Department of Chemistry
Grossmont College

Program Review
2005-2012

Program Review for 2005-2012 Submitted by Chemistry Department Faculty and Staff

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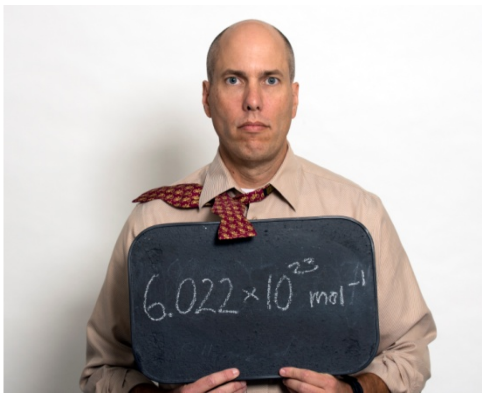

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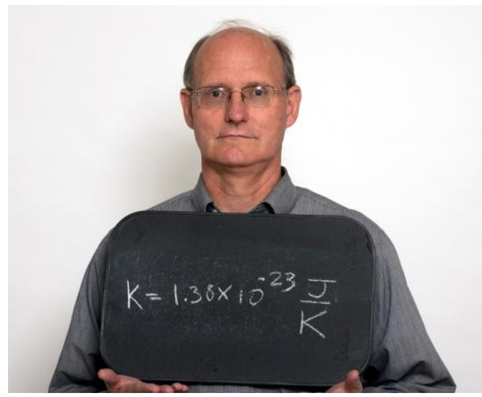

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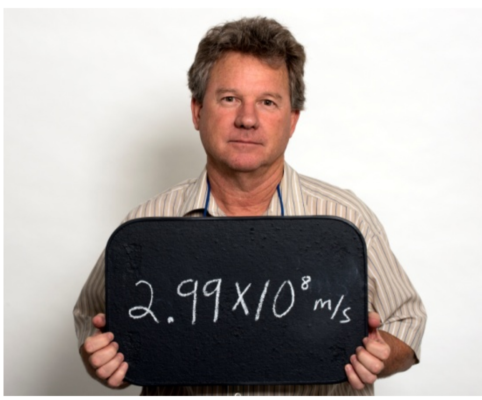

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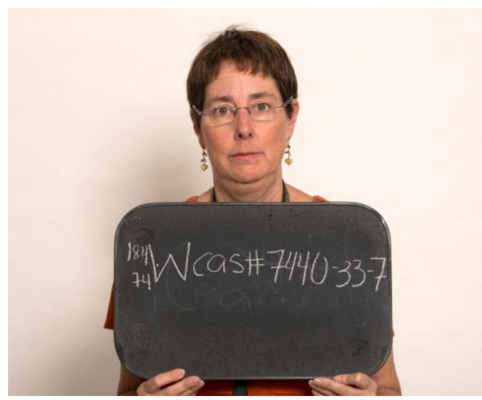

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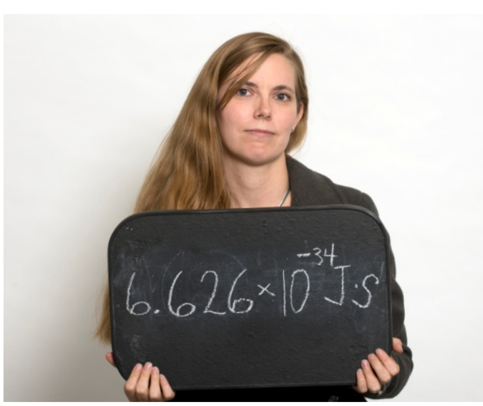

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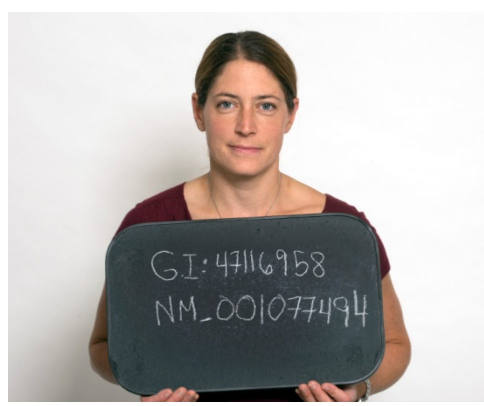

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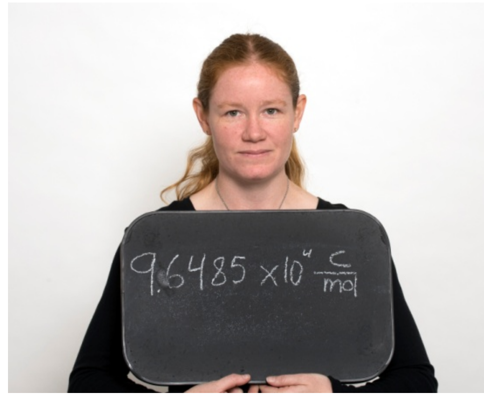

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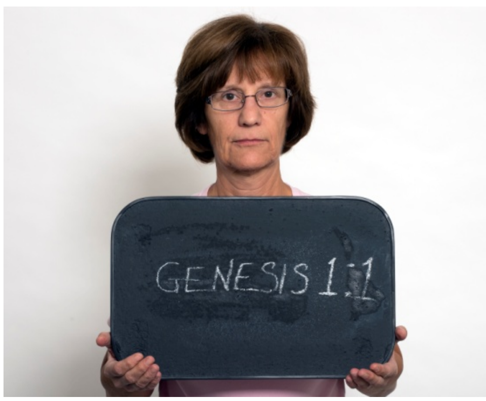

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Angela Johnson- Senior Recruiter Employment Services
(Really likes to hang out during chemistry college hour)

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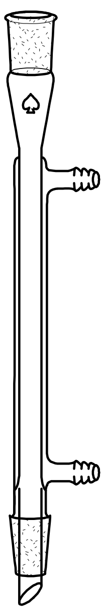
SECTION 1 - BRIEF DESCRIPTION AND HISTORY OF THE PROGRAM

1.1 Introduce the self-study with a brief department history. Include changes in staffing, curriculum, facilities, etc.

In 1964, when Grossmont College opened, we offered courses that covered most of the first two years of a science major curriculum in addition to courses to prepare allied health and other related programs. The initial course offerings included Fundamentals of Chemistry (Chem 115 and 116), General Chemistry (Chem 141 and 142), Quantitative Analysis and first-semester Organic Chemistry (Chem 231). A few years later, Science 110 Introduction to Scientific Thought was added as well as Chemistry 110 (a non-majors course without a lab) and Chemistry 120 (Preparation for Chem 141). In the early 1990's we obtained a National Science Foundation (NSF) grant to develop the chemistry tutorial classes which were added to the curriculum. Because the tutorial courses (T-classes) did not articulate outside our department nor were they included in the degree listings, these courses were optional. However, since each chemistry courses was now tied to a tutorial course, these T-classes became quite popular and provided a robust adjunct to regular lecture and laboratory instruction. The T-classes also had a positive effect on our WSCH.



The above list represents the courses offered at Grossmont until the 1990's. In the late 1990's we developed a new chemistry course called Forensic Chemistry (Chemistry 113) and in 2002 we started offering the second semester of Organic Chemistry (Chemistry 232, formerly called Chem 223). In 2009 we also developed a new chemistry course for allied health majors (Chemistry 102) in response to the state-wide recommendation that colleges begin offering a one-semester course encompassing general, organic and biological chemistry (BOG course).

In 2007, the first new building on campus since the founding of the college was opened. The Science Laboratory building (Bldg. 30) greatly expanded our facilities and modernized our laboratories, our stockroom capability and tutorial classroom. Our new chemistry laboratories have become perhaps our greatest physical asset. Prior to the new building opening, our department had use of three chemistry laboratories, each lab outfitted with only two fume hoods and outdated facilities. The new building provided us with four state-of-the-art chemistry labs and we were fortunate to have a major voice in the design and use of these labs. One of our primary goals was to install enough fume hoods to provide a safe workspace for every student thereby eliminating the previously inefficient practice of standing in line to gain access to a fume hood. All of our fume hoods are standardized and equipped with the necessary utilities- electrical/data ports, natural gas, compressed air, house vacuum, running water and pocket sinks- which provides a self-contained, safe working environment for each student. Thoughtful placement of lab benches and overhead projectors preserves the necessary sight-lines between the instructor and students at all times. This design aspect was crucial to our needs; besides having the capability to monitor students engaged in laboratory work, we created a learning space to be used for both lecture and lab sessions. This ability provides a seamless transition between lecture and lab activities and reflects the structure of our chemistry program which combines the lecture and lab into one course, both components taught by the same instructor.

With our new science lab building online, we put into practice the recommendation of the American Chemical Society regarding chemistry lab education guidelines and reduced the enrollment for most of our courses from 32 to 24 students per section. The result is that we have three 24-seat labs equipped with 12 double hoods and one 32-seat lab with only two large fume hoods. The 32-seat lab is dedicated to our introductory courses that use far less noxious materials in the lab and require much less dedicated fume hood space. The 32-seat lab provides us some flexibility and enables us to maintain a significant number of larger sections.

The new building expanded our stockroom space and streamlined the functioning layout of our facilities. Locating the stockroom in the center of the building enables access to all chemistry labs which are situated on the periphery of the second floor. (There is also a connecting mini prep facility which services the Earth Sciences lab adjacent to the chemistry area.) A single fume hood was installed in the stockroom for prep work and temporary hazardous materials storage. Generous storage cabinetry and work benches were designed to maintain critical sight lines throughout the entire stockroom, most of which can be monitored by the centrally located technicians' office. The layout of our chemistry area restricts student access to the stockroom while providing an efficient arrangement for servicing the lab classes while in session.

The other major improvement to our facilities and boon to our program was inclusion of our Chemistry Science Learning Center (CSLC), the largest contiguous space on the second floor of our building adjacent to our lab areas. The CSLC is a large mezzanine that extends the width of the building and opens to the learning center on the first floor. This space was designed to expand our chemistry tutorial program and the layout resembles a large classroom. The room is outfitted with 40 computer stations, an instructor station that controls dual overhead projectors, an oversized map printer used by Earth Sciences and a regular pay-printer for students. Three walls are covered with whiteboards, and bookshelves and deep map shelves. The computers are cloned with our chemistry tutorial software packages, molecular modeling programs, chemistry drawing programs, GIS software (for Earth Sciences) and the regular complement of Windows software (Word, Excel, PowerPoint, etc.). The chemistry faculty offices are located down the hall from the CSLC so that students have ready access to fulltime instructors' office hours. Faculty devote some of their office hours in the CSLC to encourage usage by students.

Since our last program review, we hired Diana Vance as our newest full-time faculty. Our current full-time complement is now 7 tenured faculty members. Currently we have 3 adjunct faculty, one who teaches Chemistry 120 and two who teach Science 110. Our adjunct faculty have been reduced significantly over the last 6 years due to recurring budget challenges and section cuts.

Program Goals

1.2 Appendix 1 contains the most recent 6-year Unit Plan for the program. From the 6-year Unit Plan, select your most successful and least successful goals and answer the following questions:

For your most successful goal:

a) What activities did you undertake to achieve this goal?

b) Report and explain the data you have to verify progress toward your goal.

c) How did the achievement of this goal help move the college forward toward fulfillment of the planning priority goals in its strategic plan?

For your least successful goal:

a) What challenges or obstacles have you encountered?

b) Has this goal changed and why?

Chemistry Department's Most Successful Goal

We combine two of our goals as "most successful" since both are inextricably linked: Hiring a new faculty member and developing a new chemistry course (Chem 102).

Obviously hiring Diana Vance as a new full time faculty member was a major benefit to our program because more full time faculty ensures consistency between multiple section courses and provides students with additional contact outside of regular class time. The fact that Vance completed her master's degree at UCSD is also a noteworthy advantage since familiarity with their chemistry program helps our decision process when we discuss changes to our course outlines and articulation issues. Furthermore, adding Vance to our department allowed us to reassign another full time faculty to develop a new course, Chemistry 102.

Chem 102 is the answer to the California Nursing Board recommendation to reduce the number of units to complete a nursing degree. At the time, nursing students were required to complete two semesters of chemistry- one semester of (prerequisite) introductory general chemistry followed by a semester of organic/biochemistry. One suggestion by the nursing board was to completely eliminate all chemistry credits from their degrees. The compromise solution was to develop a one-semester course encompassing general, organic and biochemistry topics.

The success of this goal speaks for itself- since the very first offering in Fall 2009, the demand was greater than we expected for a newly-offered course. Each semester, we have offered two sections of Chem 102; both sections fill quickly and the waitlists are maxed-out each time. Demand continues to grow and anecdotal comments from students support the notion that this course can be offered anytime, day or evening, and students will register. Most semesters, SDSU students are part of the roster, a testament to the regional popularity of this course.

Chemistry Department's Least Successful Goal
Procuring budget increases necessary to hire student tutors and for purchasing and maintenance of laboratory equipment.

Although our faculty mentor the students as much as possible, we find that student tutors can sometimes help the students more than a seasoned instructor. This is true for several reasons. First, student tutors can seem less intimidating and the struggling students are less reticent to ask them for help and second, the difficulties of learning chemistry are still fresh in the minds of our tutors which sometimes gives them an insight to the student's difficulties that the faculty miss, and third, the tutors are much younger and share more common experiences with the students which may give them an insight to help in ways the more seasoned faculty miss. A secondary benefit of training student tutors is the fact that as a nation we need to educate many more of our youth in STEM fields. Some of these tutors will recognize their talent in teaching and may decide to pursue a career in science education. Discovering these individuals is critical to maintaining a technologically savvy workforce.

Likewise, inclusion of state-of-the-art equipment in our program enables our department to remain competitive and up to date on modern chemical education. However, the intermittent funding stream for these purchases is far from ideal.

Having permanent line items in our budget for hiring student tutors and for the purchase and maintenance of lab equipment remains one of the biggest challenges for our department. We are also very concerned about the cost to replace our current instruments when they have reached the end of their usable lifetime. In particular, our infrared spectrophotometer is over 6 years old will eventually need to be replaced. This IR spectrophotometer is the workhorse instrument in our department; it is routinely used in several different chemistry lab courses. It is not a stretch to say that the IR instrument is vital to sustaining our organic chemistry program insofar as we maintain the articulation agreements with various other schools.

Implementation of Past Program Review Recommendations

1.3 Your program 6-year Unit Plan in Appendix 1 contains the most recent Academic Program Review Committee recommendations for the program. Describe changes that have been made in the program in response to recommendations from the last review.

1. Meet with the coordinator of the Tech Prep Program to strengthen articulation efforts with local high schools.

Recommendation met

The Tech Prep Program has evolved into a different organization and is no longer our focal point for articulation efforts with local high schools. We have taken the initiative and hosted several outreach events here at Grossmont which include the Science Festival (2009), the Science Decathlon (2007, 2008, 2009, 2010) and the San Diego chapter of BeWise (Better Education for Women in Science and Engineering). As a result of the relationships formed in these events, we have brought together scientists and educators from local agencies with our division Dean, Mike Reese, and continued with a broader-based approach to outreach events. For example, Nancy Taylor (San Diego Office of Education) has assisted with our on-going participation in the Science Decathlon and Chris Deckard (Grossmont alum and current SPAWAR employee) has brought the SeaPerch underwater robotics competition to Grossmont College's swimming pool. One of our faculty volunteered to teach a year of high school chemistry at a north county private school (2007). Upon graduation, a student from that class enrolled at Grossmont and joined the Griffin women's volleyball team.

2. Maximize efficient use of the new science building, especially by offering more sections in the summer.

Recommendation met

Inasmuch as the recent budget constraints are the major determining factor regarding the number of summer sections that we can offer, we utilize the new building in a smartly efficient manner. Since we designed our labs to function as classrooms, the majority of our single-section courses are taught in these rooms. This arrangement provides a couple of advantages- room scheduling conflicts are alleviated to a degree and the back-to-back lecture/lab format affords a seamless transition for the students. Also, there can be significant crossover between lecture and prelab discussion topics; having students in a lab environment for both sessions enhances the continuity of instruction.

Now that we have 4 chemistry labs, we can group together courses that use similar equipment. For example, since organic, biochemistry and forensic chemistry courses tend to employ the same analytical techniques, these courses are assigned to the organic lab adjacent to the large instrument room that houses specific analytical instruments. Similarly, general and prep chemistry courses are assigned to the two identical general chemistry labs that both contain common equipment and a small adjacent balance room. Having two identical labs allows us to schedule some of the biggest multi-section courses in the same environment. The 4th lab, our biggest lab accommodates the larger 32-seat lab sections.

3. Develop a job description for a shared technician with Earth Sciences and pursue hiring as programs expand.

Recommendation not met

Funding for this position was not forthcoming. More to the point, the Earth Sciences department has expanded their lab programs and now requires a full time technician rather than a shared technician with our chemistry department.

4. Develop and offer an analytical chemistry course that will articulate with four- year institutions and pursue articulation with UCSD's Chem 6 CL laboratory course.

Recommendation not met

There is considerably less demand for the traditional analytical chemistry course in undergraduate chemistry degrees and consequently, we have decided not to commit resources to a course that is predicted to have increasingly lower demand. Also, much of the articulation issues regarding the 6 CL lab course can be resolved by alternative pedagogy within our existing curricula.

5. Collaboratively write student-learning outcomes and collectively agree upon their assessment methods to be written in course syllabi of sections of the same course. Use student-learning outcome data for continued course and program improvement.
Recommendation met
See Section 3 for adumbration of our SLO efforts.

6. Continue to submit curriculum modification and deletion proposals for courses that have not been reviewed by the Curriculum Committee in the last five years.
Recommendation partially met
We have completed this task for both Chem 141 and Chem 142, currently the only two 1440 degree courses in our department. We anticipate inclusion of at least one if not both semesters of organic chemistry (chem 231, Chem 232) to the 1440 degree status as well. All of our course outlines have been submitted to the Curriculum Committee although most of them are process pending awaiting the completion of 1440 degree requirements. See Section 2.1 for details of our progress on course outlines.

SECTION 2 - CURRICULUM DEVELOPMENT AND ACADEMIC STANDARDS

In Appendix 2 - Catalog Descriptions, insert copies of your catalog descriptions from the most recent college catalog (see "Courses of Instruction" section. This is the blue section). If your program has an Associate Degree program, include the relevant pages from the catalog (see "Associate Degree" section. This is the yellow section). [NOTE: Do not include your actual course outlines]

2.1 Review your courses outlines and explain how these outlines reflect currency in the field and relevance to student needs, as well as current teaching practices.

The course outlines for all chemistry courses were recently submitted to the Curriculum Committee. We requested that the course outlines for both Chem 141 and Chem 142 (the two-semester sequence of General Chemistry) be reviewed and approved first, since these two courses will certainly be included in the Transfer Model Curriculum (TMC) for chemistry as outlined by The Student Transfer Achievement Reform Act (SB 1440). (Additionally, these two courses are required for the Geology Associate Degree and we did not want to impede the program review process for the Earth Sciences department.) Currently, the vetting process is complete and the chemistry TMC has been submitted for review to the corresponding Faculty Discipline Review Group (FDRG). Once that review process is complete, we will better understand the obligatory changes and modifications that need to be incorporated into our remaining course outlines. In general, our course outlines are copacetic with the goals listed in each outline and we include the current choice of textbook for each course. We do not include SLOs in the course outlines but have chosen to list the SLOs in each syllabus since that is the document that students are most likely to see.

The two-semester sequence of organic chemistry (Chem 231/232) is of particular interest to us. Our department has always offered the first semester of organic

chemistry since all receiving institutions consider first semester ochem to be a lower-division course and it is a required class for all baccalaureate chemistry majors plus several other natural science majors. In academic year 2000-01, the most recent new full time faculty at the time (Olmstead) was hired to expand the departmental offering in organic chemistry and
the second semester of Ochem (Chem 232) was developed and offered for the first time at Grossmont. This course has always been an articulation challenge for our department due to the capricious manner in which some 4-year institutions view community colleges teaching what is considered to be an upper division course. Incidentally, this view is not shared by all, since the two semester sequence of organic chemistry is historically and traditionally a sophomore-level sequence. Frequently, our major receiving school (SDSU) requires additional, albeit, surmountable transfer hurdles to our students attempting to matriculate Chem 232, whereas UCSD and most other schools accept Chem 232 without question. This is one major reason why we want to ensure that our course outlines are updated to reflect the approved content of each course that becomes part of the agreed-upon TMC and therefore, we are anxiously awaiting word about the status of Chem 232.

As soon as the California Community Colleges Chancellor's Office announces the 1440 degree requirements for the chemistry discipline, we can quickly assess the impact on our remaining course outlines and prioritize the completion of curriculum review.

Current chemistry education practices maintain the notion that chemistry is not simply a service discipline that teaches skills sets to be transplanted into other fields but is in fact one of the founding bodies of modern scientific thought that has accelerated development of our understanding of natural phenomena across the natural sciences. Nationally and globally, the number of students choosing chemistry as a college major or career path is in decline which fuels our continuous improvement strategy in all chemistry courses.

To establish relevancy between course outlines and student needs, our department strives to incorporate personal improvement, societal issues evaluation and awareness of career needs into the educational goals across the discipline. There are several common threads that tie together our approach to chemical education across the department. These goals, adumbrated in our course outlines and corresponding syllabi include, teaching the fundamental theories about the nature of matter, investigating the scientific method through laboratory experiments, developing mathematical literacy and elucidating the interdisciplinary applications of chemistry for a host of career paths and academic interests.

Development of critical thinking skills is our primary strategy for progressing student skill sets. The problem-solving approach is a cyclical learning pathway that includes the following elements: clear statement or definition of a problem; formulation of a hypothesis; planning and performing experiments; data collection and drawing pertinent conclusions. Our lecture/lab format provides the setting to carry out all steps in this process, often within the confines of a single lab period but also spanning between classroom lectures and lab activities. Using current issues for lecture and prelab discussions establishes a link between chemistry and our society and provides content for in-depth investigation of special topics such as acid rain, nuclear energy, bioactivity of pharmaceuticals and others.. The specialized skills resulting from this process include mathematical literacy, communication skills, quantitative analysis, abstract reasoning abilities, understanding of the interrelationship of concepts and collaborative learning. These skills are then measured from multiple assessments which include formal written lab reports and standardized exams. In the case of general chemistry and organic chemistry, the standard exam is a validated test provided by the American Chemical Society (ACS) and allows us to compare student performance with national results.

It should be noted that, but for an occasional few exceptions, we are committed to having the same instructor teach both the lecture and lab portion of our courses. This contributes to the seamless continuity within each course.

Professional development of our dedicated faculty includes multiple sabbatical leave projects, authoring of books and laboratory manuals and research projects with local academic and industry concerns. These accomplishments afford a professional perspective on the teaching and learning enterprise which students eagerly desire.

A final note, we are a creative pod that appreciates a good flash bang activity to foster intellectual curiosity. There may be marginal academic value in some of the fire and noise chemistry demonstrations that we perform in lecture and lab but the resultant stimulus is palpable in the classroom.

2.2 What orientation do you give to new faculty (both full- and part-time) regarding curricular expectations (i.e. SLOs and teaching to course outlines), academic standards, and department practices? How do you maintain an ongoing dialogue regarding these areas? You are encouraged to use feedback from your Faculty Survey discussion.

When new adjunct faculty meet our department their first encounter is usually “the interview”. The interview consists of a practice lecture with chemistry faculty playing the role of students. This practice gives us a quick and pertinent evaluation of the interviewee and gives the candidate a general sense of the rigor we expect in our subject matter.

As part of our faculty meeting during staff development week, the department divides into small groups according to class assignments; each group has a full time faculty member who serves as coordinator. New faculty are quickly assimilated into a common core and the coordinator serves as mentor for newly hired teachers (as well as guide for seasoned adjuncts). Adjuncts are provided with all the resources needed to teach their course- textbooks, solutions manual, laboratory manual, and a large body of ancillary materials developed by our department. We gently inform new teachers that we expect them to ask for assistance rather than go into a classroom less than fully prepared; there is no judgment associated with asking for and receiving help from another teacher. To that end, we are able to provide lecture notes, PowerPoint presentations, problem sets, etc., if needed. We encourage them to use a common syllabus for the course but allow them complete freedom to write their own if preferred. Frequently, new adjuncts are grateful for abdication of the syllabus prep. The coordinator reviews the course content and SLOs for the course and ensures that all teachers for multiple section courses are following the same weekly schedule. The chemistry stockroom technicians are an integral part of these breakout sessions and are there to answer questions about lab experiments, house-keeping issues, hazardous waste treatment procedures, etc. The purpose of these meetings is to demonstrate to new faculty that we operate as a team and that all department members are available for each other.

Either the coordinator or other faculty provide help with the practical aspects of the job including laboratory tour, stockroom layout and procedures, office assignment, restroom/classroom keys and campus facilities.

All teachers are encouraged to attend faculty meetings to stay abreast of updates and changes to schedules or procedures. This is also a time devoted to discussion of any issues regarding lecture, lab or student affairs.

The results of our faculty survey (Appendix 5) indicate that our orientation process is quite successful. All but two questions scored 4 or 5 (“agree” / “strongly agree”) in the survey. This tells us that we are quite thorough in providing faculty with the following: opportunities for staff development; adequately regular department meetings; collaboration on SLOs and SLO assessments; input on teaching pedagogy, new policies, procedures, protocols and decision-making processes; access to training, equipment and technology; and agreeable teaching schedules. Two questions regarding our course outlines scored less than 4, most likely due to confidence in our time-honored pedagogy which has been validated through numerous metrics over many years. However, the survey results compel us to review course outlines at least once each semester, during orientation, as a reality check performance.

2.3 Give some examples of how your department members keep their instruction (i.e. delivery, content, materials, and syllabus) current and relevant to student academic and/or career needs.

As a rule, chemistry faculty engage in continuous revision of lecture notes, changing example problems and adding more examples to clarify those areas where students tend to struggle. Updating lab manuals and websites is a nonstop search-and-find effort to fix errors and update content. For our multiple-sections courses, we revise the syllabus each semester prior to, or during staff development week. When a course switches to a new textbook, lecture notes and PowerPoint material is modified to reflect the order of topics and content of the new text. A few instructors have begun using clickers during class for assessment and short quizzes.

For our Sci110 course, two new major components have been added, a compulsory science project and a capstone oral presentation. The science project requires the students to submit a hypothesis and perform experiments on their own to test the validity of the hypothesis. Another innovation is to include a group or individual oral presentation to the class on an ethical issue raised by scientific research. Because there is no single textbook out there which covers all the important topics (scientific thinking, history and philosophy of science, ethics and pseudoscience), a textbook was written (Oakes) specifically for the course. The text is a mixture of readings from important authors in the field as well as sections written by Oakes. The text has been picked up by a publisher and has been adopted by most of the instructors for the course.

Chemistry faculty are strong supporters of sabbatical leave projects and encourage each other to consider this option for professional development. Brief descriptions of recent sabbaticals are included in Section 8.1.

2.4 Analyze the data in Appendix 3 - Grade Distribution Summary. Identify and explain any unusual retention patterns or grading variances. (To figure retention percentages, subtract the "W's" from the total enrollment and divide that result by the total enrollment.)

Retention Rates for Chemistry, Science and Grossmont College

Retention rates for the department, both chemistry and science, and Grossmont College are compared and shown in Figure 2.4.1 and Table 2.4.1. (Summer terms are not included in the discussion here in Section 2.4; to see the complete analysis of retention rates, refer to Section 5.4.) For the time period spring 2006 through fall 2012, the average retention rate for Chemistry is 72.1%; the average for Science is 75.7% and for the college, 80.9%. Worth noting is that the retention rates for chemistry have been steadily increasing for the last 3 years (2010-2012). This trend is not surprising given the tenacious enrollment behavior exhibited by students during this season of section cuts.

Figure 2.4.1 Comparison of Retention Rates (%) for Chemistry, Science and College

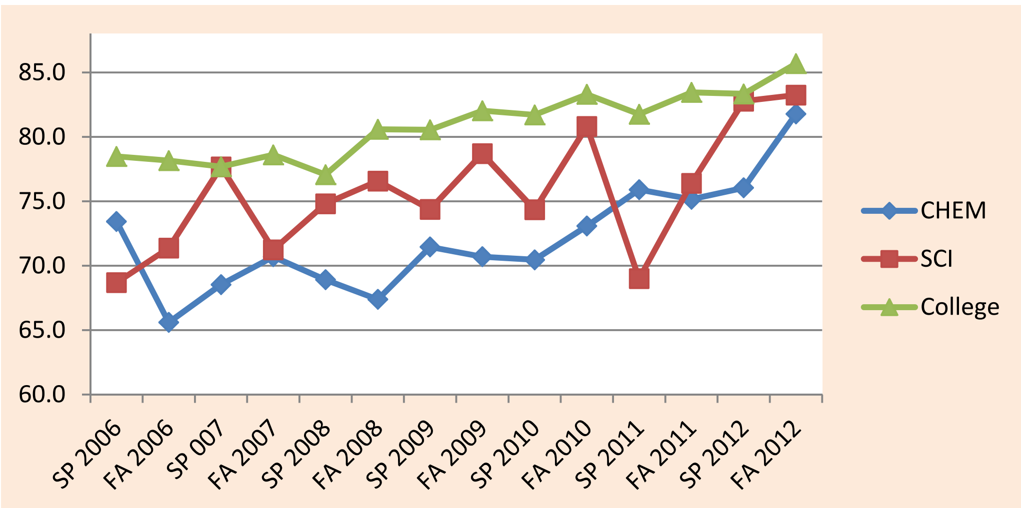


Table 2.4.1 Comparison of Retention Rates (%) for Chemistry, Science and College

% Retention	SP 2006	FA 2006	SP 007	FA 2007	SP 2008	FA 2008	SP 2009	FA 2009	SP 2010	FA 2010	SP 2011	FA 2011	SP 2012	FA 2012
CHEM	73.4	65.6	68.5	70.7	68.9	67.4	71.4	70.7	70.4	73.1	75.9	75.2	76.0	81.8
SCI	68.7	71.4	77.7	71.2	74.8	76.6	74.4	78.7	74.3	80.8	69.0	76.4	82.8	83.2
College	78.5	78.2	77.7	78.6	77.1	80.6	80.5	82.0	81.7	83.3	81.8	83.4	83.3	85.7

It seems plausible that the increase in chemistry retention rates is correlated to the decrease in sections throughout the campus starting in 2008. Over the period from 2008 to 2011 the availability of classes in chemistry was progressively reduced. This reduction corresponds with a significant decrease in the number of withdrawals and a slight increase in the number of students receiving a grade of B or higher. This trend may be attributed to the fact that with fewer spaces available, those students who were more proactive in obtaining a seat in the remaining sections tended to be the more prepared and motivated students. It stands to reason that these students had a higher probability of success. Additionally, registration priorities tended to favor those students who were closer to graduating as well as new students who had chosen to participate in orientation activities in order to receive priority. Clearly these self-selected students are more prepared to succeed in all classes including chemistry.

We can only be anecdotal and speculate, but prior to 2008, students would enroll in one or two more classes than they ultimately intended on completing. They would play the field a bit and then plan on dropping one or two classes if one appeared too hard or if they did not like the instructor or if something came up in their lives. More recently, with the difficulty of getting a full schedule, students have been less inclined to play this game which may explain the higher retention rates. We also had a temporary shift in our student pool as the 4 year institutions closed their doors to many students. This altered pool may have also impacted our retention rates.

The cyclical trend for Sci110 retention rates is more difficult to explain but perhaps due to fluctuations of the ratio of part time to full time instructors.

Retention Rates for Chemistry by Course

Chemistry courses present some consistent trends in that retention rates, as a rule, increase for those courses that have prerequisites (Figures 2.4.2a,b,c). For example, the average retention rate for Chem116 is 8% greater than the retention rate for the prereq Chem115 (Fig. 2.4.2a). Likewise the average retention rate for Chem142 is 7% greater than the prereq Chem141 (Fig. 2.4.2b) and the average retention rate for Chem232 is 4% greater than the prereq Chem231 (Fig. 2.4.2c).

Fig 2.4.2a Retention Rates for Chem 115 and Chem 116

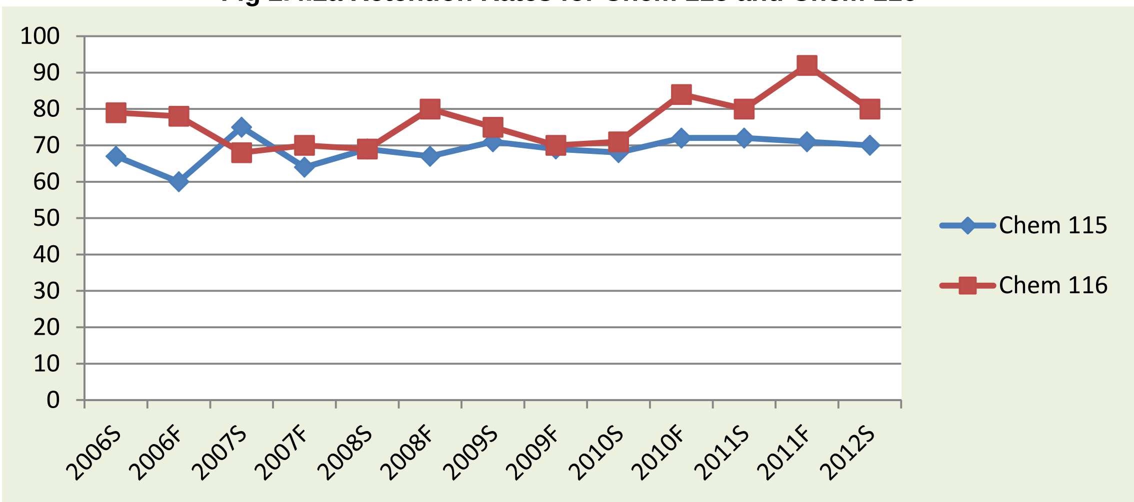


Fig 2.4.2b Retention Rates for Chem 141 and Chem 142

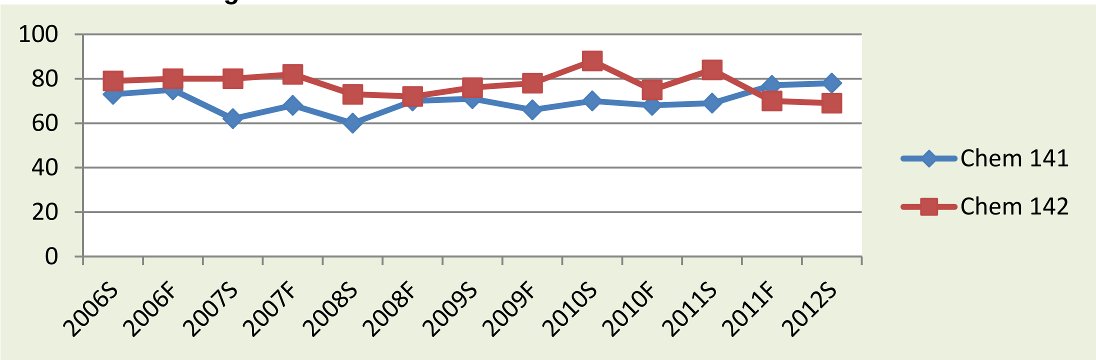
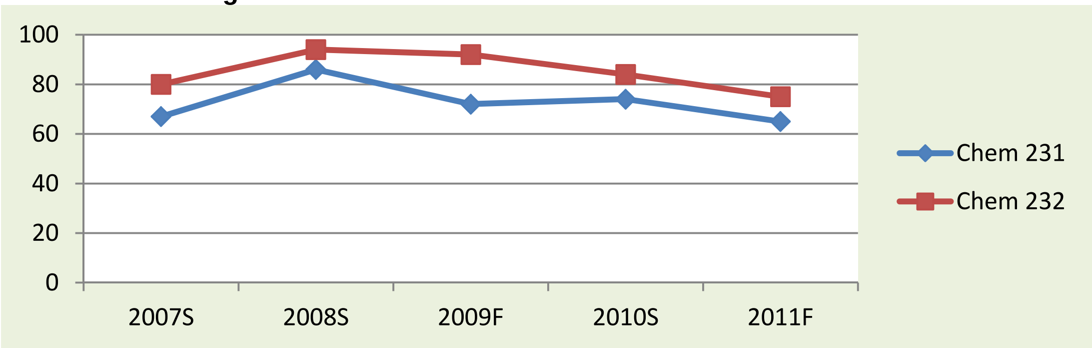


Fig 2.4.2c Retention Rates for Chem 231 and Chem 232



The organic chemistry sequence of Chem 231 and Chem 232 has the highest retention rate of all courses (Figures 2.4.3a,b). What we cannot track is the individual patterns of students who enroll in organic chemistry; however, anecdotally, the vast majority of organic students are those who have matriculated through Chem 120 prep course and the two-semester sequence of general chemistry in our department at Grossmont College. This high retention rate is thus understood to be a reflection of the robust preparation that our students obtain over a 2-3 semester interlude prior to enrolling in organic chemistry. However, we do recognize that because of the relatively small number of students who enroll in the organic sequence (Chem 231/232), small changes in in this population will skew the results disproportionately.

Figure 2.4.3a Retention Rates for Chem 231

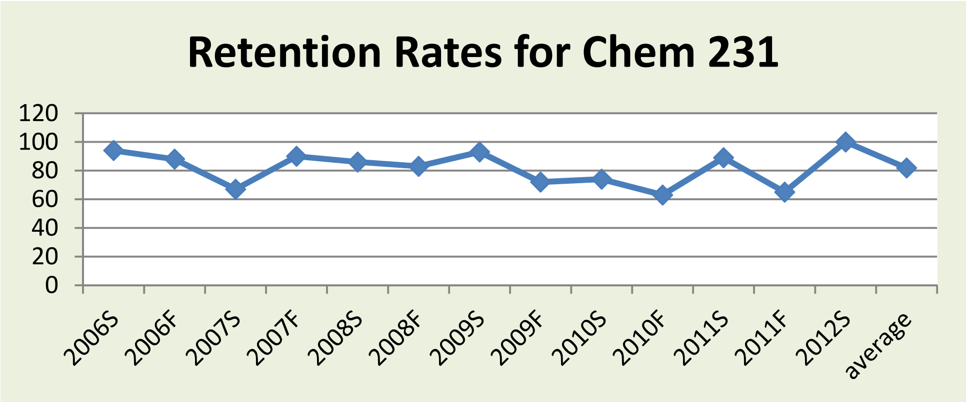
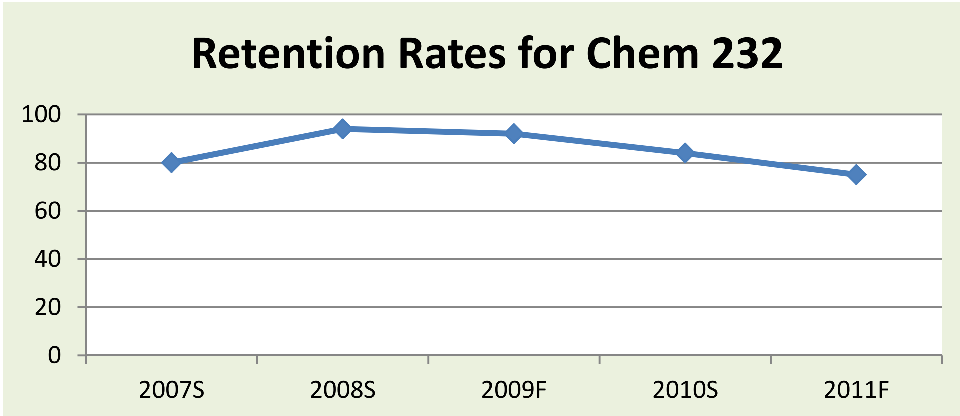


Figure 2.4.3b   Retention Rates for Chem 232



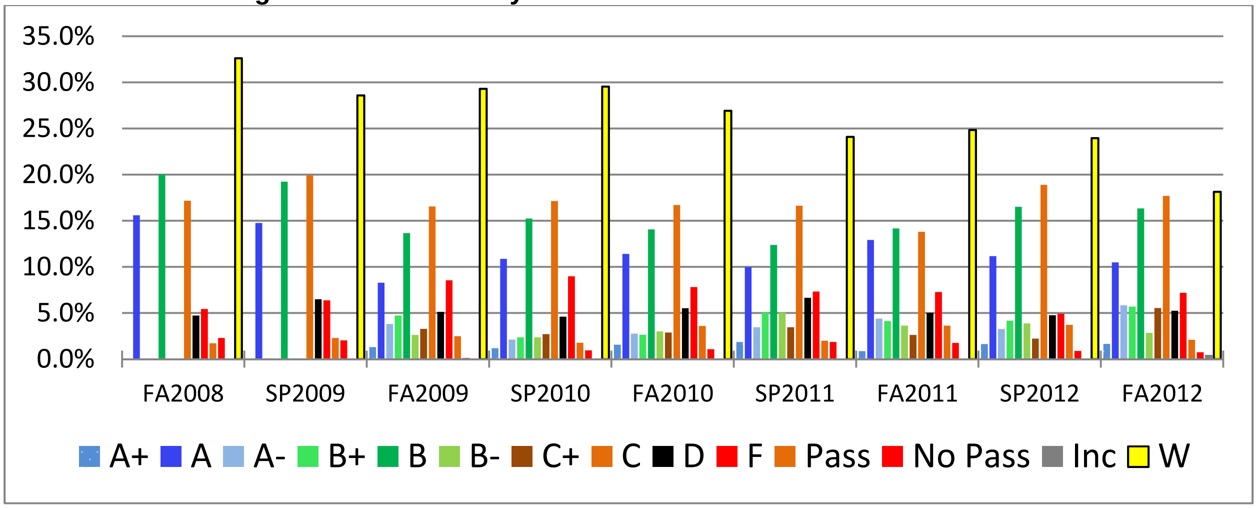
The overall results for chemistry show an increase in retention rates since 2008 (Figure 2.4.1). The most visible recent development in our department is the opening of our new science lab building in 2007. Whether this event is the sole causation for the favorable trend in student retention rates is certainly debatable, however, our modern facilities and acquisition of state of the art instrumentation in our laboratories has generated considerable enthusiasm with students and faculty. Our program integrates lectures, labs and tutorial assistance in one location and, a dedicated complement of full time faculty have offices just around the corner from the science learning center, our tutorial hub. To that point, 2007 was also the year our department reached our present sized faculty with the hiring of Diana Vance. An increase in the ratio of full time to part time faculty in both introductory and degree courses does contribute to reliable uniformity within our program.

Furthermore, we believe that the inception of our refurbished tutor program in spring 2010 has significantly impacted both retention and success rates for our students. Our new approach to tutoring relies less on computer aided instruction and more on student tutors as guides to solving homework assignments and preparing lab reports. In 2010 we hired a seasoned part time instructor to serve up to 25 hours per week as a tutor in the CSLC. This program is popular with students and alleviates some of the barriers for students to seek academic assistance with their chemistry classes. Since then, we have been scrambling to maintain on-going, financial assistance to hire and manage student tutors in the CSLC. To that end, one of the primary financial needs for our department is to secure a permanent funding stream to hire student tutors each semester and to create a paid position for a Director of Chemistry Tutor Services in the CSLC.

Grading Variances

We examined the overall grade distribution for Chemistry shown below in Figures 2.4.4 and 2.4.5. Appendix 3. contains the full-sized graphs and corresponding data tables. (We did not analyze the equivalent grade distribution for Science.)

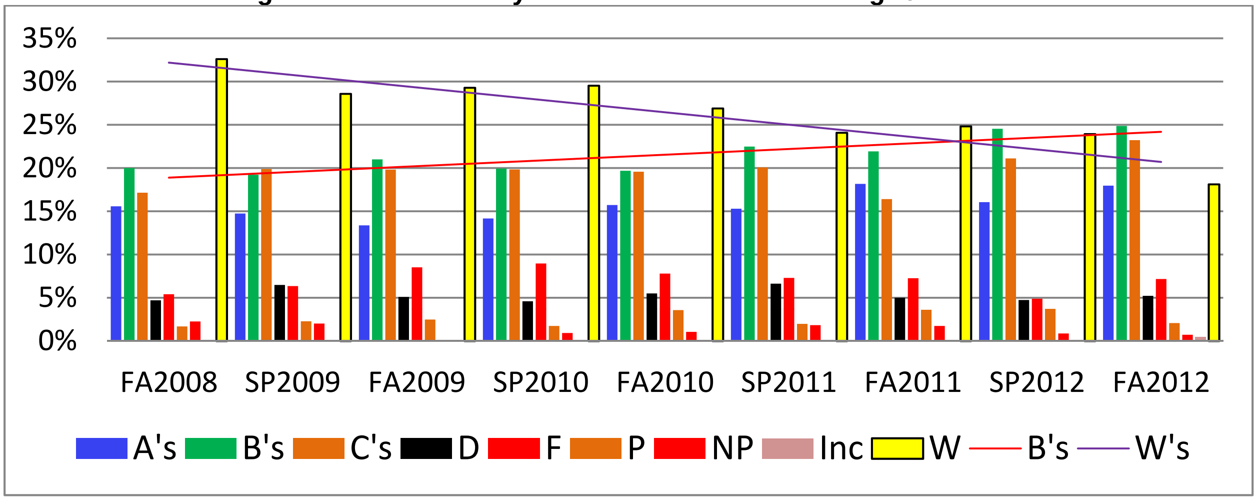
Figure 2.4.4 Chemistry Letter Grades as Percent of Enrollment



The graphical format used to illustrate the data in Figure 2.4.4 shows significant deviation from an ideal bell-shape curve with respect to grade distribution. In particular, if one ignores the percentage of withdrawals (yellow bar), the percentage of A, B and C grades is high compared to D, F and NP grades.

After Fall 2008 in which %W was highest, the most common passing grade is C and the lowest is A+. We have always been under the impression that our department does not contribute to grade inflation and the data here confirms that as a department we practice performance-based grade assignments. Another observation to be made is that, with the inception of the new grading system in Fall 2009, instructors generally do not assign many +/- grades. However, if the +/- grades are collapsed in to A, B and C grades, the grade distribution shows a slight trend upward for B grades (B+, B and B-). In fact, the total B grades are equal to or modestly higher than total C grades (see Figure 2.4.5).

Figure 2.4.5 Chemistry Letter Grades Not Including +/- Grades



The inverse correlation between the trend lines for %W and %B (Fig. 2.4.5) belies the notion that reluctance to withdraw creates a larger non-successful cohort. In other words, if students choose not withdraw because of non-academic motives (fewer sections available, a need to maintain financial aid or to satisfy VISA requirements) then it is reasonable to presume there will be a larger proportion of students who are marginally skilled and/or motivated to be successful. But as withdraw rates decreased (%W trend line), overall letter grades increased slightly (%B trend line). Again, our revamped tutorial program is considered to be one of the primary reasons for these encouraging trends since our program requirements, academic rigor and evaluation processes have not changed over the interim.

Regarding the +/- letter grade system, we are dismayed that we are prevented from assigning C- grades. The reason given to the college is that a C- grade violates the spirit of Title V although we fail to see how this can be true. We question the process of assigning a “passing” grade to any student who **earns** a C- for the semester. We are restricted to two options: **give away** a higher grade, a C, or **take away** an earned grade and assign a D for the semester. In some cases, a C- grade is the most important option for many instructors. We do not wish to contribute to grade inflation yet we anguish over the two unfavorable options.

In summary, grade distribution in our department does not reveal any unusual or alarming trends. The percent of passing grades (A, B, C, Pass) falls within a consistently narrow range for the time period Fall 2008 through Spring 2012. Of course we relish the notion that we could do better as teachers and raise the level of success across the program but this outcome requires assiduous student performance over which we have limited control. Finally, we see no patterns of differences in grade assignments between different instructors for multiple-section courses. Again this is not surprising given our department-wide efforts to provide consistency across both of our disciplines (see comments regarding pedagogical uniformity in Section 2.5).

2.5 Describe strategies employed to ensure consistency in grading in multiple section courses and across semesters (e.g., mastery level assessment, writing rubrics, and departmental determination of core areas which must be taught).

There is a deep well of collaborative effort within the department to communicate among full time and adjunct faculty on matters regarding quality control of the “product” we present to our students. The on-going visible evidences are frequent and spontaneous “faculty meetings” in the hallway between classes, spirited conversations in the chemistry nexus (meeting room 30-236) during meal breaks and, casual, spontaneous visits to each other’s lab sessions. The determinate practices in this regard include: using rubrics for grading lab reports; using common syllabi and administering common final exams for multiple-section courses; consensus decisions for adopting common textbooks for all courses; and adherence to our principle that course objectives and SLOs are standardized across our curriculum.

The defining characteristic of our department is the ability to agree on the larger issues that affect our curriculum and impact our students. One example is that we agree on using the same grading scale for chemistry classes and, the manner in which we weigh the laboratory contribution to the course is a standard percentage (approximately

25%) of the overall semester grade. The consistency in grade distribution is a reflection of this standardized agreement protocol. The chemistry department gives common exams in most of its courses. In addition, faculty regularly share their midterm exams as a way of insuring consistency at this level as well. A welcome advantage to this is that we often get to borrow good questions from each other which helps to alleviate everyone's work load and allows us to make informal comparisons of student performance between multiple sections of a particular course.

2.6 Describe and give rationale for any new courses or programs you are developing or have developed since the last program review.

We have developed two new courses since our lasts program review, Chem 102 and PSC 100.

PSC 100 The old physical science course (GC course PSC 110) was never articulated with Cal State because it included too much physics, astronomy and other topics and not sufficient chemistry. Rather than change the old PSC 110 we decided to create a whole new course to articulate with NAT SCI 100 at SDSU. To that end, we created a class which is approximately 40% chemistry, 50% physics and 10% "science" (scientific thinking and scientific method). The new class is PSC 100 Physical Science for Teachers. It is designed to be problem-based. In other words, the curriculum is designed to answer questions important to modern society such as the nature of energy or environmental concerns. It was also designed to be avowedly interdisciplinary, so that chemistry and physics content are intermixed throughout the course. The course was created, principally by John Oakes as part of a sabbatical leave, but the committee responsible was formed equally of chemists and physicists. The course is designed so that either a chemistry or a physics instructor can teach the class, whereas the typical physical science is almost always taught by a physics instructor. To date, Oakes (chemistry) has been the only instructor for the class for each of the first five semesters it has been offered.

Chem 102 In fall 2009 we offered a new chemistry course, Chem 102, General, Organic and biological Chemistry. This course is typically identified as a GOB course, (General / Organic / Biochem). Chem 102 is the answer to the California Nursing Board recommendation to reduce the number of units to complete a nursing degree. Although the nursing program did desire the one semester of organic/biochemistry (Chem 116) as part of their curriculum, they were opposed to the prerequisite course (Chem 115) since these additional units exceeded their degree cap. One suggestion by the nursing board was to *completely eliminate all chemistry units from their degrees!* The compromise solution was a recommendation to develop a one-semester course encompassing general, organic and biochemistry topics, hence, Chem 102 came to fruition. The resultant course extends the lecture format to 4 hours per week and preserves the 3 hours per week of laboratory to give a 5 unit course. Thus, Chem 102 provides two options for nursing students- two semesters of chemistry (4 units each), or a one-semester equivalent for 5 units. Worth mentioning is the fact that SDSU developed their Chem 102 course soon after the recommendation by the nursing board

(2007) and shortly afterwards (2008), Cuyumaca College started offering Chem 102 as well. We were compelled to follow suit in order to serve our students and preserve enrollment in our department.

There was, and remains, some disinclination to offering Chem 102 based on the content and structure of the course. We essentially combined two semester-length courses (Chem 115/116) into one course. The reluctance stems in large measure from the compression of multiple, content-rich topics into a one semester time frame. Essentially the course is divided into thirds- 5 weeks of general chemistry topics (which includes the obligatory review and mastery of dimensional analysis and related math skills), 5 weeks of organic chemistry topics (a feat of unrealistic proportions) and a final 5 weeks of human biochemistry and related pharmacology topics. Obviously, there is a cut and paste approach that lends itself to rapid, rigorous scope with limited depth.

The first three semesters of Chem 102 (F2009, S 10, F 10) is best described as a trial by fire experience using an upper-division GOB textbook and a compilation of our two lab manuals from Chem 115 and Chem 116. This cobbled approach created a formidable challenge in that it required students to cogently sift through multiple in-depth resources while maintaining the rapid pace necessary to cover the material according to the course outline. Subsequently, two developments were undertaken to alleviate some of these concerns: creation of a dedicated website and a new laboratory lab manual. Expanding the instructor website provided a concentrated source of study guides, worksheets, practice drills and PowerPoint lecture notes for students. A sabbatical leave project (Olmstead F 2011) resulted in the publication of a dedicated laboratory manual for Chem 102. A parallel objective of this sabbatical project was to incorporate a POGIL-based approach to learning. POGIL is an acronym for Process Orientated Guided Inquiry Learning. POGIL instruction is a research-based approach in which collaborative teams develop critical thinking skills, cognitive learning strategies and process skills. We also switched to an integrated textbook written primarily for this type of course; the authors (Frost, Deal and Timberlake) are pioneers in GOB instruction and POGIL advocates.

The lab manual includes new lab experiments and expands on other lab activities that were not part of the previously complied version. For example, “Eggsperience with Laboratory Measurements” teaches methods of mass and volume measurements using chicken eggs, and separation of the components (shell, yolk, albumin and membrane) affords a scheme to determine mass percent. The Osmosis experiment involves removal of the shell from a raw chicken egg. Dissolution of the shell in hydrochloric acid gives a translucent raw egg delicately held together by the semi-permeable membrane which is the source of study for osmosis. By graphing experimental data, students are able to determine the isotonic concentration of a raw egg. Another experiment uses raw potatoes as a source of enzyme extract used to determine the optimum pH and temperature of enzymatic activity, and to complete the food pyramid, we use strawberries as a source of DNA which is isolated and its behavior characterized. Employing household substances like sucrose, starch, bleach and beeswax in other lab activities assuages some of the mystery of science and generates productive enthusiasm in the laboratory setting.

2.7 How are current issues (i.e. environmental, societal, ethical, political, and technological) reflected in your curriculum?

For the most part, the chemistry discipline addresses environmental, societal, ethical, political, and technological issues in the context of problem-solving challenges similar to the manner in which all chemical education is advanced. Not much effort is made to create curriculum modules entirely devoted to any particular environmental or societal theme. As instructors, we do try to point out where chemistry is applicable outside of the classroom with examples. Laboratory experiments usually provide the best setting to investigate applications such as separation science (think environmental waste stream cleanup), or energy consumption (nuclear reactors, daily caloric intake) or synthetic chemistry (pharmaceutical development, food and cosmetic science). We typically talk a little about the history of chemistry, who discovered what, when, etc. Obviously, all of these topics lend themselves to robust discussions incorporating historical, environmental and ethical viewpoints. Realistically speaking, the amount of material in our curricula leaves little wiggle room to add or replace traditional material.

The biggest exception to this constraint occurs in Chem100, also known as environmental chemistry. This course is very topical and the material is selected by the individual instructor each semester. One of the textbooks used for this course is a publication by the American Chemical Society (ACS) which is a steadfast treatise on the connections between environmental issues related to chemistry and society's obligation to address these concerns.

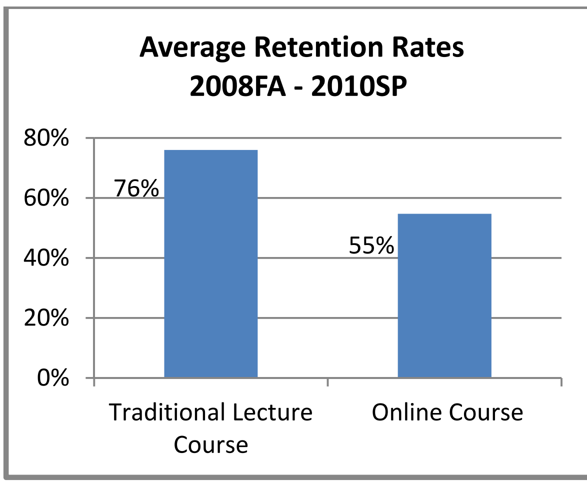
Chem116 has a poster project component in which students select a molecule, assemble a poster and present their findings to the class. Students have considerable leeway to develop the information they glean from several reference sources and illustrate the relevancy and impact of a specific chemical substance. It is not unusual for students to include in their posters current issues as they pertain to chemistry. Each semester, the best posters are selected for display in our hallway, once again pointing out the need for display cases to enhance the recognition that our students deserve (refer to Section 6.8).

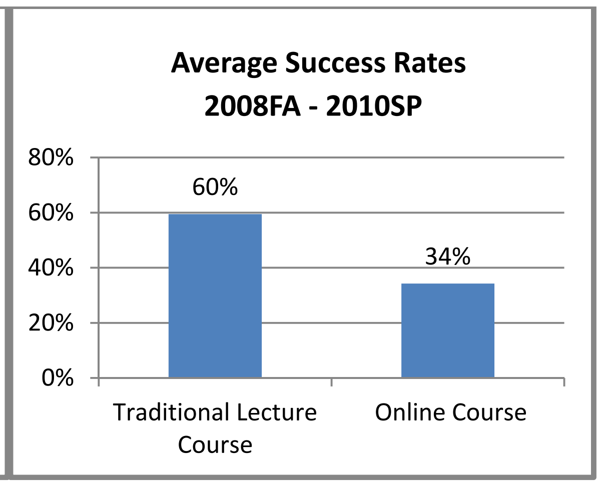
The other major venue for these scientifically peripheral topics is Science110 where the curriculum undergoes constant changes and updates in order to foster discussion on emerging ethical issues dealing with cloning, stem cell research, nanotechnology and so on. There is also an environmental component in the physical science class (PSC 100), team-taught by Oakes, although this is not a chemistry department course.

2.8 If applicable, provide a comparison of the retention and success rates of distance learning sections (including hybrid) and face-to-face sections. Is there anything in the data that would prompt your department to make changes? (Please see instructions for help on finding the applicable data.)

Our department does not offer much in the way of distance learning courses. The only example in this regard is Science110 which was offered as an online course for four semesters (2008FA – 2010SP). Given the notion that new courses and new course formats usually require a variable time period ("breaking in period") to become established, there is a dearth of concluding data in terms of retention rates or grade distributions. For what it is worth, the average retention and success rates over the four semester timeframe are shown in Figure 2.8.1; these data represent a total of 5 sections. The graphs in Figure 2.8.1 were constructed using data from the Grade Distribution Summary and match with the corresponding data from the District PR Warehouse. The online course was taught by both full and part time faculty. Obviously, such a small data set is not statistically significant, thus any conclusions are probably suspect even though there is a significant difference in both retention and success rates for the two formats. The only other pertinent observation is that the number of withdrawals is significantly higher for the online Sci110 course when compared to the traditional lecture format of Sci110. However, this is not particularly alarming since most online courses have higher dropout rates than traditional courses. Given these unremarkable results, our department is not eager to resume this online course nor are we planning to develop any other chemistry online choices.

Figure 2.8.1 Retention and Success rates for Sci110 Fall 2008 – Spring 2010





2.9 If applicable, include the list of courses that have been formally articulated with the high schools. Describe any articulation and/or collaboration efforts with K-12 schools. (Contact the Career and Technical Education Partnership and Tech Prep office for help.)

Our department does not have any chemistry or science courses that articulate with high schools. Two instructors (Willard and Larter) attended a 2YC3 workshop on dual enrollment (high school/college) and identified several challenges to instituting this type of program. Currently, there are no plans to pursue this avenue of collaboration although we do recognize the value of such arrangements and are not opposed to such engagements in the future should a mutually beneficial method come to light.

2.10 Consult with the articulation officer and review both ASSIST.org and the Grossmont College articulation website. Please identify if there are any areas of concern or additional needs your department has about articulation with four-year institutions. Please describe how the program ensures that articulations with key four-year universities are current.

Our department does not have any articulation issues with four year institutions nor our sister college. Our full complement of chemistry courses is intended for students seeking the AS degree from Grossmont College as well as to prepare them for transfer into 4-year institutions to complete Baccalaureate degree programs. All of our chemistry courses can be used to satisfy the following:

- Completion of the Grossmont Associate of Science degree in Chemistry
- IGETC requirements for University of California schools (Area 5A)
- General Ed Breadth Requirements for the CSU schools (Area B1)
- University Studies degree (Area B1)
- General Studies degree (AS degree in Science and Quantitative Reasoning)

SECTION 3 - OUTCOME ASSESSMENT

Using the course Student Learning Outcome (SLO) assessment data that you've compiled in Appendix 1- Annual Progress Reports, as well as Appendix 4– Course-to-Program SLO Mapping document, answer the following questions:

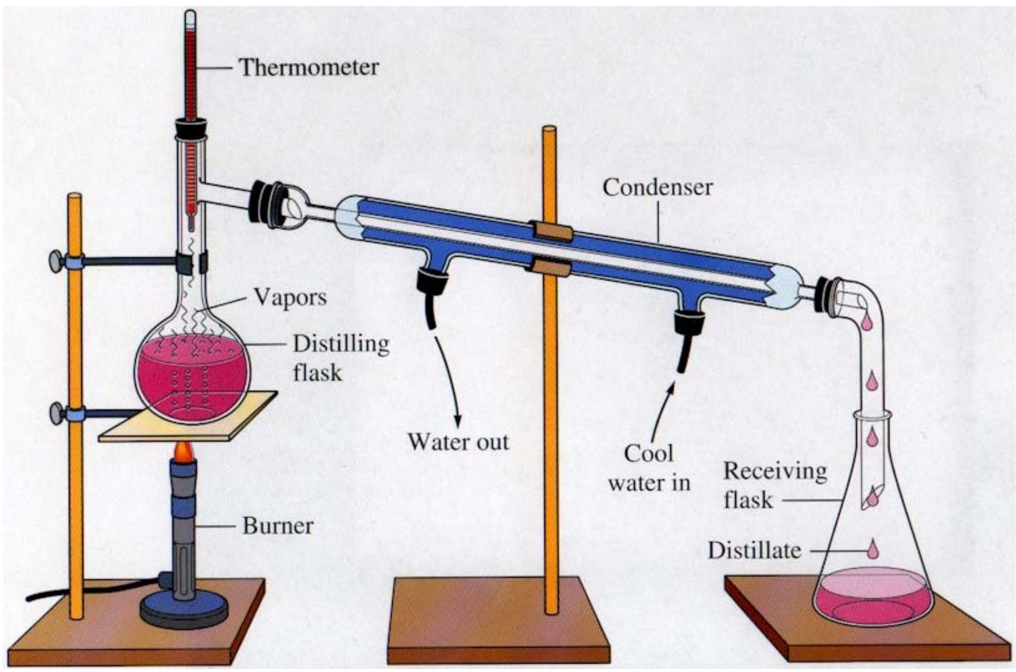
3.1 What is working well in your current SLO assessment process, and how do you know? What needs improvement and why?

At the beginning of the SLO process, we devoted several department meetings to identify the specific academic goals that we felt could be analyzed by appropriate metrics. The initial round-robin discussions ultimately led to our SLO course-to-program mapping document (See Appendix 6). The process we used to complete the mapping document included assigning each instructor the task of writing SLOs for a particular course. Some tasks were based on assigning course SLOs to the instructor with the most experience teaching that particular course but since most courses are taught by several instructors, the bulk of SLOs were written by faculty subgroups. After the initial SLOs were completed, subsequent department meetings were held to “compare notes”. Not surprisingly, the vast majority of SLO options presented to the group were consistent in content, a reflection of the homogeneity of our department mindset. After departmental massage and with slight variations for specific courses such as organic and biochemistry, the following SLOs were constructed for each course:

- Demonstrate a working knowledge of the language of chemistry.
- Apply quantitative reasoning to chemical problems
- Apply a laws and theories to explain and predict the properties of atoms and molecules.
- Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.

Having a fairly standard set of SLOs for all our courses certainly helps to codify academic goals throughout our program and ties together our sequential courses such as general chemistry (Chem 141/142) organic chemistry (231/232) and introductory/allied health courses (Chem 115/116/102).

One possible area of improvement would be incorporation of additional assessment tools on which all faculty agree to implement. Currently, we rely primarily on standardized final exams as our major source of assessment data. However, analysis of written exam responses is not the optimum measurement of laboratory skills. In response, our department has engaged in discussions involving some type of lab skill assessment such a lab practical in conjunction with the final exam or more to the point, a lab activity capstone experience, at least for the second semester of the two-semester sequence courses. We have already adopted these types of activities in some of our courses: Sci110 requires a independent research project; Chem 116 requires students to complete a poster session; Chem 232 includes an organic synthesis project (a paper synthesis culminating in a classroom presentation).



3.2 Using your course-level SLO Assessment Analyses (Appendix 5) and your Course-to-Program SLO Mapping Document (Appendix 6) discuss your students' success at meeting your Program SLOs.

Refer to Appendix 5 to view raw data on SLO assessments.

1. SLO assessment of Chem 141/142

According to our data, students met the goals for SLOs 1-3. Based on our criteria, SLO #4 was not met. Part of the issue with SLO #4 is that it was covered by only 4 questions on the final exam. This would mean that students would need to correctly answer 3 out of 4 questions in order to meet the goal. If the criteria were to be changed to correctly answer 2 out of 4 questions, then 84% of students would have met the goal.

2. SLO assessment of Chem 120

SLO 1: The target was that 65% of the students should score 75% or better. This goal was not met; only 56% of students (target goal was 65%) were able to meet the goal. One possible reason for the lower than expected score could be the question sample size of eight. Also, the benchmarks were arbitrarily assigned for this first cycle, therefore changing the expectation better represents how our students actually perform. The remaining SLO goals were met.

3. SLO assessment of Chem 116

All of the SLO goals were met in the assessment for this course. No changes are recommended at this time.

3.3 Based on your discussion in Section 3.2, are there any program SLOs that are not adequately being assessed by your course-level SLOs? Please discuss any planned modifications (i.e. curricular or other) to the program itself as a result of these various assessment analyses.

Apart from the specific conclusions in Section 3.2, a laboratory skills assessment may be the next level of implementation in our department for improving/changing the manner in which SLOs are measured.

SECTION 4 - STUDENT ACCESS

4.1 How does facility availability affect access to your program?

The chemistry program requires student access to three types of facilities, lecture classrooms, chemistry laboratories and the Chemistry Science Learning Center (CSLC). Since the opening of the Science Lab building (Bldg 30) a few years ago, our laboratory facilities are adequate for our program as is also the CSCL which serves as a student hub for several types of student activities including computer access, and most importantly, the chemistry tutoring program. However, classroom availability remains a challenge for our department. This issue is specifically addressed in Section 6.8 but a discussion of additional concerns is included here.

Perhaps part of this important issue is manifest in the fact that, with the exception of one course, all of our chemistry courses include a laboratory class. From the outside, it may appear that chemistry courses simply require two different environments which can be scheduled independently according to room availability. However, the reality is that for each course, the lecture and lab portions must be scheduled together. As mentioned above, access to Building 30 allows us to schedule our lab sections with little problem but the biggest challenge is synchronizing a lecture room in the appropriate timeslot so that the combined lecture/lab portions of the course fall within a reasonable time period that is manageable for students. For example, an early morning lab class requires a morning timeslot for lecture; thus most course require a minimum of 4 contiguous hours (one hour lecture and 3 hours lab). Many of our chemistry classes have 6 hours of lab so this requirement infiltrates two days per week.

Ideally, we strive to schedule our multiple section courses throughout the day and evenings so that students have several choices to add a chemistry class that fits their timetable (mornings, afternoons and evenings). When the lecture room availability decreases, one of the wacky resolutions forced upon us is a morning lecture coupled with an afternoon lab; generally, courses scheduled as such have low enrollments for obvious reasons. A seamless transition between lecture and lab is vital in that the same instructor teaches both portions of the course and thus it is easier to carve out blocks of time for our teachers; and also, students remain engaged in the material since lecture concepts flow into subsequent laboratory activities.

The other problem we encounter is our preference to offer lectures three days per week in opposition to the campus tradition of two days per week; the former uses a 50-minute timeslot versus the latter 75-minute timeslot. So not only are we competing for days of the week and times of day but we have the added complication of requesting only 50 minutes of a 75 minute schedule which cultivates occasional concern from Operational Instructions, although we certainly do not fault all those wonderfully helpful folks in that department!

4.2 Discuss what your program has done to address any availability concerns (i.e. alternative scheduling sessions or off-site offerings).

The chemistry department has always had a night program which in itself utilizes classrooms at non-peak times. We offer flexibility by scheduling multiple section courses throughout the day and evenings and view the night sections in the same manner as any other course- with a commitment to provide consistency in instruction (including training and mentoring adjunct faculty who are frequently teaching night sections) and obligatory stockroom support for night classes.

For several years our department has been utilizing a MWF lecture format. This allows us to schedule the lab portion of the course on T and/or Th depending upon whether the course has a 3- or 6-hour lab. This is an attractive alternative for many students based on the popularity of these offerings but more importantly, we subscribe to the philosophy that increased frequency of face-to-face meetings with students is pedagogically sound.

Another alternative that is popular with students includes a 6-hour lab on Fridays which eliminates the traditional 4-hour blocks of time during the peak days (M-Th). We also offer on occasion a second 8-week course which is really a boon to students who discover their need to matriculate back into a lower level course or who simply decide to change their course selection without losing a semester of their academic career.

4.3 Based on your analysis of the Student Survey results in Appendix 7, what trends did you observe that might affect student access (i.e., course offerings, communication, department and course resources)?

We administered the student survey from the district department of Research, Planning and Effectiveness and since our department is relatively small, we requested that the survey results be organized for each course as well as the overall department results. Although this was a small task to collate results by course, there were no significant deviations in results from individual courses compared to the overall department results. Notable outcomes from the survey include the following:

- The response rate for the department was 72%
- 86% responded that lecture was the number one resource for student learning
- 84% of students reported that the material learned in the course would be useful outside of the classroom for purposes other than academic goals
- 59% of students use the Chemistry Science Learning Center (CSLC)
- 90% of students who use the CSLC also use the chemistry tutors resident in the CSLC
- 58% of students claim that they spend a minimum of 3 hours per week studying outside of classes
- 69% of students use face-to-face meetings as their primary method of communication with instructors

4.4 What implications do these findings from 4.3 have for your program?

Clearly, the CSLC is a much sought after asset for our department and our student tutors are an integral aspect of that facility. Access to the CSLC is encouraged and facilitated by using the learning center computers as a repository for software packages geared towards chemistry lab reports, programs for molecular modeling and molecular calculations, instructor websites and the usual suite of Microsoft Office programs. The availability of student tutors throughout each day has become an expected aide-de-camp for our students. Although a minority of students claim they never utilize student tutors in the CSLC, passive learning among non-participants is expected due to the spontaneous teaching interactions that take place between tutors and students in a very public and open classroom environment. Indeed, chemistry instructors routinely recommend that students form study groups and use the CSLC as a meeting place that contains unique resources. As mentioned previously, the creation of a Director of Chemistry Tutor Services from departmental ranks would go far to endorse our efforts in the CSLC.

4.5 Based on your analysis of questions 3 through 16 in the Appendix 7 - Student Survey, identify any changes or improvements you are planning to make in curriculum or instruction.

Since the vast majority of our students claim that classroom lectures are vital to learning the material, we will continue to employ problem-solving approaches as a central learning pathway in both the classic lecture format and lab activities. Incorporating current issues for lecture topics and prelab discussions does establish a link between chemistry and our society as evidenced by the survey result stating that there exist a high level of relevancy between our program and the desire to walk away from the classroom with useful skills and understanding. If we exclude the survey results from the introductory and prerequisite courses, over 80% of respondents state that they have taken at least two courses in our department which suggests that students are satisfied with the results of our program in terms of relevancy and useful skillsets that have value beyond short-term academic goals.

The primary means of communication between students and instructors is face-to-face meetings which includes office hours (27%) and get-togethers before or after class (51%). The fact that most of these meetings are brief interludes before or after class suggests that students in our department find the instructors to be approachable and helpful on a personal basis, not to mention the efficiency of these meetings. We will continue to not only fulfill the contractual obligation regarding office hours but encourage instructors to thoughtfully schedule office hours to avail themselves as much as possible on multiple days and timeslots convenient for students.

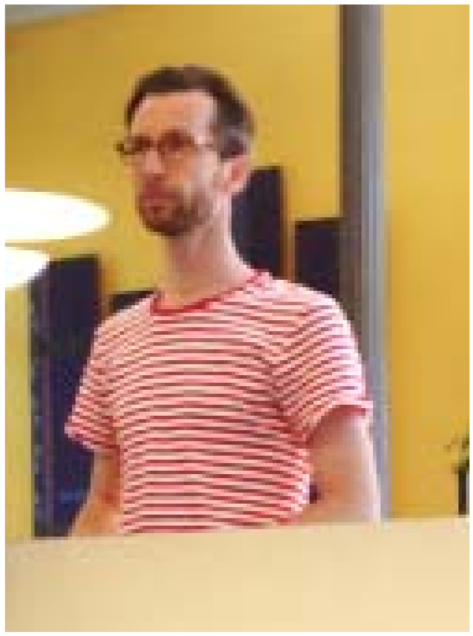
4.6 Discuss program strategies and/or activities that have been, or will be used to promote/publicize the courses/program. Comment on the effectiveness of these strategies in light of the results of the Student Survey (Appendix 7)

Because chemistry is a central discipline for nearly every science degree, students come to us which obviates the need to promote our program, at least within the Grossmont student population. However, would like to see more transfer students from regional schools (both community colleges and 4-year schools), especially for our higher level courses which periodically suffer from under-enrollment. The main reason for low enrollments in general and organic chemistry is the self-pruning that results from the rigorous prerequisite pathway into these courses. In the past we have tried to contact area schools to advertise the open seats available but this usually occurs the week prior to or during the first week of the semester when most students have already made their choices. Short of covert operations outside our bailiwick, we would like to see more cooperation between regional chemistry departments, especially those schools that have large impaction issues in undergraduate chemistry programs.

At present, electronic communication platforms such as Blackboard, Twitter, Facebook, etc. are not the primary preference for most students but we will continue to monitor this behavior and adjust as the situation evolves. However, instructor websites have been and continue to be desired by students as all full time instructors use these platforms for routine drills, practice problems, syllabi and hyperlinks to internet sites.

We have very few students who actually complete the certificate or associate degree. Promoting a terminal result such as a certificate or degree is a worthwhile goal and since the number of degrees and certificates in Chemistry is historically low, our department is creating a new competition-based certificate to supplement the traditional achievement degrees and honors program. Starting next year, we will award our first ever Rock-Paper-Scissors medal to the winner of the national championship round to be held at Grossmont College this coming spring semester. All odds favor our very own Chemistry department student, Shawn "Shawshank" Peterson. Peterson, a newcomer to the sport, is rapidly becoming a major player in the RPS realm after having won both local and regional titles last semester. The memorable moment came in the final plays of the last round when Peterson unveiled "the shank" maneuver to overcome a disastrous rout of successfully repeated paper moves from worthy opponent Kyle "the Slip" Wilson. RPS aficionados recall with glee the comeuppance of the Shank. Before his RPS debut, Peterson attained national fame by winning the international Eenie-Meenie-Miny-Moe titles in both singles and doubles competition. The Shank, the king of Roshambo techniques and rapid-fire ick-ack-ock style is a natural by all standards. His extensive accomplishments include trophies in several cross-training events including the Drawing-Straws tournament at the Turner County Fair in Parker, South Dakota; the International Monty Python Hide-and-Seek contest; and his all-time favorite, Red-Rover-Red-Rover-Sending-Fun-Over competitions. Peterson credits his success to his grandmother who encouraged him at a young age to become top dog at Glenda's Daycare and Bait Shop in Flint Michigan in the Pattie-Cake-Pattie-Cake and Peek-A-Boo contests held each afternoon before nap time. Peterson's agent and trainer, Rodney Arbuckle, is already planning the next career phase for the Shank: Finding Waldo in the Australian outback. The elusive Waldo was reportedly last seen lurking somewhere in the bowels of Scandinavia (Fig 4.6).

Figure 4.6 Waldo Spotted at the Municipal Library Copenhagen, Denmark



4.7 Explain the rationale for offering course sections that are historically under-enrolled. Discuss any strategies that were used to increase enrollment.

Chem232 is the most challenging course for our department in terms of enrollment. Refer to Section 2.1 for additional commentary regarding the organic program. Historically, Chem 232, the second semester of organic chemistry, is the lowest enrollment course in our department. However, we must maintain this course offering since it is part of the chemistry certificate and degree. The challenge has been exacerbated for the last several years due to section cuts and surgically precise mandatory caps on allocations of LED for all departments. Until several factors come into play to allow us to expand the number of sections in our department, we will be faced with the challenge of trying to maintain the prerequisite pipeline that pours into organic chemistry.

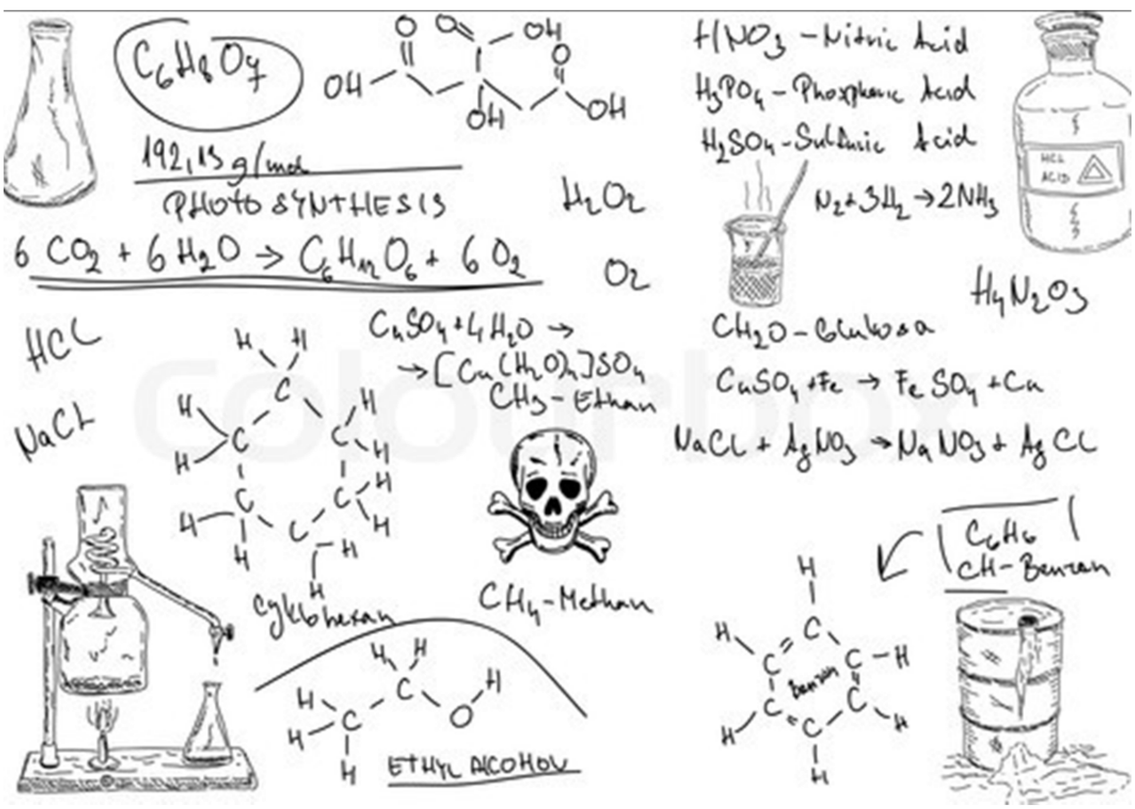
We are forced to offer the second semester of organic chemistry (Chem 232) only once in every two or three semesters instead of more frequently as in the past. Our current strategy is a somewhat cannibalistic approach- in order to offer chem 232 at least once per year, we have to cancel one or two sections of lower level courses;

this of course upsets the delicate balance of having adequate numbers to populate the higher level courses. The result is that we often lose the second semester cohort of organic students to 4-year schools. It is difficult to formulate a strategy to ameliorate this situation in light of the current budget constraints.

4.8 Based on an analysis and a review of your 6-year Unit Plan (Appendix 1), what specific strategies were utilized to address access issues of special populations (e.g. ethnicity, age, and gender).

We have not identified any access hurdles for any particular population of students. What we do know is that students need adequate preparation in order to be successful in any of our chemistry courses. This preparation includes strong math and reading skills at the onset, in addition to a host of other skills and behavior-based abilities. Even our so called “introductory courses” are often mistakenly assumed to be less rigorous than is actually the case. Academic preparedness is the primary determinate whereas, ethnicity, age, gender, etc. are much less indicators of access issues.

As mentioned in Section 2.1, the number of students choosing chemistry as a field of study is in decline, both on a national level as well as globally. To that end, we have extended much effort towards recruiting interest in the discipline through our multiple outreach activities (see Section 1.3, recommendation #1).



SECTION 5 - STUDENT SUCCESS

5.1 Building on your answer to question 4.8, what specific strategies were utilized to maximize success issues of special populations?

Since the department agrees that academic preparedness is the single most important factor that leads to success in our program, we generally make no distinction among special student populations since academic aptitude cuts across all groups. We appreciate the support from the District regarding enforcement of prerequisites. The two semester sequence of general chemistry is our flagship offering and the majority of chemistry students choose Chem 141/142 as their primary academic goal since nearly every science major requires general chemistry as part of a baccalaureate degree. Chem 120 is the prereq for general chemistry and this course is one of our most popular because it serves as the indicator of student preparedness for higher level courses. We do offer a validated test for those students who feel they can test out of the prereq Chem 120, but nearly all of our chemistry students must prove their mettle before enrolling in general chemistry. Although imposition of a prerequisite is not popular with many students, we feel this is an important strategy that does lead to success.

Another major strategy for success was a complete overhaul of our approach to tutoring chemistry students. We have essentially replaced tutorial software with live bodies. As much as we are able, we employ student tutors in the Chemistry Science Learning Center (CSLC). As the student survey shows, 90% of our students in the CSLC utilize our tutors minimally on a weekly basis. We still make available our tutorial software on department computers in the CSLC for those who prefer computer aided instruction and even the students who frequently use tutors supplement their study time using the various software packages. Self-instruction coupled with interaction with human expertise creates an environment conducive to efficient and pertinent skill building.

5.2 Describe specific examples of departmental or individual efforts, including instructional innovations and/or special projects aimed at encouraging students to become actively engaged in the learning process inside and outside of the formal classroom.

We engage our chemistry students in several ways. We use student graders for lab reports and occasionally for quizzes although all exams are graded by the instructor on record. Many of our chemistry students choose to work in the chemistry stockroom to fulfill work study assignments. Some of our classes require participation in poster sessions and oral presentations which gives students an opportunity to investigate science issues that are relevant to themselves. A multistep synthesis project (paper project) in organic chemistry is a capstone experience which demonstrates the breadth of their knowledge of organic chemistry and two of the lab experiments in second semester are multistep syntheses that require an actual laboratory synthesis of a multifunctional organic product.

As mentioned in other sections of this document, the most active participatory engagement for our students is to encourage, screen and employ them as student tutors in the CSLC.

5.3 Explain how the program collaborates with other campus programs (e.g. interdisciplinary course offerings, learning communities, community events, tournaments, competitions, and fairs) to enhance student learning inside and outside of the formal classroom.

We have a few examples of cross-disciplinary courses.

- The honors course version of Sci110 is a joint effort between the Chemistry and Humanities departments.
- Chem113 was created in cooperation with the Administration of Justice (AOJ) department to incorporate experiments investigating forensic science.
- Chem102 was created with consultation from the Nursing department to satisfy mutual interests in chemical and biological education.
- We will begin offering a linked course with the English department starting in spring 2014. Judy Dirbas and Lisa Ledri-Aguilar will team-teach one section of a linked course of Chem120 and Eng120.

Our department is a big supporter and organizer for several community events such as:

- Science Olympiad
- Be Wise competitions
- Science Fair
- Science Decathlon

5.4 Based on an analysis of “Reports” data (This is found on the intranet under “Reports”), discuss trends in success rates, enrollments and retention, and explain these trends (e.g. campus conditions, department practices). Provide examples of any changes you made to address these trends.

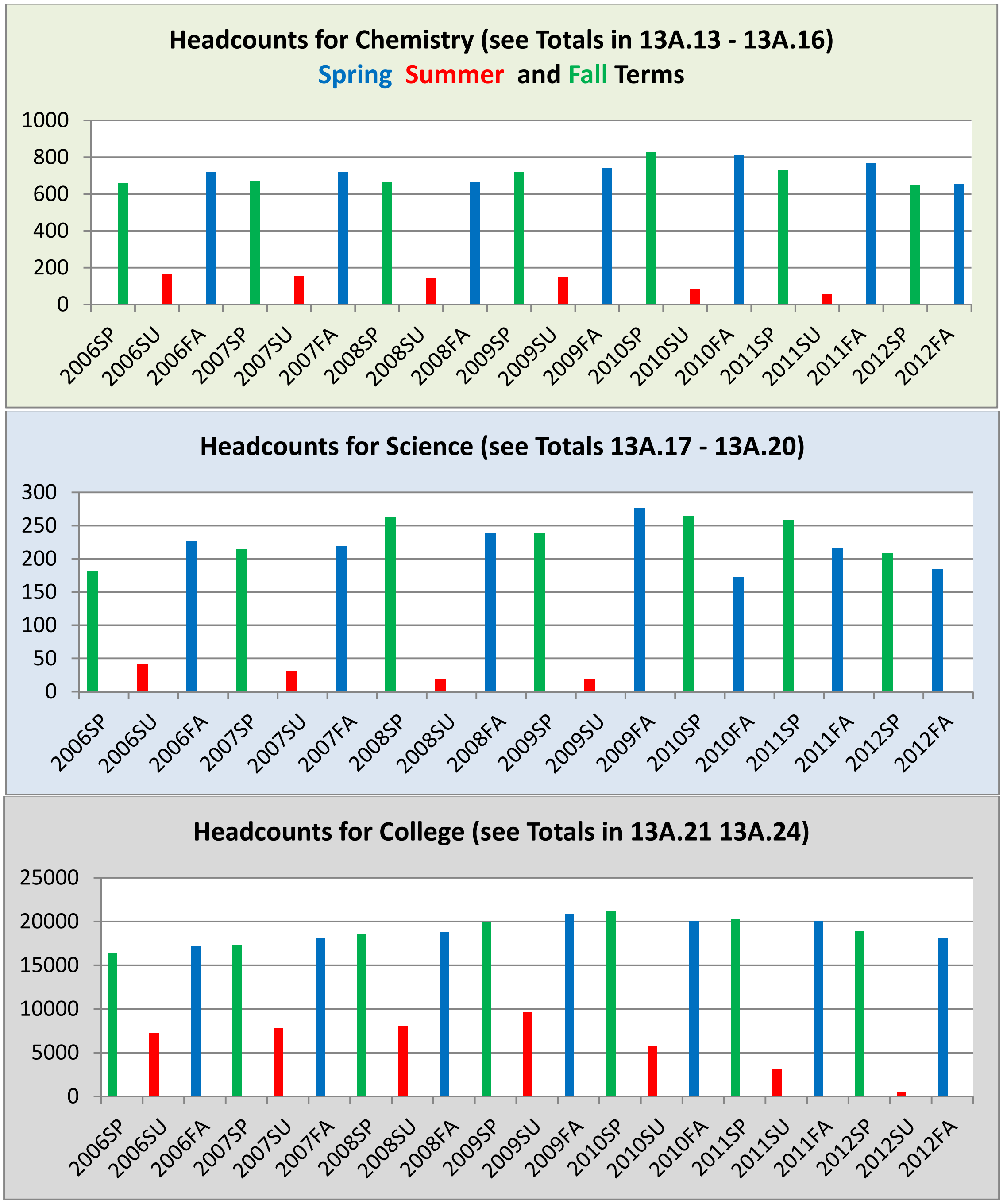
General Comments About Enrollments (Headcounts)

Appendix 13A contains extensive data and graphs for enrollments; this information was obtained from the District website. Enrollments are presented for Chemistry, Science and the College. Both duplicated and unduplicated student counts are included in the data tables for each term- spring, summer and fall, whereas; the graphs at the front of Appendix 13A (13A.1 – 13A.12) show only fall enrollments. The unduplicated student counts are also referred to as **headcounts** in this document because in the chemistry department, there is only minor difference between duplicated and unduplicated student counts. For this reason, the following conclusions are based almost entirely on headcount data, a perhaps less complicated method of analysis.

Parenthetically, the differences between duplicated and unduplicated counts are almost exclusively due to students’ concomitant enrollment in a chemistry course and a chemistry tutorial course (T-course); most chemistry courses have an associated T-course which is optional. We have not investigated the reasons why students often withdraw from T-courses so the assumption is that some students discover they can master their chemistry course content and no longer have a need for the tutorial class or they fail to keep up with the lessons and prefer a W versus an F grade. Others may simply decide to decrease their workload. In any event, withdrawal from a T-course has no effect on their grade in the associated chemistry course. Thus, because we do not actually keep track of this behavior regarding the T-courses, we use headcount data primarily to compare Chemistry, Science and the College. Incidentally, the headcount and duplicated student counts for Science are almost identical since there are no T-courses for Science.

Composite graphs combining spring, summer and fall terms were generated using total enrollments from data tables in Appendix 13A and are shown in Figure 5.4.1.

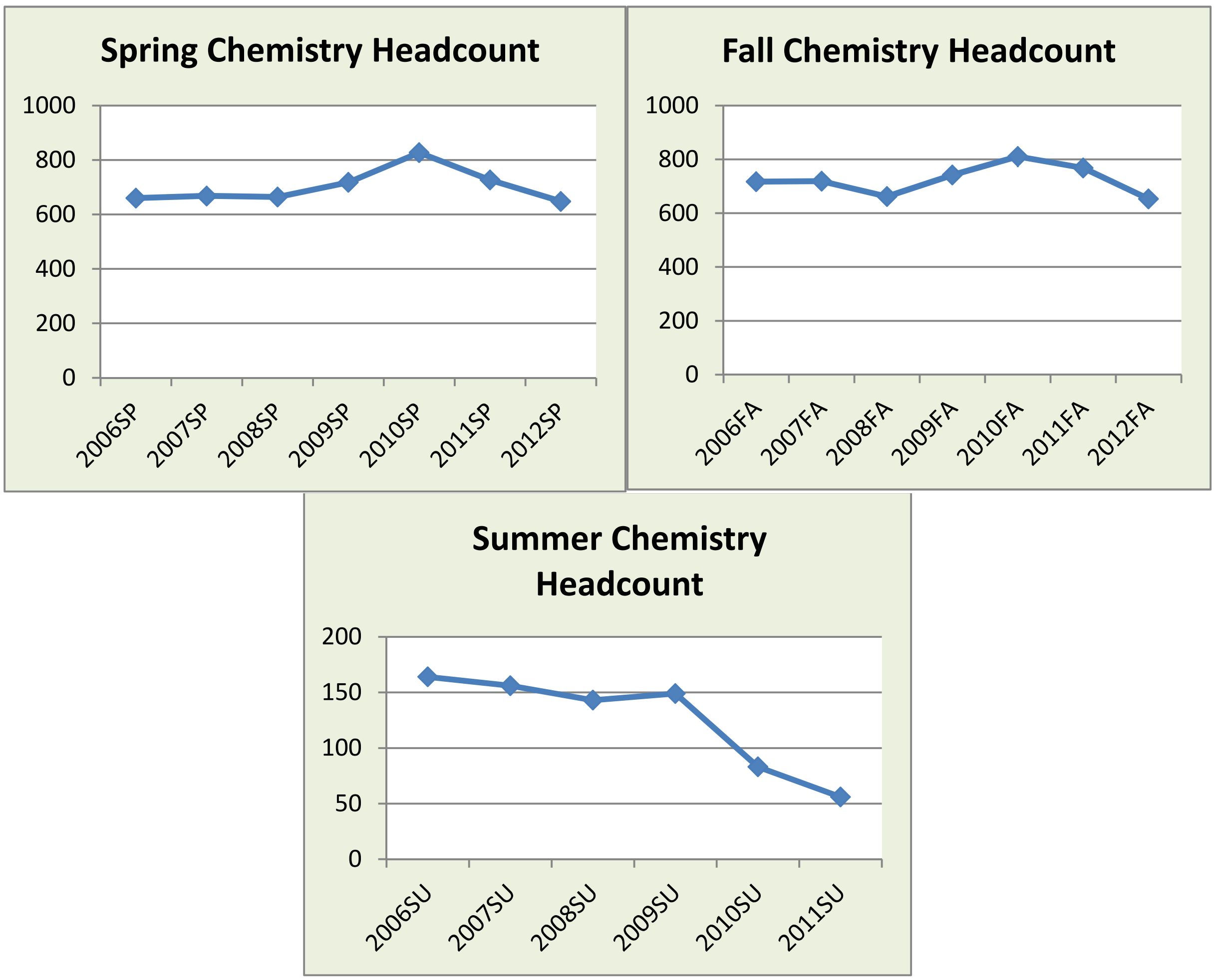
Figure 5.4.1 Headcounts Comparison for Chemistry, Science and College FA 2006–SP 2012



Not unexpectedly, the spike in enrollments for Chemistry and Science correlate to a college-wide enrollment increase in 2009-2010. Obvious in each of the three bar graphs (**Figure 5.4.1)** is a dearth of sections for summer terms after 2009. In fact there were no Chemistry sections offered in 2012 and no Science sections offered from 2010 to 2012.

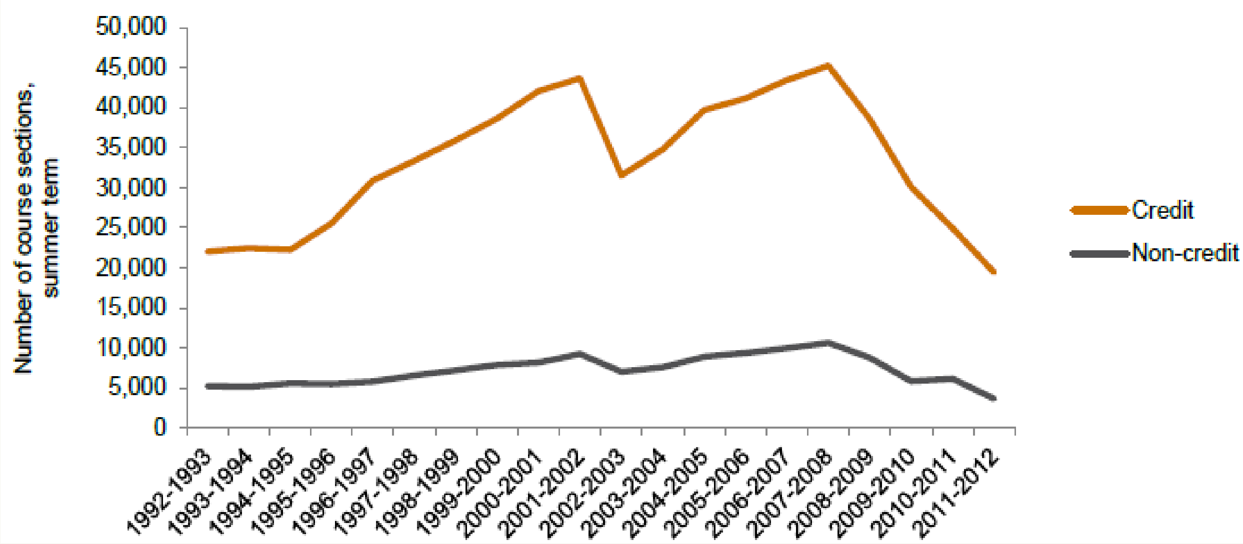
Figure 5.4.2 amplifies the enrollment trends in Chemistry. Starting in 2009, enrollments started to increase significantly during spring and fall terms until this trend tapered off in 2012. This short-term increase is certainly due to cutbacks in the summer program- the trend for summer terms began to decrease about the same time that spring and fall enrollments were up. (Note the different scales for the y-axis in each graph.)

Figure 5.4.2 Headcounts for Chemistry FA 2006 – SP 2012



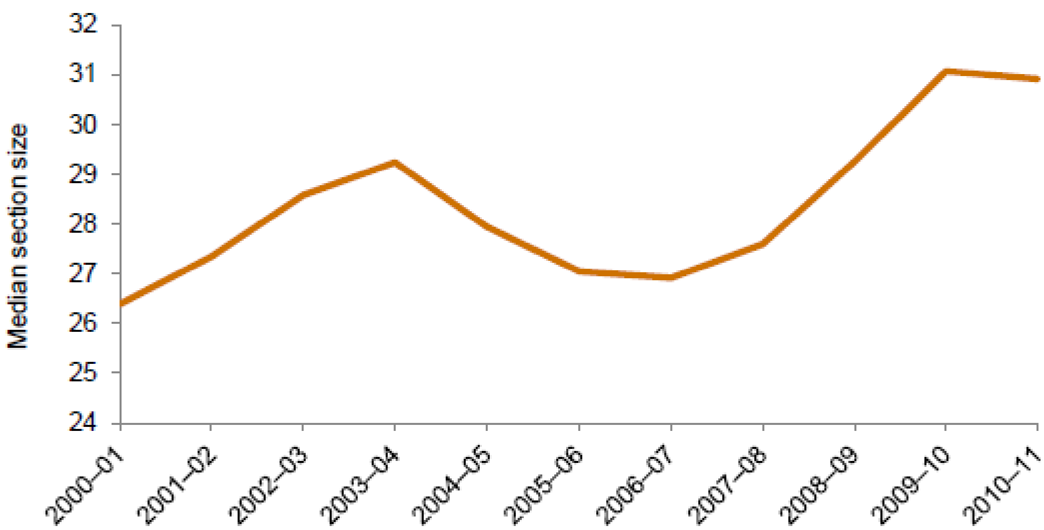
While it may be beyond the scope of this document to rely on data outside the department or college, the Public Policy Institute of California provides somewhat of a standard against which we can compare ourselves. According to this study by the PPIC, summer term offerings decreased approximately 60 percent between 2008 and 2012 and section size increased (*Impact on budgets Cuts on California's Community Colleges*, PPIC; 2013). Figures 5.4.3a and 5.4.3b illustrate the state-wide trends and our department mirrors the enrollment data and conclusions from the PPIC study.

Figure 5.4.3a Course Offerings in Summer Term for California Community Colleges



SOURCE: CCCCO Data Mart, 2013

Figure 5.4.3b Average Section Enrollment for California Community Colleges



SOURCE: (PERRY) March 2013

According to this study, reduction in summer course offerings suggests that community colleges are tackling budget cuts by prioritizing offerings in the fall and spring academic terms. This is certainly the case with our department (Fig. 5.4.2). However, reductions in summer offerings may slow the completion rates for some students. One strategy to alleviate the negative effects of course reductions is to allow increasing enrollment in the sections that are offered. In fact, average class size has increased in recent years as the number of sections has declined (See Figure 5.4.3b).

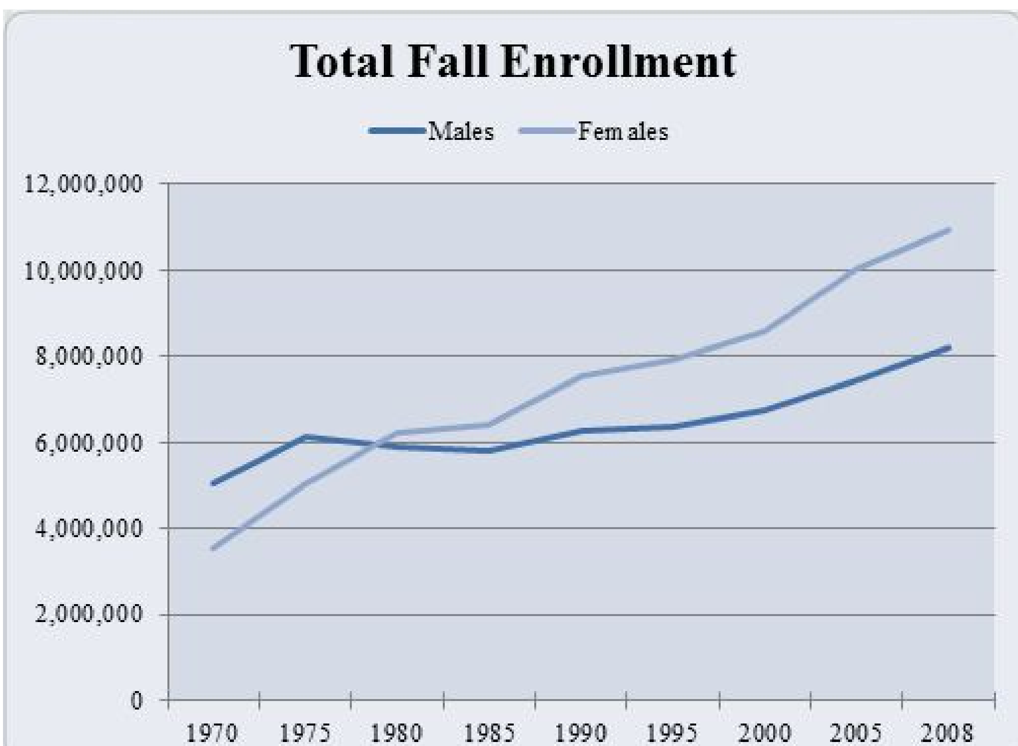
Gender Enrollments

Overall gender-based enrollment trends are listed below. These trends (Appendix 13A) are averaged over the seven-year period (refer to 13A.13 for Chemistry, 13A.17 for Science and 13A.21 for College). The College trends are fairly constant over this timeframe; however for Chemistry, the male/female ratio varies significantly from one semester to the next although a preference for fe males is observed for each term. For Science, there is also considerable variation in the male/female ratio but no gender preference for a given semester. This is statistically expected since the gender gap is relatively small for Science compared to Chemistry or the College.

- Chemistry: 38.9% male 60.2% female 21.3% difference
- Science: 50.8% male 48.6% female 2.2% difference
- College: 42.5% male 56.7% female 14.2% difference

Based on the data, it would seem that we should motivate as a department to encourage more males into our chemistry program. However, the preponderance of females in Chemistry clearly represents a large number of students in the allied health and, especially nursing programs, which are traditionally populated by females. More to the point, nationwide, the male/female ratio has been steadily increasing in favor of women since the 1970s (Figure 5.4.4). These numbers represent consolidation of fall enrollments across the U.S. Variations by term or state-to-state comparisons cannot be gleaned from this summary plot.

Figure 5.4.4 Enrollment by Gender for California Colleges

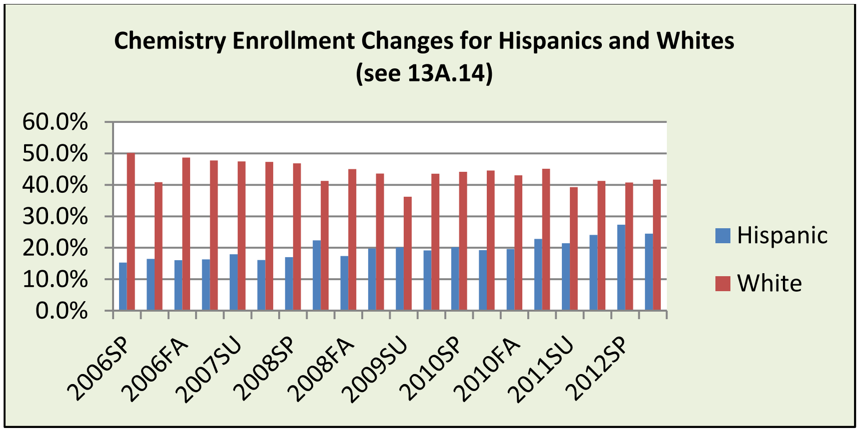


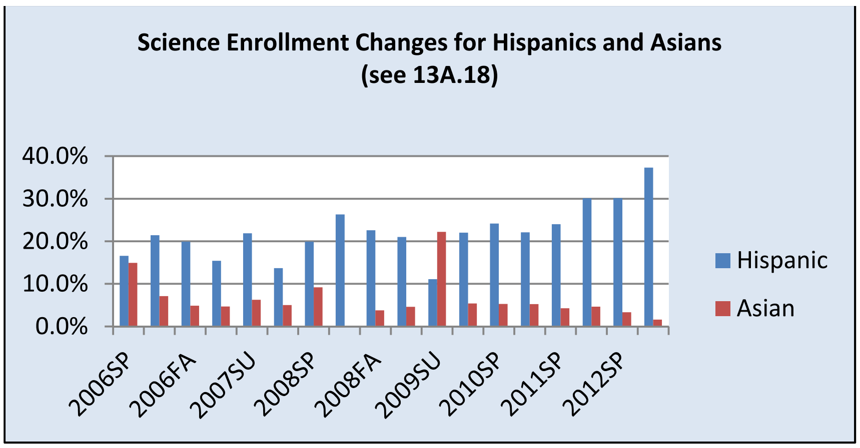
SOURCE: FORBES MAGAZINE; FEB 2012

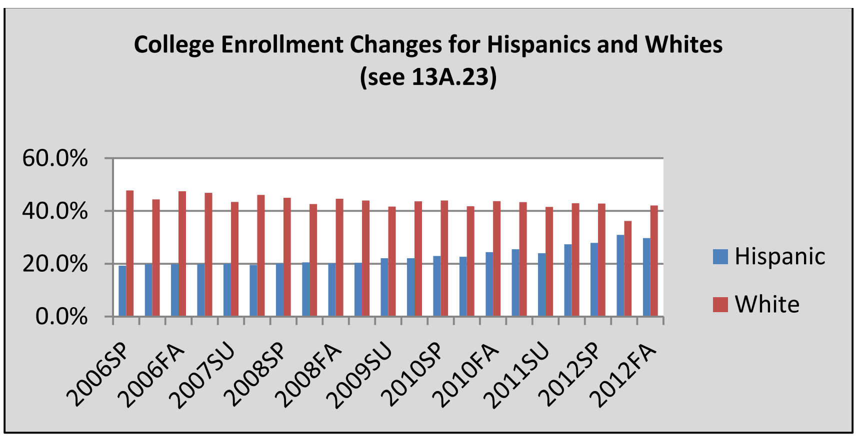
Enrollments by Ethnic Group

There are not many recognizable patterns with respect to ethnic enrollment data for Chemistry, Science or the College. However, examination of the data tables in Appendix 13A does reveal a few significant trends. In particular the Hispanic enrollment has increased in all three categories; the White population has decreased in both Chemistry and the College and, the Asian enrollments appear to be on the decline in Science. These trends are illustrated in Figure 5.4.5 below.

Figure 5.4.5 Ethnic Enrollment Trends for Chemistry, Science and College



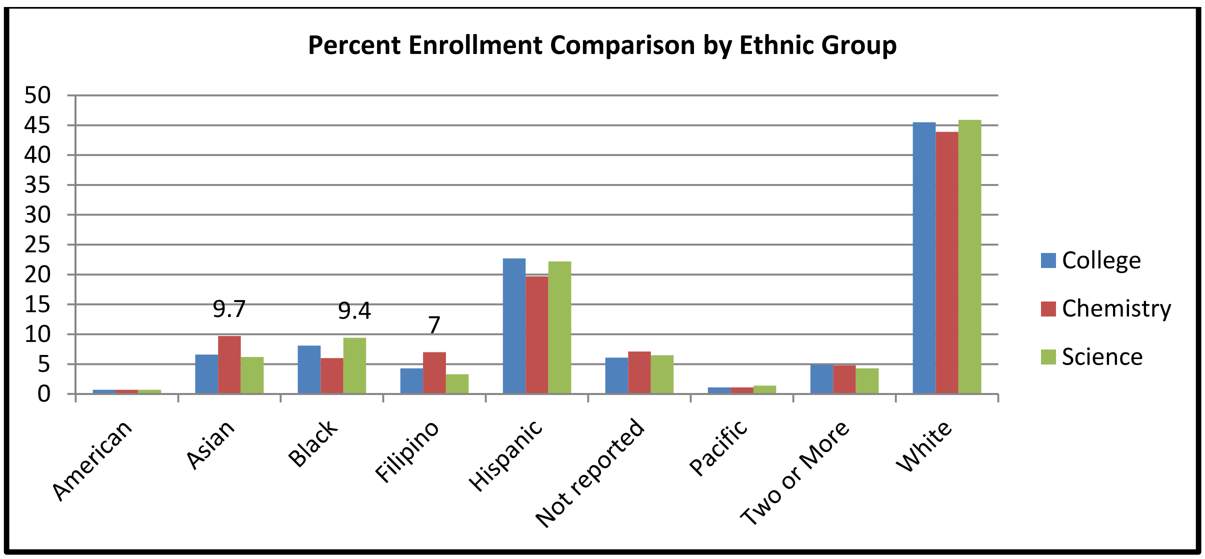




The changes in Hispanic and White enrollments are consistent with demographic drifts in the U.S. and California is certainly no exception. Across the state and other regions, percent increases in Hispanic populations are primarily due to growing Hispanic populations and come at the expense of a corresponding percent decrease in the White population (PPIC study). The apparent decrease of Asian enrollments in Science is perplexing especially in light of the broad academic success rates within this ethnic group.

Another view of ethnic enrollment trends for Chemistry, Science and the College is illustrated in Figure 5.4.6. Two notable observations can be made: the relative headcount (% unduplicated headcount) of Asian and Filipino enrollment in Chemistry exceeds the % headcount in College enrollment for both of these two groups and; the relative headcount of Black enrollment in Science exceeds the College enrollment for this group. The three numerical data labels in the graph below correspond to these occurrences.

Figure 5.4.6 Ethnic Enrollment Trends for Chemistry, Science and College

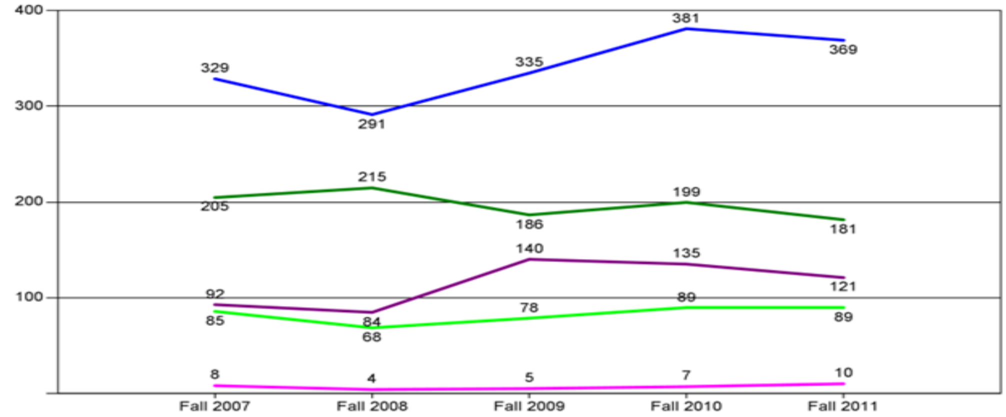


Enrollments by Age Group

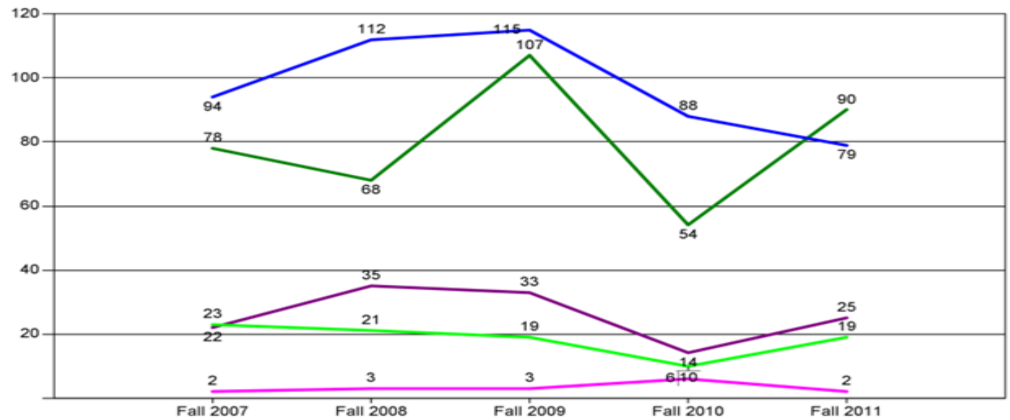
According to the data from Appendix 13A, the 20-24 year old cohorts represent the largest block of enrollments. For both Chemistry and Science, this group comprises 45.0% of enrollments (average value with little variation over the time period). For the College, this group represents 36.9% of enrollments (average value, little variation over the same period). The second highest enrollments for Chemistry, Science and the College are represented by the 18-19 year olds category. An abbreviated illustration is shown in Figure 5.4.7; the complete data for each term are available in Appendix 13A for the reader's perusal.

Figure 5.4.7 Chem Science College Headcounts Fall 2007 - Fall 2011

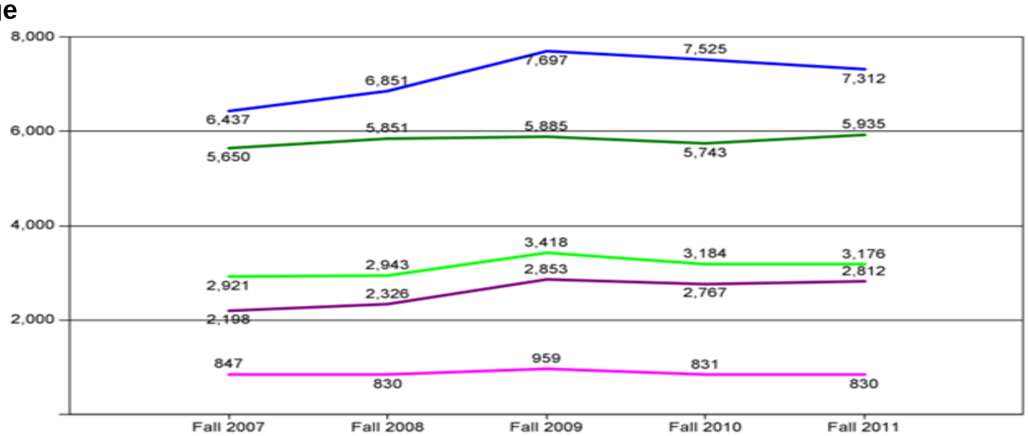
Chemistry



Science

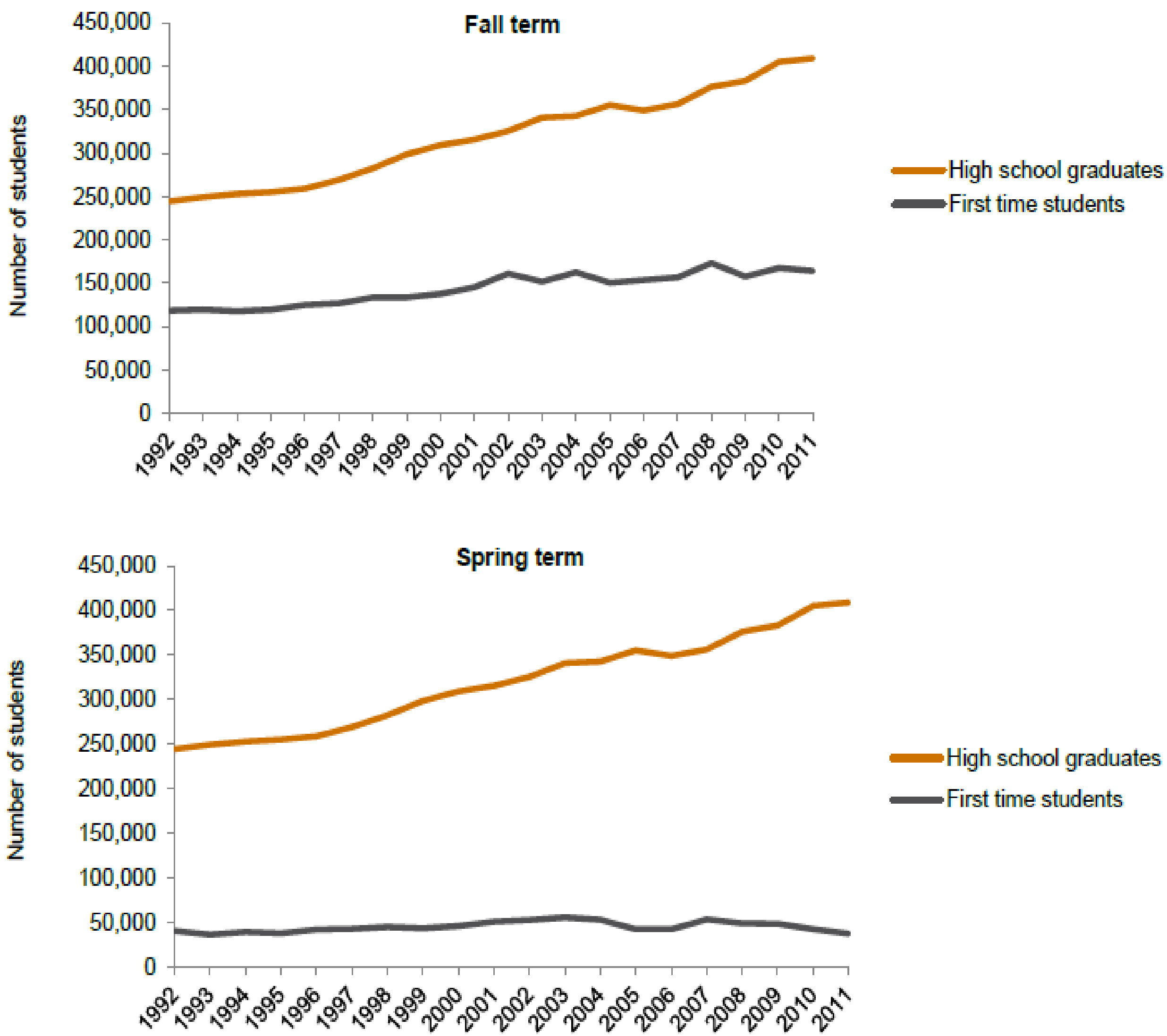


College



It seems counterintuitive that the youngest cohorts are not the biggest group, especially since Grossmont is a community college open to all high school graduates. Since enrollment eligibility requires only a high school diploma, community colleges cannot restrict enrollment by denying admission. Since most adult learners are eligible to register at Grossmont, the only process to restrict enrollment is to enlist a priority system for registration. In California, 94% of community colleges commonly give highest priority to continuing students (PPIC study). This explains why high school graduates are more likely to be somewhat disenfranchised at registration and is probably the main cause for lower enrollments at Grossmont within this age group. Figure 5.4.8 illustrates this trend for California Community Colleges: the gap between the number of high school graduates (top curve) and the number of those individuals who are able to enroll is widening.

Figure 5.4.8 Enrollment of 19 and Younger Cohort Compared to Number of High School Graduates



SOURCE: CCCCO Data Mart, 2013

Success Rates for Chemistry, Science and Grossmont College

Success rates for the department, both chemistry and science, and Grossmont College are compared and shown in Figure 5.4.9 and Table 5.4.1. This information on success rates is contained in Appendix 13B. For the time period spring 2006 through fall 2012, the average success rate for Chemistry is 57.6%; the average for Science is 62.3% and for the college, 70.8%. As noted with retention rates, the success rates for chemistry are steadily increasing and, for the last two years, success rates in Chemistry are increasing at a faster rate than success rates for the college.

Figure 5.4.9 Comparison of Success Rates (%) for Chemistry, Science and College

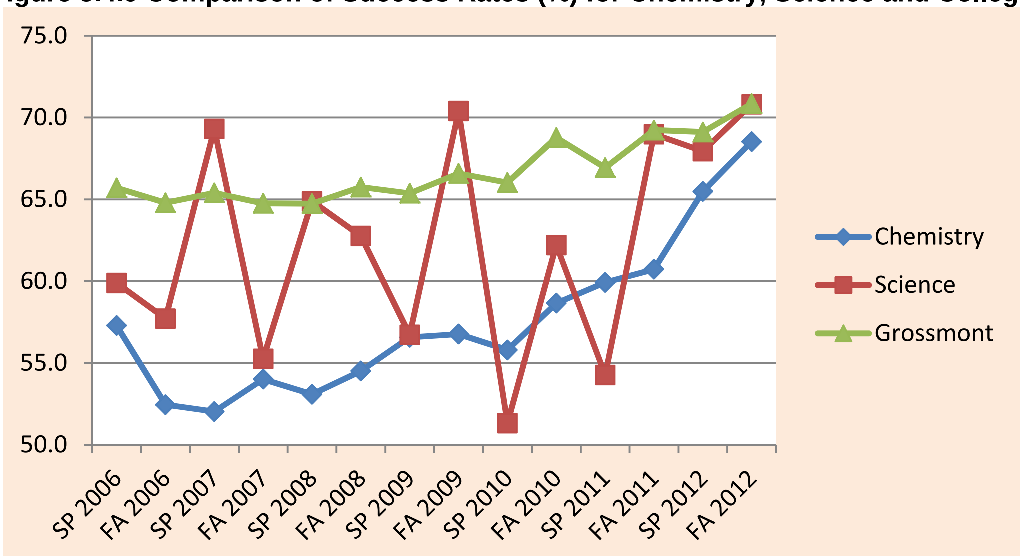


Table 5.4.1 Comparison of Success Rates (%) for Chemistry, Science and College

% Success	SP 2006	FA 2006	SP 007	FA 2007	SP 2008	FA 2008	SP 2009	FA 2009	SP 2010	FA 2010	SP 2011	FA 2011	SP 2012	FA 2012
Chemistry	57.3	52.4	52.0	54.0	53.1	54.5	56.6	56.8	55.8	58.7	59.9	60.7	65.5	68.5
Science	59.9	57.7	69.3	55.3	64.9	62.8	56.7	70.4	51.3	62.2	54.3	69.0	67.9	70.8
Grossmont	65.7	64.8	65.4	64.8	64.7	65.7	65.4	66.6	66.0	68.8	66.9	69.2	69.1	70.8

The success rates for Sci110 exhibit a periodic trend similar to the trend mentioned for retention rates in Section 2.4. Approximately 50% of the semesters (2006-2012) have Science success rates equal to or exceeding that of the College. It should be noted that the vertical axis scales are different in the two graphs (Fig. 2.4.1 and 5.4.9).

Success and Retention Rates for Chemistry Department by Course

Graphs for success and retention rates for two representative courses are shown below, Sci 110 and Chem 102. Refer to Appendix 13B to examine the data tables for Science 110 and all Chemistry courses (see 13B.13 – 13B.16).

Sci110

Despite the cyclical behavior, retention rates for Sci100 show a slight trend upward as shown in Figure 5.4.10 (data from 13B.16). The average rate for the last 6 ½ years is 76% compared to 69% in spring 2006. Even though Science110 is a multiple-section course heavily populated by adjunct faculty, the increase in retention rates may be attributed to the consistent tutelage of a full time tenured faculty coordinator (Oakes) who has been overseeing this course during the time frame represented in the graph. However, the average success rate of 62% is only incrementally higher than the 60% success rate in spring 2006.

Figure 5.4.10 Success and Retention Rates for Science 110 (2006 - 2012)

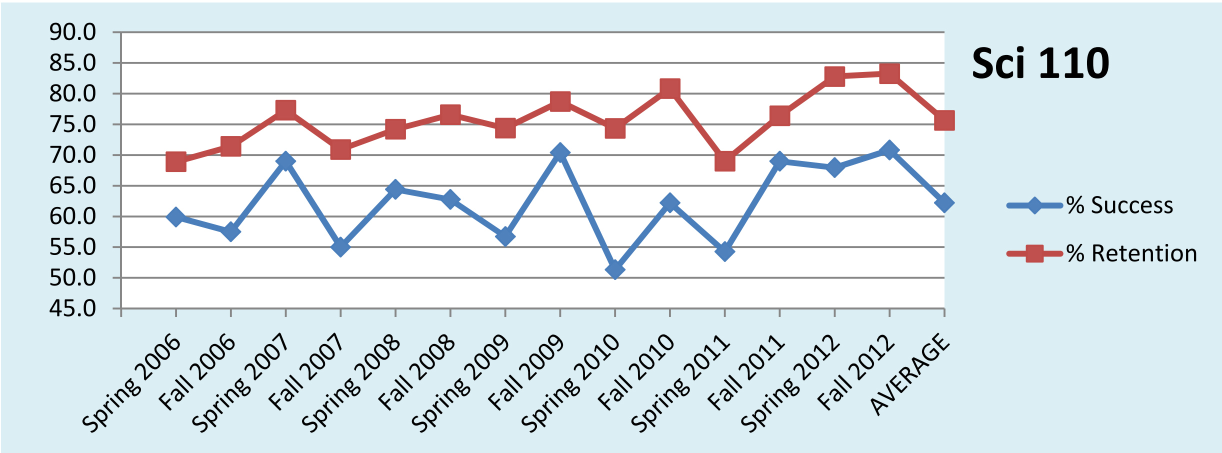
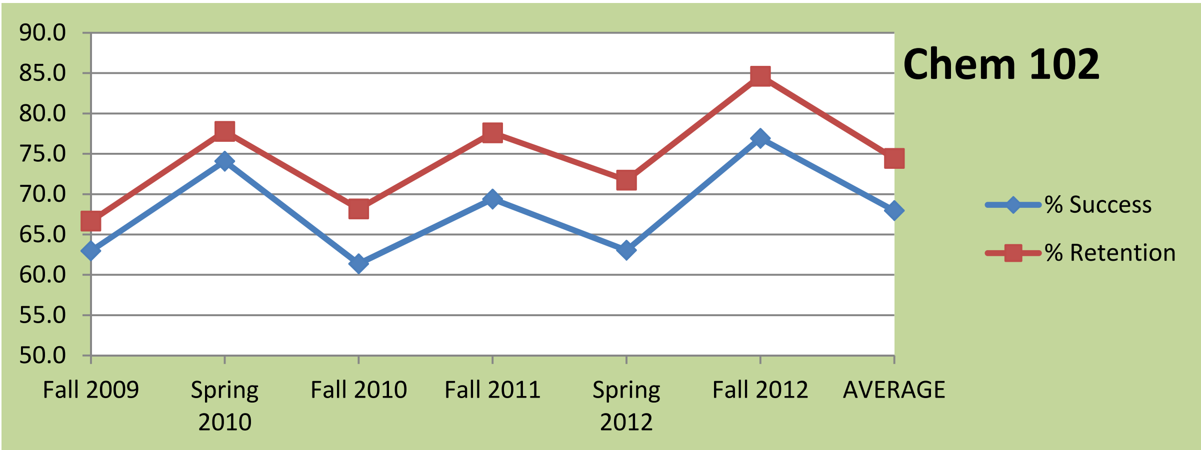


Figure 5.4.11 Success and Retention Rates for Chem 102 (2009 - 2012)



Chem 102

The graph for Chem102 is shown in Figure 5.4.11 (data from 13B.13) provides one of the better examples of our general observation regarding the correlation between high retention rates and high success rates. The interpretation is that students who drop are most likely those who are failing; most of the “no success” percentage is comprised of withdrawals, not failing grades. To say it the other way, students who remain enrolled are more likely to receive a passing grade. In general, this correlation is observed for all chemistry and science courses in our department

As with enrollments, the impact on success and retention rates by summer course options is significant:

- For Chemistry, success rates are approximately 15% higher and retention rates are approximately 9% higher for summer term compared to spring and fall terms (Figure 5.4.12a; data from 13B.2 and 13B.3).
- For Science, success rates are roughly 19% higher and retention rates are approximately 16% higher for summer term compared to spring and fall terms (Figure 5.4.12b; data from 13B.18 and 13B.19).
- For Grossmont, success rates are approximately 12% higher and retention rates are approximately 6% higher for summer term compared to spring and fall terms (Figure 5.4.12c; data from 13B.30 and 13B.31).

Figure 5.4.12a Success and Retention Rates for Summer Term for Chemistry

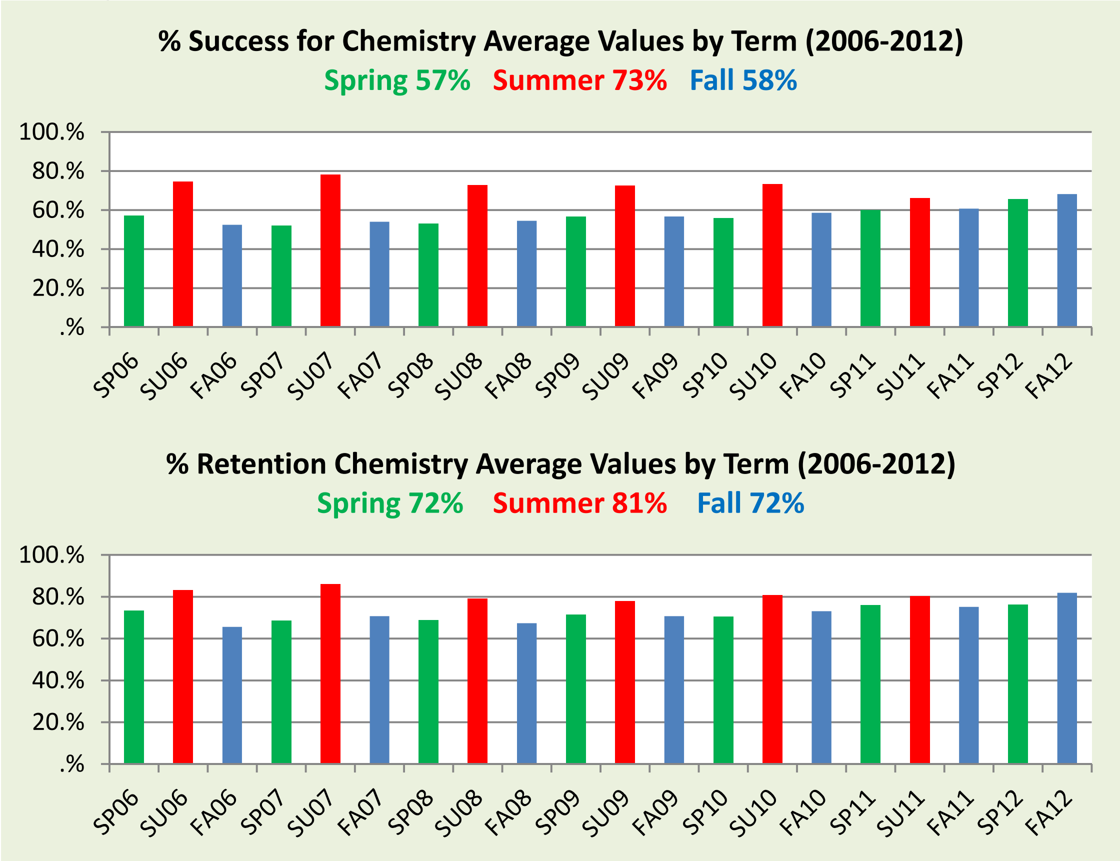


Figure 5.4.12b Success and Retention Rates for Summer Term for Science

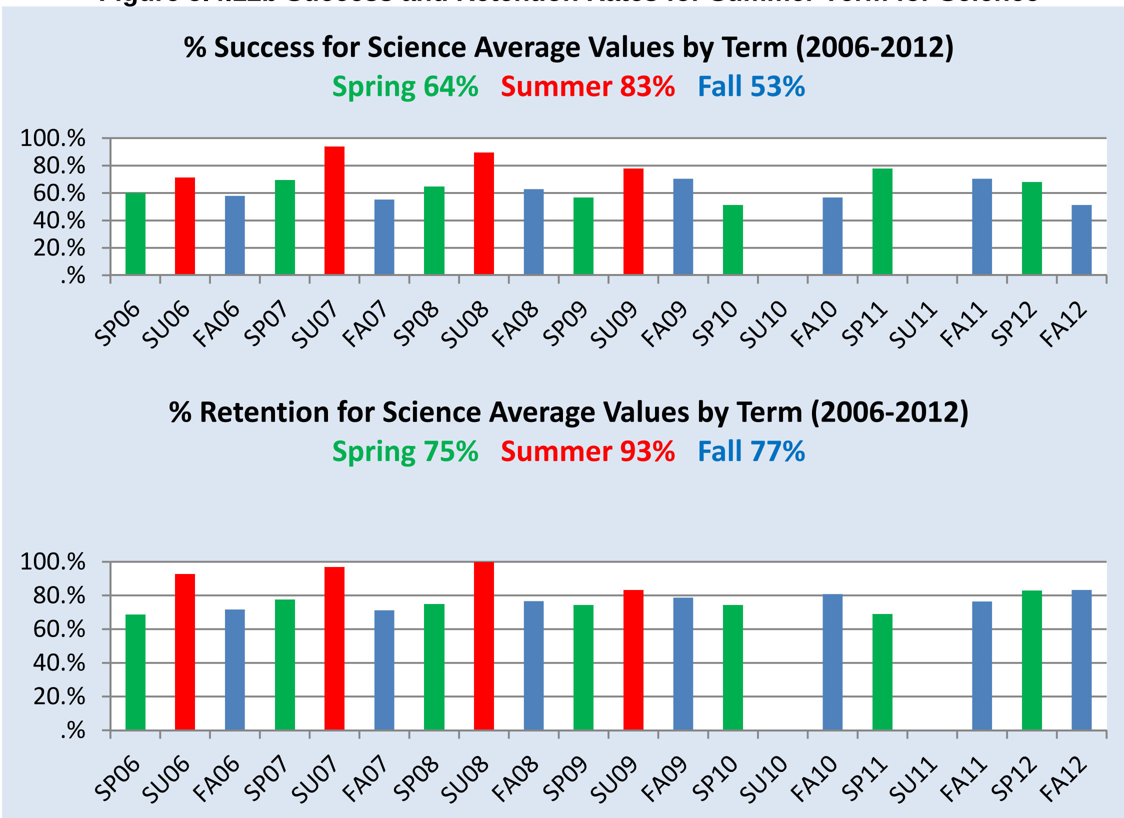
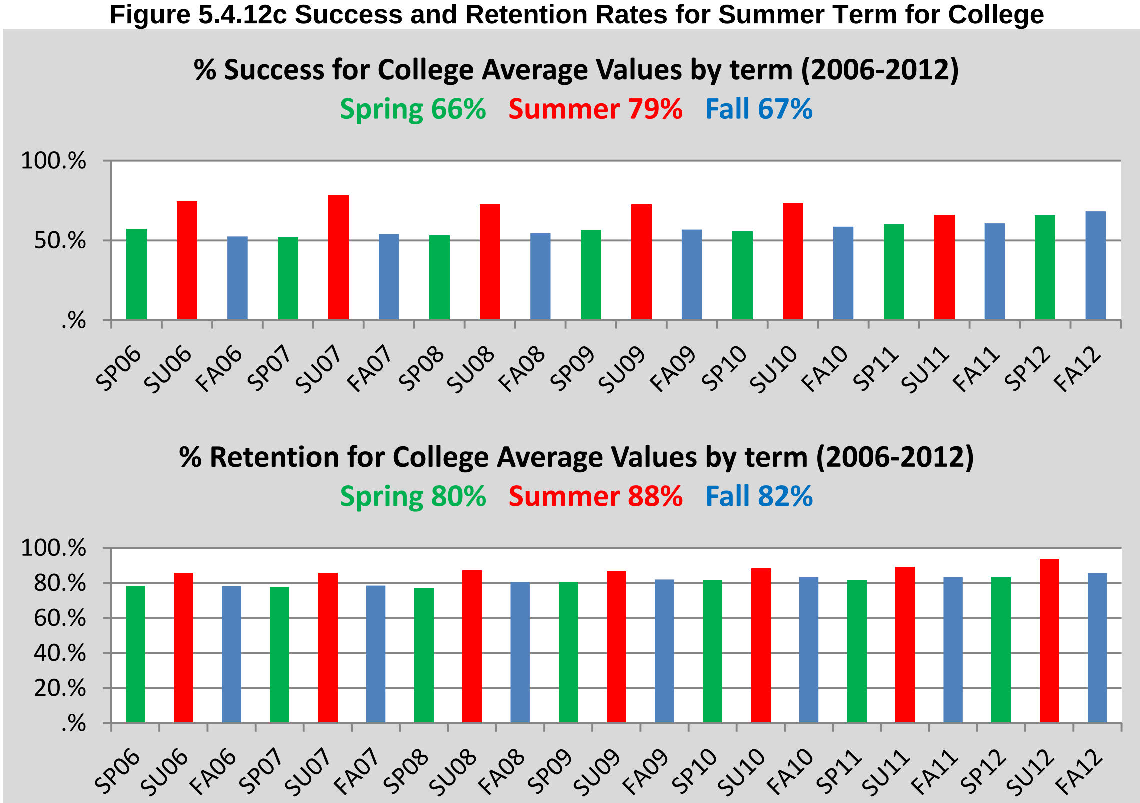
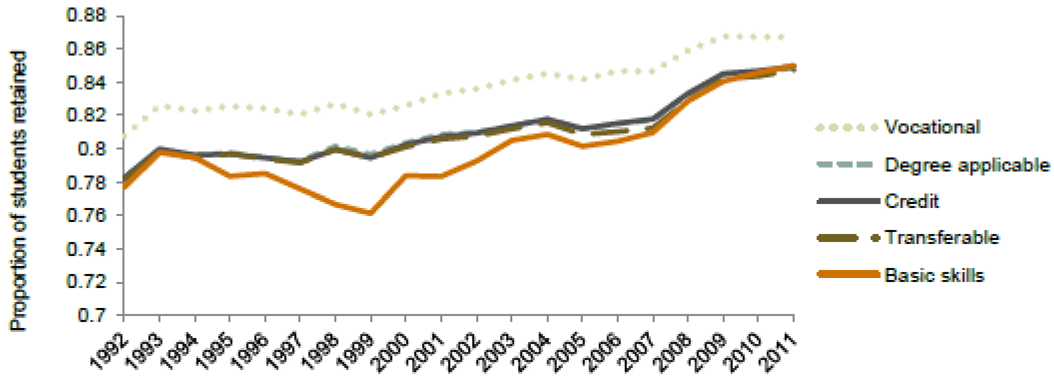


Figure 5.4.12c Success and Retention Rates for Summer Term for College



According to the PPIC study, course retention rates have improved over the past twenty years, with the sharpest increases occurring during the budget crises of the past few years (Figure 5.4.13). Retention rates have increased for all types of courses, with students in basic skills courses posting the most impressive long-term gains.

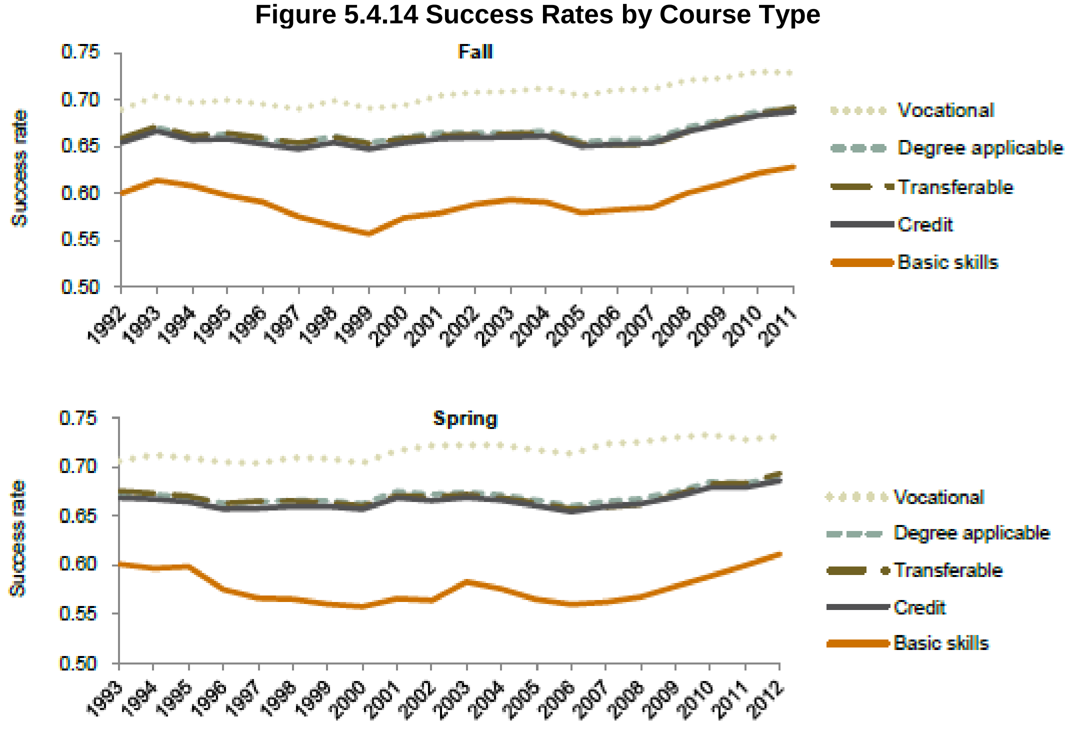
Figure 5.4.13 Retention Rates by Course Type for California Community Colleges



SOURCE: CCCCO Data Mart, 2013

Success rates are also on the rise for all types of courses, with the largest gains occurring in basic skills and credit courses (Figure 5.4.14). Success rates have improved for most age groups, especially for 18 and 19 years old. This is not surprising when potential UC and CSU students are now flocking to community colleges rather than four-year schools. Finally, success rates have been increasing for every ethnic group. Declines in enrollment indicate that students who remain in the system are more motivated and prepared for college, which leads to higher success rates. Our trends are similar.

Figure 5.4.14 Success Rates by Course Type



SOURCE: CCCCO Data Mart, 2013

Success Rates by Age

Fall semester success rates by age for are shown in Figures 5.4.15a,b,c below. The 50+ cohort is comprised of the smallest number of students, less than 1% for Chemistry and Science and approximately 5% for the College. Therefore it is suspect to draw any significant conclusions from the plots below regarding this age group.

For Chemistry, all age groups have increasing success rates from 2006, (ignoring the 50+ group) and the youngest cohorts show the most positive change. This is reflective of the state-wide trend alluded to in the PPIC study. Success rates for Science are not consistent trends and for the College, success rates have generally increased across all age groups.

Figure 5.4.15a Chemistry Success Rates by Age (see 13B.7)

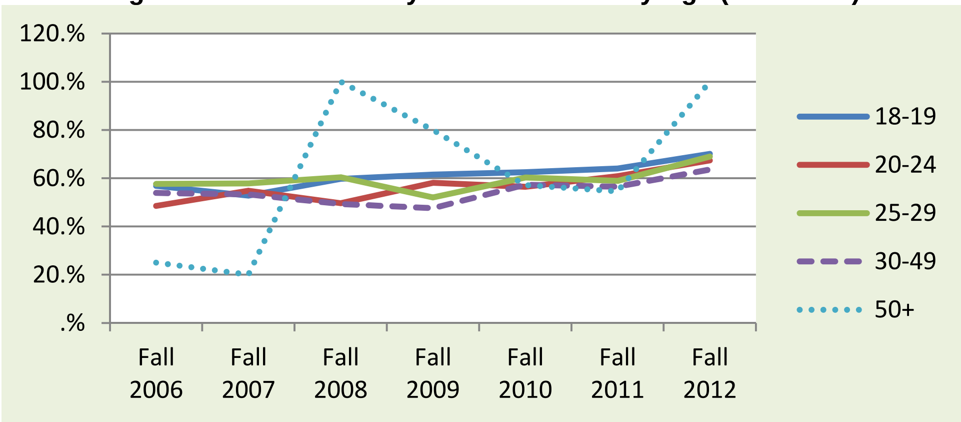


Figure 5.4.15b Science Success Rates by Age (see 13B.23)

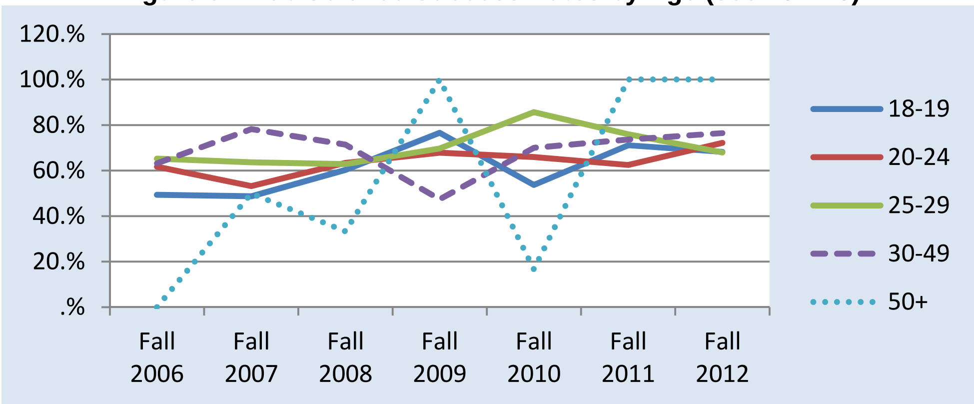
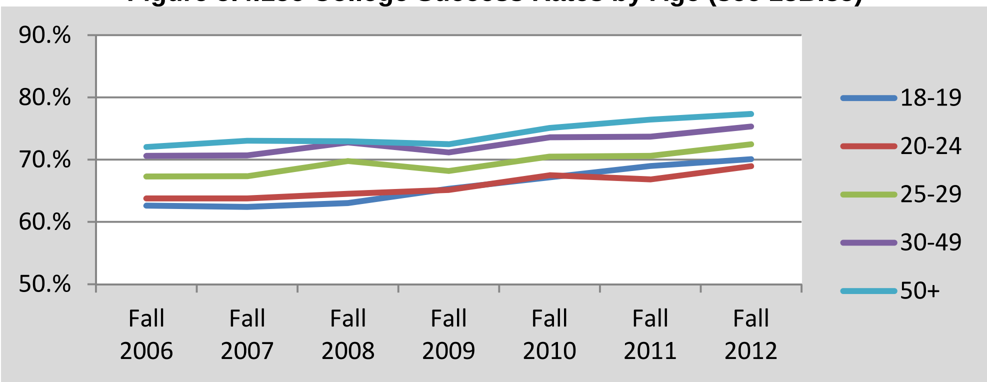


Figure 5.4.15c College Success Rates by Age (see 13B.35)



Success and Retention Rates by Gender

Overall gender-bases success and retention rates are listed below. These trends are average values over the seven-year period adumbrated in Appendix 13B. Chemistry is historically one of the more challenging disciplines so it is not surprising that the success and retention rates are lower when compared to the College. The rates for Science are also lower compared to the College and we reason that although Sci 110 is listed as an introductory course (*Introduction to Scientific Reasoning*), this is a critical thinking course which contains a fair degree of cross-discipline skill sets including some rudimentary math and fairly polished communication abilities such as writing proficiency and oral presentations.

	Success	Retention	
• Chemistry (male/female)	62.2% / 62.5%	75.1% / 74.7%	(see 13B.2 and 13B.3)
• Science (male/female)	66.2% / 66.7%	80.3%/ 78.7%	(see 13B.18 and 13B.19)
• College (male/female)	69.7% / 71.9%	83.3% / 83.4%	(see 13B.30 and 13B.31)

In summary, there is very little gender difference in success rates or retention rates for the department or for the college.

Success Rates by Ethnicity

Success rates by ethnicity from Appendix 13B show a few trends. Figure 5.4.16 shows the 3 ethnic groups with the highest success rates for Chemistry (see 13B.9), Science (see 13B.25) and the College (see 13B.37), respectively. The results are stereotypically unsurprising with Asian and Filipino students among the most successful groups along with Whites, the most populous group in this ranking. One category in Chemistry is actually the second largest group but cannot be identified with a particular ethnicity (no report). For Science one category cannot be identified with a single ethnic group (2 or more). The high success rates for the American native/Alaskan native group data is perhaps deceptive since the number of students in this category is the smallest (less than 1% of enrollments).

Figure 5.4.16 Success Rates by Ethnicity

	Asian	75.9%		
Chemistry	Filipino	66.2%	(No Report	75.6%)
	White	64.8%		
	Filipino	73.9	(American	84.2)
Science	Asian	68.7	(2 or More	69.4)
	White	68.6%		
	Asian	78.3%		
College	White	74.4%		
	Filipino	72.8%		

Analysis of success rates between full time and part time instructors was restricted to three chemistry courses and the one science course in which adjunct teachers are commonly used; Chem 115, Chem 116, Chem 120 and Sci 110. Since Chem 110 almost always uses adjunct instructors, we did not include Chem 110 in this breakdown. These results are shown below; each figure includes corresponding table and graphical results (Figures 5.4.17 – 5.4.20).

Figure 5.4.17 Chem 115 Success Rates for FT and PT Instructors

CHEM 115	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	37.4	44.4	48.7	47.1	53.7	60.3	52.5	68.8	65.0	53.1
% Success PT	66.5	61.4	61.6	55.2	52.0	54.4	78.5	52.6	0.0	60.3

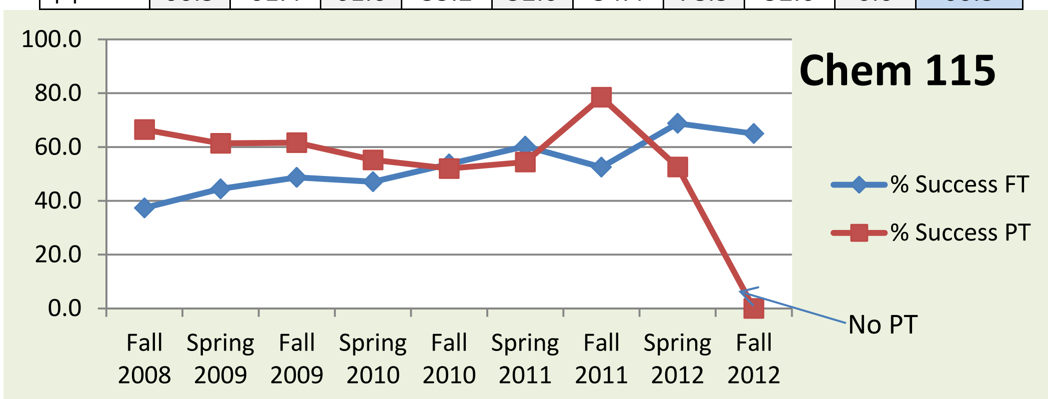


Figure 5.4.18 Chem 116 Success Rates for FT and PT Instructors

CHEM 116	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	80.0	62.5	65.0	0.0	0.0	0.0	0.0	77.4	76.8	72.3
% Success PT	63.3	73.2	60.3	64.7	77.8	73.2	84.2	0.0	0.0	71.0

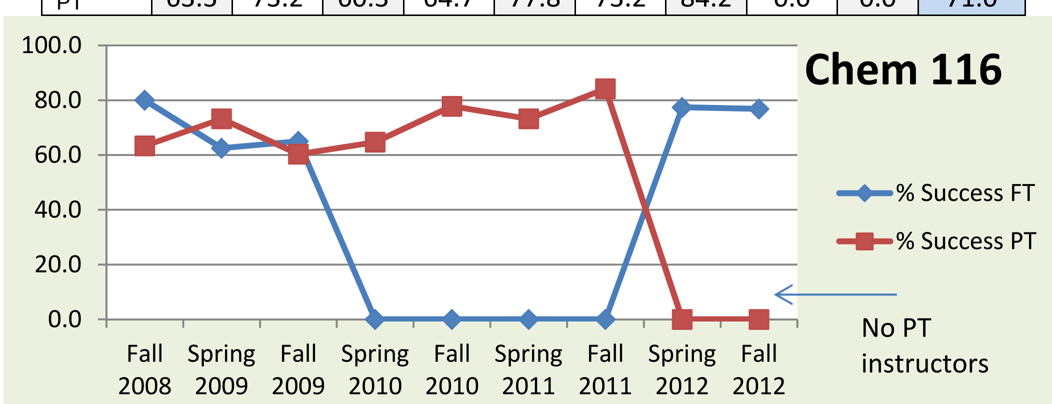


Figure 5.4.19   Chem 120 Success Rates for FT and PT Instructors

CHEM 120	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	38.1	52.9	48.2	47.6	52.5	61.6	36.0	50.1	62.3	49.9
% Success PT	58.8	42.0	50.9	51.2	55.9	57.4	59.3	73.1	70.7	57.7

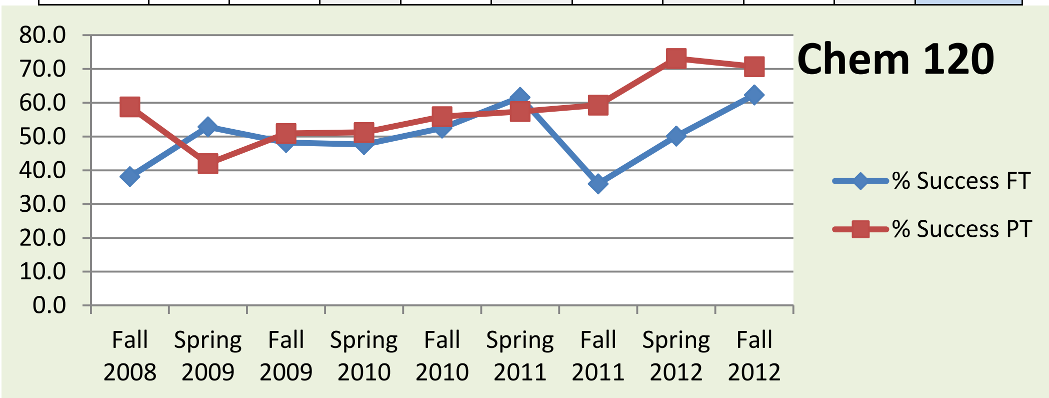
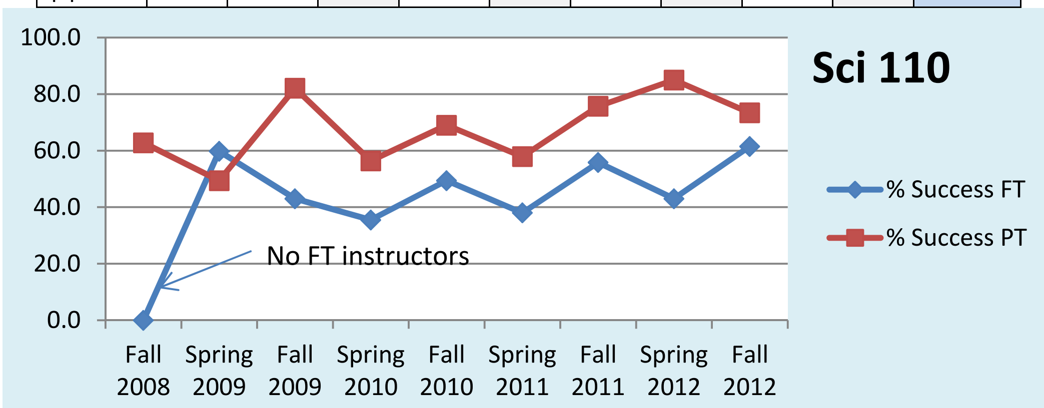


Figure 5.4.20   Sci 110 Success Rates for FT and PT Instructors

SCI 110	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	0.0	59.8	43.0	35.5	49.4	38.0	55.8	43.0	61.5	42.9
% Success PT	62.8	49.4	82.1	56.4	69.0	57.9	75.7	85.0	73.4	68.0



With the possible exception of Chem 116 due to the limited data between full and part time instructors, the trend shows that part time instructors have 7- 8% higher success rates compared to full time teachers in the same chemistry course. Sci110 shows a larger gap between the success rates for part time and full time instructors.

Success Rates for Day versus Night Courses

We noticed a general increase in success rates for night courses compared to day courses (Figure 5.4.21). In some cases, the difference appears to be significant (5-7% increase for Chem 113, 116 and 120), in other cases the increase is smaller (2-3% for Sci 110 and Chem 115). The seemingly large increases for organic chemistry are based on a single night section each so we cannot put much emphasis on the difference for Chem 231 and Chem 232; the same is true for Chem 110 which is rarely offered as a night course. Chem 142 is the exception to the general trend: the day course almost always has higher success rates.

We attribute the higher success rates for night course to the fact that these courses are characteristically populated by older, mature students and those who typically have day jobs and are adept at time management. These results reaffirm our commitment to provide a curriculum that spans several time periods throughout the day and evening.

Figure 5.4.21 Success Rates: Day versus Night Courses

		2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	**Average**
CHEM110	Day	66.7%	41.4%	52.0%	75.0%	58.9%	81.1%	62.5%
	Night	not offered	not offered	60.0%	83.3%	not offered	not offered	71.7%
CHEM113	Day	55.4%	44.7%	54.8%	58.3%	63.2%	65.9%	57.0%
	Night	not offered	65.3%	not offered	not offered	not offered	60.0%	62.7%
CHEM115	Day	49.5%	58.7%	50.7%	56.0%	57.8%	62.9%	55.9%
	Night	59.7%	59.8%	67.6%	61.8%	60.2%	47.5%	59.4%
CHEM116	Day	67.0%	59.5%	58.4%	61.1%	67.8%	not offered	62.8%
	Night	63.6%	71.1%	58.8%	75.0%	64.0%	76.7%	68.2%
CHEM120	Day	57.0%	54.7%	53.7%	45.1%	51.8%	53.7%	52.6%
	Night	69.6%	47.6%	55.0%	70.2%	52.1%	64.8%	59.9%
CHEM141	Day	51.8%	52.0%	56.9%	51.0%	54.6%	61.1%	54.6%
	Night	49.2%	53.7%	61.7%	64.6%	48.2%	46.2%	53.9%
CHEM142	Day	80.4%	73.7%	64.4%	73.1%	72.7%	75.0%	73.2%
	Night	58.3%	68.4%	68.4%	43.5%	64.9%	61.9%	60.9%
CHEM231	Day	73.0%	59.5%	82.1%	79.5%	53.7%	61.2%	68.2%
	Night	not offered	not offered	90.5%	not offered	not offered	not offered	90.5%
CHEM232	Day	72.7%	80.0%	not offered	71.4%	84.4%	not offered	77.1%
	Night	not offered	not offered	94.4%	not offered	not offered	not offered	94.4%
SCI 110	Day	61.5%	65.0%	65.6%	63.6%	69.3%	61.8%	64.4%
	Night	61.6%	76.6%	71.7%	60.5%	69.0%	55.6%	65.8%

Success and Retention Rates for Late-Add Students

We examined success and retention rates for students enrolled from waitlists. A partial graphic is shown in Figure 5.4.22. The complete table is included in Appendix 13B (see 13B.43). The last entry in the table below is for Chemistry and it is quite revealing in that students who are not enrolled prior to the first day of class have approximately 6% lower retention rates and approximately 14% lower success rates. The data only allows us to speculate about why this seems to hold true for the general population since this trend is not peculiar to our department, especially with regards to success rates which are impacted more so than retention rates. In any event, these results confirm our anecdotal conclusions over the last several years: students who add late into a course are often disorganized, less motivated, typically less prepared and less apt to discover the keys to success. We conclude that adding students above the class max with an eye towards having a sufficient number of withdrawals before census is a generous overture but, this strategy does not necessarily guarantee an increase in the probability of success.

Figure 5.4.22 Success and Retention Rates for Late-Add Students

The table below contains data for full-term (16+ week) classes only. Enrollments and outcomes for short term classes are not included.

Dark blue shading indicates that the rate for students enrolled **prior to** the start of the semester is significantly higher based on a chi-square test.

Green shading indicates that the rate for students who enrolled **on/after** the start of the semester is significantly higher based on a chi-square test.

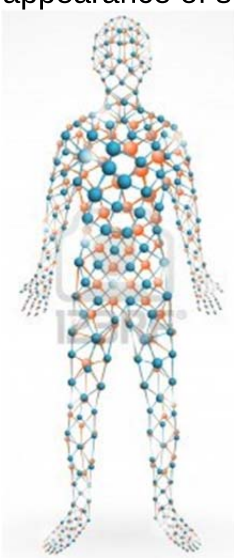
Subject	Enrollment Count (#)			Retention Rate (%)			Success Rate (%)		
	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments
	Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes	
ANTH	1,259	334	1,593	83.9	80.5	83.2	73.6	65.0	71.8
AOJ	2,244	397	2,641	82.4	81.1	82.2	68.3	63.2	67.5
ARBC	214	107	321	81.8	77.6	80.4	66.4	63.6	65.4
ART	2,280	813	3,093	84.3	84.4	84.4	71.7	71.3	71.6
ASL	941	184	1,125	87.5	84.2	86.9	82.3	73.4	80.8
ASTR	858	165	1,023	80.2	71.5	78.8	63.3	52.1	61.5
BIO	3,482	1,003	4,485	78.3	76.9	78.0	65.9	59.8	64.5
BOT*	923	1,529	2,452	67.3	76.3	72.9	51.8	61.3	57.7
BUS	2,700	435	3,135	80.2	80.9	80.3	66.3	63.2	65.9
CA	761	452	1,213	81.9	93.8	86.3	70.8	87.2	76.9
CCS	494	146	640	84.2	84.2	84.2	73.5	69.2	72.5
CD	1,910	411	2,321	81.7	82.2	81.8	60.6	61.3	60.7
CHEM	1,112	328	1,440	70.9	64.6	69.4	58.5	45.4	55.5

Success Rates for "Not Reported" Category

The "not reported" category is one of the biggest cohorts in our department and most likely this category is large across all departments in the college. The reason being is that Earth is a very attractive place in our solar system for carbon-based life forms and we suspect that most of the students in this category are in fact extraterrestrials and are therefore at a lost to categorize themselves using Earth-based classifications such as white, black and various shades in between.

Our evidence is anecdotal at best; however, there are numerous and recurring reports of “not reported” students claiming as their home places such as Europa, Io, Ganymede, Titan, Phoebe and Calypso. Clearly these are neighborhoods associated with Jupiter and Saturn and perhaps expats from Uranus and Neptune as well. Interestingly, none of these folks appear to be from the remaining outer planet of Pluto. Asked to clarify this anomaly, renowned resident astronomy expert, Dr. Ross Cohen explained that creatures from the gas giants behave differently than species from Pluto because Pluto does not resemble the other outer planets – no rocky core, no atmosphere and no moons. In fact, Pluto is no longer officially classified as a planet.

Although we are not entirely comfortable relying on dangerous and inappropriate stereotyping, other evidence for extraterrestrials stems from the behavior and appearance of some individuals within this broad, “not reported” category. For example, the inability to withstand certain wavelengths of light in the lab (i.e., the 590 nm wavelength of yellow light from the sodium vapor lamp used in spectroscopy experiments) often elicits periodic twitchy spasms and copious drool from various ports of their bodies. Also, the normal fluorescent lights in both classrooms and labs seem to overwhelm many of these beings which no doubt is a reaction to the increase in ambient light relative to their homes where the brightest light is albedo in origin, not the faint light from the distant sun.



As far as physical appearance is concerned, there is little agreement as to a particular body type or physical feature that would identify these students as extraterrestrial. However, the one-eyed, the tailed and the reptilian epidermis specimens are likely candidates for this broad group.

Regardless of appearance or behavior (which is innocuous for the most part), the high success rates for these creatures speaks volumes about the innate capabilities of our nearest galactic neighbors and we continue to welcome and mentor all creatures great and small.

5.5 If state or federal licensing/registration examinations govern the program, please comment on student success.

We have no programs in our department that require licensing or certification from any agency or oversight body.

5.6 Referring to Appendix 8- Degrees and Certificates if the program offers a degree or certificate in the college catalog, explain the trends regarding number of students who earn these degrees and/or certificates.

With tongue in cheek, we can boast that both the number of chemistry associate degrees and chemistry certificates has increased a whopping 50% since 2011! See Table 5.6.1 below. In all seriousness, the number of degrees and certificates is quite small compared to the number of students who matriculate through our program. We can only make assumptions based on anecdotal information from our students to account for these small numbers. Since all of the chemistry courses listed for our degree and certificate are required for most undergraduate science baccalaureate degrees, obviously, our students are more interested in completing transferable coursework rather than all of the requirements for a degree or certificate.

As mentioned in Section 2.1, we await announcement from the California Community Colleges Chancellor's Office regarding the 1440 degree requirements for the chemistry discipline. Once students (and faculty) become educated on the details of the transfer model curriculum for chemistry, we anticipate a surge of interest in our chemistry degree and certificate.

TABLE 5.6.1

Headcount by Chemistry Degree			Headcount by Chemistry Certificate	
year	count		year	count
2007SP	1			
2011SP	1		2011SP	1
2012SP	2		2012SP	2

5.7 Describe activities your faculty has implemented to provide and maintain connections to primary, secondary and post-secondary schools.

As described in Sections 1.3 and 2.9, we have been involved with several outreach activities geared towards high school populations. However, we have no formal connections to any primary or secondary schools at the present time.

Our relationships with post-secondary schools is limited to the usual array of articulation issues and some volunteer work on committees that are designed to streamline the articulation processes between community colleges and 4 year schools.

SECTION 6 - STUDENT SUPPORT AND CAMPUS RESOURCES

6.1 Indicate how the program utilizes college support services (i.e. Learning and Technology Resources Center; learning assistance centers for English reading and writing, math, technology mall, and tutoring center; Instructional Media Services, CATL).

One of our faculty (Lehman) served as director of CATL for a two-year period. Since then, this learning center has been disbanded.

We work closely with DSPS each semester to accommodate students that require this type of assistance. We have a great working relationship with this office and frequently do business over the phone and often enjoy expedited service because of our personal connections.

Since we maintain our own departmental tutor center (CSLC), we do not utilize the campus tutor center to any large degree although some of our students do utilize the tutor center on their own. And of course the technology mall is a popular place for many students and although we do not keep track of the usage, it is not uncommon to hear our students planning a small study group meeting in the tech mall.

The math center is a common recommendation by chemistry faculty to our students that need assistance with math review and electronic calculator usage.

Instructional Media Services is a great asset for our department and we are continually grateful for their rapid response to department needs; they keep our classroom projectors operational are always available to meet instructors in the classroom within minutes of a phone call. James Cho with instructional computing is considered to be an honorary member of our department in a sense. Each semester, he is here during staff development week to update the clones on our department computers in the CSLC. His expertise at trouble-shooting conflicts with multiple platforms and software clashes is invaluable.

The English reading and writing center is also recommended to students whenever an instructor feels that they can benefit from “refresher” instructions for writing assignments. In particular, the honors Sci110 course makes a point to recommend the English center to students given the large volume of writing assignments that are part of that course.

6.2 Analyze the results of the Student Survey - Appendix 7 and describe student utilization and satisfaction with campus resources as it relates to your program (i.e. availability, usage, relevance).

The percentages for each student response regarding campus resources are shown below in Table 6.2.1.

Except for DSPS and EOPS, students generally indicate that campus resources are helpful regardless of whether or not it is a required component of their coursework. This observation supports the notion that we can better serve our students simply by reminding them throughout the semester about the available helpful resources.

Table 6.2.1 Student Survey Results for Campus Resources				
Resource	**Use Required**	**Voluntary Use**	**Helpful**	**Not Helpful**
Assessment and Testing Center	22	78	49	51
English Writing Lab	14	86	45	55
Tech Mall	6	94	82	18
Library (online resources)	8	92	75	25
On-Campus Library	8	92	79	21
Math Study Center	9	91	60	40
Tutoring Center	6	94	83	17
DSPS	6	94	41	59
EOPS	5	95	43	57
Chemistry Computer Labs	15	85	86	14
Blackboard Help Line	19	81	49	51
Other	32	68	51	49

As far as the Assessment Center is concerned, our guess is that 22% of students are required to use the testing center (time and half for exams, etc.) and the remaining 78% are voluntarily seeking academic advice which is smart behavior. However, approximately 50% of students claim that the Assessment Center is not helpful. This begs the question, are students upset about the advice they receive or are they just irritated by the extra work involved with scheduling exams outside of class.

We are especially encouraged to see that students find the chemistry department computer labs to be very helpful (86%). This speaks to the relevancy of our program in that computer-based instruction is an attractive avenue for modern learning habits. We also like to see that students think highly of the Math Study center (60%) since, as mentioned previously, math skills development is a primary indicator of success in our program and we regularly encourage them to seek help from that resource. We would like to see more positive responses to the English Writing Center since that too is necessary for success. Hopefully our new linked course, Chem 120/ Eng 120 (Section 5.3), will induce more students to consider the value of the writing center as have the previous linked courses in Sci 110.

Students that indicated “other” in the survey are mostly referring to the ancillary materials from our textbook publishers. OWL, Wiley Plus, Mastering Chemistry, etc. are computer-based homework modules that are required for some, but not all, of our chemistry courses. Again we speculate that students are not well satisfied (51%) with this mode of learning which is most likely related to the anecdotal comments we hear from students about ease of use, relevancy and level of difficulty compared to the hours spent on these exercises.

6.3 Describe some of the activities for which your department has used the Institutional Research Office or other data sources.

One instructor (Lehman) has worked with this office on a regular basis. At least 4 elections have been run through their office. Studies dealing with our chemistry transfer students were completed within the last few years. One study involved investigation of the success rates of students that move from Cuyumaca to Grossmont, and the more recent study correlated success rates for waitlisted students and crashers who add a class and the likelihood of completing that class.

6.4 Working with your library liaison evaluate and provide a summary of the current status of library resources (i.e. books, periodicals, video, and databases) related to the program.

We have an assortment of somewhat outdated but still pertinent chemistry videos and newer DVD selections that instructors use in lecture and lab sessions to reinforce chemical concepts and application examples (chemical industry videos).

For the most part, we do not have our textbooks on reserve since we were not diligent about updating the selection as our textbooks changed from one semester to the next. Instead, we make available to our students publisher desk copies previous editions of textbooks. This assortment is kept on the shelves in the CSLC, handy for both students and our tutors on an as-needed basis.

6.5 How does the program work with the various student support services (i.e. Counseling, EOPS, DSPS) to help students gain access to courses, develop student education plans, make career decisions and improve academic success? How does your program communicate specific and current information that can be used by those student service groups?

We maintain a good working relationship with the Counseling office and talk frequently with counselors to be sure they have correct information about our chemistry program, specific course requirements and expectations. For example, we have discussed our need for certain prerequisites in the chemistry department and clarified the effects of our prerequisites on other disciplines, primarily math, physics and biology.

We work closely with Instructional Operations for scheduling of classes each semester and to provide course outline changes and resolution of articulation issues with Cuyumaca College and other institutions. Instructional Operations provides valuable assistance to us so that we can avoid scheduling classes that conflict with classes in other disciplines that students need to complete their major course work.

We communicate frequently throughout the semester with personnel in DSPS to facilitate accommodations and testing procedures for DSPS students.

We are on a first name basis with several individuals in the above-mentioned offices and typically resort to a phone call or a personal visit to conduct business and resolve any difficulties with individual students.

6.6 Describe how the department uses available technology to enhance teaching and learning and to communicate with students? According to the Student Survey in Appendix 7, how do students respond to the use of technology?

Our department utilizes many of the technological accoutrements available to instructors. We rely on the audio/visual capabilities provided by classrooms outfitted with “smart carts”. Our chemistry labs are equipped with overhead projectors and data acquisition capabilities to capture data during experiments. Each instructor has a webpage containing various study aides such as lecture notes, practice problems and links to avail students to publisher’s websites for additional content. Blackboard is a common platform of communication between students and instructors and Web Advisor provides easy access to class-wide communication via email.

Our biggest use of technology occurs in our chemistry lab sessions. Each chemistry lab has a small anteroom for electronic balances and some specialized lab equipment such as melting point devices and rotoevaporators. Students are taught proper procedures for access to these items and are encouraged to use the equipment as dictated by the needs of their lab experiments. The organic lab has an adjoining instrument room that houses our state-of-the-art analytical equipment: IR spectrophotometer, gas chromatographs, HPLC chromatograph, atomic absorption spectrometer and specialized devices for chemical sample storage.

The CSLC has 40 computer stations that contain the usual collection of Microsoft Office programs that students may use to write lab reports and project presentations. We also have software packages specific to chemistry education on these computers such as ChemDraw and Odyssey by WaveFunction, a molecular modeling program that is used in conjunction with IR spectroscopy lab experiments.

The scientific equipment used in our program represents one of the major assets in our complement of educational methods designed to foster scientific literacy in qualitative and quantitative reasoning. The technological link between concept and reality becomes evident to students through the use of our valuable instrumentation suite.

6.7 Identify and explain additional technological resources that could further enhance student learning.

We are in the process of prioritizing our technological needs from a list that includes adding to the number of micro GC and Vernier systems. Currently we have only two micro GC devices which create a bottleneck for students in the organic and forensic lab experiments. A similar problem exists with experiments in general chemistry that require data acquisition over extended time periods using the Vernier boxes.

We also need to identify permanent funding for software packages used by several chemistry courses. These are ChemDraw, a molecular drawing program and Odyssey, a molecular modeling program.

Eventually we will need to replace our infrared spectrometer. This is an expensive instrument (approximately $24K to purchase new) we procured several years ago with money from our division’s share of a state block grant. This instrument is the workhorse in our instrument room and serves organic, biochemical and forensic courses. These courses have constructed tried-and-true experiments based on IR spectroscopy analyses and without this instrument, our curriculum will suffer greatly.

6.8 Comment on the adequacy of facilities that your department uses. (e.g., does the room size and configuration suit the teaching strategies?)

The chief disappointment for us in term of facilities is the broken promise that our department would eventually have one large lecture room dedicated to chemistry classes and that this area would also contain a small satellite prep facility for classroom chemistry demonstrations. The purpose of the satellite prep facility was to eliminate the current process of carting chemicals and equipment across the campus and then returning to the stockroom after lecture. This process is especially unattractive when the instructor is scheduled to teach back-to-back lectures since the pass time between classes does not lend itself to this particular housekeeping chore. The above-mentioned promise was made years before when we were still in the planning stages for building 30 (the new science lab bldg.) and the agreement was to carve out a dedicated room from the remodeled building 31 (formerly the 300 north bldg.). By the time remodel construction was completed on building 31, the original agreement had been forgotten, due in part to the changes in personnel who were party to the original agreement (former Dean Bill Bradley was our biggest advocate for this arrangement) and also due to pressure from instructional operations to accommodate other departments looking to capitalize on the newly refurbished facilities. It must be noted that Instructional Operations is in no way responsible for the current situation. As it stands, we are in line with the rest of campus to find classrooms each semester and the only two large lecture rooms in building 31 which can accommodate our double and triple sections (64-96 students) are also popular for many other departments. Furthermore, neither of these two large lecture halls was plumbed for large wash sinks which was part of the agreement to facilitate our chemistry demonstrations.

One last point to be made regarding these new lecture halls is the choice of furniture. The student desks are made from corrugated plastic which makes it nearly impossible to write on the uneven surface. The Earth Science department refers to these desks as “covered in bumps”. Students must use their notebooks to cover this nonfunctional surface which increase the probability that they will peek into their notes during a quiz or exam.

With the new science lab building (Bldg 30), we have adequate space to accommodate all of our lab sections however; we do have a few issues to be resolved- we need display cases in the chemistry hallway on the second floor and we need replacement chairs for the chemistry labs.

Funding was depleted before we could purchase display cases for the hallway outside the faculty offices; these were also part of our original submission plans. The reason for display cases was to exhibit equipment set-ups for the laboratory experiments each week. The idea was to show the student set-up, as part of a prelab activity, in order to reduce the time students spent preparing for experiments once they are actually in the lab. The other purpose for display cases is to showcase our student’s poster project after we select the best examples for recognition.

The stools provided for the students to sit in lab are not ergodynamically suitable, especially for extended periods of time and all our labs are at least 3 hours long, some longer. We have replaced about half of the stools with swivel chairs on wheels but funding was exhausted before we could replace the remaining 50 or so stools.

Unfortunately, we cannot afford to divert money from our chemical supplies budget to purchase the remaining chairs.

SECTION 7 - COMMUNITY OUTREACH AND RESPONSE

7.1 How does your program interact with the community (locally, statewide and/or nationally)? Describe activities.

Activities involving the local and statewide community are described in detail in Section 1.3 of this document in response to recommendations from the previous Program Review Committee (recommendation #1).

<u>Advisory Committee Recommendation</u>

Some disciplines are required to have advisory committees. Answer this question if this is applicable to your program.

Our department is not required to have advisory committees.

7.2 If appropriate, summarize the principal recommendations of the program advisory committee since the last program review. Describe how the program has responded to these recommendations. Include the date of last meeting and frequency of meetings. List organizations represented.

Not relevant.

SECTION 8 - FACULTY/STAFF PROFESSIONAL DEVELOPMENT

8.1 Highlight how your program's participation in professional development activities including sabbaticals (listed in Appendix10) has resulted in improvement in curriculum, instruction, and currency in the field.

Appendix 10 contains a table of professional development activities for the department faculty. Below are some highlights.

- Sabbatical leaves (Lehman) to develop expertise in analytical instrumentation:

The first sabbatical (F 2002) involved working with the crime lab of San Diego County Sherriff's department and concurrent research with undergraduate education at Point Loma University and the second sabbatical (F 2009) was used to develop instrumentation methods and experiments to incorporate into our chemistry laboratory curriculum at Grossmont College.

A semester sabbatical (Willard F 2006) working with the Science Olympiad:

This project was undertaken to develop new materials for chemistry coursework and to encourage east county schools to participate in local science competitions. Results include organizing the inaugural Science Decathlon in California; hosting a Be Wise (Better Education for Women in Science and Engineering) workshop at Grossmont College; participating in numerous preparatory workshops at Grossmont and Cuyumaca for competition events; and assembling a team of science educators from the GC District and SDSU to help present workshops, facilitate competition events and act as judges for the events.

- A sabbatical leave (Oakes F 2008) to develop new courses, PSC100 and SCI120:

PSC 100, Physical Science for Teachers, is an interdisciplinary physics/chemistry class which now articulates with SDSU NAT SCI 100. It is rather innovative in that the curriculum is problem-based rather than discipline-based and is therefore truly interdisciplinary and is useful in particular to pre-service teachers. As a result of this sabbatical, a new textbook was written specifically for the course (see section 2.6 for details about PSC100).

SCI 120 (which has not yet been offered), is a 4-unit interdisciplinary bio/chem/physics class which utilizes a problem-based approach. We hope to offer this class when pressure about adding back class sections eases.

- A sabbatical leave (Olmstead F 2011) to improve Chem102 curriculum:

This project resulted in the publication of a dedicated laboratory manual for Chem102. A parallel objective of this sabbatical project was to incorporate a POGIL-based approach to learning. POGIL is an acronym for Process Orientated Guided Inquiry Learning.

- John Oakes serves as an editor for the undergraduate journal, American Journal of Undergraduate Research and has reviewed a number of articles for the journal. In 2010 John wrote and published a textbook, ”Intro to Scientific Thought", with Cognella which is now used as the text for our SCI 110 class. He has also published four new books since the last program review and has taught at dozens of universities and in over 50 countries on topics related to science and Christianity. He plays an active role in Project Kaleidoscope, a national curriculum reform effort, and has presented at two national conferences on interdisciplinary science (January, 2011 and February 2013) with PKAL. He also ran a workshop program for PKAL in 2008 on interdisciplinary science at the University of San Diego. He is a local sponsor for the PKAL national conference in San Diego in October 2013.

8.2 Describe any innovative professional development activities your program has created.

The department has developed a chemistry laboratory experience which demonstrates the importance of an understanding of the types of interactions that occur between particles by making a tube of lip balm or lipstick. This presentation has been made to various groups, but we could also provide it for the campus community as a fun introduction to the kinds of things students will learn in our classes. This will help other faculty to be able to share with students how chemistry is relevant to their lives, something that we always seem to need to justify to our students as they sometimes see the discipline as nothing more than an impediment to their success.

Jeff Lehman was the major organizer for a recent field trip during staff development week in which the faculty toured several power facilities in southern California. He has helped coordinate 3 Earth Science flex trips. He also offered flex week workshops on student-faculty communication methods (Twitter and Clickers).

8.3 Describe how your faculty shapes the direction of the college and/or the discipline (e.g., writing grants, serving on college/district committees and task forces, Academic Senate representation, presenting at conferences, etc.).

Jeff Lehman has served as a senate officer for 4 years, and the senate VP for 2 years. He co-wrote two (unsuccessful) education grants with UCSD. He is currently serving on the Budget Allocation Task Force, which has been assigned the job of constructing a new budget allocation method for the district. He served as the Accreditation Standard IIID co-chair; chaired the GE Task Force; served on the tutor task force, and the College Recognition Committee. He is also a member of the Grossmont College EOC and serves on the EOC working group.

Diana Vance has served on the Institutional Review Committee since 2010. This committee is responsible for prioritizing annually submitted activity proposals that support department, division or college wide strategic plans and initiatives. It will also explore and refine cost estimates and options for requests that include short-term staffing, facilities, and technology. The recommended priorities are then forwarded to the Planning and Resources Council.

Cary Willard worked with Susan Arena and Morris Hein as a contributing author on the 14th edition of the Wiley text Chemistry. She was involved in bringing more current topics into the text and updating many of the end-of-chapter questions and generated a set of computer enhanced examples which dovetail with the book. These allow students to not simply read through a solution in an example, but to be guided to the answer through a tutorial process. She also coauthored the solutions manual for the textbook. This was a great opportunity to work directly with two giants in the field of chemical education and learn more about how different strategies in a book help students to excel. An added benefit from this project was the ability to more effectively utilize some of the study guides incorporated into the text.

John Oakes is the Honors Program coordinator and in that connection has developed curricula and served as scholarship chair. He also served on the Grievance Committee and the Curriculum Committee since the last program review. He completed three classes to increase his discipline knowledge in biology so that a single instructor can teach a class with physics, chemistry and biology content. The classes completed included evolution, physiology and ecology.

Tom Olmstead has served on the sabbatical review Committee for the past two years and is now termed out. He also participated in the WOW program at Grossmont College and is the current editor for the Chemistry Program Review document.

Judy George and Cary Willard attended the 2YC3 (2 year college chemistry consortium) meeting in spring of 2012. At this meeting Judy was successful in adding Grossmont College to the study group which comprised the ACS self-study pilot project. Martin Larter and Cary Willard attended the 2YC3 meeting in the fall of 2012.

SECTION 9 - STAFFING TRENDS AND DECISION-MAKING

9.1 Explain any observed trends in terms of faculty staffing and describe changes that have occurred (i.e. reassigned time, accreditation issues, expertise in the discipline, enrollment trends).

Tables 9.1 and 9.2 are shown below; the full-sized tables can also be found in Appendix 9. The number of full time chemistry faculty has been constant since fall 2007. We added our 7th full time faculty (Vance) in 2007. Prior to 2007, we had 6 full time faculty. There was a slight increase in the number of part time faculty from 2006 to 2007 when we reached our maximum number of adjuncts in spring 2007. Since that time, the number of adjuncts has remained fairly steady until the dramatic decrease in 2012 where we lost nearly two thirds of our part time instructors. The obvious explanation for this decrease is the severe section cuts over the last few semesters.

Reassigned time has also remained steady; the bulk of reassigned time (approximately 0.38 LD) is release time for department Chair (or co-Chairs) and a small portion for Sci 110 honors coordinator (approximately 0.1 LED). The release time for honors coordinator has been split 50/50 with the Humanities department (Gwenyth Mapes) for the last three years.

TABLE 9.1 STAFFING TRENDS AND DECISION-MAKING

	2012		2011		2010		2009		2008		2007		2006	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
FT Faculty	7	7	7	7	7	7	7	7	7	7	7	6	6	6
PT Faculty	4	6	9	9	9	10	8	8	10	9	9	11	8	7
FT + Extra Pay FTEF	7.217	6.367	6.067	5.650	6.567	6.767	6.067	7.000	6.001	7.149	6.950	5.949	5.699	6.299
Total Reassigned Time	0.4335	0.4335	0.4335	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835
Total PT FTEF	0.70	1.40	2.80	2.70	2.55	3.20	3.05	2.70	2.90	2.55	2.55	3.05	2.85	2.40
Total FTEF	7.917	7.767	8.867	8.350	9.117	9.967	9.117	9.700	8.900	9.699	9.500	8.999	8.499	8.699
Earned WSCH	4262	4273	5101	4794	5282	5559	4909	4824	4380	4675	4836	4579	4932	4580

DATA SOURCES: SQL Server Reporting Services
Home > Instructional Services > Faculty
Faculty FTE - Full Time and Part Time

SQL Server Reporting Services
Home > Instructional Services > Program Review
Grade Distribution by Division

http://www.gcccd.edu/research-planning/hp-srs-faculty-staffing-data.html

9.2 Discuss part-time vs. full-time ratios and issues surrounding the availability of part-time instructors.

Table 9.2 shows the ratio of full time versus part time instructors as a percentage of FTEF. As mentioned above, section cuts directly affect the number of adjunct faculty that we can employ. Using either Total FTEF or Earned WSCH (from Table 9.1) as an indirect measure of the number of chemistry and science sections, it is clear that part time faculty experience a cycle of feast or famine resulting from the capricious nature of budget solution edicts.

TABLE 9.2 RATIO OF % FULL TIME VERSUS % PART TIME OF FTEF

	2012		2011		2010		2009		2008		2007		2006	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
% FT of Total FTEF	91.2	82.0	68.4	67.7	72.0	67.9	66.5	72.2	67.4	73.7	73.2	66.1	67.1	72.4
% PT of Total FTEF	8.8	18.0	31.6	32.3	28.0	32.1	33.5	27.8	32.6	26.3	26.8	33.9	33.5	27.6

Although the number of adjunct faculty, up until 2012, was equal to or greater than the number of full time faculty (Table 9.1), the percent of FTEF for adjuncts historically ranges from about 28% to 34% of the total FTEF. We think this is a good ratio since we are able to staff every course with at least one full time faculty who serves as coordinator for advising and mentoring when appropriate for each of our classes. The exception is Chem 110, Environmental Chemistry, which is the only chemistry course without a lab. This is not a concern since we only offer one section of Chem 110 during any semester and we give relatively free rein to the instructor to teach the course in concert with our expected rigor and the areas of expertise of the teacher.

As budget woes decrease and we eventually add back sections in our department, we will most certainly hire more adjuncts but it is doubtful that the part time percent of FTEF will increase above and beyond the historical high during our salad days (2009-2010).

The most pressing concern is that once we are in a position to hire more teachers, we will most likely have lost for good some of our valuable veteran adjuncts. We invest a lot of effort in training our adjuncts to adhere to our program standards and practices; we also help them to develop good teacher-stockroom relationships vital to smooth operations in the laboratory.

9.3 List and describe the duties of classified staff, work study and student workers who are directly responsible to the program. Include a discussion of any trends in terms of classified staffing and describe changes that have occurred (i.e. duties, adequate coverage, funding issues).

The chemistry classified staff is represented by a Senior Chemistry Technician (Oertling) and a Chemistry Technician (Crume); both are full time positions. The summary job description for a chemistry technician is given here:

> Perform a variety of technical and specialized duties related to the preparation, operation and maintenance of a chemistry laboratory and related areas; operate and demonstrate the use of specialized equipment and instructional materials; provide information and technical assistance to faculty and students.

The essential functions of our classified staff include a myriad of duties that include the obvious chores of running a chemistry stockroom such as ordering and inventory of supplies, preparation of reagents, solutions and laboratory demonstrations, and meticulous record keeping. Assignment of student lockers and equipment to students; routine maintenance of equipment; compliance with state and federal laws regarding hazardous, toxic and radioactive waste; is all handled by our technicians. They are also responsible for training student workers and for responding to student requests for lab checkout and computer/printer needs in the CSCL. In all of this, they provide a clean, safe environment for our staff and students and do it all with a cooperative spirit. The complete job description for a chemistry technician is included in its entirety in Appendix 9.

The duties of our work study students vary with their level of training in a chemistry laboratory environment. For work study students with limited or no experience, their duties are restricted to cleaning glassware, organizing equipment, inventory of chemicals and other tasks as assigned by the stockroom technicians. Over time, some of these student workers amass sufficient knowledge to perform other duties as listed below for the more experienced workers; these are generally those students who have taken one or more chemistry courses or have actual work experience in a laboratory setting.

Duties of Work Study Students

- Assist lab technician in daily tasks
- Be a service to students by handing out and receiving back equipment for experiments
- Clean laboratory glassware and other lab materials
- Clean and restock lab rooms, instructor and student equipment lockers, and clean lab balances
- Store equipment and other lab materials
- Assist students in the Science Learning Center by providing printer needs
- Communicate to the lab technicians any ongoing student needs

The duties for our chemistry tutors are much less delineated at this time. Since we are evolving into a new era of tutorial assistance in our department, we are working with the District to codify the actual job description for our student tutors. Jeff Lehman has an active role in this process and has draft copies of these job descriptions although we do not include them here since they are in the process of refining and revision.

With that said, our student tutors are selected based on their top-notch performance in chemistry classes. Each one has matriculated through our department and we are well acquainted with their skills and personalities. Student tutors are assigned various time slots in the CSLC and avail themselves to all chemistry students regardless of which course the advisee needs help with (a thousand pardons for the dangling preposition). We instruct our tutors to be a helper and not to complete homework problems for the students they are assisting. Our tutors understand that there is no penalty or judgment if they seek aid from an instructor if they cannot provide adequate aid to students' requests.

9.4 How are decisions made within your program? What role do part-time faculty and/or classified staff play in the department decision-making process?

The Chemistry Department at Grossmont College makes decision in a collegial way. We hold regular department meetings and almost all decisions are made by arriving at a consensus at these meetings. We rarely take votes because they simply are not needed. We are blessed to have a department in which all the faculty members get along with each other very well, so that decision-making has never been a cause for contention for at least the past ten years. As for adjuncts, they generally come to the first department meeting each semester. They are invited to all department meetings, but it is fairly unusual for them to come as their schedule rarely fits mid-semester meetings. Normally, department chairs or co-chairs ask for their input into decisions on an informal basis before meetings, especially when the decisions to be made have particular impact on them or if their input is particularly relevant.

As mentioned in Section 2.3, our department engages in continuous revision of program teaching materials and this on-going process is both effective and efficient due in large measure to the cooperative nature of our faculty. Our common mindset produces a standardized curriculum to which all faculty implement with very little dissent. The result is consistency in grading for multiple-section courses across semesters (re: Section 2.5) and our willingness to step up and participate in college-wide activities (re: Section 8.3) reflects the support we have for each other and the common goals that have impact beyond our small department.

SECTION 10 - FISCAL PROFILE AND EFFICIENCY

Refer to **Appendix 11 –WSCH Analysis Report** for efficiency. **Appendix 3** has the sections and enrollment. **Appendix 15 – Fiscal Data: Outcomes Profile** also has enrollment information.

10.1 Analyze and explain any trends in enrollment, numbers of sections offered, average class size and efficiency.

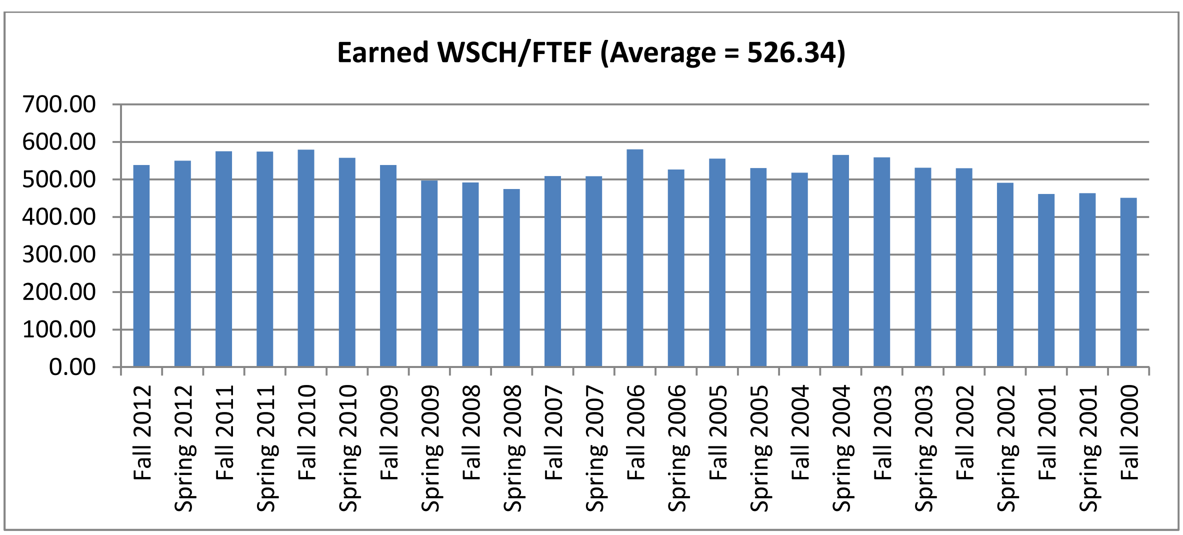
Enrollments in Chemistry started to increase significantly in 2009 but by 2012 this trend had begun to decrease. In Science, there was a dramatic spike in enrollments in 2009 but again this was only a temporary increase since the numbers have dropped considerably since then. The section cut backs are of course the primary reason for the decrease in enrollments since 2009. Concurrent with the downward trend in enrollments is a nearly complete decimation of our adjunct faculty corps. The number of sections has decreased and those that remain are bursting at the seams. Perhaps this is a level of efficiency desired by the institution but we are concerned that when the financial climate changes for the better, we will be hard pressed to replace our adjuncts. Many have moved on to other schools or relocated outside the region in search of career advancement.

In 2009 we had our highest FTEF (9.7) compared to a FTEF of 8.7 in 2006. Although this 1.0 FTEF difference may seem small, for a department our size with only 7 full time faculty, this represents major hit.

10.2 Analyze the Earned WSCH/FTEF data in Appendix 11- Grossmont WSCH Analysis. Explain trends for your overall program and for specific courses over a five-year period.

The composite results of earned WSCH/FTEF are shown in Figure 10.2.1 below.

Figure 10.2.1



Our average efficiency, which fluctuates between 500 and 580 (graph), is restricted by the fact that nearly all of our courses combine lecture and lab into a single course. Since each section can only hold a maximum of 24 students we limited as to how big our sections can grow. (There are exceptions- two courses do not have a lab, Sci 110 and Chem 110, and one of four labs seats 32 students). One of our planning strategies for many years has been to offer double and triple sections to maximize our efficiency. However even that tactic is limited in effectiveness due to the limited seating capacity of our labs. It is no surprise that our sections fill to capacity and waitlists are filled to maximum each term.

Some of our higher level courses generally have lower efficiency than the introductory courses which is to be expected. This is especially true for second semester general chemistry (Chem 142) and second semester organic chemistry (Chem 232). However, since both course are required for the chemistry degree, we must continue to offer them a frequently as our budget allows.

10.3 Using Appendix 14 - Fiscal Year FTES Analysis by Program Report and Appendix 15 - Fiscal Data: Outcomes Profile, analyze and explain the cost per FTES of the program in relation to the earned WSCH per FTEF.

As shown in Appendix 15, both the total FTES and earned WSCH/FTEF have remained fairly constant since 2006. However, the cost/FTES continues to increase on an annual basis. The bulk of this increase is our supply budget and outlays for computer software for the CSLC. Chemistry is an expensive discipline to operate and we have no control over inflation of chemical commodities but we are strongly petitioning the college to increase our department budget so that we may fund recurring expenses that are currently outside our budget allotment.

Overall, our department operates in the black. Revenue far exceeds the total annual cost for our programs.

10.4 If your program has received any financial support or subsidy outside of the college budget process, list the amount of any outside resources and how they are being used.

We have not received any financial assistance from outside the college budget process. However, last year one of our faculty (Larter) was awarded a door prize at the 2YC3 conference. The prize was a one-year free subscription to Odyssey software, a newly developed molecular modeling program. This was installed on our department computers in the CSLC for students and faculty to use. We are currently evaluating the software to determine if we want to make this a permanent addition to our computer resources although the annual subscription costs may deter us from adopting this platform.

Occasionally, we receive donations in the form of used equipment and bulk organic solvents from a contact in the local pharmaceutical industry. These gifts are the result of a relationship established several years ago when one of our faculty (Olmstead) spent a summer working at La Jolla Pharmaceutical Company in San Diego.

SECTION 11 – SUMMARY AND RECOMMENDATIONS

11.1 Summarize program strengths and weaknesses in terms of:

- teaching and learning
- student access and success
- implementing and executing the department's vision and mission statement
- fiscal stability

- The strengths of the chemistry department in terms of teaching and learning are as follows:

1. We have developed a robust curriculum in the chemistry department. Our full complement of chemistry courses is intended for students seeking the AS degree from Grossmont College as well as to prepare them for transfer into 4-year institutions to complete Baccalaureate degree programs. All of our chemistry courses can be used to satisfy the following:

- Completion of the Grossmont Associate of Science degree in Chemistry
- IGETC requirements for University of California schools (Area 5A)
- General Ed Breadth Requirements for the CSU schools (Area B1)
- University Studies degree (Area B1)
- General Studies degree (AS degree in Science and Quantitative Reasoning)

Additionally, our department teaches Science 110, *Introduction to Scientific Thought*, and the corresponding honors course, Science 110H, both of which can be used to satisfy GE requirements for UC, CSU, the University Studies degree and the general Studies degree.

2. Our department consists of cohesive, highly-qualified, experienced, and innovative full-time faculty and staff. Each semester we schedule at least one full-time faculty to teach during the night shift to ensure that our night program offers that same level of rigor and to provide our part-time faculty (many of whom teach only at night) an experienced colleague available for consultation and timely assistance if needed. We have two full-time chemistry stockroom technicians, one for the day shift and one for the night program. The stockroom work schedules include a 3 hour overlap so that both technicians are present each workday. In addition to providing a seamless transition between work shifts, this schedule facilitates communication of stockroom issues and provides adequate coverage for lab sections during the busiest time of the day.

3. Department faculty is committed to standardization of curricula, especially across multi-sectional courses. Each course has a full time faculty coordinator to assist adjuncts assigned to that course. We offer common final exams in many courses and extend the option for individual teachers to supplement these exams with additional material tailored to their class. We also encourage newly-hired instructors to use the same midterm exams written by the course coordinator throughout the semester if they

choose. Adjunct faculty generally accept this practice as a welcomed service which alleviates some of their workload.

We always use the same teaching materials for courses that have different instructors for individual sections. Changes in textbooks across the curriculum are infrequent and always a unanimous departmental choice. We believe this is a tremendous economic benefit for students and delivers an uninterrupted pedagogy between the two semester sequences in general and organic chemistry.

Furthermore, each lab course uses the same laboratory manual for all sections. Occasionally we supplement lab experiments with publisher ancillaries but for the most part, all of our lab manuals were written by department faculty. This practice serves a number of purposes, especially for courses with multiple lab sections:

- Efficiency in stockroom preparations- all sections are on the same schedule
- Common laboratory experiences for all students
- Ability for students to make up missed labs in another section since each section does the same experiment during the same week
- Ability to change experiments and rapidly update lab manuals each semester
- Ability for faculty to develop and test innovative lab activities

Our department participated in a self-study with the American Chemical Society (ACS) last year. The findings and conclusions from that study were provided to us and are listed below below:

Department Strengths

1. Adequate staffing/budget and excellent support for the chemistry stockroom

2. State-of-the-art laboratory facilities and science learning center equipped with computer-aided software

3. Shared governance and agreement throughout the department regarding curricula, ancillary materials (textbooks, lab manuals, etc.) and a willingness to provide equal access to full time faculty in support of the evening program

Department Weaknesses

1. Inadequate resources dedicated towards laboratory instrumentation upkeep and method developments.

2. Difficulty with scheduling regular faculty meetings due to full teaching schedules.

3. Chronic challenge to maintain minimum enrollments in both semesters of organic chemistry.

These summary comments from the ACS mirror many of our concerns addressed in this document.

➢ Student access and success

Student access is facilitated by our 3-pronged approach to our students- lectures, lab sessions and interaction in our CSLC. All of the chemistry faculty have offices adjacent to each other and clustered near the CSLC which creates an open and inviting atmosphere for our students. As they must all go through the second floor of the Science Lab building in order to access their labs, there is easy access to faculty and stockroom assistance when needed. It is rare that a student will wander around our halls without being noticed and without an offer of help. We can foresee our department COLLEGE HOUR being used as an opportunity to meet with students for clubs and other activities.

The weaknesses of student access are well discussed in Sections 4.1 and 6.8 of this document.

Discussions about the strengths and weaknesses regarding student success can also be found in this document; refer to Sections 5.1 – 5.3.

➢ Implementing and executing the department's vision:

Beginning fall semester 2013, the chemistry Department will resurrect the old tradition of **COLLEGE HOUR!** We have carved out a one hour time block every Wednesday from 11 am to noon for this purpose. Our objective is to encourage other departments and divisions to notice this practice and follow suit much like we led other departments to re-establish offering Friday classes a few years ago when we tossed aside anecdotal attitudes regarding what students would accept in terms of scheduling classes. To that point, our Friday schedule has become and remains a popular choice for many students. Typically, we offer MWF lectures in several courses and schedule 3 hour labs on Friday which fill both morning (9 to noon) and afternoon (noon to 3 pm) timeslots. For courses that have 6 hours of lab, traditionally offered as two 3-hour sessions, we even managed to fill a 6-hour Friday lab (9 am to 3 pm). Adopting the philosophy of James Earl Jones in *Field of Dreams*, we know that if we build it, they will come. We are confident that this same philosophy will lead others departments to seriously consider the value of College Hour. We are willing to consider other time and/or day periods in the future if that emboldens other departments to adopt College Hour concurrent with ours. We understand the sacrifice required to block out College Hour in the midst of "primetime" but anticipate that the benefits will outweigh any inconvenience.

The purpose of College Hour will allow us to schedule regular faculty meetings which have always been a problem due to the conflicting teaching schedules of instructors. We agree that most of the time, one robust meeting per month will be sufficient to handle the bulk of department issues; thus, we envision using College Hour for a host of activities:

- team-building opportunities for department staff such as monthly luncheons or short hikes
- a midday break to view college activities in the quad or the goings-on in other departments
- informal mentoring sessions with our student tutors

- participation in campus clubs- we have discussed forming a new Chemistry Club
- going for drives around campus with the maintenance crews in the golf carts
- sitting in on lectures with our colleagues until they agree to initiate College Hour in their own departments to get rid of us

We believe that College Hour will alleviate much of the consternation mentioned in point #2 under ACS Department Weaknesses.

- Fiscal stability

Chemistry is an expensive discipline to operate and maintain. It is vital that we continue to include modern instrumentation in the laboratory component of our courses. This means that we need to identify permanent funding streams for operational costs and for procurement of new and replacement instrumentation. Some of our needs include software packages that serve laboratory activities and there is always the problem of having to separate software requests from equipment/instrumentation requests since the latter almost always requires purchase of supporting computer-based ancillaries. Also we need to include manufacturer service agreements with many purchases which are not always recognized by the administration as justifiable costs. (See point #1 under ACS Department Weaknesses).

11.2 Describe any concerns that have affected or that you anticipate affecting the program before the next review cycle. These may include items such as increases or decreases in number of full-time and adjunct faculty, sections offered, and growth or decline of the program.

(See point #3 under ACS Department Weaknesses).

The growth of second semester organic chemistry (Chem232) remains a formidable challenge and the past period of section cuts has had a negative impact on our ability to sustain adequate numbers of students who have completed the full year of general chemistry prerequisites. One of our former part time instructors has joined the full time faculty at Cuyumaca and we are in communication on this and other issues. We are working towards an agreement that facilitates Cuyumaca students to enroll at Grossmont for Chem232 after they have completed the first semester of organic (Chem 231). This should be a workable situation since Cuyumaca does not offer Chem232. In the meantime, we need to ramp up the pipeline in our department so that we can continue to offer Chem 232 every semester. For example, this spring semester 2013, we have a full section of Chem 231 students who desire to take Chem232. Unfortunately, Chem 232 will not be offered in the fall which means we will most likely lose these Grossmont students to other institutions.

In addition to the concerns regarding organic chemistry above, overall, we still have significant issues in other areas of our program. Until we have full restoration of the sections we have lost over the last few years, we must continue to cannibalize one area in order for remaining courses to flourish. Specifically, the Chem 115/116 sequence and Chem 102 course, which are vital to nursing, allied health and forensic programs, have been reduced so that we can maintain an adequate number of Chem 120 sections to prepare students for the Chem 141/142 sequence. All of these introductory courses are in high demand and the juggling act we have been performing since budget woes began forces us to choose one over the other. It is almost as if we are trying to answer the question, "who do we disenfranchise, the nursing and allied health majors or the chemistry majors?" Below is an email communication illustrating the need for us to maintain adequate numbers of students for the nursing program:

From: Christine Girsch
To: Tom Olmstead
RE: stats for RN students and Chemistry
Sent: Tue 04/30/2013 09:57 AM

Okay. We did try to gather this info too however, we didn't get it all so.......

What I mean about 3 of the 4 semester, I mean, we have students that joining the program every fall and spring so right now we have a class in their 1st semester, class in their 2nd semester, class in their 3rd semester and 1 class to graduate this semester.

1st semester students- 11 students reported taking Chemistry (8@GC, 3@CC) but the course was not recorded = 11 total Chem takers 2nd semester students- 6 students reported taking Chem 102 (5 @GC, 1 @CC), 3 took Chem 115 (3 @ GC), 3 took Chem 116 (2@GC, 1@CC) = 12 total Chem takers 3rd semester students- 12 students reported taking Chemistry (6@GC, 6@CC) -which Chemistry course that was taken was not recorded = 12 total Chem takers 4th semester was not polled (class does not meet until Wednesday)

I hope it helps a little more.

Thank you,
Christine Girsch
Grossmont College
Administrative Assistant
Division of Allied Health and Nursing
619-644-7149

This email was part of a larger conversation between Chemistry and Nursing departments regarding the importance of chemistry in the nursing curriculum and the need to offer appropriate courses and an adequate number of sections each semester.

Another concern is about our Chemistry Science Learning Center. The CSLC has blossomed into an effective part of our program. We now have student tutors staffing this facility M-F. We need to ensure that this room continues to be an open-access facility dedicated to chemistry department needs. We therefore oppose any future efforts to regularly schedule classes in the CSLC.

Our tutoring operation is another major issue in our department. Currently we are having problems finding an adequate number of student tutors and the need for tutors is critical as illustrated in the following email from the Grossmont Tutoring Center:

From:	John Oakes	Sent: Mon 8/26/2013 3:43 PM
To:	Judy George; Jeff Lehman; Tom Olmstead; Diana Vance; Martin Larter; Cary Willard	
Cc:	Lisa Oertling	
Subject:	FW: Math & Sciences Tutors	

Good Afternoon,

I want to let you know that we are really in need of tutors. We are sending students away with no hope of appointments for the rest of this week. Monday, September 9th (next week is holiday) got filled up in the first hour of the day as we have one Math and one Math& Chem tutor. There are only 4 tutors who have been approved so far and I have at least 5 pending. However, with the limitation of 19 hours per week and even less when the student is also working as a TA…we are facing a shortfall in available appts for the semester. Students are complaining and I really can only send them back to their instructor or the department chair.

The process has taken two weeks to get continuing office helpers approved…just so you know.

I could use 2 Chemistry; 2 Physics; 2 Math; 2 Biology esp 240 & Physiology; and 1-2 Earth Sciences Tutors beyond the ones we have now. There are huge gaps in hours of availability. Please let me know if you have qualified tutors to send our way.
Thank you for your help.

Lucy Price
Tutoring Center Coordinator
Grossmont College

We are aware of campus discussions evaluating the tutoring options- a centralized location such as the tutoring center in the Tech Mall versus localized, departmental endeavors such as our own CSLC operation or the Math tutoring center. We prefer the latter option. This semester (Fall 2013) Martin Larter is serving as the tutoring coordinator and plans to complete a data analysis of tutoring efficacy at the close of the semester. We want to quantify the correlation between students who received tutoring and the grade they received in their chemistry course. These students will be compared to their cohort in the same section who did not receive tutoring. This is no small undertaking and all of it is being done without any compensation since we gave back the LED which was always used to compensate the instructor of record for our T-courses. Additionally, Mr. Larter has been mentoring the tutors and overseeing the operation in the CSLC. We should add that the new hiring process for student workers, which includes student tutors, is a cumbersome, time-consuming process which hampered our ability to get tutors in place at the beginning of the semester. However we are confident that this paperwork process will eventually become easier to implement.

11.3 Make a rank-ordered list of program recommendations. These recommendations should be clearly based on the information included in Sections 1 through 11 of this document. You may include recommendations that do not require additional fiscal resources.

1. Assignment of 0.3 LED to fund a Director of Chemistry Tutoring Services (DCTS) and a permanent funding stream to hire student tutors.

As mentioned throughout this document, our on-going efforts to improve the tutorial courses in our department has led to a different approach involving student tutors coupled with traditional computer-aided instruction. The DCTS would oversee hiring and training of student tutors and provide on-going mentoring and assistance. The DCTS would also collect data on the efficacy of our tutor program, making adjustments as needed.

2. Increases in Chemistry Department budget:

2A. Increase the Chemistry Department supply budget by 25%.

Using budget data from fiscal year 2011/2012, the department spent our entire supply budget of $23,028, plus an additional $6,059 from our abatement fund for a total of $29,087.

25% increase = 1.25 ($23,028) = $28,785

The abatement money is targeted for replacement of broken glassware and equipment. However, we have been spending the abatement funds to augment our general supply budget in lieu of replacing breakage. This has led to a shortage of certain glassware for student laboratories. Eventually, depletion of glassware and student equipment will impact our program in that students will no longer have a complete personal lab kit and will be forced to share equipment. We need to preserve the individual lab experience that is a hallmark in our program and can only do so if we stop spending abatement monies for general supplies and use these funds for the intended purpose of replacement. Otherwise, students will be forced to partner up for all lab experiments.

2B. We need to identify additional funding of approximately $20,000 for replacement of key laboratory instruments.

The work-horse instrument is our Nicolet 380 FTIR spectrometer which is approaching 10 years lifetime. We also have a need to add two more Venier Gas chromatographs, bench-top instruments that have a slow throughput with large classes.

Nicolet IF-5 spectrometer with ATR sample compartment	$18,500
Two Vernier gas chromatographs @ $1700 each	$3598
Total	$22,098

2C. Increase in software licenses line item by $4500

According to last year's budget, we had $930 to pay for all of our instructional and laboratory software packages. This barely covers the annual cost of ChemDraw and we will need to renew our license agreement with Spartan after next year.

ChemDraw annual license	$855
Spartan 3-year site license	$4,500
Total	$5,355

3. Increase the allotment of LED for our department.

Over the period of this past program review cycle, our program has been dealt repeated harsh blows from budget constraints and the number of sections has dropped dramatically. The other major consequence is that we have decreased the number of adjuncts from 11 to 4 currently. As mentioned previously, our degree courses, Chem 141/142 and Chem 231/232 are increasingly difficult to populate when the pipeline is constricted with fewer section of lower-level courses. The organic program in particular has suffered from low enrollment for this reason.

4. Dedicated classrooms for chemistry lectures

As mentioned in Sections 4.1 and 6.8, we are still waiting for the chemistry lecture rooms promised to our department years ago. Also, we need to fulfill that agreement in its entirety and have the chemistry lecture rooms plumbed with natural gas and water so that we can resume classroom chemistry demonstrations that were routine adjuncts to many of our classes.

5. Display cases for the second floor of building 30

We have always envisioned a series of display cases outside the halls of our chemistry labs. These display cases would serve many purposes:

- Presentation of poster projects from our capstone activities
- Laboratory glassware setup for weekly experiments
- Portraits of the chemistry faculty
- Announcement center for departmental activities

We are certainly thinking about Proposition R and V funds as a source of financial assistance for this request.

6. Hire a part-time chemistry technician

We have a real need to hire another technician dedicated to maintaining our fleet of laboratory instruments. The amount of time instructors need to develop instrumentation labs and prepping the instruments for weekly experiments is enormous. Thankfully, our two current stockroom technicians are fairly well trained to handle some of these duties but this situation cannot continue. The time spent by our technicians on lab instruments detracts from their regular duties.

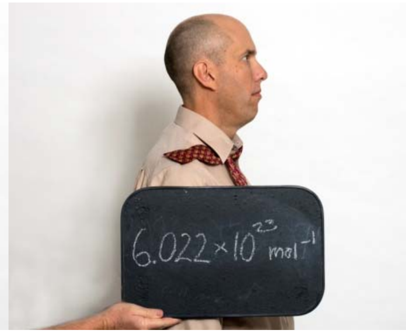
7. Hire another full time chemistry instructor

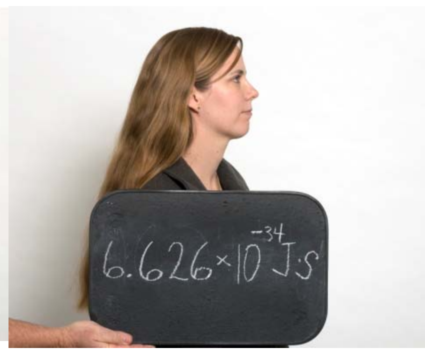
Eventually we will need another full time instructor so that we can assign all of the Chem 141/142 courses to full time teachers. This course sequence is our flagship offering and we do not use adjuncts for these courses. Once the section cuts have been restored, in order to assign full timers to the Chem 141/142 and Chem 231/232 sequences, we will not have enough full timers to teach the introductory courses. As mentioned previously, each introductory course has at least one full time instructor to mentor and oversee part time teachers.

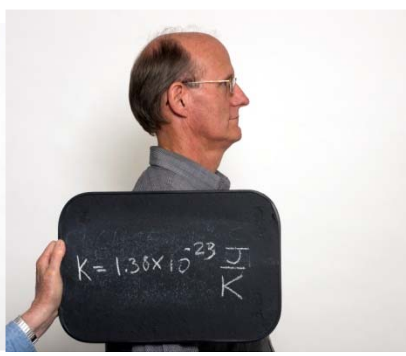
8. Increase the number of chemistry degrees

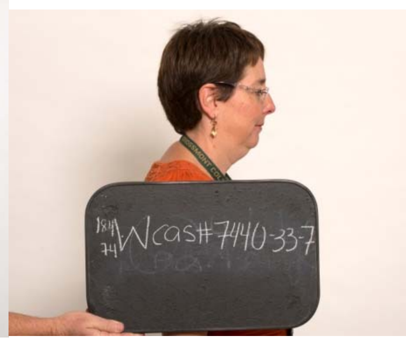
We believe that “if you build it, they will come”. All of our requests listed above have a singular purpose and that is to continue to serve our students and increase the attractiveness of our program.

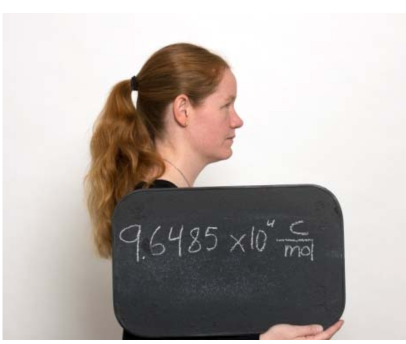
Recidivists

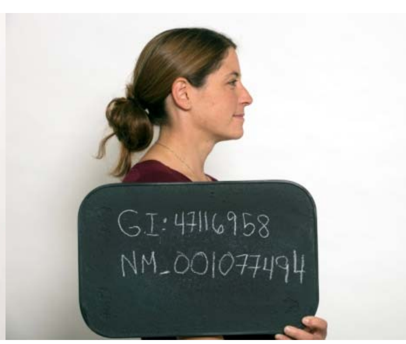












Department/Unit Name **<u>Chemistry</u>** **Month/Year** **<u>November 2009</u>**

Instructions:

This Six-Year Unit Plan details the goals that you have for your department/unit in a number of areas, as well as the strategies that you plan to implement to achieve those goals. Each year, this plan will inform and be implemented through the activities in your various annual action plans. In addition, this plan is organized so that the work eventually accomplished in the areas listed can be used to complete key sections of your next program review document.

THE DEADLINE FOR SUBMITTING THIS COMPLETED SIX-YEAR DEPARTMENT/UNIT
PLAN TO YOUR DEAN IS FRIDAY, NOVEMBER 6th, 2009.

Remember, for your Six-Year Plan, you are developing your department/unit goals and strategies (activities) for each of the areas listed as plan sections on the following pages. Your goals and activities may support one or more of the following College Strategic Planning Priority
Goals are provided here for your reference:

Student Access
- **Goal 1:** Better serve students in historically under-served populations
- **Goal 2:** Respond to changing community needs

Learning and Student Success
- **Goal 3:** Provide an Exceptional Learning Environment to Promote Student Success
- **Goal 4:** Promote Student Success for Historically Under-served Populations
- **Goal 5:** Promote Student Success for Historically Under-prepared Populations

Robust Fiscal and Physical Resources
- **Goal 6:** Promote Institutional Effectiveness
- **Goal 7:** Develop and maintain an exceptional learning environment
- **Goal 8:** Maximize Revenue from Traditional and Non-Traditional Sources

Economic and Community Development
- **Goal 9:** Enhance Workforce Preparedness
- **Goal 10:** Develop Innovative Partnerships That Meet Long-term Community Needs

Value and Support of Employees
- **Goal 11:** Promote Employee Success

BACKGROUND

A. Please provide a list of your most recent program review recommendations.

1. Hire new faculty member.
2. Develop Chemistry 102 - combining chem 115 and 116.
3. Purchase more lab equipment

Appendix 1.1 Six-Year Department/Unit Plan

B. If applicable, please provide a list of any advisory committee recommendations.

N/A

C. Provide a list of any certification/accreditation recommendations.

N/A

PLAN SECTIONS

In each section, answer the questions as completely as possible. **Remember that you are discussing long-term plans for the next six years**.

D. Community Outreach/Response

1. What is/are your six-year goal(s) in this area?

To continue to provide outreach to the local community using a variety of modalities:

- We intend to continue hosting the regional Science Decathlon in coordination with our sister campus, Cuyamaca.
- We intend to continue to host Science Festival activities on an occasional basis.
- We would like to introduce some chemistry specific competitions to our local students.

Briefly explain:

a. why each goal was chosen (include any supporting data)

Science Decathlon, science festivals, and other competitions provide an opportunity to work with students from our feeder middle and high schools. This develops relationships, introduces students to the science expertise in the district and invigorates science inquiry within our district. This fosters a more science literate community and will encourage technological industry to settle in our region.

b. how each goal supports the college strategic planning priority goals

These goals enhance workforce preparedness and develop innovative partnerships that meet long-term community needs.

2. What strategies/activities would you undertake to accomplish each goal?
We intend to continue hosting science competitions and other learning opportunities both here and in conjunction with Cuyamaca.

3. How will you demonstrate that you have accomplished the goal (be sure to include how data will be collected/assessed)?
We will monitor the number of participants in each of the events we host and will survey them for input to improve as appropriate.

E. Student Success and Support

1. What is/are your six-year goal(s) in this area?
We wish to staff the Science Learning Center with student tutorial support.

Briefly explain:

a. why each goal was chosen (include any supporting data)
The SLC is open approximately 63 hours per week with only 6-12 hours covered by faculty tutors. This leaves the center unstaffed for more than 80% of the hours it is open. Students helping students master chemistry is an excellent way to both enhance the tutors knowledge and the tutee's comprehension of the subject matter.

b. how each goal supports the college strategic planning priority goals
This provides an exceptional learning environment to enhance student success. We also wish to employ students from a diverse background to promote success in historically under-served populations.

2. What strategies/activities would you undertake to accomplish this goal?
Faculty will identify excellent students in their classes to employ in the SLC. They will actively search for poly-lingual students to aid non-traditional students.

3. How will you demonstrate that you have accomplished the goal (be sure to include how data will be collected/assessed)?
We will record the use of the SLC to determine if there is better use of the facility when there are tutors present. We will assess the progress of students using the SLC, both in terms of competence and confidence.

F. Department/Unit Resources and Development

1. What is/are your six-year goal(s) in this area (include pursuit of any outside resources)?

We want to continue to purchase laboratory equipment to enhance the learning experience in the laboratory. We wish to continue to acquire equipment that will allow us to utilize guided inquiry in our classrooms and labs.

Briefly explain:

a. why each goal was chosen (include any supporting data)

We wish to ensure that students have the opportunity to work with the state of the art equipment they may encounter in upper division coursework and in their careers.

b. how each goal supports the college strategic planning priority goals

provide an exceptional learning environment to promote student success.

2. What strategies/activities would you undertake to accomplish this goal?

Work with the dean to find financial resources both through the institution, grants, and community partnerships to purchase needed equipment.

3. How will you demonstrate that you have accomplished the goal (be sure to include how data will be collected/assessed)?

We will purchase new equipment and develop new labs using this equipment.

G. Faculty/Staff Professional Development

1. What is/are your six-year goal(s) in this area?

1. Encourage all faculty to attend at least one conference semi-annually.
2. Provide adjunct mentoring opportunities.
3. Continue encouraging faculty to participate in outreach activities

Briefly explain:

a. why each goal was chosen (include any supporting data)

1. To keep all faculty abreast of current technology and pedagogy.
2. To support our adjunct faculty and encourage them to continually improve their teaching style.
3. To maintain our excellent outreach program and maintain community relationships.

b. how each goal supports the college strategic planning priority goals

All promote employee success.

2. What strategies/activities would you undertake to accomplish this goal?

Find financial resources to compensate faculty for both updating their skills and reaching out to the community.

3. How will you demonstrate that you have accomplished the goal (be sure to include how data will be collected/assessed)?

Faculty will bring back useful information from conferences to share with the department.

Outreach activities will continue to flourish within the department and division.

H. Curriculum Development

1. What is/are your six-year goal(s) in this area?

    1. Develop a science 120 course (integrated science for educators) to support future science teachers.
    2. Develop and offer an instrumental chemistry course to articulate with 4-year institutions

Briefly explain:

a. why each goal was chosen (include any supporting data)

1. To support the multi-disciplinary environmental awareness programs being promoted by the district. It also supports our local community of K-12 educators in their quest to remain current in scientific methodologies.
2. To provide a seamless transfer between Grossmont College and UCSD for our transfer students.

b. how each goal supports the college strategic planning priority goals

1.It enhances workforce preparedness

2. It promotes institutional effectiveness

2. What strategies/activities would you undertake to accomplish this goal?

We will develop and offer these courses.

3. How will you demonstrate that you have accomplished the goal (be sure to include how data will be collected/assessed)?

1. We will enroll K-12 educators desiring a more complete view of experimental science and they will bring this knowledge to the classroom.
2. The instrumental chemistry course will articulate with UCSD's 6CL laboratory course

I. Staffing Needs

1. Please explain your projected needs for staffing (include data to support your needs)?
   1. We need tutors for the student learning center.
   2. We need full-time faculty to teach the new coursework we wish to develop.

J. Student Outcomes

If you have not done so already, complete your six-year student outcome assessment plan by
going to
http://www.grossmont.edu/student_learning_outcomes/SLO%20Spreadsheet%20home.htm,
clicking on your department link, and completing the spreadsheet.

NOTE: the student outcome plan spreadsheet was due online by October 2nd.

THE DEADLINE FOR SUBMITTING THIS COMPLETED SIX-YEAR DEPARTMENT/UNIT PLAN TO YOUR DEAN IS FRIDAY, NOVEMBER 6th, 2009.

Chemistry

PROGRAM REVIEW COMMITTEE
SUMMARY EVALUATION
Fall 2006

SCHOOL YEAR	FALL SEMESTER		SPRING SEMESTER		COST/FTES	COMMITTEE RECOMMENDS
	WSCH/FTEF	% of MAX WSCH	WSCH/FTEF	% of MAX WSCH		
00/01	2971	76%	3179	78%	$2,355	MAINTAIN
01/02	3349	74%	3487	83%	$2,257	
02/03	4015	88%	3364	87%	$2,228	
03/04	4192	91%	4235	93%	$1,852	
04/05	5179	86%	5306	85%	$2,019	

The Program Review Committee commends the department for:

1. Continued excellence in coordination of multi-section courses and coordination of lab and lecture coursework.
2. Consistently high scores by students on the National American Chemical Society Exam.
3. Outreach to local schools, including work with the Science Olympiad, Science in Action Program, Kids and Seniors Together.
4. Use of data provided by the Office of Institutional Research and Planning to track Grossmont College student success rates, grade point average, and degrees obtained at San Diego State University, which shows the high level of rigor established by Grossmont Chemistry faculty.
5. Innovative and effective use of Web CT to support student learning and direct communication with students as well as the generous mentoring of faculty on how to use Web CT.

The Program Review Committee offers the following recommendations:

1. Meet with the coordinator of the Tech Prep Program to strengthen articulation efforts with local high schools.
2. Maximize efficient use of the new science building, especially by offering more sections in the summer.
3. Develop a job description for a shared technician with Earth Sciences and pursue hiring as programs expand.
4. Develop and offer an analytical chemistry course that will articulate with four-year institutions and pursue articulation with UCSD's Chem 6 CL laboratory course.
5. Collaboratively write student-learning outcomes and collectively agree upon their assessment methods to be written in course syllabi of sections of the same course. Use student-learning outcome data for continued course and program improvement.
6. Continue to submit curriculum modification and deletion proposals for courses that have not been reviewed by the Curriculum Committee in the last five years.

Cardiovascular Technology 215	Clinical Practicum III	5
	Total	24
	Total Required	52
	Plus General Education and Elective Requirements	

Certificate of Proficiency

The following Certificate of Proficiency is designed for the student who needs to be prepared to enter an entry-level position. A department-issued certificate may be awarded upon successful completion of a prescribed course of study. This certificate will not appear on a student's transcript.

Note: All courses must be completed with a letter grade of "C" or higher.

Telemetry/ECG Technician

The Telemetry/ECG Technician Certificate of Proficiency provides students with the skills necessary to gain employment as an EKG Technician, Exercise Treadmill Technician, Holter Monitor Technician, Pacemaker Technician, or Telemetry Technician. Students may choose to begin a career or update existing skills. Students successfully completing the certificate are employable at hospitals and healthcare facilities throughout the country.

All classes must be completed with a "C" grade or higher.

Subject and Number	Title	Units
Cardiovascular Technology 104	Electrocardiographic Theory	3
Cardiovascular Technology 105	Electrocardiographic Technique	2
Cardiovascular Technology 106	Advanced Electrocardiographic Studies	5
Cardiovascular Technology 108	Advanced Cardiac Monitoring	2
	Total	12

CHEMISTRY

The chemistry major prepares students to transfer to four-year institutions for continued study in the field of chemistry. The program outlined below fulfills the lower division requirements recommended by the American Chemical Society and is typical of requirements at four-year transfer institutions. Students should consult the catalog of the transfer institution for specific requirements. Assistance in planning a course of study is available at the Counseling Center or from the Department of Chemistry faculty. The department recommends that students take one year of Russian or German (or high school equivalency) for credit under Humanities Area C, Section 2 of the associate degree general education requirements.

Career Opportunities

Analytical Chemist*
Biochemist*
Biotechnologist*
Chemistry Teacher*
Dentist*
Environmental Technician+
Forensic Specialist*
Industrial Health Engineer*
Laboratory Technician
Pharmacist*
Physician*
Research Chemist*
Safety Manager
Sanitarian+
Veterinarian*
Water-quality Analyst
*Bachelor's Degree or higher required.
+Bachelor Degree normally recommended.

The Program-level Student Learning Outcomes (PSLOs) below are outcomes that students will achieve after completing specific degree/certificate requirements in this program. Students will:

1. Analyze and interpret (evaluate) experimental data in order to identify trends and communicate results in a laboratory report.
2. Predict physical and chemical properties and changes of matter.
3. Analyze relationships between equilibrium, kinetics and the flow of energy.
4. Employ a microscopic view of matter to explain macroscopic phenomena.
5. Identify substances from qualitative analyses and spectroscopic methods.

Associate Degree Major Requirements

Note: All courses in the major must be completed with a letter grade of "C" or higher.

Subject & Number	Title	Units
Chemistry 141	General Chemistry I	5
Chemistry 142	General Chemistry II	5
Chemistry 231	Organic Chemistry I	5
Chemistry 232	Organic Chemistry II	5
	Total	20

Select SIXTEEN (16) units from the following courses:

Subject & Number	Title	Units
Mathematics 180	Analytic Geometry and Calculus I	5
Mathematics 280	Analytic Geometry and Calculus II	4
Mathematics 281	Intermediate Calculus	4
Mathematics 285	Linear Algebra and Differential Equations	3
Physics 140	Mechanics of Solids	4
Physics 240	Electricity, Magnetism & Heat	4
Physics 241	Light, Wave Motion and Modern Physics	4
	Total	16
	Total Required	36
	Plus General Education and Elective Requirements	

Certificate of Achievement

Any student who wishes to complete only the requirements listed above qualifies for a Certificate of Achievement in Chemistry. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Note: All courses must be completed with a letter grade of "C" or higher.

CHILD DEVELOPMENT

These courses are also appropriate for family child care providers, parents, administrators, health care professionals, and others working with children. Courses are designed to partially meet lower division course preparation for students planning a bachelor's degree in Child Development.

echocardiography and/or vascular duplex studies as determined by clinical specialty.
Transfers to CSU

Cardiovascular Technology 230 †
Invasive Cardiovascular Technology Review
2 units, 2 hours lecture
Prerequisite: *A "C" grade or higher in CVTE 215 or equivalent.*
This course prepares the graduate of any Invasive Cardiovascular Technology Program to sit for the Cardiovascular Credentialing International (CCI) Invasive Registry Examination. The course is intended to serve graduates as well as working professionals that have equivalent work experience wishing to prepare for this credentialing examination. The course content reviews concepts in basic through advanced medical instrumentation, anatomy and physiology, cardiac pathophysiology, cardiovascular pharmacology, angiographic equipment and imaging techniques, hemodynamics and related diagnostic calculations. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

Cardiovascular Technology 240 †
Anesthesia Technology Review
3 units, 3 hours lecture
This course is designed for anesthesia technicians and/or recent graduates of training programs who intend to sit for the American Society of Anesthesia Technologists and Technicians (ASATT) certification examination. A comprehensive review of anesthesia technology will be provided, from basic anatomy and physiology to pharmacology, instrumentation and troubleshooting of equipment. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

Cardiovascular Technology 298 ††
Selected Topics in Cardiovascular Technology
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in cardiovascular technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Career and Technical Education/Workforce Development in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture or laboratory class. Pass/No Pass only.
Non-associate degree applicable

Cardiovascular Technology 299A †
Selected Topics in Cardiovascular Technology
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in cardiovascular technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Career and Technical Education/Workforce Development in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture or laboratory class.
Associate degree applicable

Cardiovascular Technology 299B †
Selected Topics in Cardiovascular Technology
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in cardiovascular technology not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Career and Technical Education/Workforce Development in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture or laboratory class.
Baccalaureate level-CSU transfer

Chemistry (CHEM)

Chemistry 102 †
Introduction to General, Organic and Biological Chemistry
5 units, 4 hours lecture, 3 hours laboratory
Prerequisite: *A "Pass" grade in Math 090 or equivalent.*
A one-semester course covering the basic principles of general, organic and biochemistry as needed to understand the biochemistry, physiology and pharmacology of the human body. This course is intended for students planning to transfer to a California State University nursing program. Students with a grade of "C" or higher in Chemistry 115 and 116 are not eligible for this class.
Satisfies General Education for: Grossmont College B2, B3: CSU B1, B3; IGETC 5A0
Transfers to: CSU, UC

Chemistry 110 †
Environmental Chemistry
3 units, 3 hours lecture
A course in chemistry designed for the nonscience student who wishes to discover how chemistry is an intricate part of our everyday life. Emphasis will be placed on basic chemical principles and practices, fundamental concepts, and modern implications of chemistry. Students will also become acquainted with environmental applications of topics covered, including the study of environmental issues such as ozone depletions, global warming, air and water pollution, and radioactivity. Demonstrations and audio-visual experiments involving student participation take the place of a laboratory.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

Chemistry 113 †
Forensic Chemistry
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "Pass" grade in Mathematics 090 or equivalent.*
Elementary principles of inorganic and general chemistry with application to the field of criminal justice. Students will learn basic chemical terminology, problem solving techniques and chemical explanations of our environment. Emphasis will be placed on forensic applications of topics covered, including the study of physical evidence such as hair, fibers, glass fingerprints, and paint. Organic and inorganic techniques for analyzing evidence will be studied in lecture and practiced in lab. Previous chemistry background is helpful, but not required. This course is recommended for students needing a one semester general chemistry laboratory course. This course does not satisfy the prerequisite for Chemistry 141. Students will not receive credit toward graduation for more than one of the following courses: Chemistry 113, Chemistry 115 and Chemistry 120.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

† This course meets all Title 5 standards for Associate Degree Credit.
†† This course meets all Title 5 standards for Nondegree Credit.

CHEMISTRY 115 †
Fundamentals of Chemistry
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "Pass" grade in Mathematics 090 or equivalent.*
Elementary principles of inorganic and general chemistry with an overview of organic and biochemistry. Basic chemical terminology, problem solving techniques and chemical explanations of our environment will be studied. Chemical concepts will be explained through common applications such as health science and forensic science. Previous chemistry background is helpful, but not required. This course is recommended for students needing a one semester general chemistry laboratory course. This course does not satisfy the prerequisite for Chemistry 141. Students will not receive credit toward graduation for more than one of the following courses: Chemistry 113, Chemistry 115 and Chemistry 120.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

CHEMISTRY 115T †
Tutorial Laboratory-Chemistry 115
1 unit, 3 hours laboratory
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 116 †
Introductory Organic and Biochemistry
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Chemistry 115 or equivalent.*
The study of carbon compounds with emphasis on their structure, properties, and reactivity. Introduction to the structure of the major classes of biomolecules—carbohydrates, lipids, and proteins—and their relationship to the major classes of organic compounds.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

CHEMISTRY 116T †
Tutorial Laboratory-Chemistry 116
1 unit, 3 hours laboratory
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of organic and biochemistry chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 120 †
Preparation for General Chemistry
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *"C" grade or higher or "Pass" in Mathematics 110 or equivalent.*
A beginning general chemistry course for students with little or no background in chemistry. This course will prepare students for a full year general chemistry course. This course will be an intensive study in the areas of problem solving, basic atomic theory, chemical nomenclature, stoichiometry, gas laws, solutions, acid-base chemistry, and redox. The laboratory will be an introduction to quantitative techniques, descriptive chemistry, gas laws, and data treatment. Students will not receive credit toward graduation for more than one of the following courses: Chemistry 113, Chemistry 115 and Chemistry 120.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

CHEMISTRY 120T †
Tutorial Laboratory-Chemistry 120
1 unit, 3 hours laboratory
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of chemistry. This material would be appropriate for chemistry major or science major sequence. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 141 †
General Chemistry I
5 units, 3 hours lecture, 6 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Chemistry 120, or a "C" grade or higher or "Pass" in Mathematics 110 or equivalent and Chemistry 141 assessment.*
Basic principles and calculation of chemistry with emphasis in stoichiometry, gas laws, kinetic-molecular theory, basic equilibrium including gas phase and solution phase, pH atomic and molecular structures, chemical bonding, and applications of the First Law of Thermodynamics. The laboratory is an introduction to classical and instrumental analysis, the principles of equilibrium, and atomic and molecular structures. The course is equivalent to Chemistry 200 at San Diego State University.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC

CHEMISTRY 141T †
Tutorial Laboratory-Chemistry 141
1 unit, 3 hours laboratory
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of first semester general chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 142 †
General Chemistry II
5 units, 3 hours lecture, 6 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Chemistry 141 or equivalent.*
Basic principles and calculations of chemistry with emphasis on the areas of thermodynamics, kinetics, aqueous equilibrium, electrochemistry, coordination chemistry, nuclear chemistry and an introduction to organic and biochemistry. The laboratory will demonstrate the concepts presented in lecture and in addition will introduce qualitative analysis. This course is equivalent to Chemistry 201 at San Diego State University.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC

CHEMISTRY 142T †
Tutorial Laboratory-Chemistry 142
1 unit, 3 hours laboratory
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of second semester general chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 199
Special Studies or Projects in Chemistry
1-3 units, 3-9 hours
Prerequisite: *Consent of instructor.*
Individual study, research or projects in the field of chemistry under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and/or division. May be repeated for a maximum of nine units.

CHEMISTRY 231 †
Organic Chemistry I
5 units, 3 hours lecture, 6 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Chemistry 142 or equivalent.*
First of a two semester organic chemistry sequence. The topics covered will include nomenclature of organic compounds, stereochemistry, reaction mechanisms, and the study of

† This course meets all Title 5 standards for Associate Degree Credit.

representative reactions for certain classes of organic compounds. The relationship of structure to properties, reactivity and mechanism or reaction will be emphasized. This course is intended for biology, chemistry and pre-medical majors needing either one or two semesters of organic chemistry.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC

CHEMISTRY 231T †
Tutorial Laboratory-Chemistry 231
1 unit, 3 hours laboratory
Recommended Preparation: *A "C" grade or higher or "Pass" in Chemistry 142 or equivalent.*
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of organic chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 232 †
Organic Chemistry II
5 units, 3 hours lecture, 6 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Chemistry 231 or equivalent.*
Second of a two semester sequence. The topics covered will include: structure and reactivity of carboxylic acids and their derivatives, amines and other nitrogen functional groups, aromatic compounds, heterocyclic compounds, polyfunctional compounds, conjugation and aromaticity, and multistep organic synthesis.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC

CHEMISTRY 232T †
Tutorial Laboratory-Chemistry 232
1 unit, 3 hours laboratory
Recommended Preparation: *A "C" grade or higher or "Pass" in Chemistry 231 or equivalent.*
This course consists of computer aided tutorials, drills and problem sets for the purpose of helping the student to master basic concepts of second semester organic chemistry. This course is offered on a Pass/No Pass basis only.
Transfers to CSU

CHEMISTRY 298 ††
Selected Topics in Chemistry
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Mathematics, Natural Sciences, and Exercise Science and Wellness in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture, or laboratory class. Pass/No Pass only.
Non-associate degree applicable

CHEMISTRY 299A †
Selected Topics in Chemistry
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Mathematics, Natural Sciences, and Exercise Science and Wellness in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture, or laboratory class.
Associate degree applicable

CHEMISTRY 299B †
Selected Topics in Chemistry
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in chemistry not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Mathematics, Natural Sciences, and Exercise Science and Wellness in relation to community/student need(s) and/or available staff. May be offered as a seminar, lecture, or laboratory class.
Baccalaureate level-CSU transfer

CHILD DEVELOPMENT (CD)

CHILD DEVELOPMENT 101 †
Parent Education
1 unit, 1 hour lecture
This course is primarily designed for parents of children enrolled in the Child Development Center although others are welcome to take the class. The course includes an overview of child development principles and an exploration of the role of parents in supporting the development of their children. The course will provide guidance in effective parenting strategies reflecting family and cultural beliefs. Discussions and assignments will relate directly to the participants' interaction with young children.
Transfers to CSU

CHILD DEVELOPMENT 106 †
Practicum: Beginning Observation and Experience
1 unit, 3 hours laboratory
Corequisite: *A "C" grade or higher or concurrent enrollment in CD 123 or 125 or equivalent.*
A laboratory experience at an approved placement site, this course includes observing and recording behavior of infant through preschool children and working directly with preschool children. This course is designed to reinforce and augment understanding of principles and techniques for observing, assessing, planning and working with young children through direct experience.
Transfers to CSU

CHILD DEVELOPMENT 115 †
(Family Studies 115)
Changing American Family
3 units, 3 hours lecture
A survey of the contemporary American family with emphasis on changes in form, functions and expectations. The history of the family, both public and private, will be considered and examined in relation to the effects of class, ethnicity and social policy. The effects on the family of common life events experienced by individuals and family members will be covered including sexuality, mate selection, marriage, childbearing, the working family, divorce, domestic violence and aging. The future of the family including implications for the individual and society will be discussed.
Satisfies General Education for: Grossmont College D2; CSU D7, D10; IGETC 4J
Transfers to: CSU, UC (credit limited: see page 37)

CHILD DEVELOPMENT 121 †
The Arts and Creativity for Young Children
3 units, 3 hours lecture
This course will explore the development of creativity and creative expression through art, music, dramatic play and movement. Students will participate in a variety of creative experiences and learn strategies for incorporating the creative arts into daily routines and curriculum in early care and education settings. Developing skills to prepare an inclusive classroom environment that integrates creativity, is aesthetically pleasing, and developmentally appropriate will be a part of the course. This class meets the Program/Curriculum core requirement for Community Care Licensing and the California Commission on Teacher Credentialing Child Development Permit.
Transfers to CSU

† This course meets all Title 5 standards for Associate Degree Credit.
†† This course meets all Title 5 standards for Nondegree Credit.

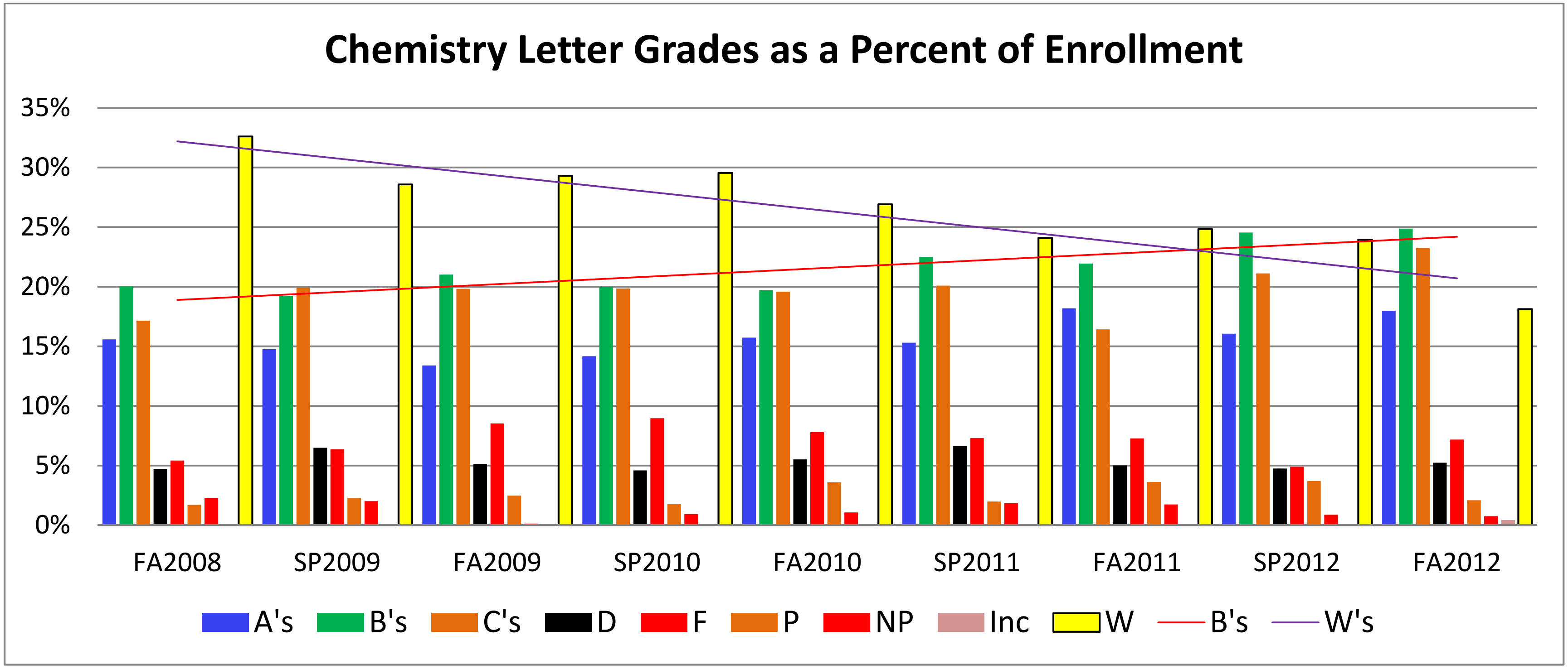
APPENDIX 3 Grade Distribution Summaries by Section for Each Term 2006-2012

- Chemistry Letter Grades as a Percent of Enrollment
- Summaries are arrange from most recent (Spring 2012) to oldest (Spring 2006)
- Summaries for Chemistry are listed first followed by summaries for Science
- Summaries prior to Fall 2008 use the previous format (before adoption of the *Colleague* data system)

Chemistry Letter Grades as a Percent of Enrollment											
totals	E	A's	B's	C's	D	F	P	NP	Inc	W	E + W
FA2008	471	109	140	120	33	38	12	16	0	228	699
SP2009	527	109	142	147	48	47	17	15	0	211	738
FA2009	538	102	160	151	39	65	19	1	0	223	761
SP2010	596	120	169	168	39	76	15	8	0	250	846
FA2010	608	131	164	163	46	65	30	9	0	224	832
SP2011	570	115	169	151	50	55	15	14	0	181	751
FA2011	599	145	175	131	40	58	29	14	0	198	797
SP2012	511	108	165	142	32	33	25	6	0	161	672
FA2012	546	120	166	155	35	48	14	5	3	121	667

%		A's	B's	C's	D	F	P	NP	Inc	W
FA2008		15.6%	20.0%	17.2%	4.7%	5.4%	1.7%	2.3%	0.0%	32.6%
SP2009		14.8%	19.2%	19.9%	6.5%	6.4%	2.3%	2.0%	0.0%	28.6%
FA2009		13.4%	21.0%	19.8%	5.1%	8.5%	2.5%	0.1%	0.0%	29.3%
SP2010		14.2%	20.0%	19.9%	4.6%	9.0%	1.8%	0.9%	0.0%	29.6%
FA2010		15.7%	19.7%	19.6%	5.5%	7.8%	3.6%	1.1%	0.0%	26.9%
SP2011		15.3%	22.5%	20.1%	6.7%	7.3%	2.0%	1.9%	0.0%	24.1%
FA2011		18.2%	22.0%	16.4%	5.0%	7.3%	3.6%	1.8%	0.0%	24.8%
SP2012		16.1%	24.6%	21.1%	4.8%	4.9%	3.7%	0.9%	0.0%	24.0%
FA2012		18.0%	24.9%	23.2%	5.2%	7.2%	2.1%	0.7%	0.4%	18.1%

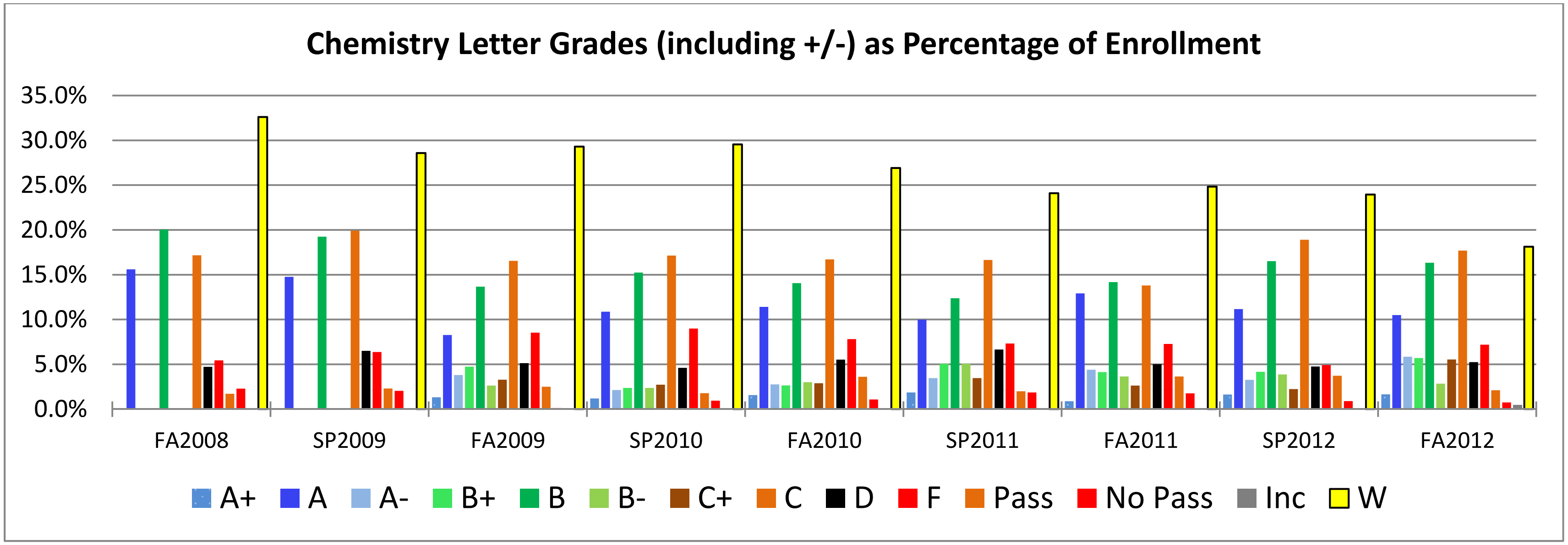
(See graph next page)


Chemistry Letter Grades as a Percent of Enrollment
35%
30%
25%
20%
15%
10%
5%
0%
FA2008
SP2009
FA2009
SP2010
FA2010
SP2011
FA2011
SP2012
FA2012
A's
B's
C's
D
F
P
NP
Inc
W
B's
W's

Chemistry Letter Grades (including +/-) as Percentage of Enrollment																
	E	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	No Pass	Inc	W	E + W
FA2008	471	0	109	0	0	140	0	0	120	33	38	12	16	0	228	699
SP2009	527	0	109	0	0	142	0	0	147	48	47	17	15	0	211	738
FA2009	538	10	63	29	36	104	20	25	126	39	65	19	1	0	223	761
SP2010	596	10	92	18	20	129	20	23	145	39	76	15	8	0	250	846
FA2010	608	13	95	23	22	117	25	24	139	46	65	30	9	0	224	832
SP2011	570	14	75	26	38	93	38	26	125	50	55	15	14	0	181	751
FA2011	599	7	103	35	33	113	29	21	110	40	58	29	14	0	198	797
SP2012	511	11	75	22	28	111	26	15	127	32	33	25	6	0	161	672
FA2012	546	11	70	39	38	109	19	37	118	35	48	14	5	3	121	667
total	4966	76	791	192	215	1058	177	171	1157	362	485	176	88	3	1797	6763

	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	No Pass	Inc	W
FA2008	0.0%	15.6%	0.0%	0.0%	20.0%	0.0%	0.0%	17.2%	4.7%	5.4%	1.7%	2.3%	0.0%	32.6%
SP2009	0.0%	14.8%	0.0%	0.0%	19.2%	0.0%	0.0%	19.9%	6.5%	6.4%	2.3%	2.0%	0.0%	28.6%
FA2009	1.3%	8.3%	3.8%	4.7%	13.7%	2.6%	3.3%	16.6%	5.1%	8.5%	2.5%	0.1%	0.0%	29.3%
SP2010	1.2%	10.9%	2.1%	2.4%	15.2%	2.4%	2.7%	17.1%	4.6%	9.0%	1.8%	0.9%	0.0%	29.6%
FA2010	1.6%	11.4%	2.8%	2.6%	14.1%	3.0%	2.9%	16.7%	5.5%	7.8%	3.6%	1.1%	0.0%	26.9%
SP2011	1.9%	10.0%	3.5%	5.1%	12.4%	5.1%	3.5%	16.6%	6.7%	7.3%	2.0%	1.9%	0.0%	24.1%
FA2011	0.9%	12.9%	4.4%	4.1%	14.2%	3.6%	2.6%	13.8%	5.0%	7.3%	3.6%	1.8%	0.0%	24.8%
SP2012	1.6%	11.2%	3.3%	4.2%	16.5%	3.9%	2.2%	18.9%	4.8%	4.9%	3.7%	0.9%	0.0%	24.0%
FA2012	1.6%	10.5%	5.8%	5.7%	16.3%	2.8%	5.5%	17.7%	5.2%	7.2%	2.1%	0.7%	0.4%	18.1%

(See graph next page)


Chemistry Letter Grades (including +/-) as Percentage of Enrollment
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
FA2008
SP2009
FA2009
SP2010
FA2010
SP2011
FA2011
SP2012
FA2012
A+
A
A-
B+
B
B-
C+
C
D
F
Pass
No Pass
Inc
W

Grade Distribution by Division
School: Grossmont College -- Term: 2012FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102 General, Organic & Biological																			
6164		5.0	22	0	5	0	1	3	2	3	6	1	1	0	0	0	4	Olmstead, Thomas	
Course Total			22	0	5	0	1	3	2	3	6	1	1	0	0	0	4		
CHEM-110 Environmental Chemistry																			
8681		3.0	49	6	6	14	13	6	2	1	1	0	0	0	0	0	4	Zajac, Ewa	PT
Course Total			49	6	6	14	13	6	2	1	1	0	0	0	0	0	4		
CHEM-113 Forensic Chemistry																			
2502		4.0	22	0	2	2	2	4	1	4	4	0	3	0	0	0	2	Lehman, Jeffrey	XP
2503		4.0	21	0	2	0	1	1	1	6	4	0	6	0	0	0	5	Lehman, Jeffrey	
Course Total			43	0	4	2	3	5	2	10	8	0	9	0	0	0	7		
CHEM-115 Fundamentals of Chemistry																			
2508		4.0	27	0	1	2	1	3	0	1	7	5	7	0	0	0	5	Willard, Cary	
2509		4.0	25	1	4	2	2	3	0	3	5	1	4	0	0	0	7	Willard, Cary	
8547		4.0	25	0	3	3	1	5	0	0	7	3	1	2	0	0	4	Vance, Diana	
8548		4.0	28	0	4	0	0	11	1	0	9	2	1	0	0	0	4	Vance, Diana	
Course Total			105	1	12	7	4	22	1	4	28	11	13	2	0	0	20		
CHEM-115T Tutorial Lab for Chem 115																			
2512		1.0	6	0	0	0	0	0	0	0	0	0	0	2	4	0	4	Larter, Martin	
Course Total			6	0	0	0	0	0	0	0	0	0	0	2	4	0	4		
CHEM-116 Intro Organic & Biochemistry																			
2515		4.0	23	0	6	1	0	6	2	3	4	1	0	0	0	0	5	Oakes, John	
2516		4.0	17	1	2	3	2	3	3	0	1	2	0	0	0	0	3	Oakes, John	
Course Total			40	1	8	4	2	9	5	3	5	3	0	0	0	0	8		

Grade Distribution by Division

School: Grossmont College -- Term: 2012FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-120 Prep for General Chemistry																			
0412		4.0	21	0	2	0	0	6	0	0	7	2	4	0	0	0	7	George, Judy	
0457		4.0	23	0	4	1	0	7	0	0	5	1	4	1	0	0	4	George, Judy	
2518N		4.0	20	1	2	1	1	4	2	2	4	1	2	0	0	0	6	Hernandez, Amanda	PT
2521N		4.0	21	0	3	3	3	3	2	2	2	1	1	1	0	0	4	Hernandez, Amanda	PT
5393		4.0	24	0	5	0	0	6	0	0	8	3	1	1	0	0	1	Larter, Martin	
5970		4.0	20	0	2	0	0	5	0	0	7	2	4	0	0	0	5	Larter, Martin	
8545		4.0	23	0	4	1	0	2	0	0	7	2	5	2	0	0	6	George, Judy	
Course Total			152	1	22	6	4	33	4	4	40	12	21	5	0	0	33		
CHEM-120T Tutorial Lab for Chem 120																			
2525		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	Larter, Martin	XP
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	1		
CHEM-141 General Chemistry I																			
2526N		5.0	17	0	3	0	4	1	1	1	6	0	1	0	0	0	8	Vance, Diana	
2527		5.0	17	0	1	2	0	5	0	0	2	4	1	0	0	2	7	George, Judy	XP
5382		5.0	24	0	2	1	3	5	0	6	5	2	0	0	0	0	0	Lehman, Jeffrey	
8803		5.0	19	1	3	0	0	8	0	1	4	0	1	0	0	1	5	Willard, Cary	
Course Total			77	1	9	3	7	19	1	8	17	6	3	0	0	3	20		

Grade Distribution by Division

School: Grossmont College -- Term: 2012FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-141T Tutorial Lab for Chem 141																			
2531		1.0	5	0	0	0	0	0	0	0	0	0	0	4	1	0	5	Larter, Martin	XP
Course Total			5	0	0	0	0	0	0	0	0	0	0	4	1	0	5		
CHEM-142 General Chemistry II																			
2532		5.0	21	0	2	1	3	3	0	2	9	0	1	0	0	0	9	Oakes, John	
Course Total			21	0	2	1	3	3	0	2	9	0	1	0	0	0	9		
CHEM-231 Organic Chemistry I																			
2536		5.0	18	0	0	2	1	6	2	2	3	2	0	0	0	0	3	Larter, Martin	
Course Total			18	0	0	2	1	6	2	2	3	2	0	0	0	0	3		
CHEM-232 Organic Chemistry II																			
8549		5.0	7	1	2	0	0	3	0	0	1	0	0	0	0	0	3	Olmstead, Thomas	
Course Total			7	1	2	0	0	3	0	0	1	0	0	0	0	0	3		
Subject Total			546	11	70	39	38	109	19	37	118	35	48	14	5	3	121		
Division Total			546	11	70	39	38	109	19	37	118	35	48	14	5	3	121		

Grade Distribution by Division

School: Grossmont College -- Term: 2012SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102 General, Organic & Biological																			
8896		5.0	20	0	11	0	0	4	0	1	1	0	2	0	1	0	4	Olmstead, Thomas	
9115		5.0	13	0	2	0	0	5	0	0	5	1	0	0	0	0	9	Olmstead, Thomas	
Course Total			33	0	13	0	0	9	0	1	6	1	2	0	1	0	13		
CHEM-110 Environmental Chemistry																			
6630		3.0	45	4	4	4	11	12	5	0	2	1	2	0	0	0	1	Zajac, Ewa	PT
Course Total			45	4	4	4	11	12	5	0	2	1	2	0	0	0	1		
CHEM-113 Forensic Chemistry																			
6632		4.0	13	0	0	0	1	1	3	1	5	1	1	0	0	0	8	Lehman, Jeffrey	XP
6633		4.0	24	0	2	2	2	6	1	0	7	3	1	0	0	0	4	Lehman, Jeffrey	
Course Total			37	0	2	2	3	7	4	1	12	4	2	0	0	0	12		
CHEM-115 Fundamentals of Chemistry																			
6637		4.0	11	0	2	0	0	3	0	0	4	1	0	1	0	0	18	Harbach, Rebecca	PT
6639		4.0	20	0	5	0	0	6	0	0	6	0	3	0	0	0	4	Vance, Diana	
6640		4.0	20	0	4	0	0	3	0	0	9	3	1	0	0	0	4	Vance, Diana	
8892		4.0	20	0	3	1	0	7	1	0	2	4	2	0	0	0	9	Harbach, Rebecca	PT
9332N		4.0	26	1	1	3	3	6	3	1	2	2	0	4	0	0	6	Parker, Kathryn	PT
Course Total			97	1	15	4	3	25	4	1	23	10	6	5	0	0	41		
CHEM-115T Tutorial Lab for Chem 115																			
6641		1.0	11	0	0	0	0	0	0	0	0	0	0	8	3	0	6	Oakes, John	
Course Total			11	0	0	0	0	0	0	0	0	0	0	8	3	0	6		

Grade Distribution by Division

School: Grossmont College -- Term: 2012SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-116 Intro Organic & Biochemistry																			
6644N		4.0	21	0	5	1	1	2	6	1	5	0	0	0	0	0	4	Larter, Martin	
6645N		4.0	18	0	1	3	0	3	2	1	7	0	1	0	0	0	6	Larter, Martin	
Course Total			39	0	6	4	1	5	8	2	12	0	1	0	0	0	10		
CHEM-116T Tutorial Lab for Chem 116																			
6646		1.0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	Oakes, John	
Course Total			3	0	0	0	0	0	0	0	0	0	0	3	0	0	0		
CHEM-120 Prep for General Chemistry																			
6649		4.0	16	0	2	0	0	3	0	0	7	2	2	0	0	0	12	George, Judy	
6650		4.0	20	0	0	0	0	5	0	0	10	2	3	0	0	0	7	George, Judy	
6652		4.0	20	0	1	0	0	2	0	0	10	2	5	0	0	0	6	Larter, Martin	
6653		4.0	17	0	2	0	0	2	0	0	8	1	4	0	0	0	6	Larter, Martin	
6908		4.0	21	0	6	0	0	2	0	0	9	1	1	2	0	0	5	Larter, Martin	
8898N		4.0	23	1	2	3	3	5	1	4	4	0	0	0	0	0	3	Hernandez, Amanda	PT
Course Total			117	1	13	3	3	19	1	4	48	8	15	2	0	0	39		
CHEM-120T Tutorial Lab for Chem 120																			
6654		1.0	7	0	0	0	0	0	0	0	0	0	0	5	2	0	2	Oakes, John	
Course Total			7	0	0	0	0	0	0	0	0	0	0	5	2	0	2		
CHEM-141 General Chemistry I																			
6655		5.0	22	0	1	1	3	6	0	3	6	1	1	0	0	0	6	Lehman, Jeffrey	
6657		5.0	21	1	5	2	2	4	2	1	3	1	0	0	0	0	6	Oakes, John	XP
6658N		5.0	19	3	3	0	1	7	1	0	3	1	0	0	0	0	5	Willard, Cary	
Course Total			62	4	9	3	6	17	3	4	12	3	1	0	0	0	17		
CHEM-141T Tutorial Lab for Chem 141																			
6659		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	Oakes, John	
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	0		

Grade Distribution by Division
School: Grossmont College -- Term: 2012SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor
CHEM-142 General Chemistry II																		
6660		5.0	19	0	1	1	0	4	1	1	6	2	3	0	0	0	9	George, Judy
6662N		5.0	17	0	5	1	1	7	0	0	2	1	0	0	0	0	7	Vance, Diana
Course Total			36	0	6	2	1	11	1	1	8	3	3	0	0	0	16	
CHEM-142T Tutorial Lab for Chem 142																		
6663		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	4	Oakes, John
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	4	
CHEM-231 Organic Chemistry I																		
6664		5.0	22	1	7	0	0	6	0	1	4	2	1	0	0	0	0	Olmstead, Thomas
Course Total			22	1	7	0	0	6	0	1	4	2	1	0	0	0	0	
Subject Total			511	11	75	22	28	111	26	15	127	32	33	25	6	0	161	
Division Total			511	11	75	22	28	111	26	15	127	32	33	25	6	0	161	

Grade Distribution by Division
School: Grossmont College -- Term: 2011FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102 General, Organic & Biological																			
6164		5.0	17	0	5	1	0	7	1	0	2	1	0	0	0	0	8	Olmstead, Thomas	
9557		5.0	21	0	6	0	1	6	3	1	1	2	1	0	0	0	3	Olmstead, Thomas	
Course Total			38	0	11	1	1	13	4	1	3	3	1	0	0	0	11		
CHEM-110 Environmental Chemistry																			
8681		3.0	40	7	8	6	9	4	2	0	0	2	1	1	0	0	6	Zajac, Ewa	PT
Course Total			40	7	8	6	9	4	2	0	0	2	1	1	0	0	6		
CHEM-113 Forensic Chemistry																			
2502		4.0	17	0	0	1	4	1	1	2	4	0	4	0	0	0	6	Lehman, Jeffrey	XP
2503		4.0	22	0	2	1	2	1	2	4	7	1	2	0	0	0	5	Lehman, Jeffrey	
Course Total			39	0	2	2	6	2	3	6	11	1	6	0	0	0	11		
CHEM-115 Fundamentals of Chemistry																			
2508		4.0	24	0	7	0	0	3	0	0	10	1	3	0	0	0	8	Larter, Martin	
2509		4.0	24	0	3	0	0	5	0	0	9	1	5	0	1	0	8	Larter, Martin	
8547		4.0	17	0	2	0	0	3	0	1	6	0	3	2	0	0	15	Vance, Diana	
8548		4.0	23	0	6	0	0	8	0	0	4	2	2	0	1	0	6	Vance, Diana	
8663		4.0	20	0	4	0	0	4	0	0	6	2	3	0	0	0	14	Larter, Martin	
8925N		4.0	19	0	3	2	2	3	4	3	2	0	0	0	0	0	7	Parker, Kathryn	PT
8926N		4.0	23	0	3	6	1	2	5	1	2	1	1	1	0	0	2	Parker, Kathryn	PT
Course Total			150	0	28	8	3	28	9	5	39	7	17	3	2	0	60		
CHEM-115T Tutorial Lab for Chem 115																			
2512		1.0	18	0	0	0	0	0	0	0	0	0	0	10	8	0	4	Oakes, John	
Course Total			18	0	0	0	0	0	0	0	0	0	0	10	8	0	4		

Grade Distribution by Division
School: Grossmont College -- Term: 2011FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-116 Intro Organic & Biochemistry																			
2515N		4.0	27	0	4	4	1	8	2	1	4	1	2	0	0	0	4	Anness, Robert	PT
2516N		4.0	32	0	11	2	1	11	2	1	2	1	1	0	0	0	1	Anness, Robert	PT
Course Total			59	0	15	6	2	19	4	2	6	2	3	0	0	0	5		
CHEM-120 Prep for General Chemistry																			
2518N		4.0	17	0	3	1	1	2	2	0	2	5	1	0	0	0	14	George, Judy	
2519N		4.0	22	0	1	0	0	1	0	0	9	4	6	0	0	0	8	George, Judy	
2521N		4.0	16	0	0	0	0	3	0	0	6	5	1	1	0	0	12	George, Judy	
5393		4.0	18	0	7	0	0	4	0	0	4	1	1	1	0	0	7	Du Vigneaud, Jacqueline	PT
5970		4.0	21	0	0	0	0	12	0	0	1	1	2	3	0	0	4	Du Vigneaud, Jacqueline	PT
8545		4.0	17	0	6	0	0	3	0	0	3	2	3	0	0	0	7	Du Vigneaud, Jacqueline	PT
Course Total			111	0	17	1	1	25	2	0	25	18	14	5	0	0	52		
CHEM-120T Tutorial Lab for Chem 120																			
2525		1.0	10	0	0	0	0	0	0	0	0	0	0	7	3	0	1	Oakes, John	
Course Total			10	0	0	0	0	0	0	0	0	0	0	7	3	0	1		
CHEM-141 General Chemistry I																			
2526N		5.0	24	0	8	1	1	8	1	0	3	0	1	0	0	0	2	Hernandez, Amanda	PT
2527		5.0	19	0	3	3	2	3	1	2	2	1	2	0	0	0	6	Oakes, John	XP
5382		5.0	20	0	1	3	3	1	2	4	5	0	0	0	0	0	6	Lehman, Jeffrey	
8803		5.0	16	0	1	1	0	0	0	0	4	1	8	0	1	0	10	George, Judy	
Course Total			79	0	13	8	6	12	4	6	14	2	11	0	1	0	24		

Grade Distribution by Division

School: Grossmont College -- Term: 2011FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-141T Tutorial Lab for Chem 141																			
2531		1.0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	1	Oakes, John	
Course Total			3	0	0	0	0	0	0	0	0	0	0	3	0	0	1		
CHEM-142 General Chemistry II																			
2532		5.0	16	0	3	1	1	3	1	0	4	2	1	0	0	0	6	George, Judy	XP
8578N		5.0	12	0	0	0	1	3	0	0	4	0	3	0	0	0	6	Vance, Diana	
Course Total			28	0	3	1	2	6	1	0	8	2	4	0	0	0	12		
CHEM-231 Organic Chemistry I																			
2536N		5.0	15	0	3	2	0	2	0	1	3	3	1	0	0	0	8	Larter, Martin	
Course Total			15	0	3	2	0	2	0	1	3	3	1	0	0	0	8		
CHEM-232 Organic Chemistry II																			
8549		5.0	9	0	3	0	3	2	0	0	1	0	0	0	0	0	3	Olmstead, Thomas	
Course Total			9	0	3	0	3	2	0	0	1	0	0	0	0	0	3		
Subject Total			599	7	##	35	33	##	29	21	##	40	58	29	14	0	198		
Division Total			599	7	##	35	33	##	29	21	##	40	58	29	14	0	198		

Grade Distribution by Division

School: Grossmont College -- Term: 2011SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-110 Environmental Chemistry																			
6630		3.0	34	6	4	2	5	9	7	1	0	0	0	0	0	0	11	Zajac, Ewa	PT
Course Total			34	6	4	2	5	9	7	1	0	0	0	0	0	0	11		
CHEM-113 Forensic Chemistry																			
6632		4.0	19	0	1	1	2	3	2	2	5	2	1	0	0	0	4	Lehman, Jeffrey	
6633		4.0	15	0	2	0	2	1	5	1	2	0	2	0	0	0	6	Lehman, Jeffrey	
Course Total			34	0	3	1	4	4	7	3	7	2	3	0	0	0	10		
CHEM-115 Fundamentals of Chemistry																			
6634		4.0	25	0	3	0	0	7	0	0	14	0	1	0	0	0	9	Kolonko, Kenneth	PT
6636		4.0	29	1	2	6	1	3	0	2	11	0	2	1	0	0	5	Willard, Cary	
6637		4.0	19	1	1	1	0	4	0	3	4	2	3	0	0	0	15	Willard, Cary	
6639N		4.0	25	0	0	1	2	4	1	1	5	7	4	0	0	0	5	Bowie, Bryan	PT
6640N		4.0	24	0	1	0	1	3	5	2	5	4	2	0	1	0	13	Bowie, Bryan	PT
Course Total			122	2	7	8	4	21	6	8	39	13	12	1	1	0	47		
CHEM-115T Tutorial Lab for Chem 115																			
6641		1.0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	5	Oakes, John	
Course Total			3	0	0	0	0	0	0	0	0	0	0	1	2	0	5		
CHEM-116 Intro Organic & Biochemistry																			
6644N		4.0	19	0	1	3	2	4	2	1	4	0	1	1	0	0	4	Anness, Robert	PT
6645N		4.0	17	0	7	1	0	4	0	1	2	1	1	0	0	0	5	Anness, Robert	PT
Course Total			36	0	8	4	2	8	2	2	6	1	2	1	0	0	9		
CHEM-116T Tutorial Lab for Chem 116																			
6646		1.0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Oakes, John	
Course Total			1	0	0	0	0	0	0	0	0	0	0	0	1	0	1		

Grade Distribution by Division
School: Grossmont College -- Term: 2011SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-120 Prep for General Chemistry																			
6647	4.0		22	2	2	1	2	2	1	0	3	2	3	3	1	0	6	Hernandez, Amanda	PT
6648	4.0		24	0	2	0	4	3	2	2	7	3	0	1	0	0	3	Hernandez, Amanda	PT
6649	4.0		29	0	2	0	1	4	2	0	8	3	5	2	2	0	3	George, Judy	
6650	4.0		20	0	3	0	1	0	1	0	5	1	6	2	0	0	10	George, Judy	
6652N	4.0		20	0	3	0	1	7	0	0	3	0	2	3	1	0	5	Vance, Diana	
6653N	4.0		24	0	3	0	2	2	1	0	11	4	1	0	0	0	0	Vance, Diana	
6908	4.0		29	1	6	0	3	1	1	2	5	4	6	0	0	0	1	Hernandez, Amanda	PT
9116	4.0		23	0	10	0	0	5	0	0	3	2	3	0	0	0	7	Du Vigneaud, Jacqueline	PT
9117	4.0		14	0	3	0	0	3	0	0	2	3	3	0	0	0	14	Du Vigneaud, Jacqueline	PT
Course Total			205	3	34	1	14	27	8	4	47	22	29	11	4	0	49		
CHEM-120T Tutorial Lab for Chem 120																			
6654	1.0		5	0	0	0	0	0	0	0	0	0	0	1	4	0	5	Oakes, John	
Course Total			5	0	0	0	0	0	0	0	0	0	0	1	4	0	5		
CHEM-141 General Chemistry I																			
6655	5.0		20	2	4	0	1	5	0	0	5	3	0	0	0	0	5	Willard, Cary	
6656	5.0		18	0	4	0	0	1	2	0	5	1	5	0	0	0	8	George, Judy	
6657	5.0		21	1	2	3	0	4	3	4	3	1	0	0	0	0	3	Oakes, John	XP
6658N	5.0		11	0	1	0	0	4	0	1	3	2	0	0	0	0	15	Larter, Martin	
Course Total			70	3	11	3	1	14	5	5	16	7	5	0	0	0	31		
CHEM-141T Tutorial Lab for Chem 141																			
6659	1.0		1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	Oakes, John	
Course Total			1	0	0	0	0	0	0	0	0	0	0	0	1	0	2		

Grade Distribution by Division

School: Grossmont College -- Term: 2011SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor
CHEM-142 General Chemistry II																		
6660		5.0	25	0	5	4	5	3	1	1	3	2	1	0	0	0	3	Lehman, Jeffrey
6662N		5.0	16	0	2	0	3	5	0	1	3	0	2	0	0	0	5	Vance, Diana
Course Total			41	0	7	4	8	8	1	2	6	2	3	0	0	0	8	
CHEM-142T Tutorial Lab for Chem 142																		
6663		1.0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Oakes, John
Course Total			1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
CHEM-231 Organic Chemistry I																		
6664		5.0	17	0	1	3	0	2	2	1	4	3	1	0	0	0	2	Larter, Martin
Course Total			17	0	1	3	0	2	2	1	4	3	1	0	0	0	2	
Subject Total			570	14	75	26	38	93	38	26	##	50	55	15	14	0	181	
Division Total			570	14	75	26	38	93	38	26	##	50	55	15	14	0	181	

Grade Distribution by Division
School: Grossmont College -- Term: 2010FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102	General, Organic & Biological																		
6164		5.0	14	0	4	0	1	3	1	1	2	1	1	0	0	0	5	Olmstead, Thomas	
9557		5.0	16	0	4	0	1	5	1	1	3	1	0	0	0	0	9	Olmstead, Thomas	
Course Total			30	0	8	0	2	8	2	2	5	2	1	0	0	0	14		
CHEM-110	Environmental Chemistry																		
2500		3.0	48	7	8	0	8	12	0	2	2	4	1	4	0	0	3	Zajac, Ewa	PT
Course Total			48	7	8	0	8	12	0	2	2	4	1	4	0	0	3		
CHEM-113	Forensic Chemistry																		
2502N		4.0	16	0	4	1	1	2	1	2	3	0	2	0	0	0	8	Lehman, Jeffrey	
2503N		4.0	19	1	2	6	1	0	1	1	4	2	1	0	0	0	7	Lehman, Jeffrey	
Course Total			35	1	6	7	2	2	2	3	7	2	3	0	0	0	15		
CHEM-115	Fundamentals of Chemistry																		
2505		4.0	26	0	1	0	0	8	0	0	10	2	5	0	0	0	7	Kolonko, Kenneth	PT
2508		4.0	25	0	3	0	1	5	0	1	9	3	2	1	0	0	9	Willard, Cary	
2509		4.0	24	0	3	0	1	6	0	1	5	5	3	0	0	0	9	Willard, Cary	
2510N		4.0	17	1	4	0	0	3	0	0	6	1	1	1	0	0	10	Bowie, Bryan	PT
2511N		4.0	19	2	2	0	0	1	0	0	6	3	4	1	0	0	9	Bowie, Bryan	PT
Course Total			111	3	13	0	2	23	0	2	36	14	15	3	0	0	44		

Grade Distribution by Division
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Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-115T Tutorial Lab for Chem 115																			
2512		1.0	4	0	0	0	0	0	0	0	0	0	0	3	1	0	4	Olmstead, Thomas	
Course Total			4	0	0	0	0	0	0	0	0	0	0	3	1	0	4		
CHEM-116 Intro Organic & Biochemistry																			
2515N		4.0	25	0	9	0	0	10	0	0	5	0	1	0	0	0	1	Anness, Robert	PT
2516N		4.0	22	0	9	0	0	6	0	0	4	0	3	0	0	0	8	Anness, Robert	PT
Course Total			47	0	18	0	0	16	0	0	9	0	4	0	0	0	9		
CHEM-116T Tutorial Lab for Chem 116																			
2517		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	Olmstead, Thomas	
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	2		
CHEM-120 Prep for General Chemistry																			
2518		4.0	14	0	4	0	0	3	0	0	1	0	5	1	0	0	13	Du Vigneaud, Jacqueline	PT
2519		4.0	27	0	0	1	0	2	3	1	10	5	2	2	1	0	14	George, Judy	
2521		4.0	16	0	4	0	0	3	0	0	7	0	1	0	1	0	9	Du Vigneaud, Jacqueline	PT
2522		4.0	20	0	1	1	0	6	2	2	3	0	3	2	0	0	7	Hernandez, Amanda	PT
2523		4.0	23	2	6	0	0	5	1	1	3	1	2	2	0	0	5	Hernandez, Amanda	PT
2524N		4.0	25	0	0	0	0	4	0	0	7	6	3	5	0	0	4	Vance, Diana	
5393		4.0	27	0	2	0	1	1	3	0	10	2	7	0	1	0	8	George, Judy	
5970N		4.0	23	0	3	0	0	7	0	0	4	2	3	2	2	0	4	Vance, Diana	
6163		4.0	16	0	1	1	0	3	0	1	4	0	6	0	0	0	5	Olmstead, Thomas	
Course Total			191	2	21	3	1	34	9	5	49	16	32	14	5	0	69		
CHEM-120T Tutorial Lab for Chem 120																			
2525		1.0	7	0	0	0	0	0	0	0	0	0	0	5	2	0	2	Olmstead, Thomas	
Course Total			7	0	0	0	0	0	0	0	0	0	0	5	2	0	2		

Grade Distribution by Division

School: Grossmont College -- Term: 2010FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-141 General Chemistry I																			
2526		5.0	16	0	3	2	1	2	1	1	3	1	2	0	0	0	9	Willard, Cary	
2527		5.0	18	0	3	0	1	4	0	0	7	1	2	0	0	0	13	George, Judy	
2529N		5.0	18	0	2	1	0	4	4	1	4	0	2	0	0	0	8	Larter, Martin	
5382		5.0	25	0	2	5	3	0	2	4	7	2	0	0	0	0	6	Lehman, Jeffrey	
Course Total			77	0	10	8	5	10	7	6	21	4	6	0	0	0	36		
CHEM-141T Tutorial Lab for Chem 141																			
2531		1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	Olmstead, Thomas	
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
CHEM-142 General Chemistry II																			
2532		5.0	22	0	3	4	2	4	3	2	2	2	0	0	0	0	6	Oakes, John	
2533N		5.0	16	0	4	0	0	4	0	0	4	1	2	0	1	0	7	Vance, Diana	
Course Total			38	0	7	4	2	8	3	2	6	3	2	0	1	0	13		
CHEM-142T Tutorial Lab for Chem 142																			
2534		1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Olmstead, Thomas	
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
CHEM-231 Organic Chemistry I																			
2536		5.0	19	0	4	1	0	4	2	2	4	1	1	0	0	0	11	Larter, Martin	XP
Course Total			19	0	4	1	0	4	2	2	4	1	1	0	0	0	11		
Subject Total			608	13	95	23	22	##	25	24	##	46	65	30	9	0	224		
Division Total			608	13	95	23	22	##	25	24	##	46	65	30	9	0	224		

Grade Distribution by Division

School: Grossmont College -- Term: 2010SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102 General, Organic & Biological																			
9819		5.0	21	2	4	1	4	1	2	0	6	0	1	0	0	0	6	Olmstead, Thomas	
Course Total			21	2	4	1	4	1	2	0	6	0	1	0	0	0	6		
CHEM-110 Environmental Chemistry																			
6630		3.0	17	0	2	0	0	2	2	1	1	1	7	1	0	0	9	George, Judy	
Course Total			17	0	2	0	0	2	2	1	1	1	7	1	0	0	9		
CHEM-113 Forensic Chemistry																			
6632		4.0	19	0	0	0	3	2	2	2	5	0	5	0	0	0	4	Lehman, Jeffrey	XP
6633		4.0	15	0	2	3	1	3	3	0	1	1	1	0	0	0	3	Lehman, Jeffrey	
Course Total			34	0	2	3	4	5	5	2	6	1	6	0	0	0	7		
CHEM-115 Fundamentals of Chemistry																			
6634		4.0	28	0	5	0	0	6	0	2	9	1	3	1	1	0	8	Kolonko, Kenneth	PT
6635		4.0	24	0	2	0	2	5	0	2	5	2	6	0	0	0	8	Kolonko, Kenneth	PT
6636		4.0	20	0	2	2	0	6	0	0	8	2	0	0	0	0	17	Willard, Cary	
6637		4.0	16	0	0	1	1	3	0	0	9	0	1	1	0	0	17	Willard, Cary	
6638		4.0	21	2	5	0	0	4	0	0	4	2	4	0	0	0	13	Bowie, Bryan	PT
6639N		4.0	22	3	5	0	0	2	2	0	3	3	3	1	0	0	6	Evans, Theodore	PT
6640N		4.0	21	1	2	1	1	2	1	2	4	3	3	0	0	0	2	Evans, Theodore	PT
Course Total			152	6	21	4	4	28	3	6	42	13	20	3	1	0	71		
CHEM-115T Tutorial Lab for Chem 115																			
6641		1.0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	7	Olmstead, Thomas	
Course Total			4	0	0	0	0	0	0	0	0	0	0	4	0	0	7		

Grade Distribution by Division

School: Grossmont College -- Term: 2010SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-116 Intro Organic & Biochemistry																			
6642		4.0	11	0	6	0	0	4	1	0	0	0	0	0	0	0	7	Ternansky, Robert	PT
6644N		4.0	13	0	5	0	0	6	0	0	2	0	0	0	0	0	9	Anness, Robert	PT
6645N		4.0	20	0	4	0	0	8	0	0	5	1	2	0	0	0	3	Anness, Robert	PT
Course Total			44	0	15	0	0	18	1	0	7	1	2	0	0	0	19		
CHEM-116T Tutorial Lab for Chem 116																			
6646		1.0	3	0	0	0	0	0	0	0	0	0	0	2	1	0	2	Olmstead, Thomas	
Course Total			3	0	0	0	0	0	0	0	0	0	0	2	1	0	2		
CHEM-120 Prep for General Chemistry																			
6647		4.0	29	2	5	0	1	1	2	4	7	2	5	0	0	0	8	Hernandez, Amanda	PT
6648		4.0	29	0	2	2	2	3	0	2	9	3	6	0	0	0	8	Hernandez, Amanda	PT
6649		4.0	19	0	1	2	0	8	1	0	3	1	2	0	1	0	8	George, Judy	XP
6650		4.0	17	0	5	0	1	5	0	0	1	2	3	0	0	0	12	George, Judy	
6652N		4.0	15	0	2	0	0	3	0	0	8	2	0	0	0	0	15	Vance, Diana	
6653N		4.0	22	0	4	0	0	5	0	0	5	5	2	1	0	0	8	Vance, Diana	
9116		4.0	12	0	1	0	0	4	0	0	2	0	0	2	3	0	11	Du Vigneaud, Jacqueline	PT
9117		4.0	16	0	4	0	0	4	0	0	3	1	2	1	1	0	7	Du Vigneaud, Jacqueline	PT
Course Total			159	2	24	4	4	33	3	6	38	16	20	4	5	0	77		
CHEM-120T Tutorial Lab for Chem 120																			
6654		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	Olmstead, Thomas	
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	2		

Grade Distribution by Division
School: Grossmont College -- Term: 2010SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor
CHEM-141 General Chemistry I																		
6655		5.0	19	0	3	0	0	8	0	0	5	0	3	0	0	0	10	Willard, Cary
6656		5.0	21	0	1	1	1	6	0	0	7	1	4	0	0	0	9	George, Judy
6657		5.0	19	0	4	2	0	2	0	0	7	2	2	0	0	0	5	Oakes, John
6658N		5.0	18	0	1	0	0	6	0	0	6	1	4	0	0	0	9	Larter, Martin
Course Total			77	0	9	3	1	22	0	0	25	4	13	0	0	0	33	
CHEM-141T Tutorial Lab for Chem 141																		
6659		1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	Olmstead, Thomas
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
CHEM-142 General Chemistry II																		
6660		5.0	24	0	2	2	2	5	3	4	4	0	2	0	0	0	3	Lehman, Jeffrey
6662N		5.0	26	0	6	1	0	9	1	0	6	1	2	0	0	0	4	Vance, Diana
Course Total			50	0	8	3	2	14	4	4	10	1	4	0	0	0	7	
CHEM-142T Tutorial Lab for Chem 142																		
6663		1.0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	Olmstead, Thomas
Course Total			1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
CHEM-231 Organic Chemistry I																		
6664		5.0	17	0	3	0	0	2	0	0	7	2	3	0	0	0	6	Larter, Martin
Course Total			17	0	3	0	0	2	0	0	7	2	3	0	0	0	6	
CHEM-232 Organic Chemistry II																		
6665		5.0	16	0	4	0	1	4	0	4	3	0	0	0	0	0	3	Olmstead, Thomas
Course Total			16	0	4	0	1	4	0	4	3	0	0	0	0	0	3	
Subject Total			596	10	92	18	20	##	20	23	##	39	76	15	8	0	250	
Division Total			596	10	92	18	20	##	20	23	##	39	76	15	8	0	250	

Grade Distribution by Division

School: Grossmont College -- Term: 2009FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-102 General, Organic & Biological																			
9557		5.0	18	1	3	2	0	3	2	0	6	0	1	0	0	0	9	Olmstead, Thomas	
Course Total			18	1	3	2	0	3	2	0	6	0	1	0	0	0	9		
CHEM-110 Environmental Chemistry																			
2500		3.0	30	0	6	0	0	13	0	0	4	1	5	1	0	0	0	Zajac, Ewa	PT
Course Total			30	0	6	0	0	13	0	0	4	1	5	1	0	0	0		
CHEM-113 Forensic Chemistry																			
2502		4.0	13	1	1	2	0	3	0	0	3	2	1	0	0	0	4	George, Judy	
2503		4.0	15	1	0	0	2	0	0	3	5	3	1	0	0	0	3	George, Judy	
Course Total			28	2	1	2	2	3	0	3	8	5	2	0	0	0	7		
CHEM-115 Fundamentals of Chemistry																			
2504		4.0	27	0	6	0	0	7	0	2	10	2	0	0	0	0	7	Kolonko, Kenneth	PT
2505		4.0	19	0	1	0	1	5	0	0	10	0	2	0	0	0	9	Kolonko, Kenneth	PT
2508		4.0	15	0	2	1	0	2	0	0	6	2	2	0	0	0	14	Willard, Cary	
2509		4.0	25	1	4	0	2	5	0	2	8	0	3	0	0	0	9	Willard, Cary	
2510N		4.0	21	1	0	3	0	4	4	1	3	0	2	3	0	0	6	Evans, Theodore	PT
2511N		4.0	15	0	1	1	1	1	1	1	4	0	4	0	0	0	9	Evans, Theodore	PT
5971		4.0	20	0	1	0	1	2	0	2	7	4	3	0	0	0	10	Willard, Cary	
Course Total			142	2	15	5	5	26	5	8	48	8	16	3	0	0	64		

Grade Distribution by Division

School: Grossmont College -- Term: 2009FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-115T Tutorial Lab for Chem 115																			
2512		1.0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	1	Olmstead, Thomas	
Course Total			4	0	0	0	0	0	0	0	0	0	0	4	0	0	1		
CHEM-116 Intro Organic & Biochemistry																			
2513		4.0	15	0	2	4	1	2	2	1	1	1	1	0	0	0	5	Oakes, John	
2515N		4.0	18	0	5	0	0	11	0	0	1	1	0	0	0	0	7	Anness, Robert	PT
2516N		4.0	12	0	5	0	0	2	0	0	3	1	1	0	0	0	7	Anness, Robert	PT
Course Total			45	0	12	4	1	15	2	1	5	3	2	0	0	0	19		
CHEM-116T Tutorial Lab for Chem 116																			
2517		1.0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	3	Olmstead, Thomas	
Course Total			2	0	0	0	0	0	0	0	0	0	0	2	0	0	3		
CHEM-120 Prep for General Chemistry																			
2518		4.0	18	1	0	3	3	2	4	0	2	0	3	0	0	0	10	Bowie, Bryan	PT
2519		4.0	17	0	3	2	4	2	2	0	2	0	0	2	0	0	13	Ternansky, Robert	PT
2521		4.0	17	1	0	0	2	0	1	4	1	3	4	0	1	0	8	Bowie, Bryan	PT
2522		4.0	18	2	0	0	1	1	1	0	5	4	4	0	0	0	6	Hernandez, Amanda	PT
2523		4.0	20	0	0	4	1	2	0	1	8	3	1	0	0	0	4	Hernandez, Amanda	PT
2524N		4.0	16	0	2	0	0	6	0	0	5	1	2	0	0	0	13	Vance, Diana	
5970N		4.0	24	0	3	0	0	7	0	0	7	3	4	0	0	0	9	Vance, Diana	
Course Total			130	4	8	9	11	20	8	5	30	14	18	2	1	0	63		
CHEM-120T Tutorial Lab for Chem 120																			
2525		1.0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	3	Olmstead, Thomas	
Course Total			4	0	0	0	0	0	0	0	0	0	0	4	0	0	3		

Grade Distribution by Division

School: Grossmont College -- Term: 2009FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-141 General Chemistry I																			
2526		5.0	23	1	2	1	3	5	0	2	5	2	2	0	0	0	11	Willard, Cary	
2527		5.0	22	0	2	2	2	4	1	2	4	1	3	1	0	0	13	Larter, Martin	XP
2529N		5.0	20	0	6	0	0	5	0	0	3	0	6	0	0	0	9	Vance, Diana	
Course Total			65	1	10	3	5	14	1	4	12	3	11	1	0	0	33		
CHEM-141T Tutorial Lab for Chem 141																			
2531		1.0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	2	Olmstead, Thomas	
Course Total			2	0	0	0	0	0	0	0	0	0	0	2	0	0	2		
CHEM-142 General Chemistry II																			
2532		5.0	21	0	2	3	5	1	1	2	4	0	3	0	0	0	6	Oakes, John	
2533N		5.0	22	0	2	1	1	2	1	1	6	4	4	0	0	0	5	George, Judy	
Course Total			43	0	4	4	6	3	2	3	10	4	7	0	0	0	11		
CHEM-142T Tutorial Lab for Chem 142																			
2534		1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	Olmstead, Thomas	
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
CHEM-231 Organic Chemistry I																			
2536		5.0	13	0	2	0	2	3	0	1	2	1	2	0	0	0	5	Larter, Martin	
Course Total			13	0	2	0	2	3	0	1	2	1	2	0	0	0	5		
CHEM-232 Organic Chemistry II																			
9542		5.0	12	0	2	0	4	4	0	0	1	0	1	0	0	0	1	Olmstead, Thomas	
Course Total			12	0	2	0	4	4	0	0	1	0	1	0	0	0	1		
Subject Total			538	10	63	29	36	##	20	25	##	39	65	19	1	0	223		
Division Total			538	10	63	29	36	##	20	25	##	39	65	19	1	0	223		

Grade Distribution by Division

School: Grossmont College -- Term: 2009SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-110 Environmental Chemistry																			
6630		3.0	21	0	9	0	0	4	0	0	4	0	0	3	0	0	4	Zajac, Ewa	PT
Course Total			21	0	9	0	0	4	0	0	4	0	0	3	0	0	4		
CHEM-113 Forensic Chemistry																			
6632		4.0	12	0	1	0	0	5	0	0	3	2	0	1	0	0	7	Lehman, Jeffrey	XP
6633		4.0	17	0	3	0	0	3	0	0	10	1	0	0	0	0	8	Lehman, Jeffrey	
Course Total			29	0	4	0	0	8	0	0	13	3	0	1	0	0	15		
CHEM-115 Fundamentals of Chemistry																			
6634		4.0	25	0	4	0	0	7	0	0	10	1	3	0	0	0	8	Kolonko, Kenneth	PT
6635		4.0	27	0	5	0	0	5	0	0	10	1	3	1	2	0	7	Kolonko, Kenneth	PT
6636		4.0	21	0	2	0	0	5	0	0	7	3	3	1	0	0	6	Willard, Cary	
6637		4.0	11	0	1	0	0	5	0	0	4	1	0	0	0	0	15	Willard, Cary	
6638		4.0	18	0	3	0	0	2	0	0	5	3	4	1	0	0	10	Willard, Cary	
6639N		4.0	20	0	2	0	0	7	0	0	5	3	3	0	0	0	5	Evans, Theodore	PT
6640N		4.0	20	0	4	0	0	8	0	0	4	1	3	0	0	0	5	Evans, Theodore	PT
Course Total			142	0	21	0	0	39	0	0	45	13	19	3	2	0	56		
CHEM-115T Tutorial Lab for Chem 115																			
6641		1.0	9	0	0	0	0	0	0	0	0	0	0	6	3	0	4	Larter, Martin	
Course Total			9	0	0	0	0	0	0	0	0	0	0	6	3	0	4		

Grade Distribution by Division

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Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-116 Intro Organic & Biochemistry																			
6642	4.0		14	0	3	0	0	1	0	0	7	2	1	0	0	0	6	Larter, Martin	XP
6643	4.0		8	0	2	0	0	3	0	0	2	1	0	0	0	0	2	Larter, Martin	
6644N	4.0		11	0	6	0	0	4	0	0	0	1	0	0	0	0	3	Azer, Joseph	PT
6645N	4.0		15	0	8	0	0	6	0	0	1	0	0	0	0	0	5	Azer, Joseph	PT
Course Total			48	0	19	0	0	14	0	0	10	4	1	0	0	0	16		
CHEM-116T Tutorial Lab for Chem 116																			
6646	1.0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Larter, Martin	
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
CHEM-120 Prep for General Chemistry																			
6647	4.0		22	0	5	0	0	0	0	0	6	7	2	0	1	0	9	Hernandez, Amanda	PT
6648	4.0		17	0	4	0	0	3	0	0	5	2	3	0	0	0	9	Hernandez, Amanda	PT
6649	4.0		22	0	3	0	0	6	0	0	7	4	2	0	0	0	5	George, Judy	
6650	4.0		21	0	4	0	0	3	0	0	5	3	4	2	0	0	6	George, Judy	
6652N	4.0		15	0	4	0	0	3	0	0	5	2	0	1	0	0	12	Vance, Diana	
6653N	4.0		15	0	2	0	0	5	0	0	5	1	2	0	0	0	8	Vance, Diana	
9116	4.0		15	0	3	0	0	2	0	0	7	1	1	0	1	0	7	Du Vigneaud, Jacqueline	PT
9117	4.0		12	0	1	0	0	3	0	0	3	0	5	0	0	0	10	Du Vigneaud, Jacqueline	PT
Course Total			139	0	26	0	0	25	0	0	43	20	19	3	2	0	66		
CHEM-120T Tutorial Lab for Chem 120																			
6654	1.0		6	0	0	0	0	0	0	0	0	0	0	0	6	0	1	Larter, Martin	
Course Total			6	0	0	0	0	0	0	0	0	0	0	0	6	0	1		

Grade Distribution by Division

School: Grossmont College -- Term: 2009SP -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-141 General Chemistry I																			
6655		5.0	20	0	4	0	0	9	0	0	5	1	1	0	0	0	13	Willard, Cary	
6656		5.0	15	0	4	0	0	3	0	0	5	3	0	0	0	0	10	George, Judy	
6657		5.0	15	0	3	0	0	6	0	0	3	1	1	0	1	0	4	Oakes, John	XP
6658N		5.0	12	0	2	0	0	4	0	0	5	1	0	0	0	0	7	Vance, Diana	
Course Total			62	0	13	0	0	22	0	0	18	6	2	0	1	0	34		
CHEM-141T Tutorial Lab for Chem 141																			
6659		1.0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	Larter, Martin	
Course Total			2	0	0	0	0	0	0	0	0	0	0	1	1	0	0		
CHEM-142 General Chemistry II																			
6660		5.0	24	0	7	0	0	12	0	0	4	0	1	0	0	0	4	Lehman, Jeffrey	
6662N		5.0	14	0	2	0	0	4	0	0	4	0	4	0	0	0	8	Larter, Martin	
Course Total			38	0	9	0	0	16	0	0	8	0	5	0	0	0	12		
CHEM-199 Special Studies/Projects-Chem																			
9320 **		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	George, Judy	
Course Total			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
CHEM-231 Organic Chemistry I																			
6664		5.0	25	0	6	0	0	13	0	0	4	2	0	0	0	0	2	Olmstead, Thomas	
Course Total			25	0	6	0	0	13	0	0	4	2	0	0	0	0	2		
CHEM-232 Organic Chemistry II																			
6665		5.0	6	0	2	0	0	1	0	0	2	0	1	0	0	0	1	Olmstead, Thomas	
Course Total			6	0	2	0	0	1	0	0	2	0	1	0	0	0	1		
Subject Total			527	0	109	0	0	142	0	0	147	48	47	17	15	0	211		
Division Total			527	0	109	0	0	142	0	0	147	48	47	17	15	0	211		

Grade Distribution by Division
School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
CHEM-110 Environmental Chemistry																			
2500		3.0	10	0	7	0	0	2	0	0	0	1	0	0	0	0	5	Zajac, Ewa	PT
2501		3.0	10	0	8	0	0	1	0	0	1	0	0	0	0	0	2	Zajac, Ewa	PT
Course Total			20	0	15	0	0	3	0	0	1	1	0	0	0	0	7		
CHEM-113 Forensic Chemistry																			
2502		4.0	8	0	1	0	0	2	0	0	4	1	0	0	0	0	6	Lehman, Jeffrey	
2503		4.0	18	0	5	0	0	6	0	0	5	2	0	0	0	0	8	Lehman, Jeffrey	
Course Total			26	0	6	0	0	8	0	0	9	3	0	0	0	0	14		
CHEM-115 Fundamentals of Chemistry																			
2504		4.0	20	0	5	0	0	7	0	0	5	1	2	0	0	0	7	Kolonko, Kenneth	PT
2505		4.0	21	0	4	0	0	7	0	0	6	1	3	0	0	0	6	Kolonko, Kenneth	PT
2508		4.0	17	0	1	0	0	7	0	0	4	2	2	0	0	0	8	Willard, Cary	
2509		4.0	9	0	1	0	0	3	0	0	2	0	2	0	1	0	13	Willard, Cary	
2510N		4.0	19	0	5	0	0	6	0	0	6	1	1	0	0	0	6	Velazquez-Dones, Adolfo	PT
2511N		4.0	18	0	8	0	0	5	0	0	5	0	0	0	0	0	7	Velazquez-Dones, Adolfo	PT
5971		4.0	10	0	3	0	0	2	0	0	2	3	0	0	0	0	9	Willard, Cary	
Course Total			114	0	27	0	0	37	0	0	30	8	10	0	1	0	56		
CHEM-115T Tutorial Lab for Chem 115																			
2512		1.0	7	0	0	0	0	0	0	0	0	0	0	4	3	0	7	Larter, Martin	
Course Total			7	0	0	0	0	0	0	0	0	0	0	4	3	0	7		

Grade Distribution by Division
School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
CHEM-116 Intro Organic & Biochemistry																			
2513		4.0	11	0	3	0	0	1	0	0	5	2	0	0	0	0	4	Hernandez, Amanda	PT
2514		4.0	7	0	2	0	0	4	0	0	0	0	1	0	0	0	2	Hernandez, Amanda	PT
2515N		4.0	16	0	3	0	0	5	0	0	6	2	0	0	0	0	4	Larter, Martin	
2516N		4.0	9	0	2	0	0	2	0	0	5	0	0	0	0	0	1	Larter, Martin	
Course Total			43	0	10	0	0	12	0	0	16	4	1	0	0	0	11		
CHEM-116T Tutorial Lab for Chem 116																			
2517		1.0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	Larter, Martin	
Course Total			2	0	0	0	0	0	0	0	0	0	0	1	1	0	0		
CHEM-120 Prep for General Chemistry																			
2518		4.0	9	0	0	0	0	6	0	0	2	0	0	0	0	0	23	Du Vigneaud, Jacqueline	PT
2519		4.0	16	0	3	0	0	5	0	0	4	3	1	0	0	0	7	Vance, Diana	
2520		4.0	10	0	3	0	0	1	0	0	3	0	3	0	0	0	10	Vance, Diana	
2521		4.0	12	0	1	0	0	7	0	0	2	0	1	0	1	0	12	Du Vigneaud, Jacqueline	PT
2522		4.0	20	0	0	0	0	3	0	0	7	1	6	1	2	0	10	George, Judy	XP
2523		4.0	16	0	0	0	0	3	0	0	5	1	6	0	1	0	12	George, Judy	
2524N		4.0	30	0	16	0	0	8	0	0	3	0	0	1	2	0	4	Azer, Joseph	PT
5970N		4.0	27	0	12	0	0	11	0	0	2	0	1	0	1	0	2	Azer, Joseph	PT
Course Total			140	0	35	0	0	44	0	0	28	5	18	2	7	0	80		
CHEM-120T Tutorial Lab for Chem 120																			
2525		1.0	6	0	0	0	0	0	0	0	0	0	0	3	2	0	5	Larter, Martin	
Course Total			6	0	0	0	0	0	0	0	0	0	0	3	2	0	5		

Grade Distribution by Division
School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: CHEM -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor
CHEM-141 General Chemistry I																		
2526		5.0	19	0	2	0	0	7	0	0	7	3	0	0	0	0	12	Willard, Cary
2527		5.0	28	0	4	0	0	7	0	0	7	6	4	0	0	0	13	George, Judy
2529N		5.0	24	0	2	0	0	7	0	0	11	3	1	0	0	0	5	Vance, Diana
Course Total			71	0	8	0	0	21	0	0	25	12	5	0	0	0	30	
CHEM-141T Tutorial Lab for Chem 141																		
2531		1.0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	3	Larter, Martin
Course Total			3	0	0	0	0	0	0	0	0	0	0	1	2	0	3	
CHEM-142 General Chemistry II																		
2532		5.0	17	0	2	0	0	9	0	0	6	0	0	0	0	0	4	Lehman, Jeffrey
2533		5.0	11	0	4	0	0	3	0	0	2	0	2	0	0	0	7	George, Judy
Course Total			28	0	6	0	0	12	0	0	8	0	2	0	0	0	11	
CHEM-142T Tutorial Lab for Chem 142																		
2534		1.0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	Larter, Martin
Course Total			1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	
CHEM-231 Organic Chemistry I																		
2536		5.0	10	0	2	0	0	3	0	0	3	0	2	0	0	0	2	Larter, Martin
Course Total			10	0	2	0	0	3	0	0	3	0	2	0	0	0	2	
Subject Total			471	0	109	0	0	140	0	0	120	33	38	12	16	0	228	
Division Total			471	0	109	0	0	140	0	0	120	33	38	12	16	0	228	

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
CHEM 110 ENVIRONMENTAL CHEMISTRY															
3870		3.0	10	5			2				1	18	57.0	ZAJAC	PT
3871		3.0	5	1			1				3	10	30.0	ZAJAC	PT
COURSE TOTAL			15	6			3				4	28	87.0		
CHEM 113 FORENSIC CHEMISTRY															
3872		6.0	1	3	3	1	4			1	3	16	96.0	LEHMAN	XP
3873		6.0	1	3	9	3	1				4	21	126.0	LEHMAN	
COURSE TOTAL			2	6	12	4	5			1	7	37	222.0		
CHEM 115 FUNDAMENTALS OF CHEMISTRY															
3875		6.0	3	3	1	1	6				4	18	108.0	BRINTON	PT
3876		6.0	1				3			1	1	6	36.0	BRINTON	PT
3881		6.0	1	1	7	4	3				13	29	174.0	NEBEL	PT
3882		6.0	3	3	6	3	4	1	1		8	29	174.0	NEBEL	PT
3883		6.0	3	3	7		4				8	25	150.0	NEBEL	PT
3885N		6.0	3	8	4	1	1				5	22	132.0	OAKES	
3886N		6.0	2	8	1	2	1				8	22	132.0	OAKES	
COURSE TOTAL			16	26	26	11	22	1	1	1	47	151	906.0		
CHEM 115T TUTORIAL LAB FOR CHEM 115															
3890		3.2							6	5	13	24	76.8	LEHMAN	
COURSE TOTAL									6	5	13	24	76.8		
CHEM 116 INTRO ORGANIC & BIOCHEMISTRY															
3893		6.0	4	2	3						9	18	108.0	LARTER	
3894		6.0	3		1	2	2				1	9	54.0	LARTER	
3895N		6.0	5	5	3	2					3	18	108.0	FRIEDMAN	PT
3896N		6.0	4	3	2				1		6	16	96.0	FRIEDMAN	PT
COURSE TOTAL			16	10	9	4	2		1		19	61	366.0		
CHEM 116T TUTORIAL LAB FOR CHEM 116															
3900		3.2							2		2	4	12.8	LEHMAN	
COURSE TOTAL									2		2	4	12.8		
CHEM 120 PREP FOR GENERAL CHEMISTRY															
3903		6.0	4	9	2	2			1		10	28	168.0	KOLONKO	PT
3904		6.0	4	8	3	3			2		10	30	180.0	KOLONKO	PT
3907		6.0		7	7		3			2	8	27	162.0	GEORGE	XP
3908		6.0	3	2	2		2				10	19	114.0	GEORGE	
3909		6.0	1	3	8	2	5		1		7	27	156.0	GEORGE	
3912N		6.0	2	2	2	5	4				9	24	144.0	VANCE	
3913N		6.0	2	5	3	2	4		2		7	25	150.0	VANCE	
COURSE TOTAL			16	36	27	14	18		6	2	61	180	1074.0		
CHEM 120T TUTORIAL LAB FOR CHEM 120															
3918		3.2							3	4	5	12	38.4	LEHMAN	
COURSE TOTAL									3	4	5	12	38.4		
CHEM 141 GENERAL CHEMISTRY I															
3921		9.0	1	7	5	1					11	25	225.0	WILLARD	
3922		9.0		1	4	1	3				11	20	180.0	VANCE	
3923		9.0	7	6	5						4	22	189.0	WILLARD	
3926N		9.0	3	4	6				1		10	24	216.0	LARTER	
COURSE TOTAL			11	18	20	2	3		1		36	91	810.0		
CHEM 141T TUTORIAL LAB FOR CHEM 141															
3930		3.2							1	2	3	6	16.0	LEHMAN	
COURSE TOTAL									1	2	3	6	16.0		
CHEM 142 GENERAL CHEMISTRY II															
3933		9.0	2	9	6	1	1				9	28	252.0	LEHMAN	
3935		9.0	4	1	1		1				3	10	90.0	OAKES	XP
3937N		9.0	3	8	11	3	1				7	33	297.0	GEORGE	
COURSE TOTAL			9	18	18	4	3				19	71	639.0		
CHEM 142T TUTORIAL LAB FOR CHEM 142															
3940		3.2								2	2	4	12.8	LEHMAN	
COURSE TOTAL										2	2	4	12.8		
CHEM 231 ORGANIC CHEMISTRY I															
3942		9.0	5	9	9		1				4	28	252.0	OLMSTEAD	
COURSE TOTAL			5	9	9		1				4	28	252.0		
CHEM 232 ORGANIC CHEMISTRY II															
3944N		9.0	9	6	2						1	18	162.0	OLMSTEAD	
COURSE TOTAL			9	6	2						1	18	162.0		
SUBJECT TOTAL			99	135	123	39	57	1	21	17	223	715	4674.8		

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
CHEM 110 ENVIRONMENTAL CHEMISTRY															
4000		3.0	4		1	1	9		1		7	23	69.0	BRINTON	PT
4001		3.0	3	5	2	1	7		1		13	32	96.0	OLMSTEAD	
COURSE TOTAL			7	5	3	2	16		2		20	55	165.0		
CHEM 113 FORENSIC CHEMISTRY															
4006		6.0	1	5	5	3	1				6	21	126.0	LEHMAN	XP
4008		6.0		5	10	1	1				9	26	156.0	LEHMAN	
COURSE TOTAL			1	10	15	4	2				15	47	282.0		
CHEM 115 FUNDAMENTALS OF CHEMISTRY															
4012		6.0	3	4	3		1				14	25	150.0	ZAJAC	PT
4013		6.0	3	2	2	3	2				5	17	102.0	VANCE	
4014		6.0	1	5	3	3	1				7	20	120.0	VANCE	XP
4015		6.0	1	6	1						4	12	72.0	VANCE	
4018		6.0	6	5	6	2	1				12	32	192.0	LARTER	
4020		6.0	1	7	6	1	4				12	31	186.0	LARTER	
4021N		6.0	5	5	6						4	20	120.0	VELAZQUEZ-DONE	PT
4023N		6.0	3	6	2	2	1				5	19	114.0	VELAZQUEZ-DONE	PT
COURSE TOTAL			23	40	29	11	10				63	176	1056.0		
CHEM 115T TUTORIAL LAB FOR CHEM 115															
4035		3.0							3	5	4	12	36.0	OAKES	
COURSE TOTAL									3	5	4	12	36.0		
CHEM 116 INTRO ORGANIC & BIOCHEMISTRY															
4038		6.0	3	3	1	2	1				6	16	90.0	OAKES	XP
4039		6.0	4	3	2		1				2	12	72.0	OAKES	
4041N		6.0	6	6	2	3	3				6	26	156.0	FRIEDMAN	PT
4042N		6.0	3	4	3	1	1				8	20	120.0	FRIEDMAN	PT
COURSE TOTAL			16	16	8	6	6				22	74	438.0		
CHEM 116T TUTORIAL LAB FOR CHEM 116															
4043		3.0							4	1	6	11	30.0	OAKES	
COURSE TOTAL									4	1	6	11	30.0		
CHEM 120 PREP FOR GENERAL CHEMISTRY															
4047		6.0	6	3	10	1	4				6	30	180.0	KOLONKO	PT
4048		6.0	3	1	6	2	12				6	30	180.0	KOLONKO	PT
4055		6.0		8	7	2	1		1		2	21	126.0	GEORGE	
4056		6.0	2	3	3	5	5				4	22	132.0	GEORGE	XP
4057		6.0	3	4	7	1	4			1	6	26	156.0	GEORGE	
4060N		6.0	1	6	7	1	4				6	25	150.0	NEBEL	PT
4061N		6.0	6	2	6	1	1		1		8	25	150.0	NEBEL	PT
COURSE TOTAL			21	27	46	13	31		2	1	38	179	1074.0		
CHEM 120T TUTORIAL LAB FOR CHEM 120															
4069		3.0							4	3	3	10	30.0	OAKES	
COURSE TOTAL									4	3	3	10	30.0		
CHEM 141 GENERAL CHEMISTRY I															
4074		9.0	4	4	8	2	2				11	31	279.0	LARTER	
4076		9.0	6	2	9	2					10	29	261.0	WILLARD	
4078		9.0	3	10	5	1	1				4	24	216.0	VANCE	
4080N		9.0	2	5	8	1					7	23	207.0	WILLARD	
4081N		9.0		4	4				1		7	16	144.0	WILLARD	XP
COURSE TOTAL			15	25	34	6	3		1		39	123	1107.0		
CHEM 141T TUTORIAL LAB FOR CHEM 141															
4087		3.0							1		3	4	12.0	OAKES	
COURSE TOTAL									1		3	4	12.0		
CHEM 142 GENERAL CHEMISTRY II															
4090		9.0	2	3	10	2					4	21	189.0	LEHMAN	
4092N		9.0	5	4	8	2	1				4	24	216.0	GEORGE	
COURSE TOTAL			7	7	18	4	1				8	45	405.0		
CHEM 142T TUTORIAL LAB FOR CHEM 142															
4097		3.0							2	2		4	12.0	OAKES	
COURSE TOTAL									2	2		4	12.0		
CHEM 231 ORGANIC CHEMISTRY I															
4102N		9.0	7	9	3						2	21	189.0	OLMSTEAD	
COURSE TOTAL			7	9	3						2	21	189.0		
SUBJECT TOTAL			97	139	156	46	69		19	12	223	761	4836.0		

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
CHEM 110 ENVIRONMENTAL CHEMISTRY															
3870		3.0	5	3	3	2					17	30	87.0	PENALOSA	PT
COURSE TOTAL			5	3	3	2					17	30	87.0		
CHEM 113 FORENSIC CHEMISTRY															
3872		6.0	2	3	7	3	1				6	22	132.0	LEHMAN	XP
3873		6.0	3	1	5	1	1				14	25	150.0	LEHMAN	
COURSE TOTAL			5	4	12	4	2				20	47	282.0		
CHEM 115 FUNDAMENTALS OF CHEMISTRY															
3875		6.0	2	2	5	1	7			2	10	29	174.0	BRINTON	PT
3876		6.0	2	2	6	1	4				9	24	144.0	BRINTON	PT
3882		6.0	1	10	11		2				6	30	180.0	NEBEL	PT
3883		6.0	4	10	10	1	3		3		4	35	210.0	NEBEL	PT
3885N		6.0	3	7		1	1				7	19	114.0	NANTHAKLIMAR	PT
3886N		6.0	2	8	4	3	3				5	25	150.0	NANTHAKLIMAR	PT
COURSE TOTAL			14	39	36	7	20		3	2	41	162	972.0		
CHEM 115T TUTORIAL LAB FOR CHEM 115															
3890		3.2							5	12	6	23	73.6	LEHMAN	
COURSE TOTAL									5	12	6	23	73.6		
CHEM 116 INTRO ORGANIC & BIOCHEMISTRY															
3893		6.0	2	6	3	2					9	22	132.0	LARTER	
3894		6.0	4	3	4						9	20	120.0	LARTER	
3895		6.0	4	7			1				3	15	90.0	LARTER	XP
3896N		6.0	7	2	4	1	1				3	18	108.0	FRIEDMAN	PT
COURSE TOTAL			17	18	11	3	2				24	75	450.0		
CHEM 116T TUTORIAL LAB FOR CHEM 116															
3900		3.2								1	3	4	12.8	LEHMAN	
COURSE TOTAL										1	3	4	12.8		
CHEM 120 PREP FOR GENERAL CHEMISTRY															
3903		6.0	4	6	6	1	1				7	25	150.0	GEORGE	XP
3904		6.0	3	3	3	2	3				11	25	150.0	GEORGE	
3905		6.0	1	2	7	7	4		1		9	31	180.0	GEORGE	
3908		6.0	2	6	4		1				7	20	120.0	VANCE	
3909		6.0	5	5	3		2		2		3	20	120.0	VANCE	
3912N		6.0	3	6	5		4		1		12	31	186.0	CHAMBERS	PT
3913N		6.0	2	1	5	3	3				5	19	114.0	CHAMBERS	PT
COURSE TOTAL			20	29	33	13	18		4		54	171	1020.0		
CHEM 120T TUTORIAL LAB FOR CHEM 120															
3918		3.2							1	4	1	6	19.2	LEHMAN	
COURSE TOTAL									1	4	1	6	19.2		
CHEM 141 GENERAL CHEMISTRY I															
3921		9.0	3	7	3	3	3				12	31	279.0	OAKES	XP
3922		9.0	3	6	7	1	2				11	30	261.0	VANCE	
3925		9.0	3	7	5	3	1				12	31	270.0	OAKES	
CHEM 141 GENERAL CHEMISTRY I							(CONT"D)								
COURSE TOTAL			9	20	15	7	6				35	92	810.0		
CHEM 141T TUTORIAL LAB FOR CHEM 141															
3930		3.2							4	5	2	11	35.2	LEHMAN	
COURSE TOTAL									4	5	2	11	35.2		
CHEM 142 GENERAL CHEMISTRY II															
3933		9.0	3	6	3							12	108.0	LEHMAN	
3935		9.0	3	9	6	1	1				5	25	225.0	GEORGE	
3937N		9.0	3	4	7	1					7	22	198.0	LARTER	
COURSE TOTAL			9	19	16	2	1				12	59	531.0		
CHEM 142T TUTORIAL LAB FOR CHEM 142															
3940		3.2								4	1	5	16.0	LEHMAN	
COURSE TOTAL										4	1	5	16.0		
CHEM 231 ORGANIC CHEMISTRY I															
3942		9.0	2	3	1	2	2				5	15	135.0	KOLONKO	PT
COURSE TOTAL			2	3	1	2	2				5	15	135.0		
CHEM 232 ORGANIC CHEMISTRY II															
3944		9.0	4	3	5						3	15	135.0	OLMSTEAD	XP
COURSE TOTAL			4	3	5						3	15	135.0		
SUBJECT TOTAL			85	138	132	40	51		17	28	224	715	4578.8		

MATHEMATICS, NATURAL SCIENCES & PE

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
CHEM 110 ENVIRONMENTAL CHEMISTRY														
4001	3.0	3	2	8		2				13	28	84.0	WILLARD	
COURSE TOTAL		3	2	8		2				13	28	84.0		
CHEM 113 FORENSIC CHEMISTRY														
4006N	6.0	3	5	6	2	4				2	22	132.0	LEHMAN	
4008N	6.0	6	2	10		6				3	27	162.0	LEHMAN	XP
COURSE TOTAL		9	7	16	2	10				5	49	294.0		
CHEM 115 FUNDAMENTALS OF CHEMISTRY														
4013	6.0	3	11	6	2	2			1	8	33	198.0	NEBEL	PT
4015	6.0	4	8	7	2					10	31	186.0	NEBEL	PT
4016	6.0	2	1	4	1					11	19	114.0	WILLARD	
4018	6.0	3	2	3	2					8	18	108.0	WILLARD	
4020	6.0	1	1	4						14	20	114.0	WILLARD	
4021	6.0	4	3	1		1				10	19	114.0	LARTER	
4023	6.0	1	2	6	3			1		4	17	102.0	LARTER	
4029N	6.0	8	6	4		1				8	27	162.0	VANCE	PT
COURSE TOTAL		26	34	35	10	4		1	1	73	184	1098.0		
CHEM 115T TUTORIAL LAB FOR CHEM 115														
4035	3.0							3	6	9	18	54.0	OAKES	
COURSE TOTAL								3	6	9	18	54.0		
CHEM 116 INTRO ORGANIC & BIOCHEMISTRY														
4038	6.0	2	8	2	1	2				8	23	138.0	LARTER	
4039	6.0	6	4	3						6	19	114.0	LARTER	
4041N	6.0	2	4	1	3					4	14	84.0	FRIEDMAN	PT
4042N	6.0	6	4	2						1	13	78.0	FRIEDMAN	PT
COURSE TOTAL		16	20	8	4	2				19	69	414.0		
CHEM 116T TUTORIAL LAB FOR CHEM 116														
4043	3.0							3	5	4	12	36.0	OAKES	
COURSE TOTAL								3	5	4	12	36.0		
CHEM 120 PREP FOR GENERAL CHEMISTRY														
4047	6.0	2	10	11	2	2				8	35	210.0	KOLONKO	PT
4048	6.0	8	10	9	4	3				5	39	234.0	KOLONKO	PT
4055	6.0		2	5	2	1			2	13	25	150.0	GEORGE	
4056	6.0	3	7	2		1				15	28	168.0	GEORGE	XP
4057	6.0	6	5	6		3				16	36	216.0	GEORGE	
4060N	6.0	2	3	3				2	1	12	23	138.0	VANCE	PT
4061N	6.0	2		3		3				14	22	132.0	VANCE	PT
COURSE TOTAL		23	37	39	8	13		2	3	83	208	1248.0		
CHEM 120T TUTORIAL LAB FOR CHEM 120														
4069	3.0							1	4	7	12	36.0	OAKES	
COURSE TOTAL								1	4	7	12	36.0		
CHEM 141 GENERAL CHEMISTRY I														
4074	9.0	3	4	13	3	3				16	42	378.0	WILLARD	
4076	9.0	3	11	12	1	4				8	39	351.0	LEHMAN	
4078N	9.0	8	7	7	1	2				16	41	369.0	FREIM	PT
COURSE TOTAL		14	22	32	5	9				40	122	1098.0		
CHEM 141T TUTORIAL LAB FOR CHEM 141														
4087	3.0							6	8	4	18	54.0	OAKES	
COURSE TOTAL								6	8	4	18	54.0		
CHEM 142 GENERAL CHEMISTRY II														
4090	9.0	6	5	1	2					6	20	171.0	GEORGE	
4092N	9.0	4	7	1	1					3	16	144.0	OAKES	XP
COURSE TOTAL		10	12	2	3					9	36	315.0		
CHEM 231 ORGANIC CHEMISTRY I														
4102	9.0	5	8	3		3				3	22	198.0	OLMSTEAD	
COURSE TOTAL		5	8	3		3				3	22	198.0		
CHEM 231T TUTORIAL LAB FOR CHEM 231														
4107 **	0.0									1	1	0.0	OAKES	
COURSE TOTAL												0.0		
SUBJECT TOTAL		106	142	143	32	43		16	27	269	778	4929.0		

** CLASS NOT VALID FOR A.D.A -- NOTED ONLY (NOT INCLUDED IN TOTALS)

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
CHEM 110 ENVIRONMENTAL CHEMISTRY															
3870		3.0	1	1	2						4	8	24.0	NEBEL	PT
COURSE TOTAL			1	1	2						4	8	24.0		
CHEM 113 FORENSIC CHEMISTRY															
3872		6.0	3	5	3		3				5	19	114.0	LARTER	XP
3873		6.0	3	1	4	4	2		1		5	20	120.0	LARTER	
COURSE TOTAL			6	6	7	4	5		1		10	39	234.0		
CHEM 115 FUNDAMENTALS OF CHEMISTRY															
3875		6.0	5	2	11	2					12	32	192.0	WILLARD	
3876		6.0	4	3	4		1				10	22	132.0	WILLARD	
3879		6.0	4	5	9	4	8				8	38	228.0	LARTER	
3883N		6.0	4		7	3	1				7	22	132.0	VANCE	PT
3884N		6.0	1	5	2	1			1		10	20	120.0	VANCE	PT
3885N		6.0	2	8	1	1	2				7	21	126.0	FREIM	PT
3886N		6.0	10	5	4		1				6	26	156.0	FREIM	PT
COURSE TOTAL			30	28	38	11	13		1		60	181	1086.0		
CHEM 115T TUTORIAL LAB FOR CHEM 115															
3890		3.2							3	4	3	10	28.8	LARTER	XP
COURSE TOTAL									3	4	3	10	28.8		
CHEM 116 INTRO ORGANIC & BIOCHEMISTRY															
3893		6.0	7	7	2	1	3				9	29	174.0	OAKES	
3894		6.0	4	11	2		1				1	19	114.0	OAKES	
3896N		6.0	4	5	5	2	1				5	22	132.0	FRIEDMAN	PT
COURSE TOTAL			15	23	9	3	5				15	70	420.0		
CHEM 116T TUTORIAL LAB FOR CHEM 116															
3900		3.2							1	7	3	11	35.2	LARTER	
COURSE TOTAL									1	7	3	11	35.2		
CHEM 120 PREP FOR GENERAL CHEMISTRY															
3903		6.0		9	5	6	7		1		5	33	198.0	DIRBAS	
3904		6.0	3	5	11	4			1		8	32	192.0	DIRBAS	
3906		6.0	6	3	8	2	2				4	25	150.0	NEBEL	PT
3908		6.0	5	3	3	2				1	4	18	108.0	DIRBAS	
3909		6.0	5	4	2	2	1				3	17	102.0	DIRBAS	
3912N		6.0	5	8	7	1	3		1		5	30	180.0	KOLONKO	PT
3913N		6.0	4	9	10	2	3				9	37	222.0	KOLONKO	PT
COURSE TOTAL			28	41	46	19	16		3	1	38	192	1152.0		
CHEM 120T TUTORIAL LAB FOR CHEM 120															
3918		3.2							9	6	2	17	54.4	LARTER	
COURSE TOTAL									9	6	2	17	54.4		
CHEM 141 GENERAL CHEMISTRY I															
3921		9.0	3	10	7	2	2				13	37	333.0	WILLARD	
3922		9.0	4	3	8	1					20	36	324.0	WILLARD	XP
3925N		9.0	3	5	7		4				7	26	234.0	LARTER	
CHEM 141 GENERAL CHEMISTRY I (CONT"D)															
COURSE TOTAL			10	18	22	3	6				40	99	891.0		
CHEM 141T TUTORIAL LAB FOR CHEM 141															
3930		3.2							1	1	3	5	12.8	LARTER	
COURSE TOTAL									1	1	3	5	12.8		
CHEM 142 GENERAL CHEMISTRY II															
3933		9.0	3	10	7	1	1				4	26	234.0	OAKES	XP
3935N		9.0	2	4	3	2					5	16	144.0	DIRBAS	XP
COURSE TOTAL			5	14	10	3	1				9	42	378.0		
CHEM 142T TUTORIAL LAB FOR CHEM 142															
3940 **		0.0									1	1	0.0	LARTER	
COURSE TOTAL													0.0		
CHEM 231 ORGANIC CHEMISTRY I															
3942		9.0	5	5	4		3				1	18	162.0	OLMSTEAD	
COURSE TOTAL			5	5	4		3				1	18	162.0		
CHEM 232 ORGANIC CHEMISTRY II															
3944		9.0	2	4	2		2				1	11	99.0	OLMSTEAD	XP
COURSE TOTAL			2	4	2		2				1	11	99.0		
SUBJECT TOTAL			102	140	140	43	51		19	19	189	703	4577.2		

** CLASS NOT VALID FOR A.D.A -- NOTED ONLY (NOT INCLUDED IN TOTALS)

Science Grade Distribution Summaries

Grade Distribution by Division
School: Grossmont College -- Term: 2012FA -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
4255		3.0	43	0	7	7	3	8	5	2	8	1	2	0	0	0	6	Parker, Kathryn	PT
4257		3.0	45	0	5	7	6	8	8	2	1	2	4	2	0	0	8	Parker, Kathryn	PT
4258		3.0	10	0	1	0	0	2	0	0	4	0	3	0	0	0	1	Oakes, John	XP
4259N		3.0	30	0	4	0	0	13	0	0	9	2	2	0	0	0	10	Koningsor, Robert	PT
8532		3.0	26	0	4	6	1	2	2	1	3	2	5	0	0	0	6	Oakes, John	
Course Total			154	0	21	20	10	33	15	5	25	7	16	2	0	0	31		
Subject Total			154	0	21	20	10	33	15	5	25	7	16	2	0	0	31		
Division Total			154	0	21	20	10	33	15	5	25	7	16	2	0	0	31		

Grade Distribution by Division
School: Grossmont College -- Term: 2012SP -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
7825		3.0	19	1	2	2	1	3	0	0	2	2	4	2	0	0	8	Oakes, John	
8477		3.0	37	0	11	0	0	7	0	0	15	0	0	4	0	0	1	Albert, Richard	PT
8480		3.0	7	0	1	0	1	1	1	1	0	1	1	0	0	0	5	Oakes, John	
8481		3.0	34	0	2	2	0	3	2	4	5	3	13	0	0	0	12	Oakes, John	
8482		3.0	45	0	17	0	0	11	0	0	14	1	0	2	0	0	2	Albert, Richard	PT
8483N		3.0	31	0	2	0	0	13	0	0	10	4	2	0	0	0	8	Koningsor, Robert	PT
Course Total			173	1	35	4	2	38	3	5	46	11	20	8	0	0	36		
Subject Total			173	1	35	4	2	38	3	5	46	11	20	8	0	0	36		
Division Total			173	1	35	4	2	38	3	5	46	11	20	8	0	0	36		

Grade Distribution by Division
School: Grossmont College -- Term: 2011FA -- Division: %G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
4253		3.0	38	0	12	0	0	16	0	0	8	2	0	0	0	0	5	Albert, Richard	PT
4255		3.0	51	0	8	0	0	39	0	0	4	0	0	0	0	0	9	Albert, Richard	PT
4257		3.0	29	1	1	5	0	6	3	2	6	2	2	0	0	0	18	Oakes, John	
4258		3.0	8	0	2	1	0	1	2	0	1	0	1	0	0	0	3	Oakes, John	
4259N		3.0	24	0	4	0	0	11	0	0	6	1	1	0	1	0	12	Koningsor, Robert	PT
8532		3.0	15	0	0	3	0	3	0	2	2	1	2	0	2	0	4	Oakes, John	
Course Total			165	1	27	9	0	76	5	4	27	6	6	0	3	0	51		
Subject Total			165	1	27	9	0	76	5	4	27	6	6	0	3	0	51		
Division Total			165	1	27	9	0	76	5	4	27	6	6	0	3	0	51		

Grade Distribution by Division
School: Grossmont College -- Term: 2011SP -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
7825		3.0	10	0	0	1	1	0	0	0	4	0	4	0	0	0	8	Oakes, John	
8477		3.0	19	0	2	2	1	0	1	1	6	3	3	0	0	0	11	Oakes, John	
8478		3.0	25	0	5	0	0	11	0	0	6	1	2	0	0	0	10	Albert, Richard	PT
8480		3.0	31	1	3	2	3	6	2	1	3	2	7	0	1	0	7	Oakes, John	
8481		3.0	47	0	17	0	0	5	0	0	18	5	0	1	0	0	10	Albert, Richard	PT
8482		3.0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	4	Oakes, John	
8483N		3.0	23	0	3	0	0	6	0	0	9	1	4	0	0	0	11	Koningsor, Robert	PT
8485		3.0	22	0	1	1	3	2	6	2	2	0	4	1	0	0	19	Ternansky, Robert	PT
Course Total			178	1	31	6	8	30	9	5	48	12	24	2	1	0	80		
Subject Total			178	1	31	6	8	30	9	5	48	12	24	2	1	0	80		
Division Total			178	1	31	6	8	30	9	5	48	12	24	2	1	0	80		

Grade Distribution by Division
School: Grossmont College -- Term: 2010FA -- Division: %G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
4253		3.0	34	0	11	0	0	3	0	0	9	10	0	1	0	0	2	Albert, Richard	PT
4255		3.0	38	0	10	0	0	15	0	0	7	3	2	1	0	0	2	Albert, Richard	PT
4257		3.0	24	0	2	2	2	2	3	1	6	2	3	0	1	0	15	Oakes, John	
4258		3.0	12	0	1	2	0	4	3	0	0	0	2	0	0	0	7	Oakes, John	
4259N		3.0	31	0	4	0	0	6	0	0	12	3	6	0	0	0	7	Koningsor, Robert	PT
Course Total			139	0	28	4	2	30	6	1	34	18	13	2	1	0	33		
Subject Total			139	0	28	4	2	30	6	1	34	18	13	2	1	0	33		
Division Total			139	0	28	4	2	30	6	1	34	18	13	2	1	0	33		

Grade Distribution by Division

School: Grossmont College -- Term: 2010SP -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
0236		3.0	23	0	1	3	2	0	1	1	3	0	12	0	0	0	6	Oakes, John	
8477		3.0	25	0	3	1	3	1	1	0	5	0	8	2	0	0	8	Oakes, John	
8478		3.0	37	0	12	0	0	7	0	0	6	2	5	4	0	0	5	Albert, Richard	PT
8480		3.0	23	1	3	3	1	2	3	0	1	2	7	0	0	0	13	Oakes, John	
8481		3.0	48	0	21	0	0	13	0	0	4	3	7	0	0	0	4	Albert, Richard	PT
8482		3.0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	4	Oakes, John	
8483N		3.0	24	0	2	0	0	12	0	0	5	2	3	0	0	0	7	Koningsor, Robert	PT
8485		3.0	15	1	2	1	1	1	1	0	0	3	3	1	1	0	21	Ternansky, Robert	PT
Course Total			197	2	44	8	7	37	6	1	24	12	46	7	1	0	68		
Subject Total			197	2	44	8	7	37	6	1	24	12	46	7	1	0	68		
Division Total			197	2	44	8	7	37	6	1	24	12	46	7	1	0	68		

Grade Distribution by Division

School: Grossmont College -- Term: 2009FA -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
4253		3.0	23	0	4	0	0	9	0	0	8	2	0	0	0	0	6	Albert, Richard	PT
4255		3.0	46	0	6	0	0	18	0	0	21	1	0	0	0	0	1	Albert, Richard	PT
4257		3.0	50	0	15	0	0	23	0	0	9	1	0	2	0	0	3	Albert, Richard	PT
4258		3.0	27	0	6	2	3	3	6	2	4	1	0	0	0	0	9	Ternansky, Robert	PT
4259N		3.0	24	0	4	0	0	6	0	0	11	2	1	0	0	0	3	Koningsor, Robert	PT
4260		3.0	35	0	3	3	2	5	5	2	7	1	5	1	0	0	18	Oakes, John	
9812		3.0	13	0	0	1	0	0	1	2	1	0	8	0	0	0	19	Oakes, John	
Course Total			218	0	38	6	5	64	12	6	61	8	14	3	0	0	59		
Subject Total			218	0	38	6	5	64	12	6	61	8	14	3	0	0	59		
Division Total			218	0	38	6	5	64	12	6	61	8	14	3	0	0	59		

Grade Distribution by Division

School: Grossmont College -- Term: 2009SP -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
8477		3.0	14	0	6	0	0	0	0	0	3	1	3	1	0	0	9	Oakes, John	
8478		3.0	31	0	6	0	0	8	0	0	12	2	3	0	0	0	7	Albert, Richard	PT
8480		3.0	28	0	5	0	0	3	0	0	8	1	10	1	0	0	6	Oakes, John	
8481		3.0	37	0	4	0	0	16	0	0	11	4	1	0	1	0	6	Albert, Richard	PT
8482		3.0	7	0	2	0	0	2	0	0	0	0	3	0	0	0	2	Oakes, John	
8483N		3.0	12	0	2	0	0	6	0	0	3	0	1	0	0	0	8	Koningsor, Robert	PT
8485		3.0	29	0	2	0	0	9	0	0	8	0	8	2	0	0	10	Oakes, John	
9120		3.0	19	0	4	0	0	5	0	0	6	1	3	0	0	0	13	Oakes, John	
Course Total			177	0	31	0	0	49	0	0	51	9	32	4	1	0	61		
Subject Total			177	0	31	0	0	49	0	0	51	9	32	4	1	0	61		
Division Total			177	0	31	0	0	49	0	0	51	9	32	4	1	0	61		

Grade Distribution by Division
School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: SCI -- Course: All Courses

Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
SCI-110 Intro to Scientific Thought																			
4253		3.0	24	0	9	0	0	9	0	0	4	0	1	1	0	0	5	Albert, Richard	PT
4254		3.0	18	0	7	0	0	6	0	0	2	2	1	0	0	0	5	Nebel, Grant	PT
4255		3.0	31	0	12	0	0	9	0	0	4	3	1	2	0	0	10	Albert, Richard	PT
4257		3.0	24	0	6	0	0	8	0	0	4	2	4	0	0	0	10	Nebel, Grant	PT
4258		3.0	27	0	13	0	0	4	0	0	5	2	3	0	0	0	3	Albert, Richard	PT
4259N		3.0	19	0	3	0	0	10	0	0	2	1	1	0	2	0	4	Koningsor, Robert	PT
4260		3.0	40	0	4	0	0	8	0	0	18	8	2	0	0	0	19	Holleran, John	PT
Course Total			183	0	54	0	0	54	0	0	39	18	13	3	2	0	56		
Subject Total			183	0	54	0	0	54	0	0	39	18	13	3	2	0	56		
Division Total			183	0	54	0	0	54	0	0	39	18	13	3	2	0	56		

MATHEMATICS, NATURAL SCIENCES & PE MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
SCI 110 INTRO TO SCIENTIFIC THOUGHT															
7318		3.0	3	2	1	1	1				4	12	36.0	OAKES	
7320		3.0	6	7	5	2	2		1		10	33	96.0	ALBERT	PT
7323	3	16.0	4	15	6	2	1		4		4	36	87.8	NEBEL	PT
7325		3.0	3	8	5	2	3		1	1	5	28	81.0	OAKES	
7326		3.0	9	18	18	2			1		2	50	150.0	ALBERT	PT
7328		3.0	2	2			1				6	11	30.0	OAKES	
7330N		3.0	4	6	7	1	2				5	25	75.0	KONINGSOR	PT
7331		3.0	21				1				15	37	108.0	NEBEL	PT
7332		3.0	1	6	4	2	2				17	32	87.0	HOLLERAN	PT
COURSE TOTAL			53	64	46	12	13		7	1	68	264	750.8		
SUBJECT TOTAL			53	64	46	12	13		7	1	68	264	750.8		
DIVISION TOTAL			4083	2579	2092	698	1119	33	678	343	3845	15470	57751.9		
FINAL TOTAL			14698	10807	6766	2089	3685	164	2258	815	12446	53728	184254.8		

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MATHEMATICS, NATURAL SCIENCES & PE MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
SCI 110 INTRO TO SCIENTIFIC THOUGHT															
7490		3.0		1	3	1	4				5	14	42.0	OAKES	
7492		3.0	12		6		5		1		2	26	78.0	ALBERT	PT
7494		3.0	3	5	6	1	8		1		6	30	90.0	OAKES	XP
7495		3.0	1	1		1	1				7	11	30.0	OAKES	
7497		3.0	3	5	4	3	1		2		8	26	78.0	OAKES	
7499		3.0	18	4	6	3	4				5	40	117.0	ALBERT	PT
7500N		3.0	3	6	3	3					6	21	63.0	KONINGSOR	PT
7502		3.0	2	13	10				2		25	52	147.0	HOLLERAN	PT
COURSE TOTAL			42	35	38	12	23		6		64	220	645.0		
SUBJECT TOTAL			42	35	38	12	23		6		64	220	645.0		
DIVISION TOTAL			3998	2487	2163	806	1345		627	397	3630	15453	59280.4		
FINAL TOTAL			13867	10756	7132	2259	4240		2165	876	11396	52691	183772.8		

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MATHEMATICS, NATURAL SCIENCES & PE MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
SCI 110 INTRO TO SCIENTIFIC THOUGHT															
7318		3.0	4	6	6		1		1	1	9	28	81.0	ALBERT	PT
7320		3.0	13	5	22				1		7	48	141.0	ALBERT	PT
7323		3.0	6	9	7	2	2				8	34	102.0	OAKES	
7325		3.0	1	2							8	11	30.0	OAKES	
7326	3	16.0	4	9	7	3			3		7	33	71.3	NEBEL	PT
7328N		3.0	4	7	9	2					2	24	72.0	KONINGSOR	PT
7330		3.0	1	6	13	2	5		3		8	38	108.0	HOLLERAN	PT
COURSE TOTAL			33	44	64	9	8		8	1	49	216	605.3		
SUBJECT TOTAL			33	44	64	9	8		8	1	49	216	605.3		
DIVISION TOTAL			3796	2483	2075	654	1062	1	653	274	3546	14544	54321.9		
FINAL TOTAL			13425	10362	6762	1972	3537	1	1936	717	11309	50021	172533.8		

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MATHEMATICS, NATURAL SCIENCES & PE — MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
SCI 110 INTRO TO SCIENTIFIC THOUGHT															
7490		3.0	11	10	4	3	1				6	35	102.0	ALBERT	PT
7494		3.0	8	6	1	3	12				8	38	111.0	OAKES	
7495		3.0	4	3	2		2				4	15	45.0	OAKES	
7496		3.0	2	5	5				1		13	26	75.0	OAKES	
7497		3.0	14	9	9	1					7	40	120.0	ALBERT	PT
7500N		3.0		3	7		1				6	17	51.0	KONINGSOR	PT
7502		3.0	10	10	7	2	5			1	21	56	159.0	HOLLERAN	PT
COURSE TOTAL			49	46	35	9	21		1	1	65	227	663.0		
SUBJECT TOTAL			49	46	35	9	21		1	1	65	227	663.0		
DIVISION TOTAL			3708	2394	2010	695	1083		726	417	3721	14754	56345.6		
FINAL TOTAL			12782	10242	6829	2140	3819		2121	781	11044	49758	173860.4		

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MATHEMATICS, NATURAL SCIENCES & PE — MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
SCI 110 INTRO TO SCIENTIFIC THOUGHT															
7318		3.0	2	1	2	2	1				10	18	54.0	OAKES	
7319		3.0	4	16	2	4			1		6	33	99.0	ALBERT	PT
7320		3.0	8	9	4		1				12	34	102.0	ALBERT	PT
7321	3	16.0	3	9	7		1		2		5	27	60.3	OAKES	XP
7325		3.0	2	1		1					4	8	24.0	OAKES	
7326		3.0	2	10	3	2	1		1		7	26	78.0	ALBERT	PT
7328N		3.0	4	6	8	2			2	1	13	36	108.0	KONINGSOR	PT
COURSE TOTAL			25	52	26	11	4		6	1	57	182	525.3		
SUBJECT TOTAL			25	52	26	11	4		6	1	57	182	525.3		
DIVISION TOTAL			3659	2464	1940	586	1138		690	320	3394	14191	52397.1		
FINAL TOTAL			12817	9918	6458	1932	3537	1	2016	724	10433	47836	164760.1		

APPENDIX 4 Annual Progress Report

SECTION 2 – UNIT/PROGRAM UPDATE

Please provide brief answers to the all the questions below the table to update your program review information:

Student Success and Program Efficiency

1. Please fill in the table below with data from the following sources:

Program Review Data Warehouse, and

Reports (can be accessed by opening a web browser on campus and typing in "reports")

	Fall 2009	Fall 2010	Fall 2011
Enrollment at Census	762	827	795
WSCH	4986	5282	5101
FTES	163.63	176.07	170.03
TOTAL FTEF	9.117	9.117	8.867
WSCH/FTEF	546.89	579.36	575.28
Overall Retention Rate	70.7	73.1	75.2
Overall Success Rate	56.8	58.7	60.7

2. Reflect upon the above 3-year trend data. Briefly discuss overall observations and any areas of concern or noteworthy trends.

Notice the modification of student behavior as course reductions occur. Fewer drop, and more succeed. I think that this is true

Curriculum Development and Academic Standards

3. Has there been any change in the status of your unit/program, specifically:

a. have new curriculum, programs, partnerships, or initiatives been created by your unit/program? If so, please describe.

Chem 102 has been running for 2 years. This is a new course for nursing students.

b. Have recent activities in other units/programs impacted your unit/program? If so, please describe.

No.

Outcome Assessment

4. Give an example of how your assessment of student learning outcomes led to improvement of your course or program (through the development of a planning activity, etc.).

None so far. If those who complete the assessment are also able to change the criteria when the assessment doesn't go as

Student Support and Campus Resources

5. Do any recent changes in your discipline/program necessitate new or updated computer technology, software, or equipment? If so, please describe.

Many of our instruments: AA, GC, IR, and HPLC are connected via computers. It is important that those are updated.

6. Have any recent changes in facilities impacted your unit/program or the services you provide? If so, please describe.

No.

Faculty/Staff Professional Development

7. Highlight how this past year's professional development activities (including sabbaticals) has resulted in improvement in curriculum, instruction, and currency in the field.

No significant changes

8. Describe how, over the past year, your faculty and staff have helped shaped the direction of the college and/or the discipline (e.g., writing grants, serving on college/district committees and task forces, Academic Senate representation, presenting at conferences, etc.).

Cary Willard is working closely with the author of a major preperatory chemistry textbook; the department was selected, and has

Staffing Trends

9. Have you had, or do you anticipate over the next couple of years, any staffing changes? If so, please provide a brief summary of the changes.

We do not foresee any stafffing requirements.

Section 3A - PROGRAM REVIEW RECOMMENDATIONS- check to see if this is in appendix 2

Recommendation	Program Review Area: **Curriculum Development**	**Student Access and Success**	**Student Support and Campus Resources / Staffing**	**Community Outreach/Response**	**Faculty/Staff Professional Development**	**Strategy/Activity** (list the activities that you plan to undertake to help achieve the recommendation)	**When was strategy/activity started? [sem, year]**	**When was strategy/activity completed? [sem, year]**	**Achievement of your recommendation - progress and outcome(s)** (in this space, document your progress as you work on your activities and when your activites are complete, briefly describe the outcome)
1. Meet with the coordinator of the Tech Prep Program to strengthen articulation efforts with local high schools.	x					We don't have any classes to articulate with the high schools.			We don't plan on doing this.
2. Maximize efficient use of the new science building, especially by offering more sections in the summer.			x			Add more classes			Haven't been able to do so for many semesters.
3. Develop a job description for a shared technician with Earth Sciences and pursue hiring as programs expand.						This proposal was made prior to the current staffing procedures.			It was not approved

Section 3A - PROGRAM REVIEW RECOMMENDATIONS

4. Develop and offer an analytical chemistry course that will articulate with four- year institutions and pursue articulation with UCSD's Chem 6 CL laboratory course.						Judy George will take a sabbatical to facilitate this.			Part of the current issue with this course is that it is changing at the 4-year schools. Hopefully a TMC will standardize such offerings, making it easier to accomplish the articulation. This would be a low-enrollment class, so it is important to work out the articulation issues first.
5. Collaboratively write student-learning outcomes and collectively agree upon their assessment methods to be written in course syllabi of sections of the same course. Use student-learning outcome data for continued course and program improvement.	x					These have been written			We have SLOs and have completed assessments for all classes except Chem 113, 115, 231, 232
6. Continue to submit curriculum modification and deletion proposals for courses that have not been reviewed by the Curriculum Committee in the last five years.						Reviewing courses now			This is currently under review

Section 3B - OTHER LONG-TERM PLANNING GOALS

Planning Goal/ Department Recommendation	Strategic Plan Goal #	Program Review Area: Curriculum Development	Student Access and Success	Student Support and Campus Resources / Staffing	Community Outreach/Response	Faculty/Staff Professional Development	**Strategy/Activity** (list the activities that you plan to undertake to help achieve the goal)	When was strategy/activity started? [sem, year]	When was strategy/activity completed? [sem, year]	**Achievement of your planning goal - progress and outcome(s)** (in this space, document your progress as you work on your activities and when your activities are complete, briefly describe the outcome)
provide outreach to the local community using a variety of modalities	1 0				X		We intend to continue hosting the regional Science Decathlon in coordination with our sister campus, Cuyamaca.			This has been completed twice, but there are no further plans for an immediate resumption of these activities. Mostly because Science Decathlon participation in the area has decreased.
							We intend to continue to host Science Festival activities on an occasional basis.		2010	
							We would like to introduce some chemistry specific competitions to our local students.			
We wish to staff the Science Learning Center with student tutorial support.	1 3 4 5 6	X		X			Faculty will identify excellent students in their classes to employ in the SLC. They will actively search for poly-lingual students to aid non-traditional students.	2010	2012	We have staffed the SLC with student and other tutors for the last 4 semesters.

Section 3B - OTHER LONG-TERM PLANNING GOALS

We want to continue to purchase laboratory equipment to enhance the learning experience in the laboratory. We wish to continue to acquire equipment that will allow us to utilize guided inquiry in our classrooms and labs.	**3** **7**			**X**			Work with the dean to find financial resources both through the institution, grants, and community partnerships to purchase needed equipment.			
Enhance professional development opportunities	**11**					**X**	Encourage all faculty to attend at least one conference semi-annually.			With the recent allocation of $25k for discipline-specific professional development, this will make this easier. Still, faculty attend the two-year college chemistry consortium meetings, honors' program meetings, and other state-level curriculum meetings.
							Provide adjunct mentoring opportunities.			
							Continue encouraging faculty to participate in outreach activities			
Update and develop curriculum	**3**	**X**					Develop a science 120 course (integrated science for educators) to support future science teachers.		2010	The Science class has been completed.
							Develop and offer an instrumental chemistry course to articulate with 4-year institutions			

SECTION 2 – UNIT/PROGRAM UPDATE

Student Success and Program Efficiency

1. Please fill in the table:

	Fall 2009	Fall 2010	Fall 2011
Enrollment at Census	762	827	795
WSCH	4986	5282	5101
FTES	163.63	176.07	170.03
TOTAL FTEF	9.117	9.117	8.867
WSCH/FTEF	546.89	579.36	575.28
Overall Retention Rate	70.7	73.1	75.2
Overall Success Rate	56.8	58.7	60.7

2. Reflect upon the above 3-year trend data. Briefly discuss overall observations and any areas of concern or noteworthy trends.

Notice the modification of student behavior as course reductions occur. Fewer drop, and more succeed. I think that this is true for any resource that is considered valuable. Students will value the resource, and devote the time required to use it wisely. In looking through different disciplines, I see a similar trend (ESL is an exception). I don't think that instruction has changed this broadly across campus to account for any magic. Are we truly serving the citizens of CA by offering so many sections filled with student who do not succeed?

Curriculum Development and Academic Standards

3. Has there been any change in the status of your unit/program, specifically:

a. have new curriculum, programs, partnerships, or initiatives been created by your unit/program? If so, please describe.

Chem 102 has been running for 2 years. This is a new course for nursing students.

b. Have recent activities in other units/programs impacted your unit/program?

No.

SECTION 2 – UNIT/PROGRAM UPDATE

4. Give an example of how your assessment of student learning outcomes led to improvement of your course or program (through the development of a planning activity, etc.).

None so far. If those who complete the assessment are also able to change the criteria when the assessment doesn't go as planned, then what is the value of the assessment? This is why, in the Chemistry Department, we use nationally created and normed final exams. In this manner a 3rd party creates the assessment, and success criteria.

Student Support and Campus Resources

5. Do any recent changes in your discipline/program necessitate new or updated computer technology, software, or equipment? If so, please describe.

Many of our instruments: AA, GC, IR, and HPLC are connected via computers. It is important that those are updated.

6. Have any recent changes in facilities impacted your unit/program or the services you provide?

No.

Faculty/Staff Professional Development

7. Highlight how this past year's professional development activities (including sabbaticals) has resulted in improvement in curriculum, instruction, and currency in the field.

No significant changes

SECTION 2 – UNIT/PROGRAM UPDATE

8. Describe how, over the past year, your faculty and staff have helped shaped the direction of the college and/or the discipline (e.g., writing grants, serving on college/district committees and task forces, Academic Senate representation, presenting at conferences, etc.).

Cary Willard is working closely with the author of a major preparatory chemistry textbook; the department was selected, and has completed, an American Chemical Society Program Evaluation as part of a pilot program for 2 year colleges; John Oakes has published a book used in Science 110, and is the leader of the Honors Program at Grossmont College; Jeff Lehman is the Vice President of the Academic Senate, serving on Accreditation Standard IIID, the District Budget Allocation Task Force, EOC Working Group, and currently writing this most annoying document. Lehman is also looking to get out of the chair position so that he doesn't have to do such things in the future. He much prefers life in the classroom. Judy George spearheaded the ACS effort with the assistance of Diana Vance. Martin Larter has been highly involved (as a co-chair) of the Faculty Professional Development Committee.

Staffing Trends

9. Have you had, or do you anticipate over the next couple of years, any staffing changes? If so, please provide a brief summary of the changes.

We do not foresee any staffing requirements.

APPENDIX 5 SLO ASSESSMENT ANALYLSIS and COURSE SLO UPDATES

SECTION 1 - ANNUAL SLO UPDATE

Please fill out the form below on ALL Course-level SLOs you've assessed over the last 2 semesters. Please add additional sections if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	check instrument used	Assessment Assignments and/or Instruments: Which were used to assess the SLO? (Department Chair should save any instruments used for assessment (rubrics, surveys, etc.) onto shared department drive or Blackboard site	Assessment Analysis (Please write a narrative on the following: What did you learn from the assessment of the outcomes? (i.e. In which areas did students excel? What issues and needs were revealed?) Did the assessment work, and if not, what needs to be revised?	check action planned	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for <u>course</u> improvement)	Semester when Next Assessment of this SLO will take place (ex. Fall 2012) (see 6-year SLO plan)	check action planned	Program Action Plan (please indicate how you will use your Course-level SLO data in making <u>Program-level</u> decisions/changes)
Chem 116(SLO 1) - SLO 1: Demonstrate a working knowledge of the language of organic and biochemistry. Chem1= 116(SLO 2) - Employ the concept of organic functional groups to predict both chemical and physical properties of an organic molecule. Chem 116 (SLO 3) - Apply the concept of structure and function to predict properties of biomolecules.	x	Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes)	Everybody successfully met the SLO criteria		Conduct further assessment related to the issue and outcome			Plan purchase of new equipment or supplies needed for modified student activities, such as: ________________
	x	Assignments based on rubrics (essays/reports, projects, performance analysis)			Conduct according to the schedule with no changes made to the assessment or SLO			Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.)
		Assignments based on checklists			Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: ________________			Revise the curriculum, course sequence or prerequisites
		Direct Observation of performances, structured practices or drills, practical exams, small group work, etc.			Develop new methods of evaluating student work, such as: ________________		x	No program action will be taken
		Student Self-Assessments (reflective journals, surveys)			Engage in professional development about best practices for this type of class/activity			Other (please describe):
		Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.)			Revise the course syllabus or outline (i.e. change in course topics)			
		Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.)			Revise the SLO			
		Student Satisfaction Survey		x	Other (please describe): If it ain't broke, don't fix it.			
		Other (please describe):						

SECTION 1 - ANNUAL SLO UPDATE	check instrument used	Assessment Assignments and/or Instruments: Which were used to assess the SLO?	Assessment Analysis (Please write a narrative on the following: What did you learn from the assessment of the outcomes?	check action planned	Course SLO Action Plan (for course improvement)	Semester for next SLO assessment (ex. Fall 2012)	check action planned	Program Action Plan (please indicate how you will use your Course-level SLO data in making Program-level decisions/changes)
Science 110(SLOs 1-4)1. Demonstrate an understanding of how scientists discover the laws of nature. 2. Describe the development of both the history and philosophy of science in multiple cultures. 3. Evaluate whether a claim is scientific or pseudoscientific using logic, demonstration and skepticism. 4. Distinguish between ethical and non-ethical behavior in science.	x	Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes)	Everybody successfully met the SLO criteria		Conduct further assessment related to the issue and outcome			Plan purchase of new equipment or supplies needed for modified student activities, such as: ______________
	x	Assignments based on rubrics (essays/reports, projects, performance analysis)			Conduct according to the schedule with no changes made to the assessment or SLO			Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.)
		Assignments based on checklists			Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: ______________			Revise the curriculum, course sequence or prerequisites
		Direct Observation of performances, structured practices or drills, practical exams, small group work, etc.			Develop new methods of evaluating student work, such as: ______________		x	No program action will be taken
		Student Self-Assessments (reflective journals, surveys)			Engage in professional development about best practices for this type of class/activity		x	Other (please describe): Discuss with faculty
		Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.)			Revise the course syllabus or outline (i.e. change in course topics)			
		Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.)			Revise the SLO			
		Student Satisfaction Survey		x	Other (please describe): None			
		Other (please describe):						

Course # and SLO wording	check instrument used	Assessment Assignments and/or Instruments: Which were used to assess the SLO?	Assessment Analysis (Please write a narrative on the following: What did you learn from the assessment of the outcomes?	check action planned	Course SLO Action Plan (for course improvement)	Semester for next SLO assessment (ex. Fall 2012)	check action planned	Program Action Plan (please indicate how you will use your Course-level SLO data in making Program-level decisions/changes)
		Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes)			Conduct further assessment related to the issue and outcome			Plan purchase of new equipment or supplies needed for modified student activities, such as: _______________
		Assignments based on rubrics (essays/reports, projects, performance analysis)			Conduct according to the schedule with no changes made to the assessment or SLO			Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.)
		Assignments based on checklists			Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _______________			Revise the curriculum, course sequence or prerequisites
		Direct Observation of performances, structured practices or drills, practical exams, small group work, etc.			Develop new methods of evaluating student work, such as: _______________			No program action will be taken
		Student Self-Assessments (reflective journals, surveys)			Engage in professional development about best practices for this type of class/activity			Other (please describe):
		Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.)			Revise the course syllabus or outline (i.e. change in course topics)			
		Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.)			Revise the SLO			
		Student Satisfaction Survey			Other (please describe):			
		Other (please describe):						

SLO Update Report for Chem 141/142

Submitted Fall 2010

Chemistry 141-142 SLO Analysis

The following data represent a sample of Chemistry 142 students over three semesters. The curriculum has not changed during this time, nor has the final exam. The final exam, from which these data are taken, is a standardized, nationally normed exam written by the American Chemical Association that covers material from both Chemistry 141 and 142. Typically, our department-wide average on this exam falls in the 85-90th percentile when compared to the national sample. Our students do very well. For this analysis, however, sections of the exam were mapped to each of chemistry's 4 student learning outcomes for this course:

1. Demonstrate a working knowledge of the language of chemistry.
2. Apply quantitative reasoning to chemical problems
3. Apply laws and theories to explain and predict the properties of atoms and molecules
4. Employ laboratory equipment and techniques to collect, organize, and evaluate experimental data.

According to our data, the details of which are attached, our students, over this period, have achieved SLOs 1-3. According to our criteria, SLO #4 was not met. I suspect that part of the issue with SLO #4 is that it was covered by only 4 questions on the final exam. This would mean that students would need to get a 3 out of 4 on this portion. If the criteria where changed to 2 out of 4 then 84% of students would have achieved it.

SLO Update Report for Chem 141/142

SLO Evaluation Criteria

Chem 141-142	ACS Final	Topic	Evaluation
Demonstrate a working knowledge of the language of chemistry.	5 8 16,39 19,32 24 29 33,34 37,40 44	Molecular geometry Nomenclature Thermo Equilibrium Kinetics IM forces Acid/base equilibrium Redox/ electrochem Periodic table	65% of students should get a score of 60% or higher
Apply quantitative reasoning to chemical problems	6 12,14,15 13 17,18 21 22,23 28 31 38	Empirical formulas Stoichiometry Chemical reactions/ equations Thermo Nuclear kinetics solutions equilibrium electrochem	50% of students should get a score of 60% or higher
Apply a laws and theories to explain and predict the properties of atoms and molecules.	4 1,2,3,7,41,42,45 9,11,27,30,35 1043 20,25,50 26 36	Nuclear Atomic theory/ Quantum Chemical equations/ reactions/descriptive Bonding Kinetics Gas properties/ gas laws electrochem	50% of students should get a score of 60% or higher
Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	46 47,49,48 Titration curve lab Qual lab	Data handling Experimental technique	65% of students should get a score of 75% or higher on test.

Submitted Fall 2010

SLO Update Report for Chem 141/142

Term	Student	SLO 1	SLO 2	SLO 3	SLO 4		
SPR 2010		62	85	65	50		
		92	31	80	50		
		62	69	65	25		
		77	69	70	100		
		54	46	50	50		
		77	69	80	100		
		92	92	85	100		
		54	46	65	50		
		62	46	60	75		
		31	15	40	25		
		70	77	35	75		
		69	62	85	50		
		62	77	55	75		
		85	92	75	75		
		92	85	55	50		
		46	39	75	75		
		54	69	60	50		
		62	77	80	100		
		62	23	70	100		
		62	85	70	50		
		77	77	65	25		
		92	85	75	100		
SPR 2007		23	62	55	0		
		92	92	80	75		
		100	100	70	50		
		77	54	60	50		
		77	69	60	0		
		39	62	35	100		
		69	92	85	75		
		62	46	35	100		
		54	46	55	75		
		62	46	85	0		
		77	69	70	75		
FALL 2008		69	85	70	75		
		54	69	60	75		
		85	46	55	25		
		77	69	80	100		
		92	85	75	100		
		62	69	65	25		
		31	23	40	50		
		54	77	60	100		
		54	85	70	100		
		77	92	95	75		
		62	62	45	75		
		31	39	50	50		
		69	85	70	50		
		85	85	85	75		
		77	62	65	50		
		77	92	85	75		
		77	85	85	100		
Total that meet SLO		37	36	37	28	42	If 2/4 were criteria for SLO #4
% that meet		74	72	74	56	84	

SLO Update Report for Chem 120

Date: January 2010
Department: Chemistry
Name of Reporter: Diana Vance

Assessment Write-Up for: Chemistry 120
(ex: HIST 108)

Semester Assessment was conducted: Fall 2009
(ex: Fall 2009)

What SLO(s) did you Assess (*include the Course SLO that you assessed* <u>*and*</u> *also the Benchmark you set for the expected % of Student Success)* **:**

SLO 1: demonstrate a working knowledge of the language of chemistry

The target was that 65% of the students should score 75% or better.

SLO 2: apply quantitative reasoning to chemical problems

The target was that 50% of students should get 60% or better.

SLO 3: apply laws and theories to explain and predict the properties of atoms and molecules

The target was that 50% of students should get 60% or better

List of Instructors Involved:

Diana Vance	Brian Bowie	Amanda Fusco	Robert Ternansky

Description of the Assessment Method *(include the assessment you used, any additional information regarding the assessment you think is important, and any calibration set-up or session information. ATTACH ANY ASSESSMENT TOOLS LIKE FINAL EXAM QUESTIONS, ETC., TO THIS DOCUMENT)***:**

Chemistry 120 employs a common multiple choice final for all sections to evaluate the students consisting of 100 questions. There are two versions of the exam: ED-2000A and ED-2000B. The final exams of four instructors, Brian Bowie, Amanda Fusco, Robert Ternansky, and Diana Vance teaching Chemistry 120 during the fall 2009 semester were analyzed totaling 117 students in the sample pool. Three student learning outcomes (SLO) were analyzed. The specific questions from each final are listed below:

SLO 1: ED2000A questions 93, 25, 45, 54, 55, 56, 84, and 19
ED2000B questions 13, 24 44, 55, 56, 57, 85, and 100
SLO 2: ED2000A questions 92, 98, 20, 23, 30, 63, 62, 65, 73, 75, 77, 86, and 91
ED2000B questions 12, 18, 19, 22, 29, 61, 64, 65, 74, 76, 78, 90, and 95
SLO 3: ED2000A questions 94, 29, 33, 37, 39, 44, 47, 49, 53, 66, 67, 85, and 91
ED2000B question 14, 28, 32, 36, 38, 43, 46, 48, 54, 68, 69, 89, and 95

SLO Update Report for Chem 120

Date of Department meeting on Analysis/Recommendations: March 5, 2010

Analysis of the Results *(for first-semester results, include any analytical data and discuss how the results compare to the benchmark set by your department; for second-semester and beyond results, include all analytical data and discuss how the results compare to previous results)***:**

	Language of Chemistry	Apply Quantitative Reasoning	Apply Laws and Theories
	SLO 1 (8 Q)	SLO 2 (11 Q)	SLO 3 (13 Q)
	100	100	92.3
	100	100	92.3
	100	100	92.3
	100	92.3	92.3
	100	92.3	92.3
	100	92.3	92.3
	100	92.3	92.3
	100	84.6	92.3
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	84.6	84.6
	87.5	76.9	84.6
	87.5	76.9	84.6
	87.5	76.9	84.6

SLO Update Report for Chem 120

87.5	76.9	84.6
87.5	76.9	84.6
87.5	76.9	84.6
87.5	76.9	84.6
87.5	76.9	84.6
87.5	76.9	84.6
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	76.9	76.9
87.5	69.2	76.9
87.5	69.2	76.9
87.5	69.2	76.9
87.5	69.2	76.9
75	69.2	76.9
75	69.2	76.9
75	69.2	69.2
75	69.2	69.2
75	69.2	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2
75	61.5	69.2

	75	61.5	69.2
	75	53.8	69.2
	75	53.8	69.2
	75	53.8	69.2
	75	53.8	69.2
	75	53.8	69.2
	75	53.8	69.2
	75	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	69.2
	62.5	53.8	61.5
	62.5	53.8	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	46.2	61.5
	62.5	38.5	61.5
	50	38.5	61.5
	50	38.5	61.5
	50	38.5	53.8
	50	38.5	53.8
	50	38.5	53.8
	50	38.5	53.8
	50	38.5	53.8
	50	38.5	46.2
	50	38.5	46.2
	50	38.5	46.2
	50	38.5	46.2
	50	38.5	46.2

	37.5	38.5	46.2
	37.5	30.8	46.2
	37.5	30.8	38.5
	37.5	30.8	38.5
	37.5	30.8	38.5
	37.5	30.8	38.5
	37.5	30.8	30.8
	25	30.8	30.8
	25	30.8	30.8
	25	30.8	30.8
	25	23.1	30.8
	25	23.1	23.1
	25	23.1	23.1
	25	23.1	23.1
	12.5	23.1	23.1
	12.5	15.4	23.1
	12.5	15.4	23.1
	12.5	15.4	23.1
	0	7.7	15.4
Average	67.690678	58.1415254	65.43559322
St Dev	23.246534	21.3056685	19.03381842

SLO 1: demonstrate a working knowledge of the language of chemistry, with eight questions. The target was that 65% of the students should score 75% or better, however only 56.4% obtained a score of 75% or better. The students did not perform as well as expected. One possible reason for the lower than expected score could be the question sample size of eight. The benchmarks were arbitrarily assigned for this first cycle, therefore changing the expectation better represents how our students actually perform.

SLO 2: apply quantitative reasoning to chemical problems, with thirteen questions. The target was that 50% of students should get 60% or better and 50.4 % of students were able to do so. Therefore our goal for student understanding was met.

Finally SLO 3: apply laws and theories to explain and predict the properties of atoms and molecules. The target was that 50% of students should get 50% or better and 79.5% students were able to do so. Therefore our goal for student understanding was achieved.

SLO Update Report for Chem 120

Recommendations for the next cycle of this assessment *(if you recommended no changes, please state why; if you recommended changes to the assessment tool, please explain why)***:**

SLO 1: demonstrate a working knowledge of the language of chemistry, with eight questions. The target that 65% of the students should score 75% or better should be lowered to 65% of students should get 60% or better then 73.5% of the students will met the target value. This is more in line with the other benchmarks for SLO 2 and 3.

Since students met the benchmarks for SLO 2 and 3 no changes are recommended at this time.

What is the date that this assessment will be conducted next?: Spring 2012

SLO Update Report for Chem 116

Date: December 2011
Department: Chemistry
Name of Reporter: Martin Larter

Assessment Write-Up for: Chemistry 116

Semesters Assessment was conducted: Spring 2009- Spring 2011

What SLO(s) did you Assess (*include the Course SLO that you assessed* *and* *also the Benchmark you set for the expected % of Student Success)* **:**

SLO 1: Demonstrate a working knowledge of the language of organic and biochemistry.

- The target was that 75% of the students should score 75% or better on the poster Project

SLO 2: Employ the concept of organic functional groups to predict both chemical and physical properties of an organic molecule.

- The target was that 80% of students should get 75% or better on the organic qualitative analysis lab

SLO 3: Apply the concept of structure and function to predict properties of biomolecules.

- The target was that 75% of the students should score 75% or better on the poster Project

List of Instructors Involved:

Robert Anness	Martin Larter

Description of the Assessment Method *(include the assessment you used, any additional information regarding the assessment you think is important, and any calibration set-up or session information. ATTACH ANY ASSESSMENT TOOLS LIKE FINAL EXAM QUESTIONS, ETC., TO THIS DOCUMENT)***:**

Poster grading scheme: Information presented should include the following (if possible):

- IUPAC and common name for molecule
- Molecular structure and chemical formula
- Physical properties (color, physical state at STP, molar mass, density, melting and boiling points, solubility)
- Where molecule is found in nature and toxicity (structural biochemical point of view) information
- History (who discovered it and when, who determined structure, who first synthesized it, etc.)
- Synthesis (if applicable, how is your molecule synthesized?); show the synthetic scheme (reaction or reactions)

Chemical reactivity (what reactions of interest does your molecule undergo, either in living systems, in the environment or in the laboratory?); write out the reactions.

SLO Update Report for Chem 116

- Information of interest (what is most interesting about your molecule, why did you select it?); this section should be the main section of the poster, and can be about anything you choose; the chemical reactivity and synthesis may be included in this section
- Include a list of references (at least 3 sources other than your textbook)

Organic Qualitative Analysis grading scheme:

- Development of a flowchart (based off of previous experiments) that uses both physical and chemical tests to separate the unknown compound into its appropriate functional group.
- Clear and concise documentation of chemical tests performed and possible conclusions from these tests
- Correct identification of the functional group of the unknown
- Correct identification of unknown compound based on additional information of melting or boiling point of the unknown compound.

Analysis of the Results *(for first-semester results, include any analytical data and discuss how the results compare to the benchmark set by your department; for second-semester and beyond results, include all analytical data and discuss how the results compare to previous results)***:**

SLO Update Report for Chem 116

Number of students	Poster Spring 2009	Poster Summer 2009	Posters Fall 2009	Poster Spring 2010	Poster Fall 2010	Poster Spring 2011
1.	86.10	89.50	80%	83.30%	93.33%	93.33%
2.	84.80	75.60	80%	86.70%	96.67%	86.67%
3.	76.10	89.40	80.00%	76.70%	93.33%	0.00%
4.	90.80	76.00	80.00%	90.00%	96.67%	73.33%
5.	92.40	88.70	96.70%	76.70%	90.00%	83.33%
6.	78.60	80.10	83.30%	76.70%	96.67%	83.33%
7.	91.00	93.70	80.00%	80.00%	83.33%	86.67%
8.	88.40	77.80	93.30%	76.70%	100.00%	83.33%
9.	82.00	85.30	90.00%	76.70%	83.33%	96.67%
10.	82.60	85.40	90.00%	96.70%	80.00%	86.67%
11.	94.10	90.40	93.30%	80.00%	83.33%	0.00%
12.	90.70	88.70	93.30%	96.70%	80.00%	83.33%
13.	79.00	84.60	83.30%	70.00%	86.67%	73.33%
14.	94.10	90.50	80.00%	80.00%	83.33%	83.33%
15.	86.90	92.00	83.30%	76.70%	83.33%	80.00%
16.	90.10	89.20	83.30%	90.00%	0.00%	90.00%
17.	89.90	96.50	86.70%	80.00%	80.00%	83.33%
18.	78.60		86.70%	80.00%	76.67%	83.33%
19.	69.30		93.30%	96.70%	80.00%	80.00%
20.	79.00		83.30%	86.70%	76.67%	83.33%
21.			93.30%	86.70%	80.00%	90.00%
22.			86.70%	83.30%	76.67%	83.33%
23.			80.00%	90.00%	86.67%	80.00%
24.			83.30%	80.00%	80.00%	76.67%

25.			86.70%	83.30%	80.00%	90.00%
26.			90.00%	76.70%	86.67%	86.67%
27.			83.30%	90.00%	86.67%	83.33%
28.			93.30%	76.70%	76.67%	83.33%
29.			80.00%	90.00%	76.67%	86.67%
30.				80.00%	83.33%	83.33%
31.				73.30%	80.00%	83.33%
32.					86.67%	83.33%
33.					80.00%	90.00%
34.					80.00%	76.67%
35.					76.67%	73.33%
36.					80.00%	
37.					76.67%	
Average	85.23	86.67	86%	82.81%	81.53%	78.95%
Standard Deviation	6.814526	6.119412	0.054216	0.070519	0.152468	0.204007

SLO Update Report for Chem 116

Number of students	Qual Lab Spring 2009	Qual Lab Summer 2009	Qual Lab Fall 2009	Qual Lab Spring 2010	Qual Lab Fall 2010	Qual Lab Spring 2011
1.	100	85	92.00%	100.00%	100.00%	100.00%
2.	100	75	100.00%	88.00%	100.00%	84.00%
3.	80	100	100.00%	100.00%	100.00%	80.00%
4.	100	80	100.00%	100.00%	88.00%	100.00%
5.	85	100	84.00%	100.00%	100.00%	100.00%
6.	85	85	100.00%	80.00%	100.00%	100.00%
7.	85	80	100.00%	88.00%	88.00%	100.00%
8.	100	100	80.00%	100.00%	100.00%	100.00%
9.	90	100	84.00%	100.00%	100.00%	88.00%
10.	85	70	100.00%	88.00%	88.00%	100.00%
11.	90	100	100.00%	88.00%	92.00%	100.00%
12.	90	100	100.00%	100.00%	100.00%	84.00%
13.	100	85	92.00%	100.00%	100.00%	100.00%
14.	85	100	100.00%	88.00%	88.00%	100.00%
15.	100	95	100.00%	100.00%	80.00%	100.00%
16.	80	80	100.00%	100.00%	100.00%	80.00%
17.	100	100	88.00%	84.00%	84.00%	100.00%
18.	100		100.00%	88.00%	84.00%	88.00%
19.	80		92.00%	100.00%	88.00%	88.00%
20.	85		100.00%	100.00%	80.00%	80.00%
21.			100.00%	100.00%	100.00%	88.00%

22.			100.00%	100.00%	76.00%	88.00%
23.			100.00%	100.00%	92.00%	100.00%
24.			100.00%	88.00%	76.00%	100.00%
25.			100.00%	84.00%	100.00%	100.00%
26.				88.00%	80.00%	100.00%
27.				100.00%	100.00%	88.00%
28.				100.00%	84.00%	100.00%
29.				100.00%	80.00%	100.00%
30.				100.00%	88.00%	88.00%
31.				88.00%	80.00%	80.00%
32.					84.00%	100.00%
33.					100.00%	84.00%
34.					100.00%	100.00%
35.					100.00%	100.00%
36.					100.00%	
37.					88.00%	
38.					76.00%	
39.					100.00%	
40.					100.00%	
41.					88.00%	
42.					80.00%	
43.					88.00%	
44.					100.00%	
45.					100.00%	
Average	90.71429	90.29412	96.48%	94.84%	91.56%	93.94%
Standard Deviation	7.950741	10.6757	0.062525	0.067877	0.087479	0.078439

SLO Update Report for Chem 116

SLO 1: Demonstrate a working knowledge of the language of organic and biochemistry. The target was that 75% of students should get 75% or better on the poster project and looking at:

Spring 2009: 82.81% of students were able to do so. Therefore our goal for student understanding was met.

Summer 2009: 84.19% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2009: 83.33 % of students were able to do so. Therefore our goal for student understanding was met.

Spring 2010: 79.43% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2010: 77.74% of students were able to do so. Therefore our goal for student understanding was met.

Spring 2011: 75.13% of students were able to do so. Therefore our goal for student understanding was met.

SLO 2: Employ the concept of organic functional groups to predict both chemical and physical properties of an organic molecule. The target was that 80% of students should get 75% or better on the organic qualitative analysis lab and looking at:

Spring 2009: 88.53% of students were able to do so. Therefore our goal for student understanding was met.

Summer 2009: 87.31% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2009: 95.60 % of students were able to do so. Therefore our goal for student understanding was met.

Spring 2010: 93.33% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2010: 89.44% of students were able to do so. Therefore our goal for student understanding was met.

SLO Update Report for Chem 116

Spring 2011: 92.43% of students were able to do so. Therefore our goal for student understanding was met.

SLO 3: Apply the concept of structure and function to predict properties of biomolecules. The target was that 75% of students should get 75% or better on the poster project and looking at:

Spring 2009: 82.81% of students were able to do so. Therefore our goal for student understanding was met.

Summer 2009: 84.19% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2009: 83.33 % of students were able to do so. Therefore our goal for student understanding was met.

Spring 2010: 79.43% of students were able to do so. Therefore our goal for student understanding was met.

Fall 2010: 77.74% of students were able to do so. Therefore our goal for student understanding was met.

Spring 2011: 75.13% of students were able to do so. Therefore our goal for student understanding was met

Recommendations for the next cycle of this assessment *(if you recommended no changes, please state why; if you recommended changes to the assessment tool, please explain why)***:**

Since students met the benchmarks for SLO 1,2 and 3 no changes are recommended at this time.

What is the date that this assessment will be conducted next?: Fall 2014

APPENDIX 6 COURSE-TO-PROGRAM MAPPING DOCUMENT

	SLO		Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015
CHEM 102	1	Demonstrate a working knowledge of the language of organic chemistry and biological chemistry													X
	2	Employ concepts of organic functional groups to predict both chemical and physical properties of organic molecules													X
	3	Apply the concept of structure and function to predict the properties and behavior of biomolecules													X
	4	Employ laboratory techniques to collect, analyze and evaluate experimental data													X
CHEM 110	1	Demonstrate a working knowledge of the language of chemistry.													
	2	Read and evaluate chemistry in scientific journals designed for the general population.													
	3	Analyze periodic trends to predict physical and chemical properties of compounds and elements.													
CHEM 113	1	Demonstrate a working knowledge of the language of chemistry.	ASP			X									
	2	Apply quantitative reasoning to chemical problems	ASP			X									
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules.	ASP			X									
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	ASP			X									
CHEM 115	1	Demonstrate a working knowledge of the language of chemistry.	ASP				X								
	2	Apply quantitative reasoning to chemical problems	ASP				X								
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules	ASP				X								
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	ASP				X								

CHEM 115T	1	Demonstrate a working knowledge of the language of chemistry.						X							
	2	Apply quantitative reasoning to chemical problems						X							
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules						X							
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.						X							
CHEM 116	1	Demonstrate a working knowledge of the language of organic and biochemistry.	ASP				X								
	2	Employ the concept of organic functional groups to predict both chemical and physical properties of an organic molecule.	ASP				X								
	3	Apply the concept of structure and function to predict properties of biomolecules.	ASP				X								
CHEM 116T	1	Demonstrate a working knowledge of the language of organic and biochemistry.													X
	2	Employ the concept of organic functional groups to predict both chemical and physical properties of an organic molecule.													X
	3	Apply the concept of structure and function to predict properties of biomolecules.													X
CHEM 120	1	Demonstrate a working knowledge of the language of chemistry.		AAR					X						
	2	Apply quantitative reasoning to chemical problems.		AAR					X						

	3	Apply laws and theories to explain and predict the properties of atoms and molecules.		AAR					X						
	4	Employ laboratory equipment and techniques to collect, organize, and evaluate experimental data.		AAR					X						
CHEM 120T	1	Demonstrate a working knowledge of the language of chemistry.							X						
	2	Apply quantitative reasoning to chemical problems.							X						
	3	Apply laws and theories to explain and predict the properties of atoms and molecules.							X						
	4	Employ laboratory equipment and techniques to collect, organize, and evaluate experimental data.							X						
CHEM 141	1	Demonstrate a working knowledge of the language of chemistry.	ASP							X					
	2	Apply quantitative reasoning to chemical problems	ASP							X					
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules.	ASP							X					
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	ASP							X					
CHEM 141T	1	Demonstrate a working knowledge of the language of chemistry.								X					

	2	Apply quantitative reasoning to chemical problems								X					
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules.								X					
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.								X					
CHEM 142	1	Demonstrate a working knowledge of the language of chemistry.	ASP	X	X										
	2	Apply quantitative reasoning to chemical problems	ASP	X	X										
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules.	ASP	X	X										
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	ASP	X	X										
CHEM 142T	1	Demonstrate a working knowledge of the language of chemistry.				X									
	2	Apply quantitative reasoning to chemical problems				X									
	3	Apply a laws and theories to explain and predict the properties of atoms and molecules.				X									
	4	Employ laboratory equipment and techniques to collect, organize and evaluate experimental data.				X									

CHEM 231	1	Demonstrate a working knowledge of the language of organic chemistry.	ASP								X				
	2	Recognize the major functional groups of organic compounds.	ASP								X				
	3	Predict the major products of chemical reactions of representative organic functional groups.	ASP								X				
	4	Apply a theoretical approach to explain the chemical and physical behavior of organic compounds.	ASP								X				
	5	Employ laboratory equipment and techniques to collect, analyze and evaluate experimental data.	ASP								X				
CHEM 231T	1	Demonstrate a working knowledge of the language of organic chemistry.										X			
	2	Recognize the major functional groups of organic compounds.										X			
	3	Predict the major products of chemical reactions of representative organic functional groups.										X			
	4	Apply a theoretical approach to explain the chemical and physical behavior of organic compounds.										X			
	5	Employ laboratory equipment and techniques to collect, analyze and evaluate experimental data.										X			
CHEM 232	1	Demonstrate a working knowledge of the language of organic chemistry.	ASP										X		
	2	Recognize the major functional groups of organic compounds.	ASP										X		
	3	Predict the major products of chemical reactions of representative organic functional groups.	ASP										X		
	4	Apply a theoretical approach to explain the chemical and physical behavior of organic compounds.	ASP										X		
	5	Employ laboratory equipment and techniques to collect, analyze and evaluate experimental data.	ASP										X		

CHEM 232T	1	Demonstrate a working knowledge of the language of organic chemistry.											X	
	2	Recognize the major functional groups of organic compounds.											X	
	3	Predict the major products of chemical reactions of representative organic functional groups.											X	
	4	Apply a theoretical approach to explain the chemical and physical behavior of organic compounds.											X	
	5	Employ laboratory equipment and techniques to collect, analyze and evaluate experimental data.											X	
CHEM 199	1	Students will be able to identify, examine, and assess a component of the discipline in a study of individualized content												

APPENDIX 7 Survey Results

2013 Program Review Faculty Survey Results
Chemistry

1a. I received an orientation to the college, department and the classes including... (a. Current course outlines were made readily available to me)

	Frequency	Percent
Strongly Agree	2	40.0
Agree	1	20.0
Neutral	1	20.0
Disagree	1	20.0
Total	**5**	**100.0**

1b. I received an orientation to the college, department and the classes including. .. (b. I had the opportunity to discuss the implementation of the course outline)

	Frequency	Percent
Strongly Agree	1	20.0
Agree	2	40.0
Neutral	2	40.0
Total	**5**	**100.0**

2a. I have opportunities for ongoing staff development including ... (a. Access to information from regular department meetings)

	Frequency	Percent
Strongly Agree	5	100.0

2b. I have opportunities for ongoing staff development including ... (b. Opportunity to collaborate with colleagues on SLOs, curriculum changes and pedagogy related to the courses I teach)

	Frequency	Percent
Strongly Agree	5	100.0

2c. I have opportunities for ongoing staff development including ... (c. Opportunity for professional growth)

	Frequency	Percent
Strongly Agree	3	60.0
Agree	2	40.0
Total	**5**	**100.0**

3. The department resources are available and sufficient for my teaching needs.

	Frequency	Percent
Strongly Agree	1	20.0
Agree	4	80.0
Total	**5**	**100.0**

2013 Program Review Faculty Survey Results
Chemistry

4. I have access to the training I need to use the available department equipment/technology.

	Frequency	Percent
Strongly Agree	2	40.0
Agree	3	60.0
Total	5	100.0

5. The department has clear and reasonable communication when it comes to adopting new policies, procedures and/or protocols.

	Frequency	Percent
Strongly Agree	4	80.0
Agree	1	20.0
Total	5	100.0

6. The procedures for deciding teaching schedules are fair and reasonable.

	Frequency	Percent
Strongly Agree	4	80.0
Agree	1	20.0
Total	5	100.0

7. I feel I have a voice in the departmental decision making process.

	Frequency	Percent
Strongly Agree	3	60.0
Agree	2	40.0
Total	5	100.0

8. I have the opportunity to be actively involved in department SLO assessment processes and discussions.

	Frequency	Percent
Strongly Agree	5	100.0

9. My employment status with the college is:

	Frequency	Percent
Full-time Faculty	5	100.0

2013 Program Review Student Survey Form
Chemistry

When answering each question, please be sure to completely fill in the bubble as shown below.

● correct	✓ incorrect	⊗ incorrect	⊘ incorrect

1. What is your reason(s) for taking this class? (Check all that apply)

- O General education requirement
- O Required for major
- O Transfer
- O Improve job skills
- O General interest
- O Improve basic skills/college success (reading, writing, English, math, computer skills)
- O Other: ______________________
- O Prerequisite

2. How did you find out about this class? (Check all that apply)

- O Class schedule or college catalog
- O Public media (radio, TV, newspaper, ad)
- O Instructor
- O Work referral
- O Other student recommendation
- O Grossmont College Counselor
- O Grossmont College presentation or special event (teacher came to class; attended fair or campus activity)
- O Friend or family member
- O Other (specify) ______________________

3. How many courses have you taken in this department at Grossmont College? (Including this current course and any repeated courses)

O One O Two O Three O More than three

4. This class was delivered: O in a traditional classroom setting O online (100%) O as a hybrid (part in classroom/part online) O other ________________

5. Which lines of communication are made available to you by your instructor (select all that apply)?

O face to face O telephone/voice mail O email O other______________

6. Which line of communication do you use most often when contacting your instructor?

O face to face O telephone/voice mail O email O other______________

7. Which line of communication do you prefer your instructor to use when responding to your message?

O face to face O telephone/voice mail O email O other______________

8. Which of the following do you check most frequently for course information and/or messages?

O voice mail O email O Blackboard Announcements O other_______

9. When I have questions or need to talk about course content or assignments, I usually meet/talk to my instructor:

O during office hours/appointment O before or after my class meets O via telephone O via email O never (explain why) ______________________

10. Who else or what else do you turn to for extra help?

O tutor/tutoring center O friends who have taken the class O textbook website O other (be specific)____

11. Which of the following *course resources* helped *you* learn the course material? (select all that apply)

2013 Program Review Student Survey Form
Chemistry

O Lecture O Homework/Assignments O Computer presentations O Videos/DVDs
O Textbook O Group work in class O Instructor website O Handouts
O Course Blackboard site O Study groups O Power Point slides
O Quizzes O Transparencies O Other ______________

12. Please indicate if *you* were required to use/or voluntarily used any of the following *campus resources* to assist you in completing this course. Also, did you find the resource helpful or not helpful?

	Required to Use	Voluntarily Used	Helpful	Not Helpful
Assessment & Testing Center	O	O	O	O
English Writing Lab	O	O	O	O
Tech Mall	O	O	O	O
Library (online resources)	O	O	O	O
On-Campus Library	O	O	O	O
Math Study Center	O	O	O	O
Tutoring Center	O	O	O	O
DSPS	O	O	O	O
EOPS	O	O	O	O
Dept. Computer Labs	O	O	O	O
Blackboard Help Line	O	O	O	O
Other (write in)	O	O	O	O

13. What I am learning/have learned in this class could be useful outside of the classroom for purposes other than achieving my academic goals.

O Yes O No

14. How many hours per week do you spend outside of class (including both lecture and lab periods) preparing and studying for this course?

O None O 1-2 O 3-5 O 5-7 O 7-10 O more than 10

15. How many hours per week do you spend in the Chemistry Science Learning Center (SLC) preparing and studying for this class?

O None O 1-2 O 3-5 O 5-7 O 7-10 O more than 10

16. Approximately how much time per week do you spend working with the chemistry tutors in the SLC?

O Less than one hour O 1-2 hours O 2-4 hours O More than 4 hours
O None- I only use the SLC for studying but not for tutoring O None- I do not utilize the SLC

Grossmont College
Chemistry
Spring 2013
N =341
Response Rate = 71.6%

Chemistry Course

	Frequency	Percent
102	27	7.9
113	29	8.5
115	80	23.5
116	21	6.2
120	72	21.1
141	43	12.6
142	47	13.8
231	22	6.5
Total	**341**	**100.0**

Q1. What is your reason(s) for taking this class? (Check all that apply)

	Frequency	Percent
Required for major	247	72.6
Transfer	133	39.1
Prerequisite	96	28.2
General education requirement	92	27.1
General interest	45	13.2
Improve basic skills/college success (reading, writing, English, math, computer skills)	24	7.1
Improve job skills	8	2.4
Other	5	1.5

*Note: Since respondents are able to select more than one option, the total percent may not equal 100. Percentage is based on the total number of students responding to this item (i.e., 340).

Q1. What is your reason(s) for taking this class? (Other)

	Frequency
Help prepare for phisiolology	1
Physics A.S. Degree	1
Recommended prerequisite	1
Required for A.S. Degree	1
Required for pharmacy school	1
Total	5

Q2. How did you find out about this class? (Check all that apply)

	Frequency	Percent
Class schedule or college catalog	265	78.2
Grossmont College counselor	89	26.3
Other	23	6.8
Other student recommendation	22	6.5
Friend or family member	15	4.4
Instructor	14	4.1
Public media (radio, TV, newspaper, ad)	4	1.2
Grossmont College presentation or special event (teacher came to class; attended fair or campus activity)	1	.3

*Note: Since respondents are able to select more than one option, the total percent may not equal 100. Percentage is based on the total number of students responding to this item (i.e., 339).

Q2. How did you find out about this class? (Other)

	Frequency
Prerequisite	5
Assist.org	3
IGETC	3
Flyer on campus	2
SDSU counselor	2
AOJ office	1
Cuyamaca College counselor	1
Grossmont website	1
Just signed up	1
Major articulation grid	1
RateMyProfessor.com	1
Trouble understanding chemistry 120	1
Webadvisor	1
Total	**23**

Q3. How many courses have you taken in this department at Grossmont College (Including this current course and any repeated courses)

	Frequency	Percent
One	164	48.2
Two	78	22.9
Three	43	12.6
More than three	55	16.2
Total	**340**	**100.0**
No Response	1	
Total	341	

Q4. This class was delivered:

	Frequency	Percent
in a traditional classroom setting	296	88.4
as a hybrid (part in classroom/part online)	33	9.9
online (100%)	1	.3
other	5	1.5
Total	**335**	**100.0**
No Response	6	
Total	341	

Q4. This class was delivered: (Other)

	Frequency
Chemistry lab	3
Homework online	1
Twitter	1
Total	**5**

Q5. Which lines of communication are made available to you by your instructor? (Check all that apply)

	Frequency	Percent
Email	327	96.2
Face to face	323	95.0
Telephone/voice mail	107	31.5
Other	31	9.1

*Note: Since respondents are able to select more than one option, the total percent may not equal 100. Percentage is based on the total number of students responding to this item (i.e., 340).

Q5. Which lines of communication are made available to you by your instructor? (Other)

	Frequency
Twitter	18
Piazza	9
Office hours	2
All	1
Web page	1
Total	**31**

Q6. Which lines of communication do you use most often when contacting your instructor?

	Frequency	Percent
face to face	185	69.0
email	76	28.4
other	6	2.6
Total	**268**	**100.0**
No Response	73	
Total	341	

Q6. Which lines of communication do you use most often when contacting your instructor? (Other)

	Frequency
Twitter	4
All	1
Office hours	1
Total	6

Q7. Which line of communication do you prefer your instructor to use when responding to your messages?

	Frequency	Percent
face to face	144	57.1
email	101	40.1
other	8	2.8
Total	**252**	**100.0**
No Response	89	
Total	341	

Q7. Which line of communication do you prefer your instructor to use when responding to your messages? (Other)

	Frequency
Twitter	6
All	2
Total	8

Q8. Which of the following do you check most frequently for course information and/or messages?

	Frequency	Percent
email	154	55.4
Blackboard Announcements	84	30.2
other	36	14.0
voicemail	1	.4
Total	**278**	**100.0**
No Response	63	
Total	341	

Q8. Which of the following do you check most frequently for course information and/or messages? (Other)

	Frequency
Twitter	21
Instructor website	10
Syllabus	2
Chemistry webpage	1
Classmates	1
Office hours	1
Total	36

Q9. When I have questions or need to talk about course content or assignments, I usually meet/talk to my instructor:

		Frequency	Percent
	before or after my class meets	117	50.6
	during office hours/appointment	62	26.8
	via email	47	20.3
	never (explain why)	2	1.3
	via telephone	2	.9
	Total	**231**	**100.0**
	No Response	110	
Total		341	

Q9. When I have questions or need to talk about course content or assignments, I usually meet/talk to my instructor: (Other)

	Frequency
Too busy	1
Tutoring center	1
Total	**341**

Q10. Who else or what else do you turn to for extra help?

		Frequency	Percent
	tutor/tutoring center	97	41.6
	friends who have taken the class	67	28.8
	textbook website	35	15.0
	other	30	14.6
	Total	**233**	**100.0**
	No Response	108	
Total		341	

Q10. Who else or what else do you turn to for extra help? (Other)

	Frequency
Google	8
Classmates	7
Instructor website	3
Chemistry lab	2
Textbook	2
Youtube	2
All of the above	1
Blackboard	1
Family	1
Homework	1
Office hours	1
Personal tutor	1
Total	**30**

Q11. Which of the following course resources helped you learn the course material? (Check all that apply)

	Frequency	Percent
Lecture	289	85.5
Homework/Assignments	261	77.2
Textbook	207	61.2
Quizzes	173	51.2
Power Point slides	127	37.6
Instructor website	118	34.9
Handouts	96	28.4
Study groups	91	26.9
Group work in class	81	24.0
Course Blackboard site	36	10.7
Computer presentations	30	8.9
Other	27	8.0
Videos/DVDs	10	3.0
Transparencies	7	2.1

*Note: Since respondents are able to select more than one option, the total percent may not equal 100. Percentage is based on the total number of students responding to this item (i.e., 338).

Q11. Which of the following course resources helped you learn the course material? (Other)

	Frequency
Tutoring	7
Lab	6
OWL	4
Google	3
Youtube	2
Chemistry lab	1
Friends	1
Practice exams	1
Study guides	1
Wiley plus	1
Total	**27**

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Assessment & Testing Center)

	Frequency	Percent
Required to Use	15	22.4
Voluntarily Used	52	77.6
Total	**67**	**100.0**
No Response	274	
Total	341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (English Writing Lab)

		Frequency	Percent
	Required to Use	8	13.8
	Voluntarily Used	50	86.2
	Total	**58**	**100.0**
	No Response	283	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Tech Mall)

		Frequency	Percent
	Required to Use	8	6.3
	Voluntarily Used	118	93.7
	Total	**126**	**100.0**
	No Response	215	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Library - online resources)

		Frequency	Percent
	Required to Use	8	7.7
	Voluntarily Used	96	92.3
	Total	**104**	**100.0**
	No Response	237	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (On-campus Library)

		Frequency	Percent
	Required to Use	9	7.6
	Voluntarily Used	109	92.4
	Total	**118**	**100.0**
	No Response	223	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Math Study Center)

		Frequency	Percent
	Required to Use	6	9.2
	Voluntarily Used	59	90.8
	Total	**65**	**100.0**
	No Response	276	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Tutoring Center)

		Frequency	Percent
	Required to Use	9	6.0
	Voluntarily Used	141	94.0
	Total	**150**	**100.0**
	No Response	191	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (DSPS)

		Frequency	Percent
	Required to Use	3	6.0
	Voluntarily Used	47	94.0
	Total	**50**	**100.0**
	No Response	291	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (EOPS)

		Frequency	Percent
	Required to Use	2	5.1
	Voluntarily Used	37	94.9
	Total	**39**	**100.0**
	No Response	302	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Dept. Computer Labs)

		Frequency	Percent
	Required to Use	19	14.7
	Voluntarily Used	110	85.3
	Total	**129**	**100.0**
	No Response	212	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Blackboard Help Line)

		Frequency	Percent
	Required to Use	11	18.6
	Voluntarily Used	48	81.4
	Total	**59**	**100.0**
	No Response	282	
Total		341	

Q12A Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Other)

	Frequency	Percent
Required to Use	8	32.0
Voluntarily Used	17	68.0
Total	**25**	**100.0**
No Response	316	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Assessment & Testing Center)

	Frequency	Percent
Helpful	50	48.5
Not Helpful	53	51.5
Total	**103**	**100.0**
No Response	238	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (English Writing Lab)

	Frequency	Percent
Helpful	45	45.0
Not Helpful	55	55.0
Total	**100**	**100.0**
No Response	241	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Tech Mall)

	Frequency	Percent
Helpful	101	81.5
Not Helpful	23	18.5
Total	**124**	**100.0**
No Response	217	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Library - online resources)

	Frequency	Percent
Helpful	83	74.8
Not Helpful	28	25.2
Total	**111**	**100.0**
No Response	230	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (On-campus Library)

	Frequency	Percent
Helpful	95	78.5
Not Helpful	26	21.5
Total	**121**	**100.0**
No Response	220	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Math Study Center)

	Frequency	Percent
Helpful	58	60.4
Not Helpful	38	39.6
Total	**96**	**100.0**
No Response	245	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Tutoring Center)

	Frequency	Percent
Helpful	121	83.4
Not Helpful	24	16.6
Total	**145**	**100.0**
No Response	196	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (DSPS)

	Frequency	Percent
Helpful	38	41.3
Not Helpful	54	58.7
Total	**92**	**100.0**
No Response	249	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (EOPS)

	Frequency	Percent
Helpful	36	42.9
Not Helpful	48	57.1
Total	**84**	**100.0**
No Response	257	
Total	341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Dept. Computer Labs)

		Frequency	Percent
	Helpful	113	86.3
	Not Helpful	18	13.7
	Total	**131**	**100.0**
	No Response	210	
Total		341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Blackboard Help Line)

		Frequency	Percent
	Helpful	44	49.4
	Not Helpful	45	50.6
	Total	**89**	**100.0**
	No Response	252	
Total		341	

Q12B Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Other)

		Frequency	Percent
	Helpful	19	51.4
	Not Helpful	18	48.6
	Total	**37**	**100.0**
	No Response	304	
Total		341	

Q12. Please indicate if you were required to use/or voluntarily used any of the following campus resources to assist you in completing this course. Also, did you find the resource helpful or not helpful? (Other - write in)

	Frequency
OWL	5
Chemistry lab	2
Wiley plus	2
Chemistry Tutoring Center	1
Friend	1
Mastering Chemsitry	1
Total	**12**

Q13. What I am learning/have learned in this class could be useful outside of the classroom for purposes other than achieving my academic goals.

	Frequency	Percent
Yes	278	83.5
No	55	16.5
Total	333	100.0
No Response	8	
Total	341	

Q14. How many hours per week do you spend outside of class (including both lecture and lab periods) preparing and studying for this course?

	Frequency	Percent
None	2	.6
1-2	26	7.8
3-5	97	29.0
5-7	99	29.6
7-10	50	15.0
More than 10	60	18.0
Total	334	100.0
No Response	7	
Total	341	

Q15. How many hours per week do you spend in the Chemistry Science Learning Center (SLC) preparing and studying for this class?

	Frequency	Percent
None	138	40.8
1-2	85	25.1
3-5	55	16.3
5-7	33	9.8
7-10	16	4.7
More than 10	11	3.3
Total	338	100.0
No Response	3	
Total	341	

Q16. Approximately how much time per week do you spend working with the chemistry tutors in the SLC?

	Frequency	Percent
Less than one hour	59	18.0
1-2 hours	64	19.6
2-4 hours	28	8.6
More than 4 hours	25	7.6
None - I only use the SLC for studying but not for tutoring	36	11.0
None - I do not utilize the SLC	115	35.2
Total	327	100.0
No Response	14	
Total	341	

Appendix 8 Headcounts for Degrees and Certificates Awarded

DATA from District Website

Headcount by Chemistry Degree				Headcount by Chemistry Certificate		
year	count	percent		year	count	percent
2007SP	1	0.16%				
2011SP	1	0.15%		2011SP	1	0.31%
2012SP	2	0.28%		2012SP	2	0.41%

Grossmont Head Count by Degree for 2007SP

Degree	2007SP	
	Count	Percent
Chemistry	1	0.16%

Degree	2011SP	
	Count	Percent
Chemistry	1	0.15%

Grossmont Head Count by Certificate for 2011SP

Certificate	2011SP	
	Count	Percent
Chemistry	1	0.31%

Grossmont Head Count by Degree for 2012SP

Degree	2012SP	
	Count	Percent
Chemistry	2	0.28%

Grossmont Head Count by Certificate for 2012SP

Certificate	2012SP	
	Count	Percent
Chemistry	2	0.41%

APPENDIX 9 STAFFING TRENDS AND JOB DESCRIPTIONS FOR CLASSIFIED STAFF

TABLE 9.1 STAFFING TRENDS AND DECISION-MAKING

	2012		2011		2010		2009		2008		2007		2006	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
FT Faculty	7	7	7	7	7	7	7	7	7	7	7	6	6	6
PT Faculty	4	6	9	9	9	10	8	8	10	9	9	11	8	7
FT + Extra Pay FTEF	7.217	6.367	6.067	5.650	6.567	6.767	6.067	7.000	6.001	7.149	6.950	5.949	5.699	6.299
Total Reassigned Time	0.4335	0.4335	0.4335	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835	0.4835
Total PT FTEF	0.70	1.40	2.80	2.70	2.55	3.20	3.05	2.70	2.90	2.55	2.55	3.05	2.85	2.40
Total FTEF	7.917	7.767	8.867	8.350	9.117	9.967	9.117	9.700	8.900	9.699	9.500	8.999	8.499	8.699
Earned WSCH	4262	4273	5101	4794	5282	5559	4909	4824	4380	4675	4836	4579	4932	4580

DATA SOURCES: SQL Server Reporting Services
Home > Instructional Services > Faculty
Faculty FTE - Full Time and Part Time

SQL Server Reporting Services
Home > Instructional Services > Program Review
Grade Distribution by Division

http://www.gcccd.edu/research-planning/hp-srs-faculty-staffing-data.html

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT

CLASS TITLE: CHEMISTRY TECHNICIAN

SUMMARY:

Under the direction of an assigned supervisor and the coordination of the Department Chair person, perform a variety of technical and specialized duties related to the preparation, operation and maintenance of a chemistry laboratory and related areas; operate and demonstrate the use of specialized equipment and instructional materials; provide information and technical assistance to faculty and students.

ESSENTIAL FUNCTIONS:

Assist in the operation and maintenance of an instructional chemistry laboratory and related areas; perform specialized and technical duties to assure efficient lab operations.

Assist teachers and students in the use of a variety of equipment, materials and supplies in the instructional setting; provide assistance to students according to instructions by teachers.

Prepare solutions, chemicals, reagents, unknowns and other instructional materials and equipment for teachers' demonstrations, laboratory exercises and student use as requested, according to approved procedures.

Operate and maintain equipment, supplies and instructional materials in a chemistry laboratory environment.

Prepare and issue materials, lockers and equipment for student use; maintain records of materials and equipment used by students.

Operate a wide variety of specialized equipment commonly found in chemistry laboratories including glassware, balances, computer and other technical apparatus, instrumentation and measuring devices.

Maintain laboratory environment in a safe, clean and orderly condition; assure proper storage and use of equipment and supplies. Assure security of equipment, materials and supplies in laboratory facilities and storage areas.

Prepare and maintain various records, log and reports related to laboratory operations, inventory, personnel, lab fees and breakage and chemical solutions and unknowns.
Assure compliance with state and federal laws and regulations governing the storage, use and handling of syringes, alcohol, radioactive and toxic materials; coordinate the safe disposal of chemicals and wastes.

Train and provide work direction to student workers and other personnel as assigned; assign and review work.

Maintain departmental area(s) in a safe, clean and orderly condition; assure compliance with established safety procedures and regulations

Assist in coordinating the use of lab facilities, assuring the availability and preparation of appropriate supplies and equipment.

Maintain currency of qualifications for area of assignment.

SECONDARY FUNCTIONS:

Order, receive and store supplies, materials and equipment; maintain inventories and price lists; confer with vendors regarding new equipment and instrumentation.

Calibrate, adjust, maintain and make minor repairs to equipment; report major repair needs according to established procedures.

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

Preparation of chemicals, solutions, reagents and unknowns for laboratory exercises and demonstrations.

Equipment and apparatus used in chemistry instruction.

Principles, practices and procedures typically used in chemistry laboratories.

Safety regulations involving the storage, use, handling and disposal of toxic materials and chemicals.

Correct English usage, grammar, spelling, punctuation and vocabulary.

ABILITY TO:

Perform specialized and technical duties to assure efficient lab operations.

Provide information and assistance to students and staff.

Assure the proper care, storage and security of assigned equipment, materials and supplies.

Maintain learning equipment in proper working order.

Issue and receive equipment and supplies.

Perform a variety of laboratory tests and demonstrations.

Prepare chemical solutions, unknowns and reagents for instructional use.

Work independently with little direction; plan and organize work to meet schedules and timelines.

Operate personal computers and other office and lab equipment used in assigned area.

Communicate effectively both orally and in writing.

Analyze situations accurately and adopt an effective course of action.

Establish and maintain cooperative and effective working relationships with others.

Maintain records and prepare reports.

Train and provide work direction to others; assign and review the work of others.

EDUCATION:

Completion of college-level chemistry coursework or equivalent.

EXPERIENCE:

Responsible chemistry laboratory experience including lab experience in college-level chemistry courses.

WORKING CONDTIONS:

Chemistry laboratory environment; subject to fumes, lifting and climbing and exposure to hazardous or toxic substances

Sabbaticals, Publications, Conferences, Workshops and other Professional Development Activities

Faculty	Date	Activity
Lehman	F 2002	Sabbatical: Working with the crime lab of San Diego County Sherriff's department to develop activities for forensic chemistry course Chem 113
Willard	F 2006	Sabbatical: Working with the Science Olympiad to develop new materials for chemistry coursework and to encourage east county schools to participate in science competitions
Lehman	F 2009	Sabbatical: Point Loma University research to develop instrumentation methods and experiments to incorporate into chemistry laboratory curriculum
Lehman	F 2006	Publication : Dale F. Shellhamer,* David C. Gleason, Sean J. Rodriguez, Victor L. Heasley,a Jerry A. Boatz and Jeffrey J. Lehman, "Correlation of calculated halonium ion structures with product distributions from fluorine substituted terminal alkenes", Tetrahedron, October 2006
Oakes	F 2008	Sabbatical: Developed material for two new courses, PSC 100 and SCI 120
Olmstead	F 2011	Sabbatical: Developed curriculum for new chemistry course, Chem 102
Oakes	2011	Publication : Textbook for SCI 100 Introduction to Scientific Thought
Oakes	2008-2012	Publications: Books published by IPI Books- *That You May Believe* *Field Manual for Apologetics* *The Christian Story* *Mormonism: Belief and Testimony*
Willard	2013	Publication: Contributing author Foundations of College Chemistry 14th ed. by Morris Hein and Susan Arena Co-author solutions manual for Foundations of College Chemistry 14th edition.
Olmstead	2011	Authored Laboratory Manual for Chem 102
Oakes	S 2013	Project Kaleidoscope conference speaker
Oakes	Sp 2011	Project Kaleidoscope conference organizer
George	2012	American Chemical Society panelist for developing self-study tools for CC chemistry programs
George	2007-present	BeWise advisor for high school females Performed chemical experiments with students to foster interest in sciences

Sabbaticals, Publications, Conferences, Workshops and other Professional Development Activities

Olmstead	2010	Attended 1 day POGIL workshop, Mira Costa College
George	2013	Linking Chem 120 with Eng 120 working with Lisa Aguilar of the English Dept
Oakes	2010	Developed new course, PSC 100 Physical Science for Teachers. Coure has been approved by Curriculum Committee and taught by Oakes
Olmstead	2011	POGIL workshop facilitator and participant, Salt Lake City UT
Oakes	2007-2013	Scholarship Director for statewide Honors Programs HTCC.
Oakes	2005-2013	Gave invited lectures in 50+ countries and 30+ universities, including UCLA, MIT, Harvard, Rutgers, UC Boulder, UT Austin, SDSU
Willard	2007-present	BeWise advisory board member
Willard	2011	served college as interim dean
Lehman	2011-Present	Club Advisor : Near-space balloon launch and recovery, and rocket launches. Cuyamaca College Engineering Club
Lehman	2009-Present	Flex Week Presenter : Numerous talks on educational technology and the chief organizer of discipline-specific professional development activities.
Vance	2010	Piloted an updated Chemistry 120 Limiting Reagent Lab with “green” reagents Spring 2010. Revised Fall 2010 with different reagents. Presented lab at Green Chemistry event at Miramar College December 4, 2010. Revised again Spring 2012 with different reagents.
Vance	Su 2010 - present	Updated Chemistry 141 Laboratory Manual with input from Judy George, Dr. Cary Willard, Dr. John Oakes, Jeff Lehman, and Martin Larter
Vance	F 2010 – present	Updated Chemistry 120 Laboratory Manual with input from Judy George, Martin Larter, and Dr. Amanda Hernandez
Vance	F 2010 - present	Updated Chemistry 142 Laboratory Manual with input from Judy George, Jeff Lehman, Dr. John Oakes, and Martin Larter
Vance	Sp 2011 - present	Updated Chemistry 116 Lab Manual with input from Martin Larter, Dr. John Oakes, and Dr. Robert Anness
Vance	F 2011 - present	Updated Chemistry 115 Laboratory Manual with input from Dr. Cary Willard and Martin Larter
Larter	F 2006	Conferences: Science Olympaid,
Larter	F 2012	Conferences: 2YC3
Larter	S 2007	Conference : science Decathlon
Larter	S 2007	ACS dinner talk

APPENDIX 11 WSCH ANALYSIS REPORT

- Composite Data Table for Chemistry
- Fall WSCH Report for Chemistry
- Spring WSCH Report for Chemistry
- Fall WSCH Report for Science
- Spring WSCH Report for Chemistry
- WSCH Data Prior to Fall 2008

Composite Data Table

	Total FTEF	Max WSCH	Max WSCH/FTEF	Earned WSCH	Earned WSCH/FTEF	% of Max
Fall 2012	7.92	4578.00	578.25	4262.00	538.34	93.10
Spring 2012	7.77	4302.00	553.88	4273.00	550.15	99.33
Fall 2011	8.87	5346.00	602.91	5101.00	575.28	95.42
Spring 2011	8.35	4590.00	549.70	4794.00	574.13	104.44
Fall 2010	9.12	5064.00	555.45	5282.00	579.36	104.30
Spring 2010	9.97	5232.00	524.93	5559.00	557.74	106.25
Fall 2009	9.12	4986.00	546.89	4909.00	538.44	98.46
Spring 2009	9.70	5232.00	539.38	4824.00	497.32	92.20
Fall 2008	8.90	4926.00	553.47	4380.00	492.12	88.92
Spring 2008	9.85	5408.00	549.03	4674.80	474.59	86.44
Fall 2007	9.50	5568.00	586.10	4836.00	509.05	86.85
Spring 2007	9.00	4919.00	546.55	4578.80	508.75	93.08

	Total FTEF	Max WSCH	Max WSCH/FTEF	Earned WSCH	Earned WSCH/FTEF	% of Max
Fall 2006	8.50	5337.00	627.88	4932.00	580.23	92.41
Spring 2006	8.70	5471.00	628.85	4580.40	526.48	83.72
Fall 2005	8.20	5142.00	627.07	4557.00	555.73	88.62
Spring 2005	9.09	5687.00	625.83	4821.20	530.56	84.77
Fall 2004	8.62	5175.00	600.55	4463.00	517.92	86.24
Spring 2004	8.45	5079.00	601.06	4776.00	565.20	94.03
Fall 2003	8.82	5439.00	616.87	4927.00	558.80	90.58
Spring 2003	7.65	4671.00	610.58	4065.00	531.37	87.02
Fall 2002	8.52	5103.00	599.15	4513.00	529.88	88.43
Spring 2002	8.95	5295.00	591.62	4398.00	491.39	83.05
Fall 2001	8.60	5391.00	626.86	3969.00	461.51	73.62
Spring 2001	8.45	50.31	595.38	3915.00	463.31	77.81
Fall 2000	7.95	4746.00	596.98	3585.00	450.94	75.53

The three highest values are highlighted in each category: Total FTEF, Max WSCH, %Max

Fall WSCH Report for Chemistry

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
Dept Totals	**Total FTEF**	8.90	9.12	9.12	8.87	7.92
	Max WSCH	4,926.	4,986.	5,064.	5,346.	4,578.
	Max WSCH/ FTEF	553.47	546.89	555.45	602.91	578.25
	Max Enrollment	843.	821.	839.	862.	750.
	Earned WSCH	4,380.	4,909.	5,282.	5,101.	4,262.
	Earned WSCH/ FTEF	492.12	538.44	579.36	575.28	538.34
	% of Max	88.92	98.46	104.30	95.42	93.10
	Approximate FTES	146.00	163.63	176.07	170.03	142.07

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 110	**Total FTEF**	0.40	0.20	0.20	0.20	0.20
	Max WSCH	192.	96.	150.	150.	150.
	Max WSCH/ FTEF	480.00	480.00	750.00	750.00	750.00
	Max Enrollment	64.	32.	50.	50.	50.
	Earned WSCH	81.	90.	153.	141.	159.
	Earned WSCH/ FTEF	202.50	450.00	765.00	705.00	795.00
	% of Max	42.19	93.75	102.00	94.00	106.00
	Approximate FTES	2.70	3.00	5.10	4.70	5.30

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 113	**Total FTEF**	0.70	0.50	0.50	0.50	0.50
	Max WSCH	288.	288.	288.	288.	288.
	Max WSCH/ FTEF	411.43	576.00	576.00	576.00	576.00
	Max Enrollment	48.	48.	48.	48.	48.
	Earned WSCH	240.	210.	300.	300.	300.
	Earned WSCH/ FTEF	342.86	420.00	600.00	600.00	600.00
	% of Max	83.33	72.92	104.17	104.17	104.17
	Approximate FTES	8.00	7.00	10.00	10.00	10.00

CHEM 115	Total FTEF	1.65	1.65	1.35	1.65	1.00
	Max WSCH	1,260.	1,260.	888.	1,320.	768.
	Max WSCH/ FTEF	763.64	763.64	657.78	800.00	768.00
	Max Enrollment	210.	210.	148.	220.	128.
	Earned WSCH	1,020.	1,230.	924.	1,260.	750.
	Earned WSCH/ FTEF	618.18	745.45	684.44	763.64	750.00
	% of Max	80.95	97.62	104.05	95.45	97.66
	Approximate FTES	34.00	41.00	30.80	42.00	25.00
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 115T	Total FTEF	0.15	0.15	0.15	0.15	0.15
	Max WSCH	300.	300.	300.	300.	300.
	Max WSCH/ FTEF	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
	Max Enrollment	100.	100.	100.	100.	100.
	Earned WSCH	42.	15.	24.	63.	30.
	Earned WSCH/ FTEF	280.00	100.00	160.00	420.00	200.00
	% of Max	14.00	5.00	8.00	21.00	10.00
	Approximate FTES	1.40	0.50	0.80	2.10	1.00
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 116T	Total FTEF	0.00	0.00	0.00		0.00
	Max WSCH	.	.	.		.
	Max WSCH/ FTEF	0	0	0	0	0
	Max Enrollment	.	.	.		.
	Earned WSCH	6.	15.	9.		.
	Earned WSCH/ FTEF	0	0	0	0	0
	% of Max	0	0	0	0	0
	Approximate FTES	0.20	0.50	0.30	0	0

		Fall 2008	Fall 2009	Fall 2010		Fall 2012
CHEM 120T	Total FTEF	0.00	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0	0
	Max Enrollment	.	.	.	.	.
	Earned WSCH	33.	21.	27.	33.	6.
	Earned WSCH/ FTEF	0	0	0	0	0
	% of Max	0	0	0	0	0
	Approximate FTES	1.10	0.70	0.90	1.10	0.20

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 141T	Total FTEF	0.00	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0	0
	Max Enrollment	.	.	.	.	.
	Earned WSCH	18.	9.	6.	12.	27.
	Earned WSCH/ FTEF	0	0	0	0	0
	% of Max	0	0	0	0	0
	Approximate FTES	0.60	0.30	0.20	0.40	0.90

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 142T	Total FTEF	0.00	0.00	0.00		0.00
	Max WSCH	.	.	.		.
	Max WSCH/ FTEF	0	0	0	0	0
	Max Enrollment	.	.	.		.
	Earned WSCH	9.	6.	.		.
	Earned WSCH/ FTEF	0	0	0	0	0
	% of Max	0	0	0	0	0
	Approximate FTES	0.30	0.20	0	0	0

		Fall 2008	Fall 2009	Fall 2010		Fall 2012
CHEM 116	**Total FTEF**	1.00	0.85	0.50	0.50	0.50
	Max WSCH	498.	432.	384.	384.	384.
	Max WSCH/ FTEF	498.00	508.24	768.00	768.00	768.00
	Max Enrollment	83.	72.	64.	64.	64.
	Earned WSCH	324.	384.	330.	384.	282.
	Earned WSCH/ FTEF	324.00	451.76	660.00	768.00	564.00
	% of Max	65.06	88.89	85.94	100.00	73.44
	Approximate FTES	10.80	12.80	11.00	12.80	9.40
		Fall 2008	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**
CHEM 120	**Total FTEF**	2.00	1.85	2.35	1.30	1.65
	Max WSCH	1,164.	1,002.	1,278.	840.	1,008.
	Max WSCH/ FTEF	581.94	541.62	543.83	646.15	610.91
	Max Enrollment	194.	167.	213.	140.	168.
	Earned WSCH	1,326.	1,164.	1,560.	972.	1,104.
	Earned WSCH/ FTEF	662.93	629.19	663.83	747.69	669.09
	% of Max	113.92	116.17	122.07	115.71	109.52
	Approximate FTES	44.20	38.80	52.00	32.40	36.80
		Fall 2008	**Fall 2009**	**Fall 2010**	**Fall 2011**	**Fall 2012**
CHEM 141	**Total FTEF**	1.50	1.50	2.00	2.00	2.00
	Max WSCH	576.	576.	792.	864.	864.
	Max WSCH/ FTEF	384.00	384.00	396.00	432.00	432.00
	Max Enrollment	72.	72.	96.	96.	96.
	Earned WSCH	822.	795.	939.	936.	873.
	Earned WSCH/ FTEF	548.00	530.00	469.50	468.00	436.50
	% of Max	142.71	138.02	118.56	108.33	101.04
	Approximate FTES	27.40	26.50	31.30	31.20	29.10

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 142	Total FTEF	1.00	1.00	1.00	1.00	0.50
	Max WSCH	432.	432.	432.	432.	216.
	Max WSCH/FTEF	432.00	432.00	432.00	432.00	432.00
	Max Enrollment	48.	48.	48.	48.	24.
	Earned WSCH	351.	495.	432.	351.	270.
	Earned WSCH/FTEF	351.00	495.00	432.00	351.00	540.00
	% of Max	81.25	114.58	100.00	81.25	125.00
	Approximate FTES	11.70	16.50	14.40	11.70	9.00
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 231	Total FTEF	0.50	0.50	0.50	0.50	0.50
	Max WSCH	216.	216.	216.	216.	216.
	Max WSCH/FTEF	432.00	432.00	432.00	432.00	432.00
	Max Enrollment	24.	24.	24.	24.	24.
	Earned WSCH	108.	162.	270.	198.	189.
	Earned WSCH/FTEF	216.00	324.00	540.00	396.00	378.00
	% of Max	50.00	75.00	125.00	91.67	87.50
	Approximate FTES	3.60	5.40	9.00	6.60	6.30
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 102	Total FTEF		0.42	0.57	0.57	0.42
	Max WSCH		168.	336.	336.	168.
	Max WSCH/FTEF	0	402.88	592.59	592.59	402.88
	Max Enrollment		24.	48.	48.	24.
	Earned WSCH		196.	308.	343.	182.
	Earned WSCH/FTEF	0	470.02	543.21	604.94	436.45
	% of Max	0	116.67	91.67	102.08	108.33
	Approximate FTES	0	6.53	10.27	11.43	6.07

			Fall 2009	Fall 2010	Fall 2011	Fall 2012
CHEM 232	**Total FTEF**		0.50		0.50	0.50
	Max WSCH		216.		216.	216.
	Max WSCH/ FTEF	0	432.00	0	432.00	432.00
	Max Enrollment		24.		24.	24.
	Earned WSCH		117.		108.	90.
	Earned WSCH/ FTEF	0	234.00	0	216.00	180.00
	% of Max	0	54.17	0	50.00	41.67
	Approximate FTES	0	3.90	0	3.60	3.00
			Fall 2009		Fall 2011	Fall 2012

Spring WSCH Report for Chemistry

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
Dept Totals	**Total FTEF**	9.70	9.97	8.35	7.77
	Max WSCH	5,232.	5,232.	4,590.	4,302.
	Max WSCH/ FTEF	539.38	524.93	549.70	553.88
	Max Enrollment	812.	808.	726.	682.
	Earned WSCH	4,824.	5,559.	4,794.	4,273.
	Earned WSCH/ FTEF	497.32	557.74	574.13	550.15
	% of Max	92.20	106.25	104.44	99.33
	Approximate FTES	160.80	185.30	159.80	142.43
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**
CHEM 110	**Total FTEF**	0.20	0.20	0.20	0.20
	Max WSCH	96.	96.	150.	150.
	Max WSCH/ FTEF	480.00	480.00	750.00	750.00
	Max Enrollment	32.	32.	50.	50.
	Earned WSCH	75.	78.	132.	138.
	Earned WSCH/ FTEF	375.00	390.00	660.00	690.00
	% of Max	78.13	81.25	88.00	92.00
	Approximate FTES	2.50	2.60	4.40	4.60
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**
CHEM 113	**Total FTEF**	0.70	0.50	0.50	0.50
	Max WSCH	288.	288.	288.	288.
	Max WSCH/ FTEF	411.43	576.00	576.00	576.00
	Max Enrollment	48.	48.	48.	48.
	Earned WSCH	264.	246.	264.	294.
	Earned WSCH/ FTEF	377.14	492.00	528.00	588.00
	% of Max	91.67	85.42	91.67	102.08
	Approximate FTES	8.80	8.20	8.80	9.80

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 115	Total FTEF	1.65	1.85	1.35	1.35
	Max WSCH	1,272.	1,272.	936.	960.
	Max WSCH/ FTEF	770.91	687.57	693.33	711.11
	Max Enrollment	212.	212.	156.	160.
	Earned WSCH	1,188.	1,332.	1,014.	828.
	Earned WSCH/ FTEF	720.00	720.00	751.11	613.33
	% of Max	93.40	104.72	108.33	86.25
	Approximate FTES	39.60	44.40	33.80	27.60
		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 115T	Total FTEF	0.15	0.15	0.15	0.15
	Max WSCH	120.	120.	120.	120.
	Max WSCH/ FTEF	800.00	800.00	800.00	800.00
	Max Enrollment	40.	40.	40.	40.
	Earned WSCH	39.	27.	24.	48.
	Earned WSCH/ FTEF	260.00	180.00	160.00	320.00
	% of Max	32.50	22.50	20.00	40.00
	Approximate FTES	1.30	0.90	0.80	1.60
		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 116T	Total FTEF	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0
	Max Enrollment	.	.	.	.
	Earned WSCH	.	15.	6.	9.
	Earned WSCH/ FTEF	0	0	0	0
	% of Max	0	0	0	0
	Approximate FTES	0	0.50	0.20	0.30

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 120T	**Total FTEF**	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0
	Max Enrollment	.	.	.	.
	Earned WSCH	21.	9.	30.	27.
	Earned WSCH/ FTEF	0	0	0	0
	% of Max	0	0	0	0
	Approximate FTES	0.70	0.30	1.00	0.90

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 141T	**Total FTEF**	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0
	Max Enrollment	.	.	.	.
	Earned WSCH	6.	3.	9.	3.
	Earned WSCH/ FTEF	0	0	0	0
	% of Max	0	0	0	0
	Approximate FTES	0.20	0.10	0.30	0.10

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 142T	**Total FTEF**	0.00	0.00	0.00	0.00
	Max WSCH	.	.	.	.
	Max WSCH/ FTEF	0	0	0	0
	Max Enrollment	.	.	.	.
	Earned WSCH	.	3.	6.	12.
	Earned WSCH/ FTEF	0	0	0	0
	% of Max	0	0	0	0
	Approximate FTES	0	0.10	0.20	0.40

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 116	**Total FTEF**	1.00	0.85	0.50	0.50
	Max WSCH	576.	408.	288.	288.
	Max WSCH/ FTEF	576.00	480.00	576.00	576.00
	Max Enrollment	96.	68.	48.	48.
	Earned WSCH	378.	378.	270.	294.
	Earned WSCH/ FTEF	378.00	444.71	540.00	588.00
	% of Max	65.63	92.65	93.75	102.08
	Approximate FTES	12.60	12.60	9.00	9.80
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**
CHEM 120	**Total FTEF**	2.00	2.00	2.15	1.50
	Max WSCH	1,152.	1,152.	1,296.	864.
	Max WSCH/ FTEF	576.00	576.00	602.79	576.00
	Max Enrollment	192.	192.	216.	144.
	Earned WSCH	1,224.	1,398.	1,518.	930.
	Earned WSCH/ FTEF	612.00	699.00	706.05	620.00
	% of Max	106.25	121.35	117.13	107.64
	Approximate FTES	40.80	46.60	50.60	31.00
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**
CHEM 141	**Total FTEF**	2.00	2.00	2.00	1.50
	Max WSCH	864.	864.	864.	648.
	Max WSCH/ FTEF	432.00	432.00	432.00	432.00
	Max Enrollment	96.	96.	96.	72.
	Earned WSCH	864.	990.	909.	711.
	Earned WSCH/ FTEF	432.00	495.00	454.50	474.00
	% of Max	100.00	114.58	105.21	109.72
	Approximate FTES	28.80	33.00	30.30	23.70

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 142	Total FTEF	1.00	1.00	1.00	1.00
	Max WSCH	432.	432.	432.	432.
	Max WSCH/ FTEF	432.00	432.00	432.00	432.00
	Max Enrollment	48.	48.	48.	48.
	Earned WSCH	459.	513.	441.	459.
	Earned WSCH/ FTEF	459.00	513.00	441.00	459.00
	% of Max	106.25	118.75	102.08	106.25
	Approximate FTES	15.30	17.10	14.70	15.30
		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 231	Total FTEF	0.50	0.50	0.50	0.50
	Max WSCH	216.	216.	216.	216.
	Max WSCH/ FTEF	432.00	432.00	432.00	432.00
	Max Enrollment	24.	24.	24.	24.
	Earned WSCH	243.	207.	171.	198.
	Earned WSCH/ FTEF	486.00	414.00	342.00	396.00
	% of Max	112.50	95.83	79.17	91.67
	Approximate FTES	8.10	6.90	5.70	6.60
		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 232	Total FTEF	0.50	0.50		
	Max WSCH	216.	216.		
	Max WSCH/ FTEF	432.00	432.00	0	0
	Max Enrollment	24.	24.		
	Earned WSCH	63.	171.		
	Earned WSCH/ FTEF	126.00	342.00	0	0
	% of Max	29.17	79.17	0	0
	Approximate FTES	2.10	5.70	0	0

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
CHEM 102	Total FTEF		0.42		0.57
	Max WSCH		168.		336.
	Max WSCH/FTEF	0	402.88	0	592.59
	Max Enrollment		24.		48.
	Earned WSCH		189.		322.
	Earned WSCH/FTEF	0	453.24	0	567.90
	% of Max	0	112.50	0	95.83
	Approximate FTES	0	6.30	0	10.73

Fall WSCH Report for Science

		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
Department Totals	Total FTEF	1.40	1.40	1.00	1.00	0.80
	Max WSCH	861.	720.	582.	627.	480.
	Max WSCH/FTEF	615.00	514.29	582.00	627.00	600.00
	Max Enrollment	287.	240.	194.	209.	160.
	Earned WSCH	714.	810.	510.	645.	555.
	Earned WSCH/FTEF	510.00	578.57	510.00	645.00	693.75
	% of Max	82.93	112.50	87.63	102.87	115.63
	Approximate FTES	23.80	27.00	17.00	21.50	18.50
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
SCI 110	Total FTEF	1.40	1.40	1.00	1.00	0.80
	Max WSCH	861.	720.	582.	627.	480.
	Max WSCH/FTEF	615.00	514.29	582.00	627.00	600.00
	Max Enrollment	287.	240.	194.	209.	160.
	Earned WSCH	714.	810.	510.	645.	555.
	Earned WSCH/FTEF	510.00	578.57	510.00	645.00	693.75
	% of Max	82.93	112.50	87.63	102.87	115.63
	Approximate FTES	23.80	27.00	17.00	21.50	18.50
		Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012

Spring WSCH Report for Science

		Spring 2009	Spring 2010	Spring 2011	Spring 2012
Department Totals	**Total FTEF**	1.60	1.40	1.40	1.00
	Max WSCH	1,068.	930.	840.	570.
	Max WSCH/ FTEF	667.50	664.29	600.00	570.00
	Max Enrollment	356.	310.	280.	190.
	Earned WSCH	714.	786.	744.	627.
	Earned WSCH/ FTEF	446.25	561.43	531.43	627.00
	% of Max	66.85	84.52	88.57	110.00
	Approximate FTES	23.80	26.20	24.80	20.90
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**
SCI 110	**Total FTEF**	1.60	1.40	1.40	1.00
	Max WSCH	1,068.	930.	840.	570.
	Max WSCH/ FTEF	667.50	664.29	600.00	570.00
	Max Enrollment	356.	310.	280.	190.
	Earned WSCH	714.	786.	744.	627.
	Earned WSCH/ FTEF	446.25	561.43	531.43	627.00
	% of Max	66.85	84.52	88.57	110.00
	Approximate FTES	23.80	26.20	24.80	20.90
		Spring 2009	**Spring 2010**	**Spring 2011**	**Spring 2012**

WSCH Data Prior to Fall 2008

http://www.gcccd.edu/research-planning/hp-srs-wsch-reports.html

SPRING 2008

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REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.400	192.00	480.00	87.00	217.50	45.31
CHEM113	190500	.500	288.00	576.00	222.00	444.00	77.08
CHEM115	190500	1.650	1272.00	770.90	906.00	549.09	71.22
CHEM115T	190500	.150	128.00	853.33	156.80	1045.33	122.50
CHEM116	190500	1.000	576.00	576.00	366.00	366.00	63.54
CHEM120	190500	1.650	1008.00	610.90	1074.00	650.90	106.54
CHEM141	190500	2.000	864.00	432.00	810.00	405.00	93.75
CHEM142	190500	1.500	648.00	432.00	639.00	426.00	98.61
CHEM231	190500	.500	216.00	432.00	252.00	504.00	116.66
CHEM232	190500	.500	216.00	432.00	162.00	324.00	75.00
******* CHEM		9.850	5408.00	549.03	4674.80	474.59	86.44
SCI 110	490100	1.600	999.00	624.37	663.00	414.37	66.36
******* SCI		1.600	999.00	624.37	663.00	414.37	66.36

FALL 2007

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 37
RUN ON: 07-12-2011 11:13:23 SUBJECT WSCH ANALYSIS FALL 2007
REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.400	192.00	480.00	165.00	412.50	85.93
CHEM113	190500	.500	288.00	576.00	282.00	564.00	97.91
CHEM115	190500	2.000	1464.00	732.00	1056.00	528.00	72.13
CHEM115T	190500	.150	300.00	2000.00	120.00	800.00	40.00
CHEM116	190500	1.000	576.00	576.00	438.00	438.00	76.04
CHEM120	190500	1.650	1020.00	618.18	1074.00	650.90	105.29
CHEM141	190500	2.300	1080.00	469.56	1107.00	481.30	102.50
CHEM142	190500	1.000	432.00	432.00	405.00	405.00	93.75
CHEM231	190500	.500	216.00	432.00	189.00	378.00	87.50
******* CHEM		9.500	5568.00	586.10	4836.00	509.05	86.85
SCI 110	490100	1.600	972.00	607.50	645.00	403.12	66.35
******* SCI		1.600	972.00	607.50	645.00	403.12	66.35

SPRING 2007

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REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	87.00	435.00	78.37
CHEM113	190500	.500	288.00	576.00	282.00	564.00	97.91
CHEM115	190500	1.500	1080.00	720.00	972.00	648.00	90.00
CHEM115T	190500	.150	128.00	853.33	156.80	1045.33	122.50
CHEM116	190500	1.000	576.00	576.00	450.00	450.00	78.12
CHEM120	190500	1.650	1008.00	610.90	1020.00	618.18	101.19
CHEM141	190500	1.500	648.00	432.00	810.00	540.00	125.00
CHEM142	190500	1.500	648.00	432.00	531.00	354.00	81.94
CHEM231	190500	.500	216.00	432.00	135.00	270.00	62.50
CHEM232	190500	.500	216.00	432.00	135.00	270.00	62.50
******* CHEM		9.000	4919.00	546.55	4578.80	508.75	93.08
SCI 110	490100	1.200	744.00	620.00	534.00	445.00	71.77
******* SCI		1.200	744.00	620.00	534.00	445.00	71.77

FALL 2006

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RUN ON: 07-12-2011 11:09:12 SUBJECT WSCH ANALYSIS FALL 2006
REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	84.00	420.00	75.67
CHEM113	190500	.500	288.00	576.00	294.00	588.00	102.08
CHEM115	190500	2.000	1296.00	648.00	1098.00	549.00	84.72
CHEM115T	190500	.150	300.00	2000.00	183.00	1220.00	61.00
CHEM116	190500	1.000	510.00	510.00	414.00	414.00	81.17
CHEM120	190500	1.650	1176.00	712.72	1248.00	756.36	106.12
CHEM141	190500	1.500	864.00	576.00	1098.00	732.00	127.08
CHEM142	190500	1.000	576.00	576.00	315.00	315.00	54.68
CHEM231	190500	.500	216.00	432.00	198.00	396.00	91.66
******* CHEM		8.500	5337.00	627.88	4932.00	580.23	92.41
SCI 110	490100	1.400	969.00	692.14	663.00	473.57	68.42
******* SCI		1.400	969.00	692.14	663.00	473.57	68.42

SPRING 2006

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RUN ON: 07-12-2011 11:13:59 SUBJECT WSCH ANALYSIS SPRING 2006
REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	24.00	120.00	21.62
CHEM113	190500	.500	288.00	576.00	234.00	468.00	81.25
CHEM115	190500	1.850	1152.00	622.70	1086.00	587.02	94.27
CHEM115T	190500	.150	128.00	853.33	134.40	896.00	105.00
CHEM116	190500	.850	576.00	677.64	420.00	494.11	72.91
CHEM120	190500	1.850	1344.00	726.48	1152.00	622.70	85.71
CHEM141	190500	1.300	864.00	664.61	891.00	685.38	103.12
CHEM142	190500	1.000	576.00	576.00	378.00	378.00	65.62
CHEM231	190500	.500	216.00	432.00	162.00	324.00	75.00
CHEM232	190500	.500	216.00	432.00	99.00	198.00	45.83
******* CHEM		8.700	5471.00	628.85	4580.40	526.48	83.72
SCI 110	490100	.200	111.00	555.00	72.00	360.00	64.86
******* SCI		.200	111.00	555.00	72.00	360.00	64.86

FALL 2005

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RUN ON: 07-12-2011 11:05:11 SUBJECT WSCH ANALYSIS FALL 2005
REPORT INCLUDES: GROSSMONT AND IVC COMBINED *** ALL SHORT TERM CLASSES

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	150.00	750.00	57.00	285.00	38.00
CHEM113	190500	.500	288.00	576.00	264.00	528.00	91.66
CHEM115	190500	2.000	1344.00	672.00	1272.00	636.00	94.64
CHEM115T	190500	.300	240.00	800.00	216.00	720.00	90.00
CHEM116	190500	.350	192.00	548.57	174.00	497.14	90.62
CHEM120	190500	1.850	1272.00	687.56	1152.00	622.70	90.56
CHEM141	190500	1.500	864.00	576.00	891.00	594.00	103.12
CHEM142	190500	1.000	576.00	576.00	360.00	360.00	62.50
CHEM231	190500	.500	216.00	432.00	171.00	342.00	79.16
******* CHEM		8.200	5142.00	627.07	4557.00	555.73	88.62
SCI 110	490100	1.200	744.00	620.00	618.00	515.00	83.06
******* SCI		1.200	744.00	620.00	618.00	515.00	83.06

SPRING 2005

CHEM110	190500	.200	111.00	555.00	66.00	330.00	59.45
CHEM113	190500	.500	288.00	576.00	324.00	648.00	112.50
CHEM115	190500	2.000	1248.00	624.00	1116.00	558.00	89.42
CHEM115T	190500	.470	368.00	782.97	200.20	425.95	54.40
CHEM116	190500	.850	576.00	677.64	432.00	508.23	75.00
CHEM120	190500	1.850	1272.00	687.56	1248.00	674.59	98.11
CHEM141	190500	1.300	864.00	664.61	774.00	595.38	89.58
CHEM142	190500	1.000	576.00	576.00	396.00	396.00	68.75
CHEM231	190500	.417	168.00	402.87	112.00	268.58	66.66
CHEM232	190500	.500	216.00	432.00	153.00	306.00	70.83
******* CHEM		9.087	5687.00	625.83	4821.20	530.56	84.77
SCI 110	490100	1.200	690.00	575.00	459.00	382.50	66.52
******* SCI		1.200	690.00	575.00	459.00	382.50	66.52

FALL 2004

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RUN ON: 09-01-2011 18:10:50 SUBJECT WSCH ANALYSIS FALL 2004
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	84.00	420.00	75.67
CHEM113	190500	.500	288.00	576.00	240.00	480.00	83.33
CHEM115	190500	2.000	1248.00	624.00	1248.00	624.00	100.00
CHEM115T	190500	.450	360.00	800.00	189.00	420.00	52.50
CHEM116	190500	.700	288.00	411.42	282.00	402.85	97.91
CHEM120	190500	1.850	1272.00	687.56	1032.00	557.83	81.13
CHEM141	190500	1.500	864.00	576.00	918.00	612.00	106.25
CHEM142	190500	1.000	576.00	576.00	288.00	288.00	50.00
CHEM231	190500	.417	168.00	402.87	182.00	436.45	108.33
******* CHEM		8.617	5175.00	600.55	4463.00	517.92	86.24
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	WSCH/FTEF	EARNED WSCH	WSCH/FTEF	% OF MAX
******* SCI		1.200	783.00	652.50	606.00	505.00	77.39

SPRING 2004

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 35
RUN ON: 09-01-2011 18:07:17 SUBJECT WSCH ANALYSIS SPRING 2004
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	96.00	480.00	86.48
CHEM113	190500	.500	288.00	576.00	306.00	612.00	106.25
CHEM115	190500	2.200	1344.00	610.90	1338.00	608.18	99.55
CHEM115T	190500	.300	240.00	800.00	150.00	500.00	62.50
CHEM116	190500	.700	384.00	548.57	456.00	651.42	118.75
CHEM120	190500	2.050	1344.00	655.60	1206.00	588.29	89.73
CHEM141	190500	1.500	864.00	576.00	864.00	576.00	100.00
CHEM142	190500	.500	288.00	576.00	234.00	468.00	81.25
CHEM232	190500	.500	216.00	432.00	126.00	252.00	58.33
******* CHEM		8.450	5079.00	601.06	4776.00	565.20	94.03
SCI 110	490100	1.200	873.00	727.50	552.00	460.00	63.23
******* SCI		1.200	873.00	727.50	552.00	460.00	63.23

FALL 2003

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 35
RUN ON: 09-01-2011 18:14:29 SUBJECT WSCH ANALYSIS FALL 2003
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	87.00	435.00	78.37
CHEM113	190500	.350	144.00	411.42	162.00	462.85	112.50
CHEM115	190500	2.350	1488.00	633.19	1458.00	620.42	97.98
CHEM115T	190500	.450	360.00	800.00	213.00	473.33	59.16
CHEM116	190500	.500	384.00	768.00	372.00	744.00	96.87
CHEM120	190500	2.050	1344.00	655.60	1308.00	638.04	97.32
CHEM141	190500	1.500	864.00	576.00	837.00	558.00	96.87
CHEM142	190500	1.000	576.00	576.00	315.00	315.00	54.68
CHEM231	190500	.417	168.00	402.87	175.00	419.66	104.16
******* CHEM		8.817	5439.00	616.87	4927.00	558.80	90.58

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
******* SCI		1.200	783.00	652.50	717.00	597.50	91.57

SPRING 2003

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 32
RUN ON: 09-01-2011 18:06:43 SUBJECT WSCH ANALYSIS SPRING 2003
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	81.00	405.00	72.97
CHEM113	190500	.350	144.00	411.42	162.00	462.85	112.50
CHEM115	190500	2.350	1536.00	653.61	1362.00	579.57	88.67
CHEM116	190500	.700	384.00	548.57	312.00	445.71	81.25
CHEM120	190500	2.050	1344.00	655.60	1194.00	582.43	88.83
CHEM141	190500	1.500	864.00	576.00	765.00	510.00	88.54
CHEM142	190500	.500	288.00	576.00	189.00	378.00	65.62
******* CHEM		7.650	4671.00	610.58	4065.00	531.37	87.02
SCI 110	490100	1.200	834.00	695.00	708.00	590.00	84.89
******* SCI		1.200	834.00	695.00	708.00	590.00	84.89

FALL 2002

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 33
RUN ON: 09-01-2011 18:20:27 SUBJECT WSCH ANALYSIS FALL 2002
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	108.00	540.00	97.29
CHEM113	190500	.350	144.00	411.42	156.00	445.71	108.33
CHEM115	190500	2.350	1440.00	612.76	1338.00	569.36	92.91
CHEM115T	190500	.450	360.00	800.00	180.00	400.00	50.00
CHEM116	190500	.700	384.00	548.57	402.00	574.28	104.68
CHEM120	190500	2.050	1344.00	655.60	1308.00	638.04	97.32
CHEM141	190500	1.500	864.00	576.00	648.00	432.00	75.00
CHEM142	190500	.500	288.00	576.00	198.00	396.00	68.75
CHEM231	190500	.417	168.00	402.87	175.00	419.66	104.16
******* CHEM		8.517	5103.00	599.15	4513.00	529.88	88.43
SCI 110	490100	1.400	879.00	627.85	711.00	507.85	80.88
******* SCI		1.400	879.00	627.85	711.00	507.85	80.88

SPRING 2002

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 22
RUN ON: 09-01-2011 18:07:48 SUBJECT WSCH ANALYSIS SPRING 2002
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- BUSINESS AND PROFESSIONAL STUDIES *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	75.00	375.00	67.56
CHEM113	190500	.350	144.00	411.42	144.00	411.42	100.00
CHEM115	190500	2.200	1440.00	654.54	1302.00	591.81	90.41
CHEM115T	190500	.450	360.00	800.00	189.00	420.00	52.50
CHEM116	190500	.700	384.00	548.57	378.00	540.00	98.43
CHEM120	190500	2.050	1344.00	655.60	1248.00	608.78	92.85
CHEM141	190500	1.500	864.00	576.00	576.00	384.00	66.66
CHEM142	190500	1.000	432.00	432.00	396.00	396.00	91.66
CHEM223	190500	.500	216.00	432.00	90.00	180.00	41.66
******* CHEM		8.950	5295.00	591.62	4398.00	491.39	83.05
SCI 110	490100	1.400	1023.00	730.71	687.00	490.71	67.15
******* SCI		1.400	1023.00	730.71	687.00	490.71	67.15

FALL 2001

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 34
RUN ON: 09-01-2011 18:23:21 SUBJECT WSCH ANALYSIS FALL 2001
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	96.00	480.00	86.48
CHEM113	190500	.350	144.00	411.42	108.00	308.57	75.00
CHEM115	190500	2.200	1440.00	654.54	1236.00	561.81	85.83
CHEM115T	190500	.450	480.00	1066.66	195.00	433.33	40.62
CHEM116	190500	.700	384.00	548.57	324.00	462.85	84.37
CHEM120	190500	2.200	1536.00	698.18	1056.00	480.00	68.75
CHEM141	190500	1.500	864.00	576.00	639.00	426.00	73.95
CHEM142	190500	.500	216.00	432.00	153.00	306.00	70.83
CHEM222	190500	.500	216.00	432.00	162.00	324.00	75.00
******* CHEM		8.600	5391.00	626.86	3969.00	461.51	73.62

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
******* SCI		1.400	831.00	593.57	591.00	422.14	71.11

SPRING 2001

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 33
RUN ON: 09-01-2011 18:11:26 SUBJECT WSCH ANALYSIS SPRING 2001
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	84.00	420.00	75.67
CHEM113	190500	.350	144.00	411.42	180.00	514.28	125.00
CHEM115	190500	2.200	1392.00	632.72	1182.00	537.27	84.91
CHEM115T	190500	.450	360.00	800.00	189.00	420.00	52.50
CHEM116	190500	.700	384.00	548.57	294.00	420.00	76.56
CHEM120	190500	2.050	1344.00	655.60	978.00	477.07	72.76
CHEM141	190500	1.500	864.00	576.00	594.00	396.00	68.75
CHEM142	190500	1.000	432.00	432.00	414.00	414.00	95.83
******* CHEM		8.450	5031.00	595.38	3915.00	463.31	77.81
SCI 110	490100	1.400	996.00	711.42	618.00	441.42	62.04
******* SCI		1.400	996.00	711.42	618.00	441.42	62.04

FALL 2000

SKDS7I-PGM GROSSMONT COLLEGE PAGE: 32
RUN ON: 09-01-2011 18:17:21 SUBJECT WSCH ANALYSIS FALL 2000
REPORT INCLUDES: GROSSMONT COLLEGE ONLY *** ALL SHORT TERM CLASSES ***

DIVISION -- MATHEMATICS, NATURAL SCIENCES & PE *** CENSUS CLASSES ***

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	EARNED WSCH/FTEF	% OF MAX
CHEM110	190500	.200	111.00	555.00	93.00	465.00	83.78
CHEM115	190500	2.050	1296.00	632.19	1110.00	541.46	85.64
CHEM115T	190500	.450	360.00	800.00	141.00	313.33	39.16
CHEM116	190500	.700	384.00	548.57	270.00	385.71	70.31
CHEM120	190500	2.050	1344.00	655.60	1134.00	553.17	84.37
CHEM141	190500	1.500	792.00	528.00	486.00	324.00	61.36
CHEM142	190500	.500	243.00	486.00	261.00	522.00	107.40
CHEM222	190500	.500	216.00	432.00	90.00	180.00	41.66
******* CHEM		7.950	4746.00	596.98	3585.00	450.94	75.53
SCI 110	490100	1.400	894.00	638.57	753.00	537.85	84.22
******* SCI		1.400	894.00	638.57	753.00	537.85	84.22

GCCCD Equivalency Criteria

The Academic Senate for California Community Colleges has consistently supported the following basic principles for granting equivalency:

- Equivalent to the minimum qualifications means *equal to* the minimum qualifications, not nearly equal.
- The applicant must provide evidence of attaining coursework or experience equal to the general education component of a regular associate or bachelor's degree.
- The applicant must provide evidence of attaining the skills and knowledge provided by specialized course work required for a master's degree (for disciplines on the Master's List) or requisite experience or coursework (for disciplines on the Non-Master's List).

The Academic Senate believes that faculty members must exemplify to their students the value of an education that is both well-rounded and specialized.

References: Education Code §§ 87359 and 87360

Please select your college and the appropriate box (1 or 2) below.

☐ CC
☒ GC Discipline Name: Chemistry Contact Name: Jeff Lehman Ext. 7341

☒ 1. The discipline criteria listed below have been reviewed and agreed upon by discipline experts at both colleges.

☐ 2. We have no discipline counterpart at the other college.

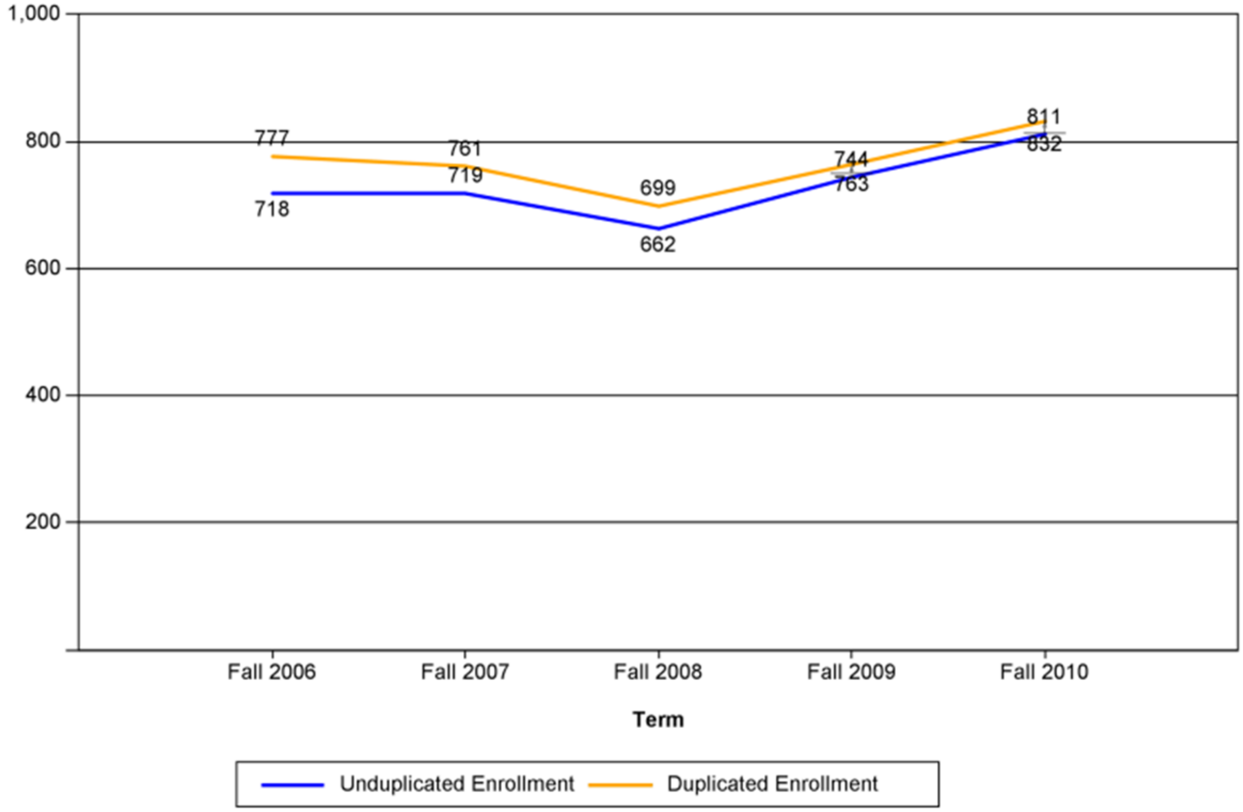
List the discipline equivalency criteria below (attach an additional sheet if necessary):

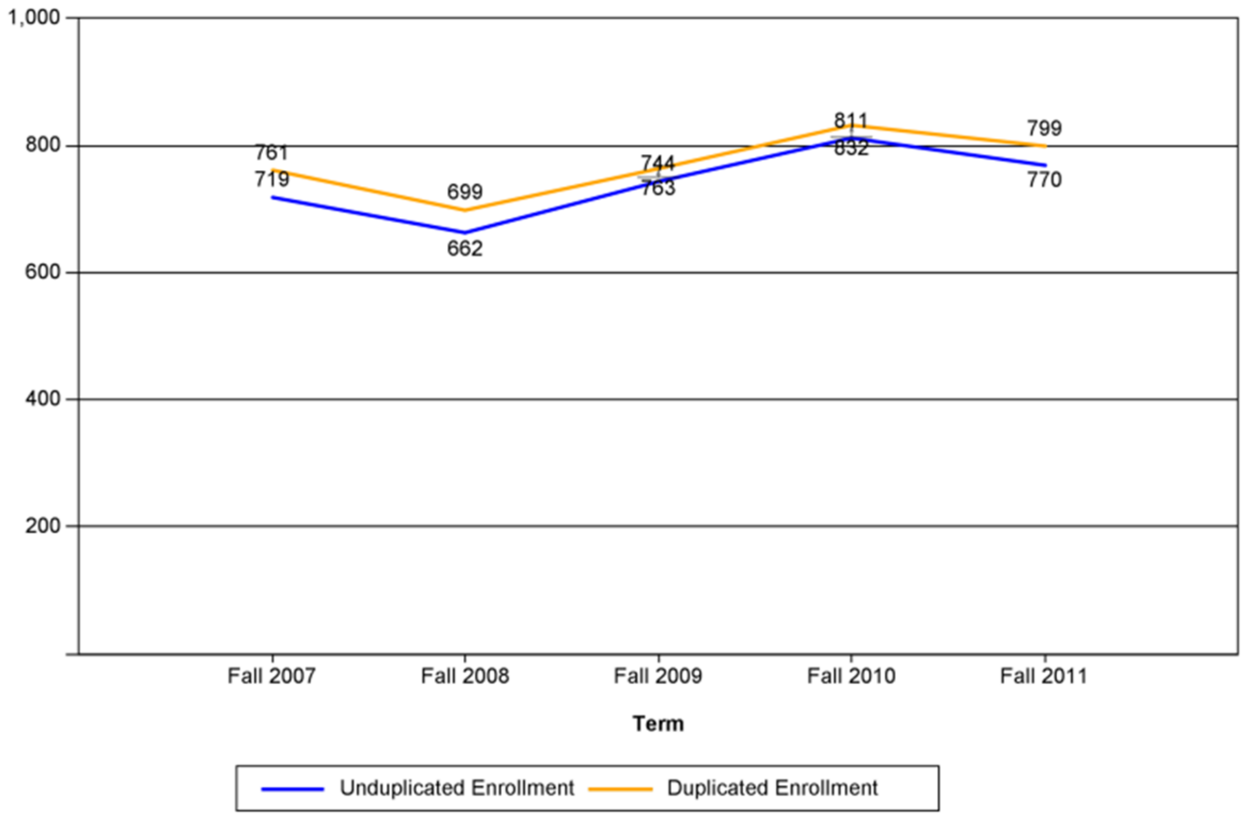
B.S. in chemistry or biochemistry
AND
M.S. in a physical or natural science with 15 graduate-level chemistry units.

APPENDIX 13A Statistical Data Outcomes Profile (Enrollments)

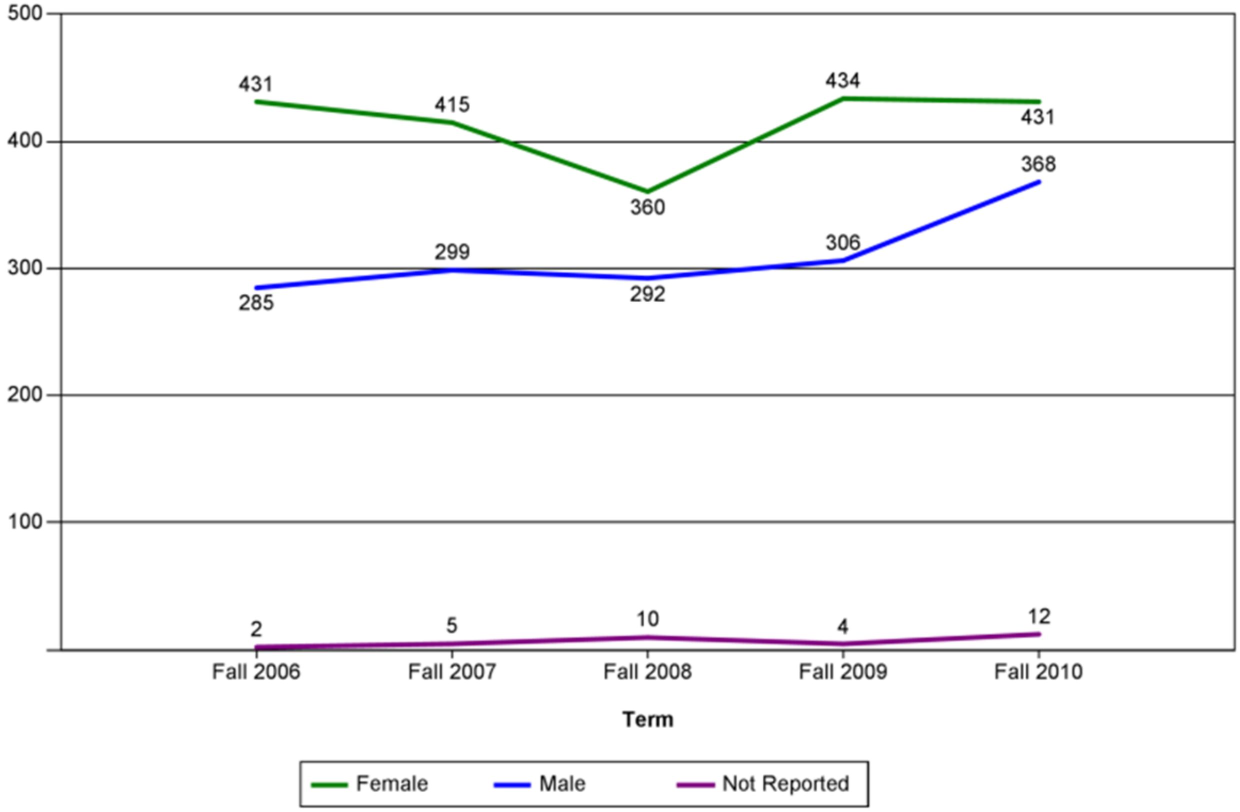
- Enrollment Graphs for Chemistry, Science and The College
- Chemistry Enrollment by Gender Data Tables
- Chemistry Enrollment by Ethnicity Data Tables
- Chemistry Enrollment by Age Data Tables
- Science Enrollment by Gender Data Tables
- Science Enrollment by Ethnicity Data Tables
- Science Enrollment by Age Data Tables
- College Enrollment by Gender Data Tables
- College Enrollment by Ethnicity Data Tables
- College Enrollment by Age Data Tables

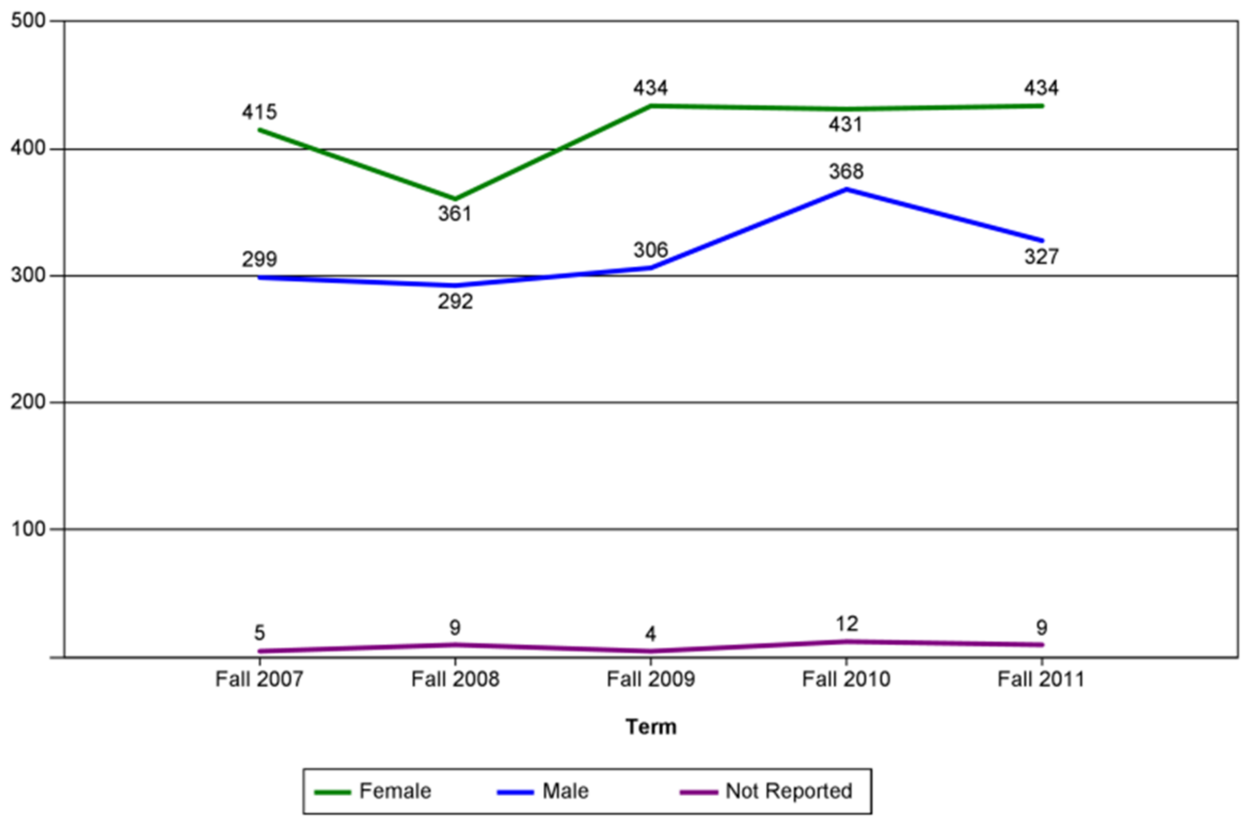
13A.1 Chemistry Total Enrollment



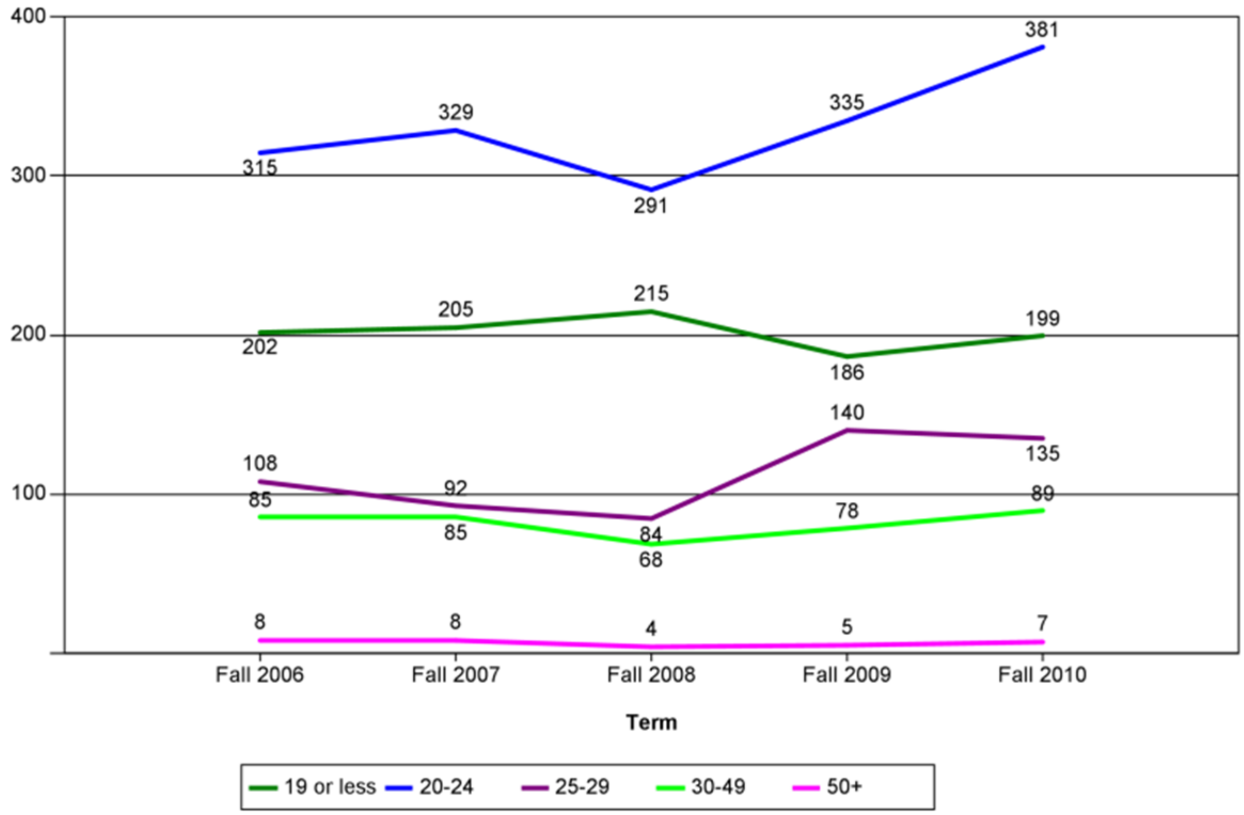


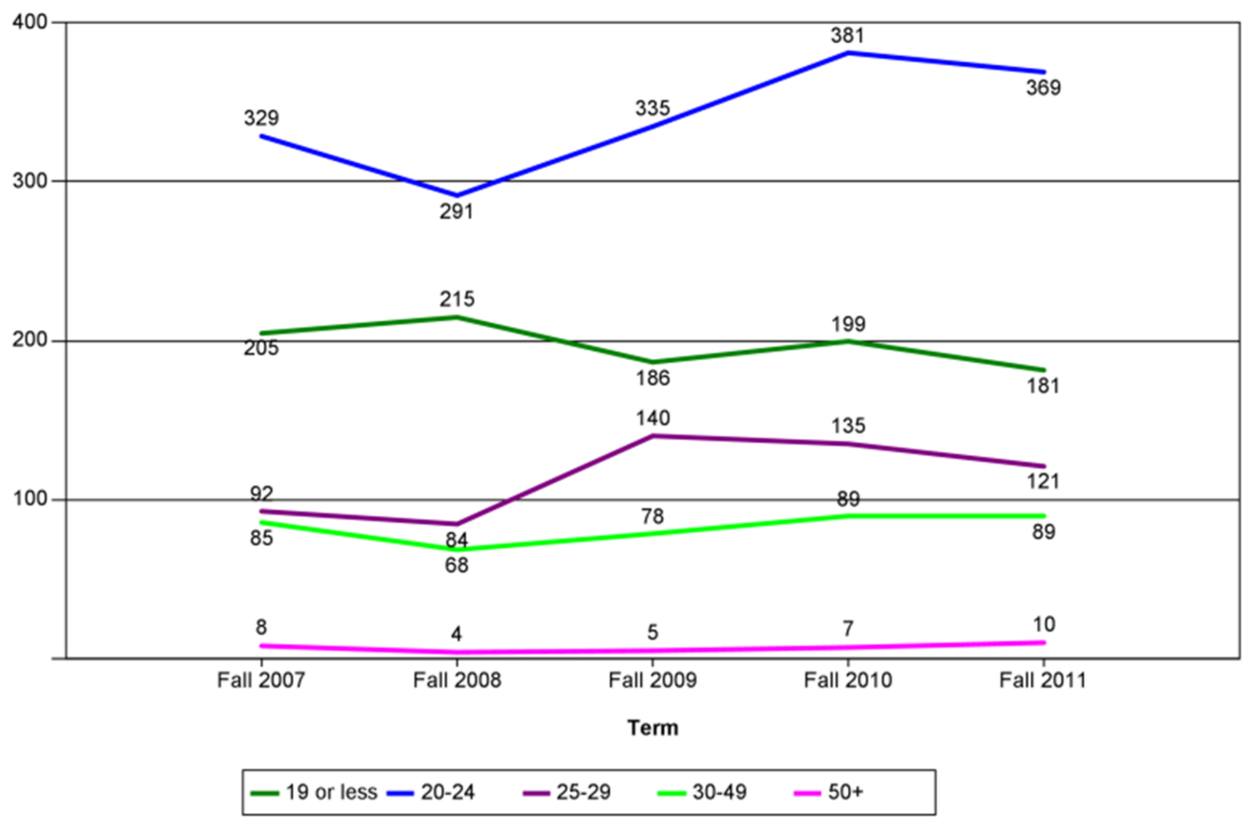
13A.2 Chemistry Enrollment by Gender (Unduplicated)



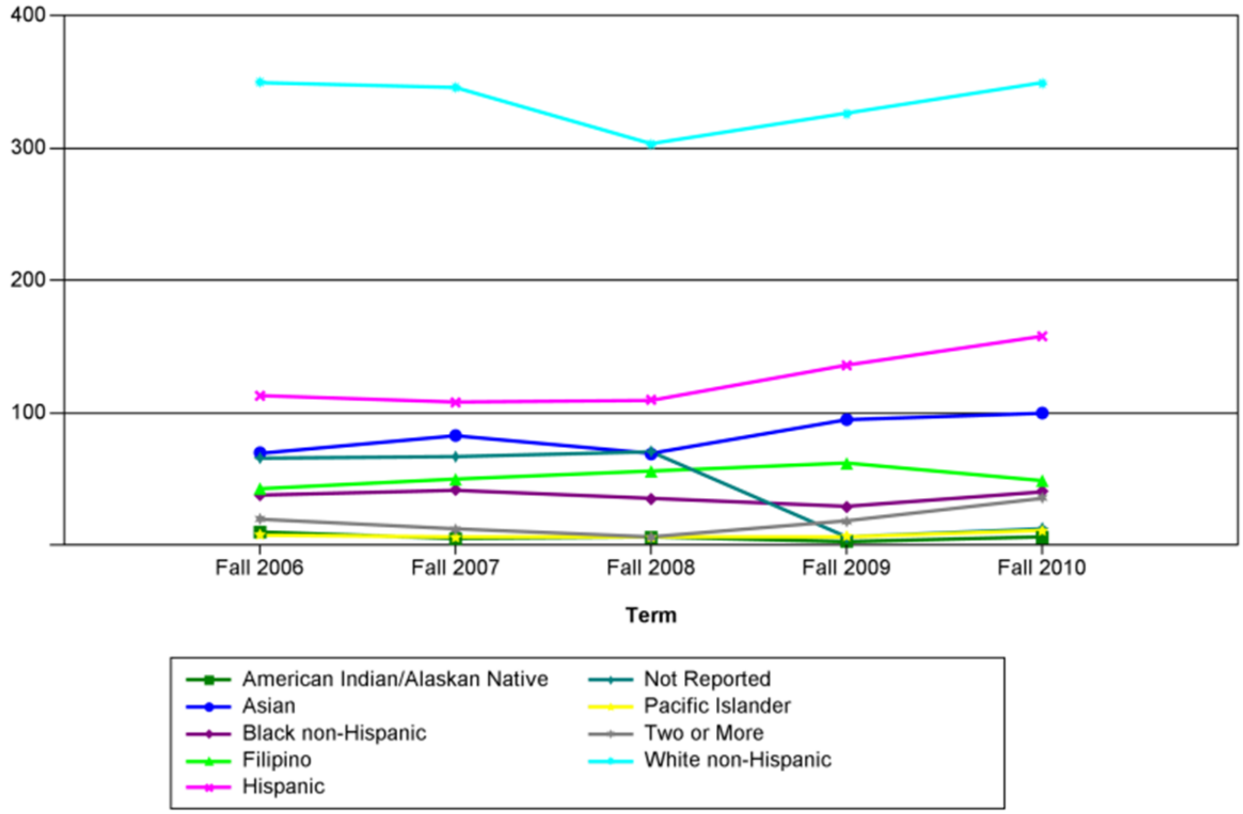


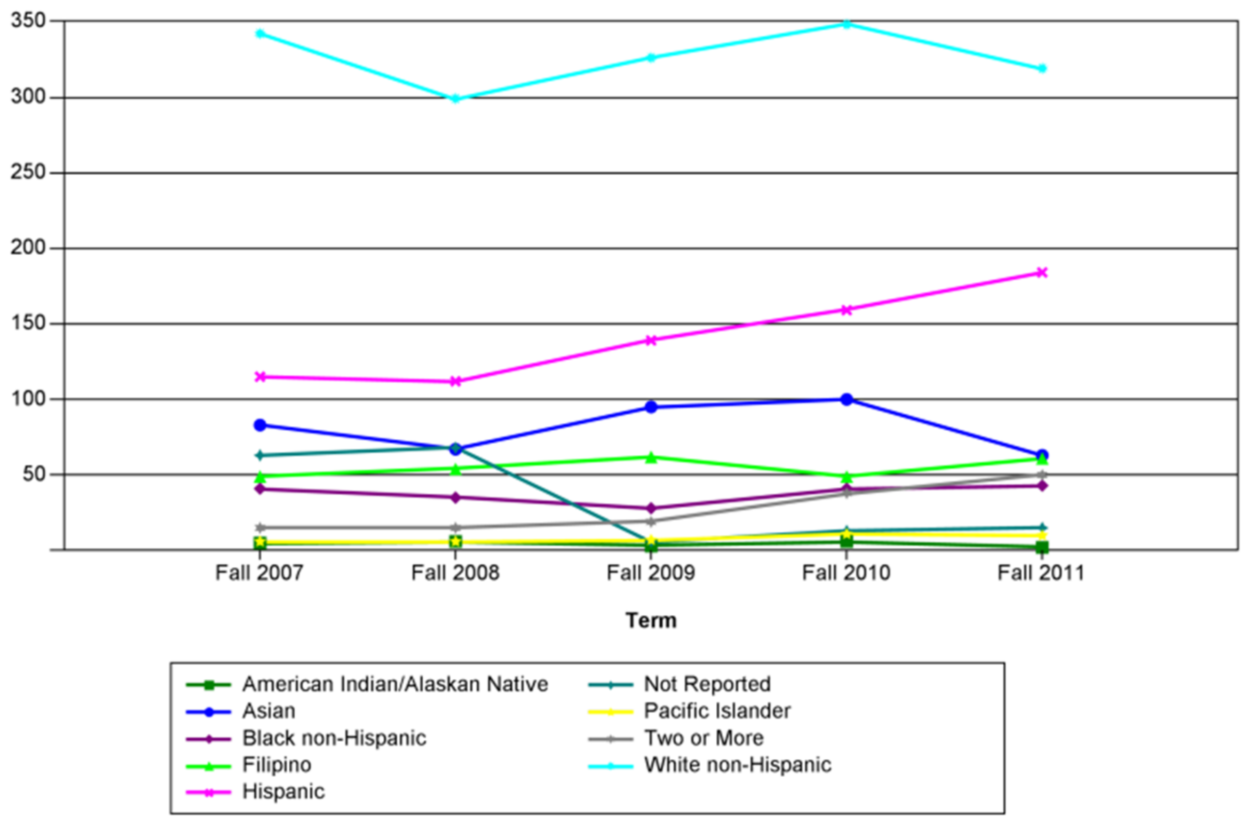
13A.3 Chemistry Enrollment by Age (Unduplicated)



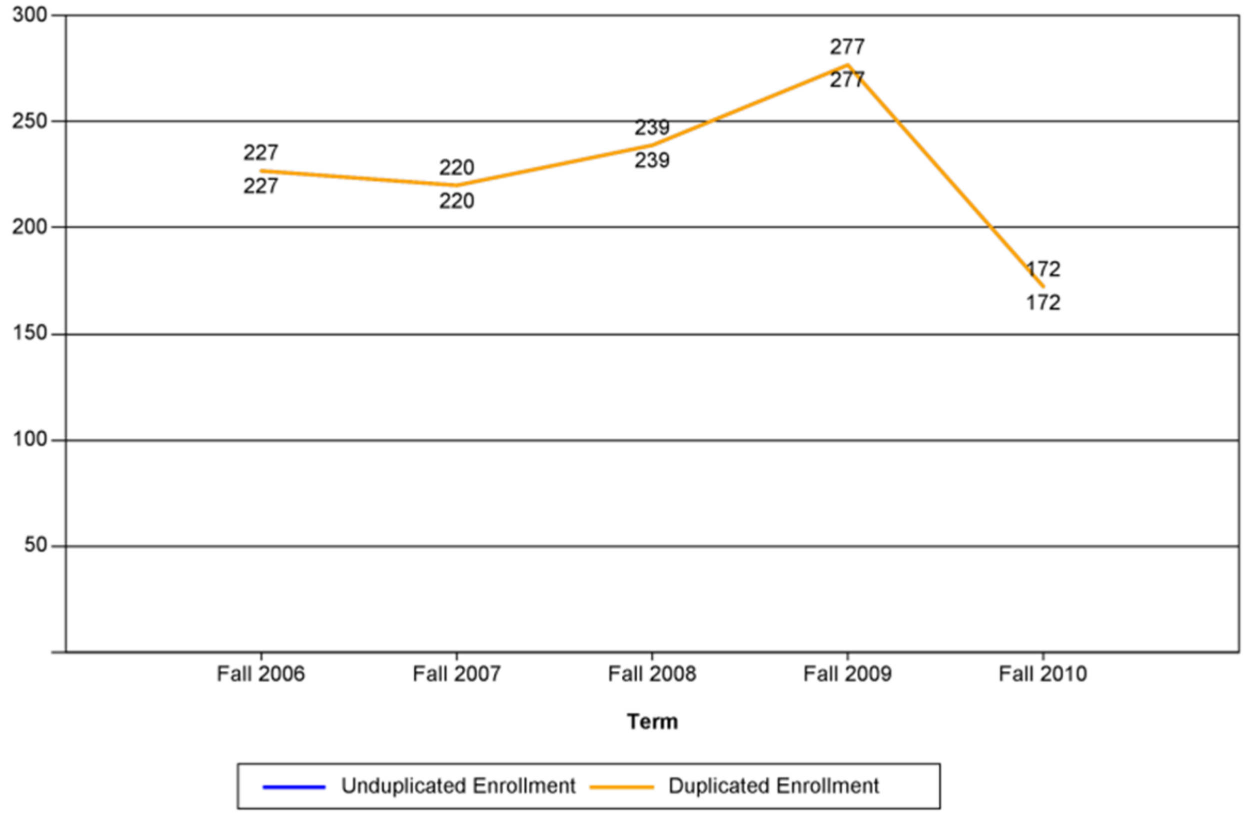


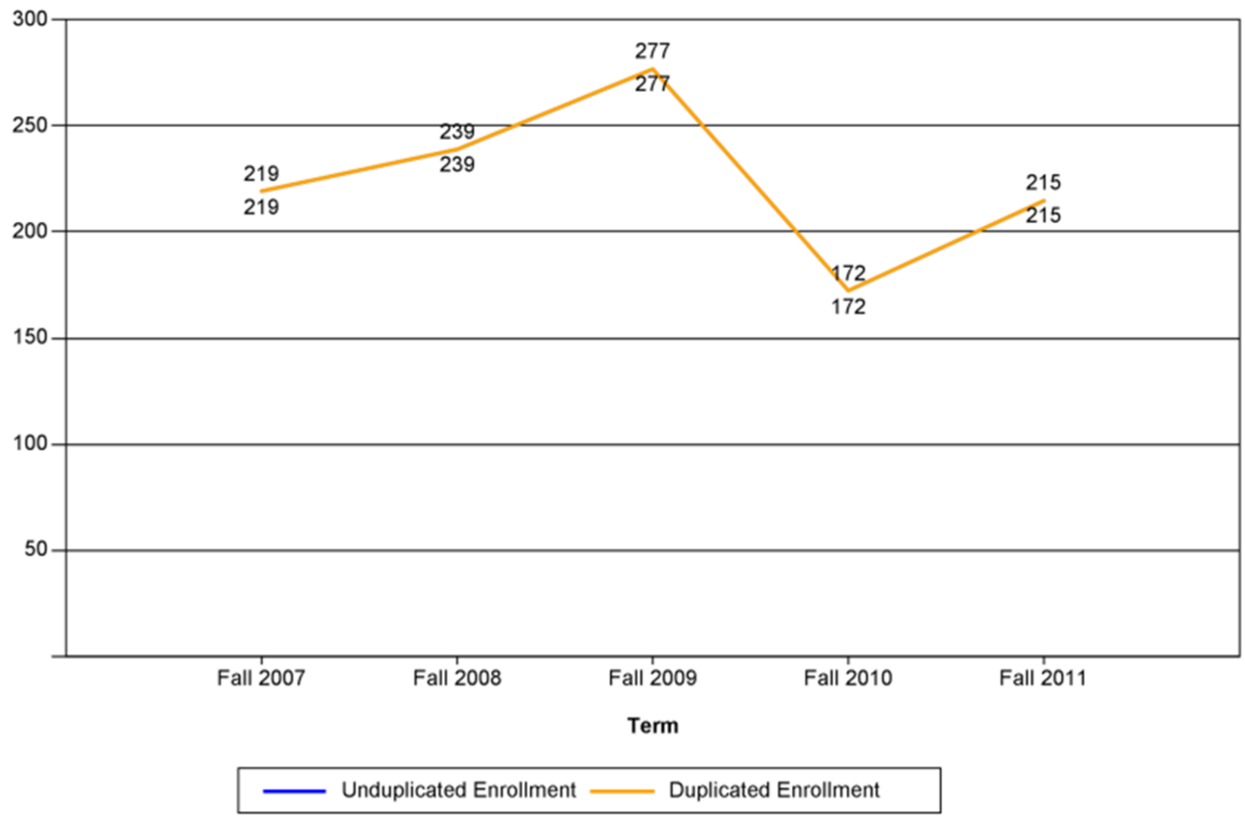
13A.4 Chemistry Enrollment by Ethnicity (Unduplicated)



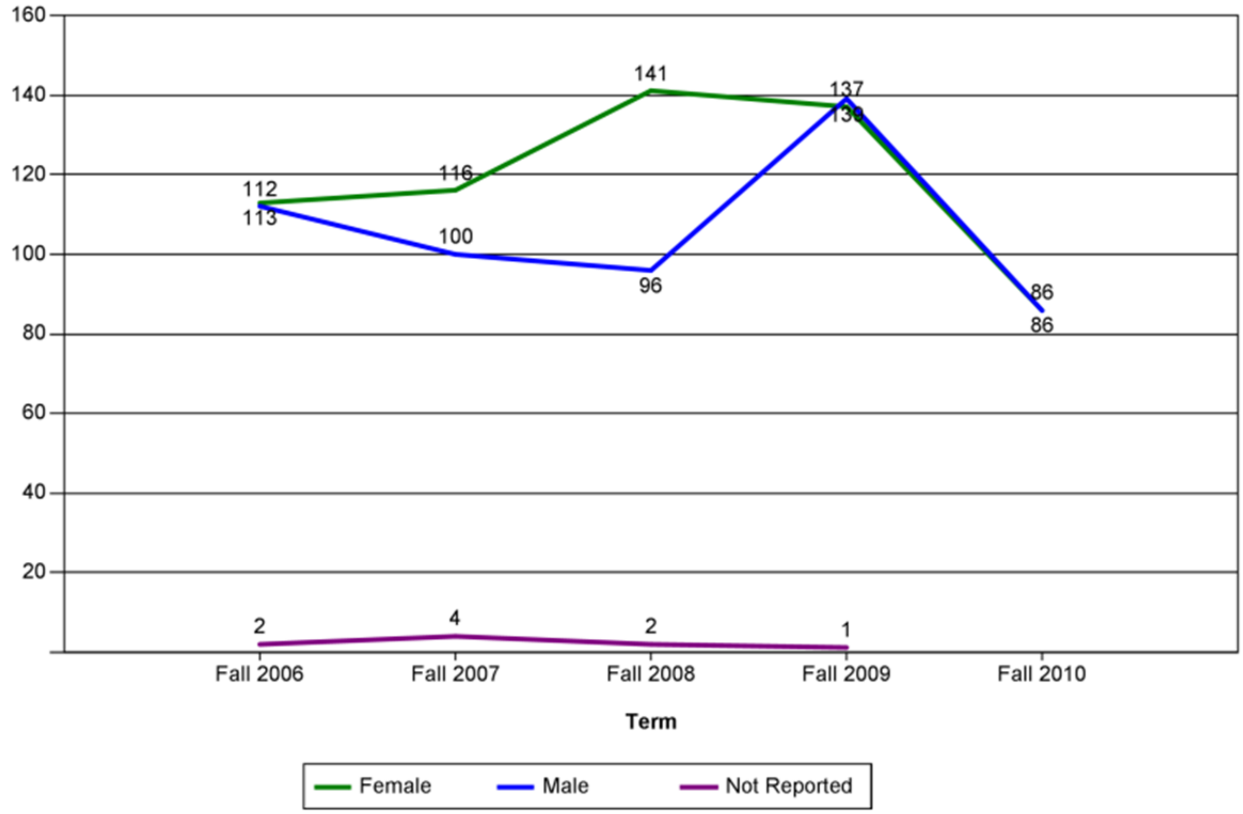


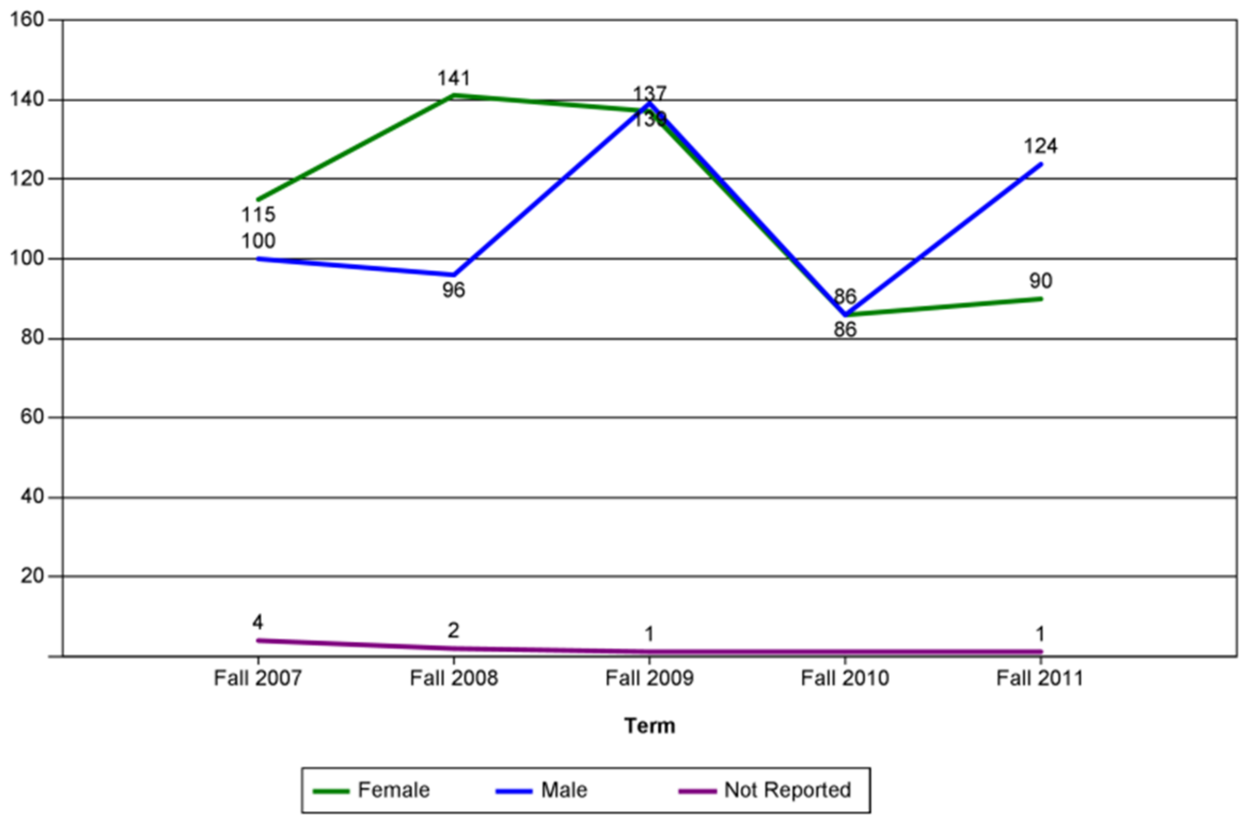
13A.5 Science Total Enrollment



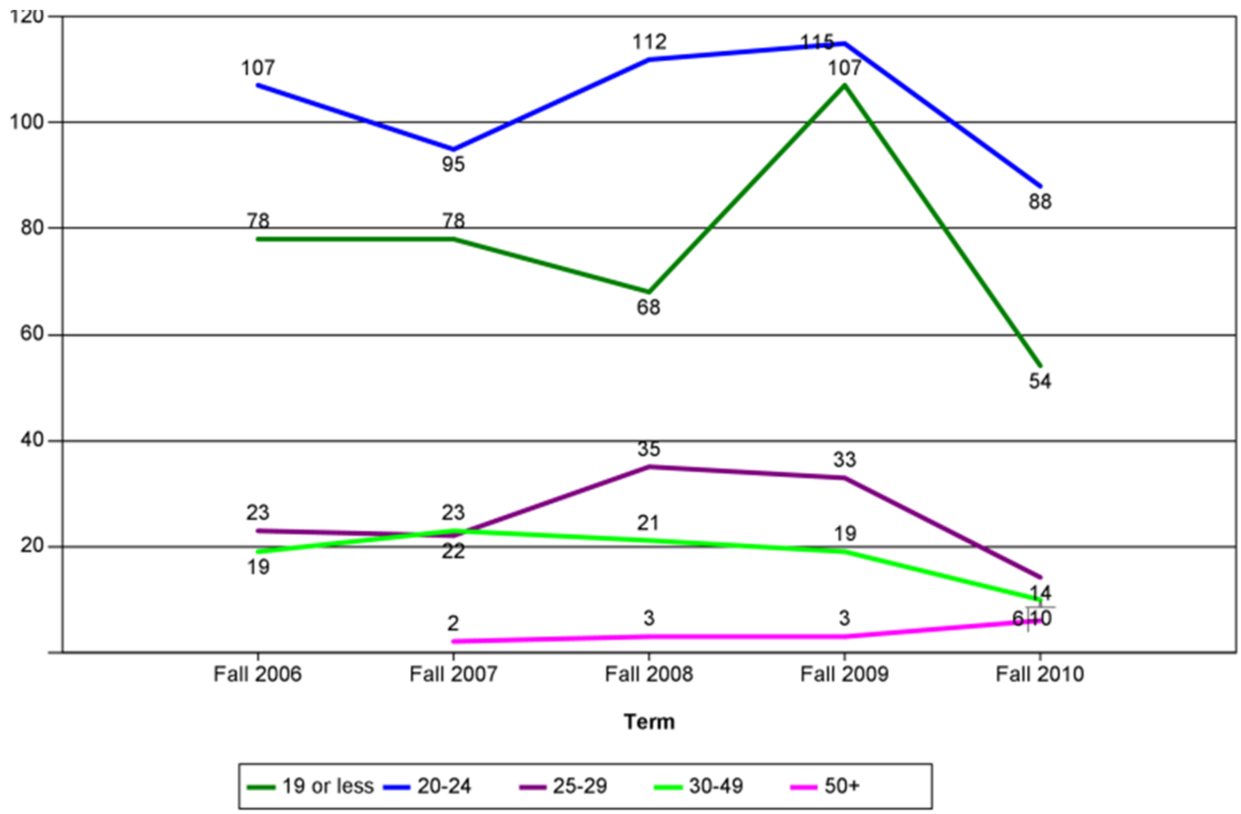


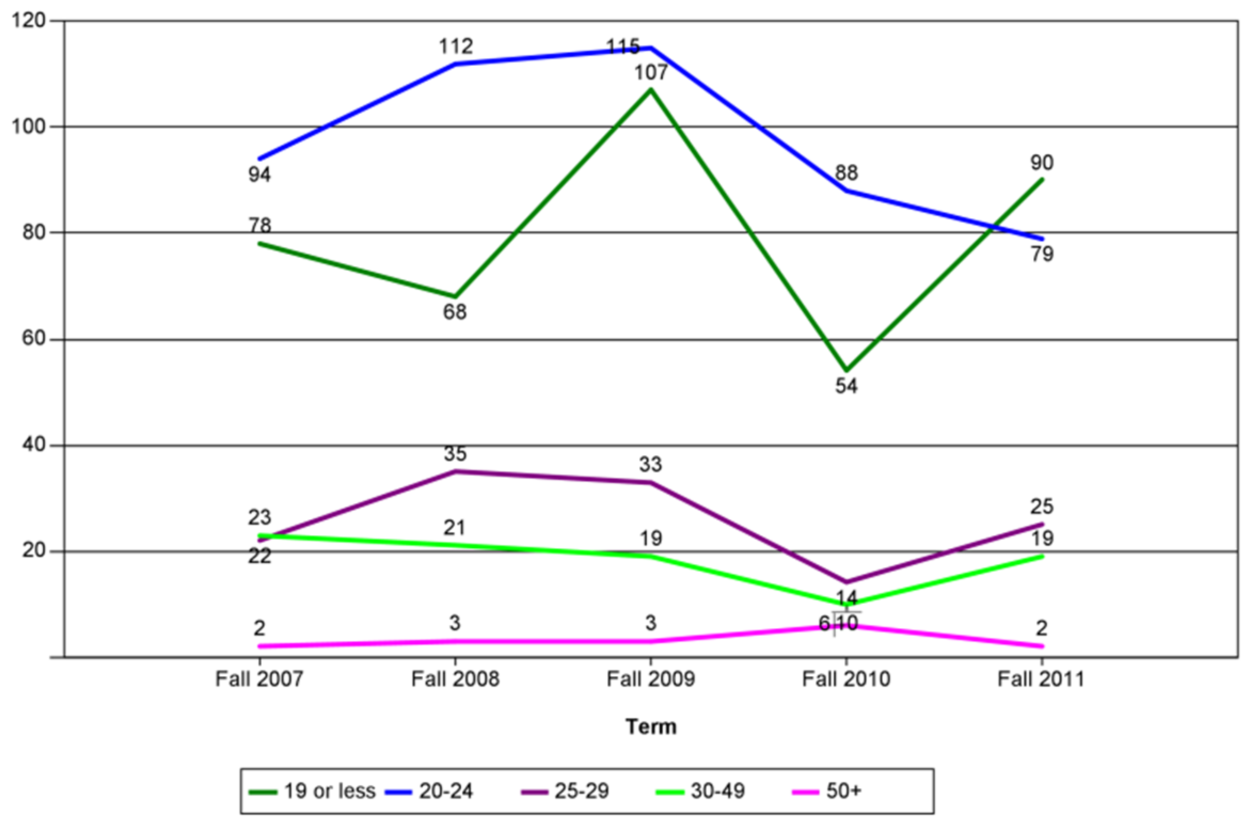
13A.6 Science Enrollment by Gender (Unduplicated)



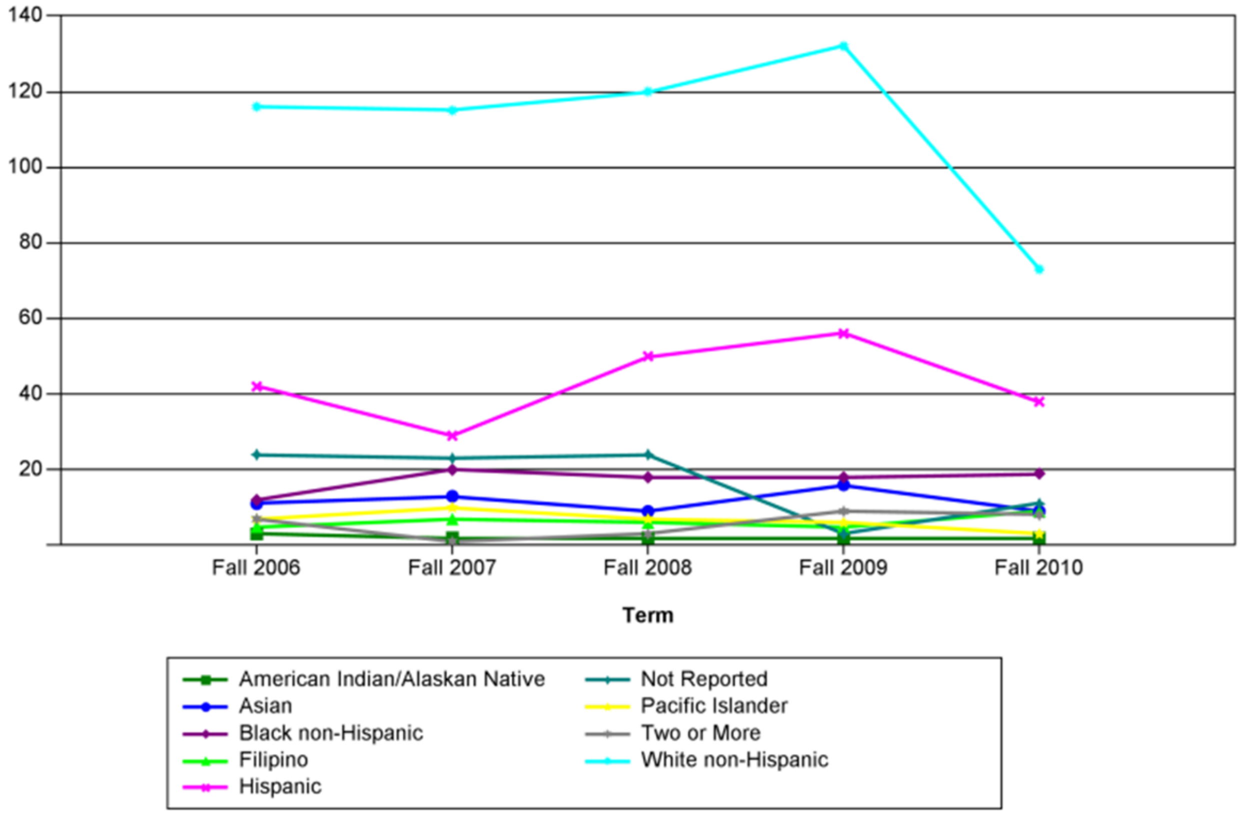


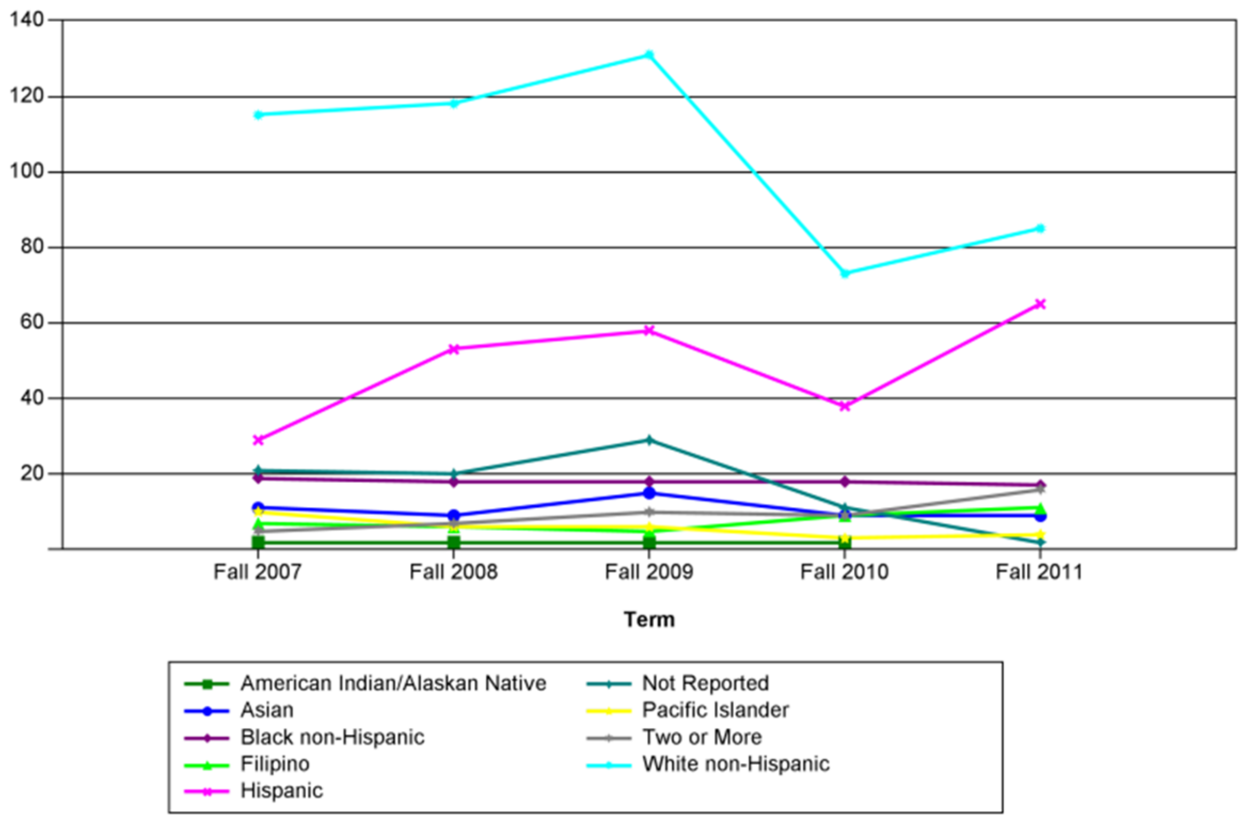
13A.7 Science Enrollment by Age (Unduplicated)



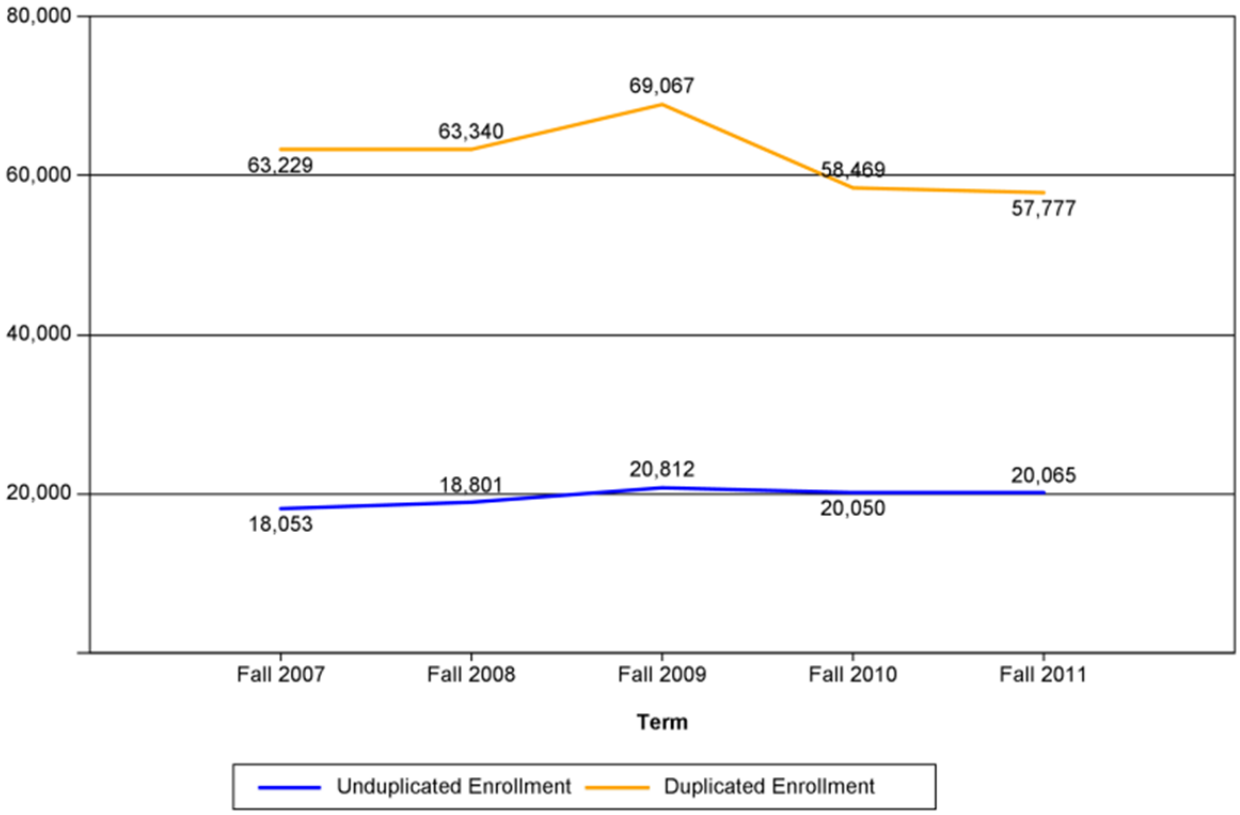


13A.8 Science Enrollment Ethnicity (Unduplicated)

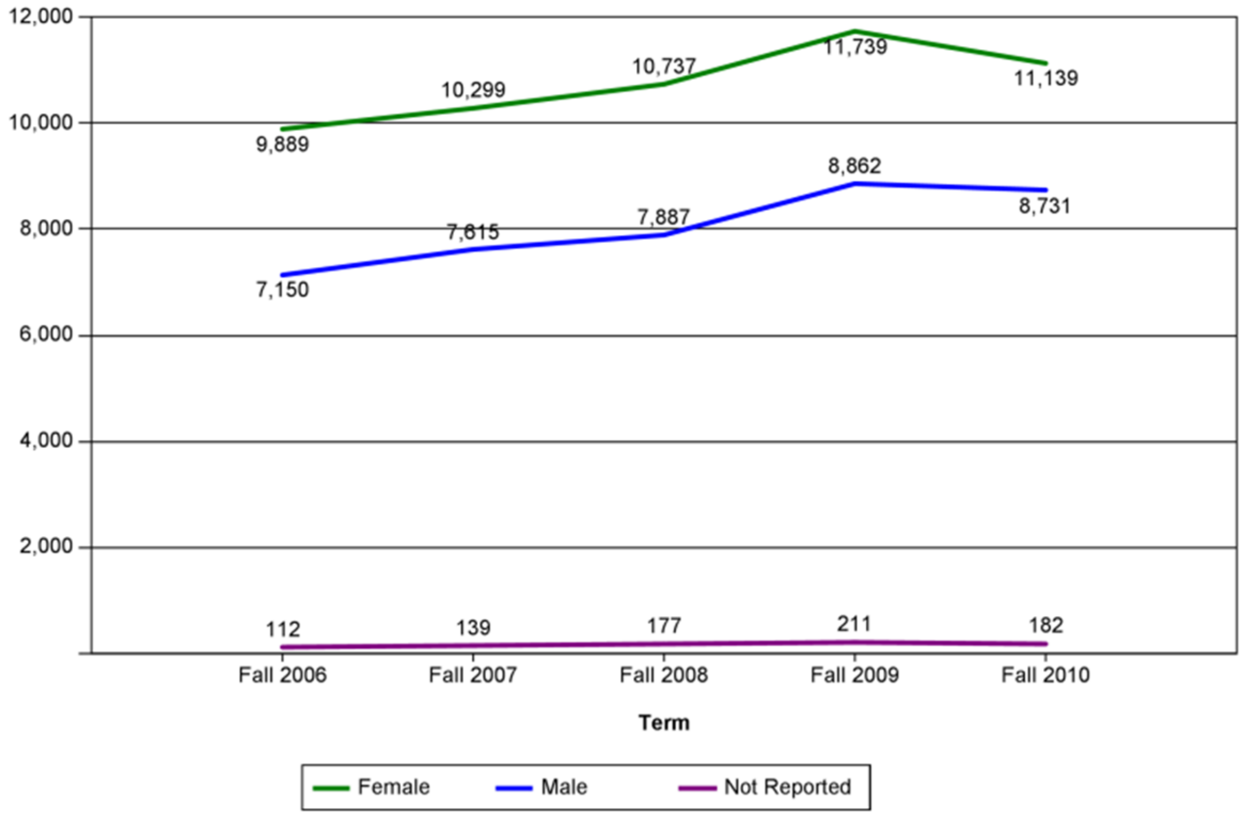


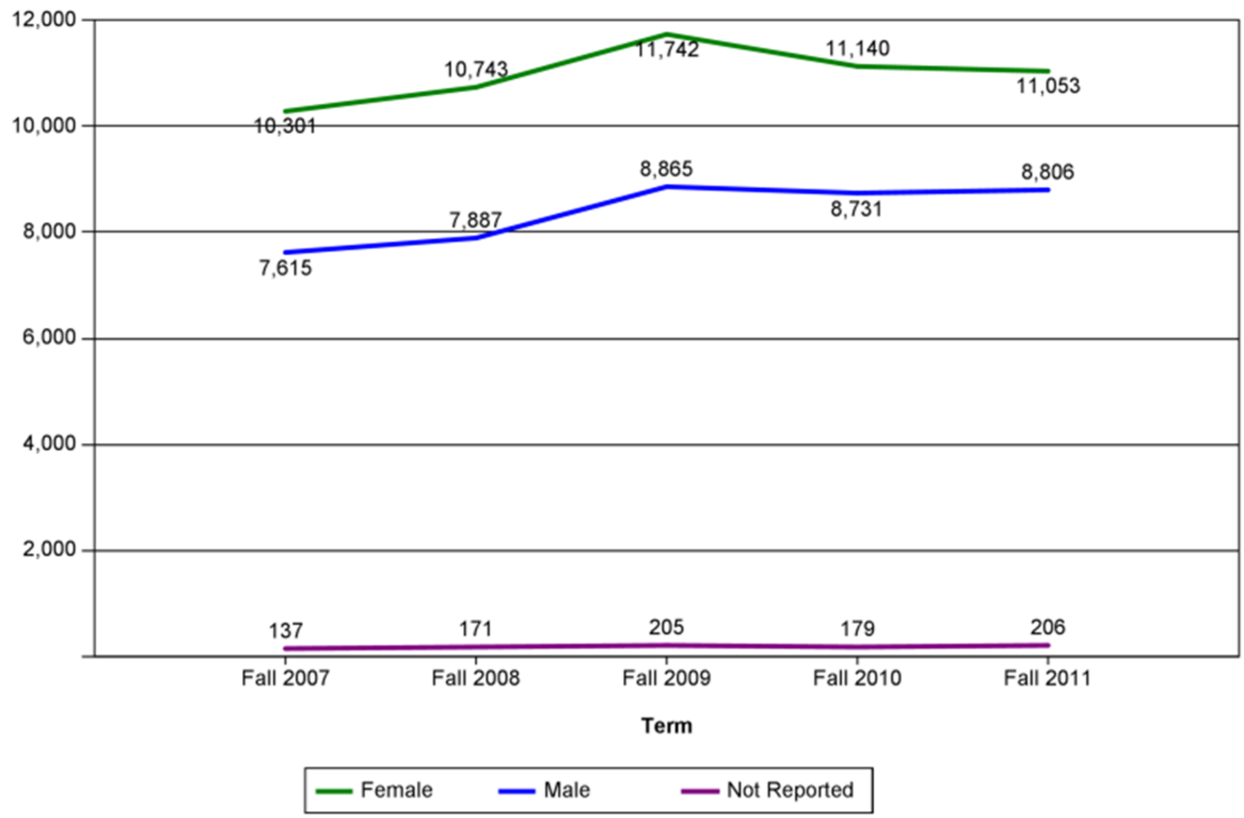


13A.9 College Total Enrollment

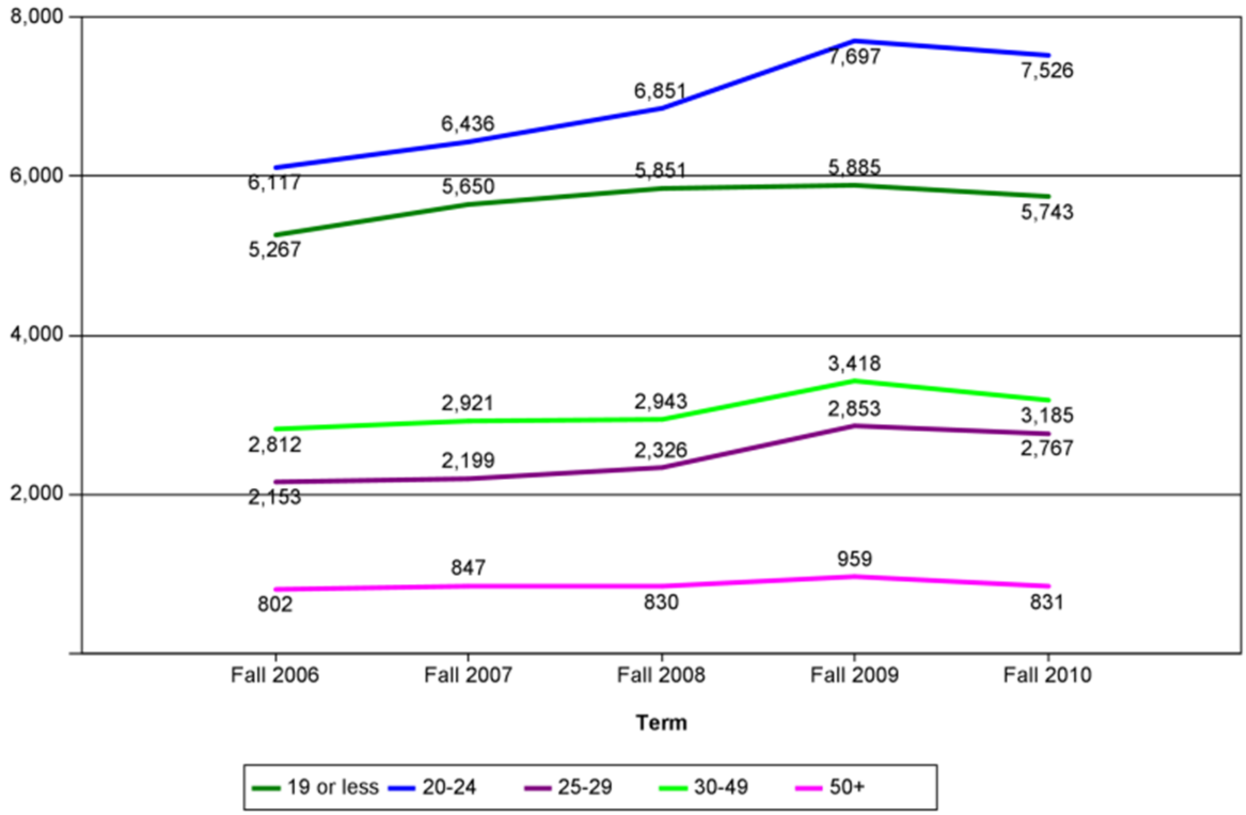


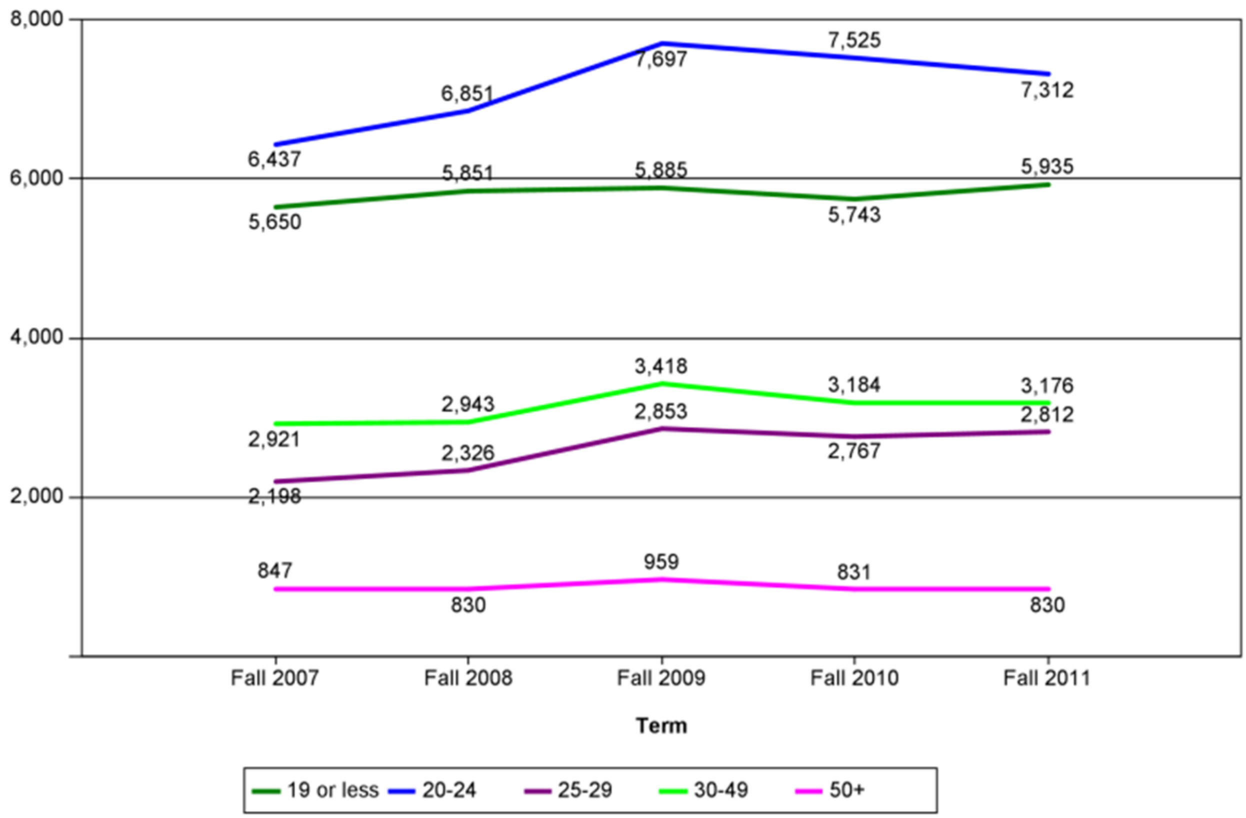
13A.10 College Enrollment by Gender (Unduplicated)



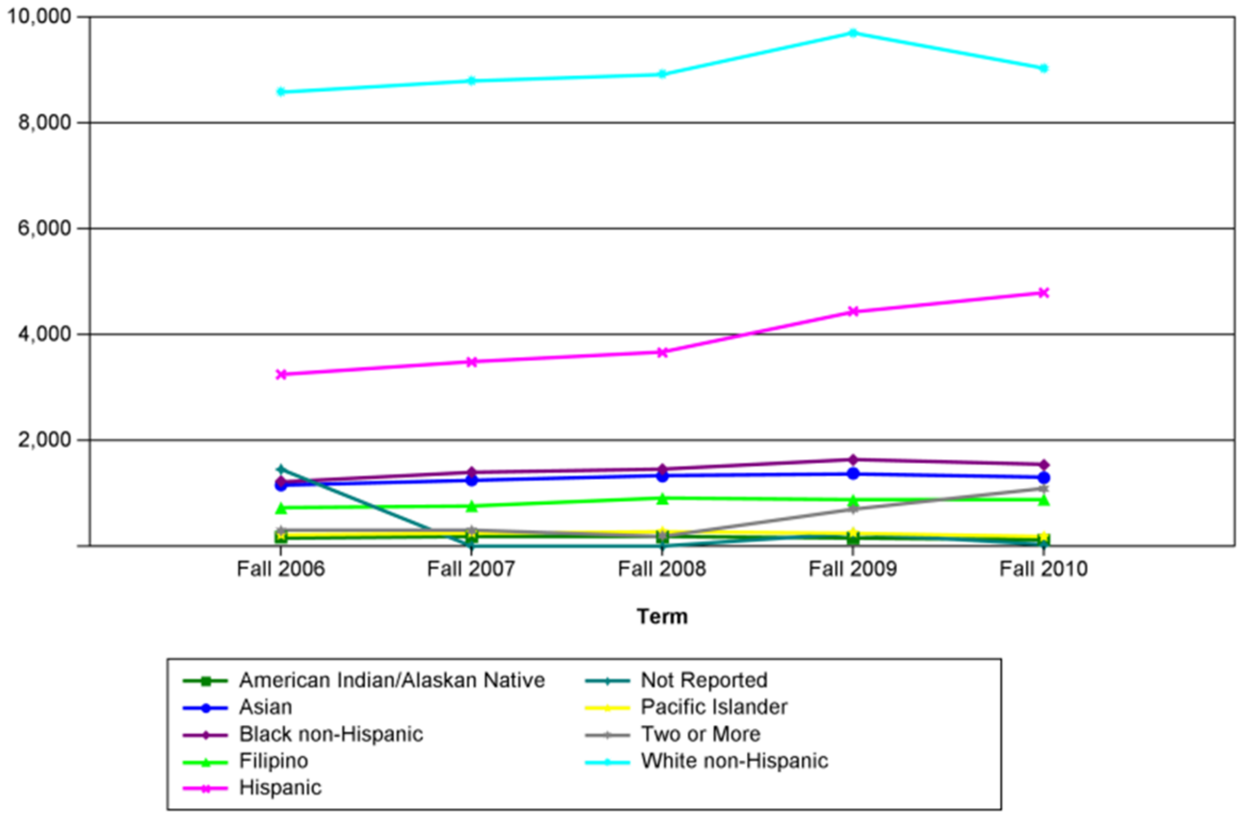


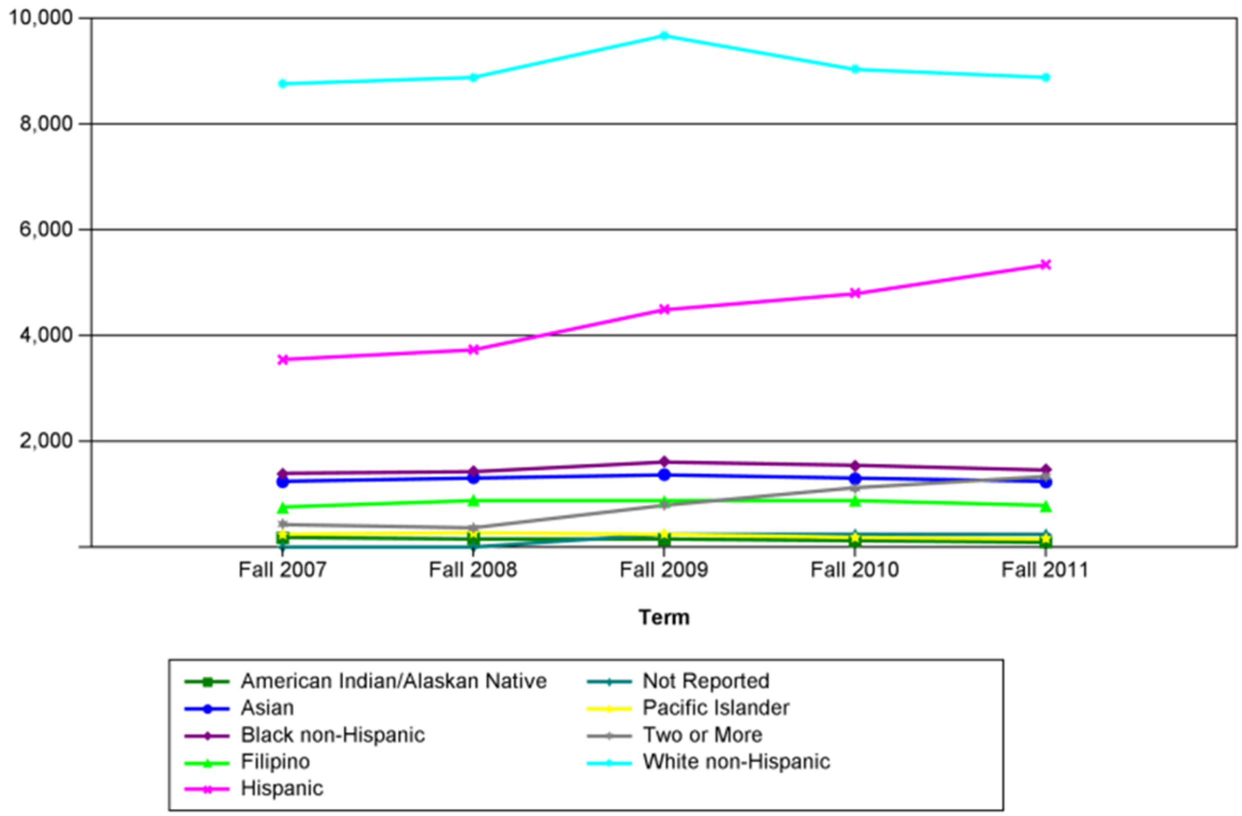
13A.11 College Enrollment by Age (Unduplicated)





13A.12 College Enrollment by Ethnicity (Unduplicated)





13A.13

Chemistry Enrollment by Gender (Unduplicated) aka HEADCOUNT

Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
Female	403	123	430	418	104	415	382	94	361	432
	61.1%	75.0%	60.0%	62.6%	66.7%	57.7%	57.5%	65.7%	54.5%	60.2%
Male	254	37	285	246	51	299	278	47	292	280
	38.5%	22.6%	39.7%	36.8%	32.7%	41.6%	41.9%	32.9%	44.1%	39.0%
No Report	3	4	2	4	1	5	4	2	9	6
	0.5%	2.4%	0.3%	0.6%	0.6%	0.7%	0.6%	1.4%	1.4%	0.8%
Total	660	164	717	668	156	719	664	143	662	718

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
100	433	475	57	431	392	30	434	353	385	
67.1%	58.4%	57.4%	68.7%	53.1%	53.9%	53.6%	56.5%	54.5%	59.0%	**60.2%**
47	305	343	25	368	322	26	326	288	266	
31.5%	41.1%	41.5%	30.1%	45.4%	44.3%	46.4%	42.4%	44.4%	40.7%	**38.9%**
2	4	9	1	12	13		8	7	2	
1.3%	0.5%	1.1%	1.2%	1.5%	1.8%	0.0%	1.0%	1.1%	0.3%	
149	742	827	83	811	727	56	768	648	653	

Chemistry Enrollment by Gender (Duplicated Student Counts)

Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
Female	435	124	471	454	104	441	420	94	379	448
	62.1%	75.2%	60.7%	63.5%	66.7%	58.0%	58.8%	65.7%	54.2%	60.6%
Male	262	37	303	257	51	315	290	47	311	285
	37.4%	22.4%	39.0%	35.9%	32.7%	41.4%	40.6%	32.9%	44.5%	38.6%
No Report	3	4	2	4	1	5	4	2	9	6
	0.4%	2.4%	0.3%	0.6%	0.6%	0.7%	0.6%	1.4%	1.3%	0.8%
Total	700	165	776	715	156	761	714	143	699	739

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
100	444	492	57	447	407	30	459	367	393	
67.1%	58.3%	58.2%	68.7%	53.7%	54.2%	53.6%	57.6%	54.6%	58.9%	**60.5%**
47	313	344	25	373	330	26	330	297	272	
31.5%	41.1%	40.7%	30.1%	44.8%	43.9%	46.4%	41.4%	44.2%	40.8%	**38.5%**
2	4	10	1	12	14		8	8	2	
1.3%	0.5%	1.2%	1.2%	1.4%	1.9%	0.0%	1.0%	1.2%	0.3%	
149	761	846	83	832	751	56	797	672	667	

13A.14

Chemistry Enrollment by Ethnicity (Unduplicated) aka HEADCOUNT

Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
American Indian/Alaskan Native	8	4	8	4		5	5	1	6	6
	1.2%	2.4%	1.1%	0.6%	0.0%	0.7%	0.8%	0.7%	0.9%	0.8%
Asian	64	14	67	75	12	83	78	12	67	79
	9.7%	8.5%	9.3%	11.2%	7.7%	11.5%	11.7%	8.4%	10.1%	11.0%
Black non-Hispanic	34	13	37	45	13	39	27	7	33	31
	5.2%	7.9%	5.2%	6.7%	8.3%	5.4%	4.1%	4.9%	5.0%	4.3%
Filipino	37	12	42	39	7	47	38	13	54	56
	5.6%	7.3%	5.9%	5.8%	4.5%	6.5%	5.7%	9.1%	8.2%	7.8%
Hispanic	101	27	115	109	28	116	113	32	115	142
	15.3%	16.5%	16.0%	16.3%	17.9%	16.1%	17.0%	22.4%	17.4%	19.8%
Not Reported	53	18	55	51	15	54	59	11	56	60
	8.0%	11.0%	7.7%	7.6%	9.6%	7.5%	8.9%	7.7%	8.5%	8.4%
Pacific Islander	7	2	7	4	1	6	6	1	6	8
	1.1%	1.2%	1.0%	0.6%	0.6%	0.8%	0.9%	0.7%	0.9%	1.1%
Two or More	25	7	37	22	6	29	27	7	27	23
	3.8%	4.3%	5.2%	3.3%	3.8%	4.0%	4.1%	4.9%	4.1%	3.2%
White non-Hispanic	331	67	349	319	74	340	311	59	298	313
	50.2%	40.9%	48.7%	47.8%	47.4%	47.3%	46.8%	41.3%	45.0%	43.6%
Total	660	164	717	668	156	719	664	143	662	718

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
	3	4	1	6	4		2	1	2	Amer.
0.0%	0.4%	0.5%	1.2%	0.7%	0.6%	0.0%	0.3%	0.2%	0.3%	0.7%
12	94	90	5	100	74	4	64	50	79	Asian
8.1%	12.7%	10.9%	6.0%	12.3%	10.2%	7.1%	8.3%	7.7%	12.1%	9.7%
8	27	49	5	41	30	10	43	37	24	Black
5.4%	3.6%	5.9%	6.0%	5.1%	4.1%	17.9%	5.6%	5.7%	3.7%	6.0%
19	61	57	8	49	48	2	61	38	40	Filipino
12.8%	8.2%	6.9%	9.6%	6.0%	6.6%	3.6%	7.9%	5.9%	6.1%	7.0%
30	142	167	16	159	166	12	185	177	160	Hispanic
20.1%	19.1%	20.2%	19.3%	19.6%	22.8%	21.4%	24.1%	27.3%	24.5%	19.7%
19	56	61	3	55	36	1	33	30	24	None
12.8%	7.5%	7.4%	3.6%	6.8%	5.0%	1.8%	4.3%	4.6%	3.7%	7.1%
1	6	8	3	11	10		10	7	10	Pacific
0.7%	0.8%	1.0%	3.6%	1.4%	1.4%	0.0%	1.3%	1.1%	1.5%	1.1%
6	30	26	5	41	31	5	53	44	42	Two
4.0%	4.0%	3.1%	6.0%	5.1%	4.3%	8.9%	6.9%	6.8%	6.4%	4.8%
54	323	365	37	349	328	22	317	264	272	White
36.2%	43.5%	44.1%	44.6%	43.0%	45.1%	39.3%	41.3%	40.7%	41.7%	43.9%
149	742	827	83	811	727	56	768	648	653	

13A.15

Chemistry Enrollment by Ethnicity (Duplicated Student Counts)

Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
American Indian/Alaskan Native	9	4	9	4		5	6	1	6	6
	1.3%	2.4%	1.2%	0.6%	0.0%	0.7%	0.8%	0.7%	0.9%	0.8%
Asian	67	14	73	77	12	85	84	12	68	79
	9.6%	8.5%	9.4%	10.8%	7.7%	11.2%	11.8%	8.4%	9.7%	10.7%
Black non-Hispanic	38	13	43	47	13	41	29	7	38	31
	5.4%	7.9%	5.5%	6.6%	8.3%	5.4%	4.1%	4.9%	5.4%	4.2%
Filipino	38	12	47	44	7	48	39	13	56	59
	5.4%	7.3%	6.1%	6.2%	4.5%	6.3%	5.5%	9.1%	8.0%	8.0%
Hispanic	106	27	128	122	28	124	119	32	125	150
	15.1%	16.4%	16.5%	17.1%	17.9%	16.3%	16.7%	22.4%	17.9%	20.3%
Not Reported	58	19	62	57	15	59	64	11	57	63
	8.3%	11.5%	8.0%	8.0%	9.6%	7.8%	9.0%	7.7%	8.2%	8.5%
Pacific Islander	7	2	7	4	1	6	7	1	7	8
	1.0%	1.2%	0.9%	0.6%	0.6%	0.8%	1.0%	0.7%	1.0%	1.1%
Two or More	25	7	38	24	6	31	29	7	28	23
	3.6%	4.2%	4.9%	3.4%	3.8%	4.1%	4.1%	4.9%	4.0%	3.1%
White non-Hispanic	352	67	369	336	74	362	337	59	314	320
	50.3%	40.6%	47.6%	47.0%	47.4%	47.6%	47.2%	41.3%	44.9%	43.3%
Total	700	165	776	715	156	761	714	143	699	739

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
0	3	4	1	6	4	0	3	1	2	Amer.
0.0%	0.4%	0.5%	1.2%	0.7%	0.5%	0.0%	0.4%	0.1%	0.3%	0.7%
12	96	91	5	102	74	4	65	51	79	Asian
8.1%	12.6%	10.8%	6.0%	12.3%	9.9%	7.1%	8.2%	7.6%	11.8%	9.6%
8	30	50	5	43	33	10	44	40	25	Black
5.4%	3.9%	5.9%	6.0%	5.2%	4.4%	17.9%	5.5%	6.0%	3.7%	6.1%
19	62	58	8	50	50	2	63	39	40	Filipino
12.8%	8.1%	6.9%	9.6%	6.0%	6.7%	3.6%	7.9%	5.8%	6.0%	7.0%
30	145	171	16	162	173	12	194	181	166	Hispanic
20.1%	19.1%	20.2%	19.3%	19.5%	23.0%	21.4%	24.3%	26.9%	24.9%	19.8%
19	57	63	3	57	37	1	33	33	24	None
12.8%	7.5%	7.4%	3.6%	6.9%	4.9%	1.8%	4.1%	4.9%	3.6%	7.2%
1	6	8	3	12	10		11	7	10	Pacific
0.7%	0.8%	0.9%	3.6%	1.4%	1.3%	0.0%	1.4%	1.0%	1.5%	1.1%
6	31	28	5	41	32	5	56	44	43	Two
4.0%	4.1%	3.3%	6.0%	4.9%	4.3%	8.9%	7.0%	6.5%	6.4%	4.8%
54	331	373	37	359	338	22	328	276	278	White
36.2%	43.5%	44.1%	44.6%	43.1%	45.0%	39.3%	41.2%	41.1%	41.7%	43.8%
149	761	846	83	832	751	56	797	672	667	

13A.16

Chemistry Enrollment by Age (Unduplicated) aka HEADCOUNT

Age Count	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
19 or less	170	38	201	162	53	205	187	46	215	190
	25.8%	23.2%	28.0%	24.3%	34.0%	28.5%	28.2%	32.2%	32.5%	26.5%
20-24	296	70	315	327	67	329	303	49	291	346
	44.8%	42.7%	43.9%	49.0%	42.9%	45.8%	45.6%	34.3%	44.0%	48.2%
25-29	116	28	108	82	25	92	109	27	84	96
	17.6%	17.1%	15.1%	12.3%	16.0%	12.8%	16.4%	18.9%	12.7%	13.4%
30-49	75	27	85	92	10	85	61	18	68	75
	11.4%	16.5%	11.9%	13.8%	6.4%	11.8%	9.2%	12.6%	10.3%	10.4%
50+	3	1	8	5	1	8	4	3	4	11
	0.5%	0.6%	1.1%	0.7%	0.6%	1.1%	0.6%	2.1%	0.6%	1.5%
Total	660	164	717	668	156	719	664	143	662	718

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
40	185	212	11	199	201	9	181	132	152	> 19
26.8%	24.9%	25.6%	13.3%	24.5%	27.6%	16.1%	23.6%	20.4%	23.3%	25.5%
71	335	391	32	381	351	19	367	327	346	20-24
47.7%	45.1%	47.3%	38.6%	47.0%	48.3%	33.9%	47.8%	50.5%	53.0%	45.0%
17	139	120	20	135	100	15	121	98	85	25-29
11.4%	18.7%	14.5%	24.1%	16.6%	13.8%	26.8%	15.8%	15.1%	13.0%	16.1%
18	78	95	17	89	68	11	89	80	63	30-49
12.1%	10.5%	11.5%	20.5%	11.0%	9.4%	19.6%	11.6%	12.3%	9.6%	12.1%
3	5	9	3	7	7	2	10	11	7	50+
2.0%	0.7%	1.1%	3.6%	0.9%	1.0%	3.6%	1.3%	1.7%	1.1%	1.3%
149	742	827	83	811	727	56	768	648	653	

Chemistry Enrollment by Age (Duplicated Student Counts)

Age	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
19 or less	175	38	206	168	53	216	196	46	221	194
	25.0%	23.0%	26.5%	23.5%	34.0%	28.4%	27.5%	32.2%	31.6%	26.3%
20-24	310	70	338	353	67	343	323	49	306	349
	44.3%	42.4%	43.6%	49.4%	42.9%	45.1%	45.2%	34.3%	43.8%	47.2%
25-29	128	28	118	87	25	102	118	27	91	104
	18.3%	17.0%	15.2%	12.2%	16.0%	13.4%	16.5%	18.9%	13.0%	14.1%
30-49	83	28	102	102	10	90	71	18	77	78
	11.9%	17.0%	13.1%	14.3%	6.4%	11.8%	9.9%	12.6%	11.0%	10.6%
50+	4	1	12	5	1	10	6	3	4	14
	0.6%	0.6%	1.5%	0.7%	0.6%	1.3%	0.8%	2.1%	0.6%	1.9%
Total	700	165	776	715	156	761	714	143	699	739

2009SU	2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012FA	**Average**
40	187	213	11	200	204	9	189	135	154	> 19
26.8%	24.6%	25.2%	13.3%	24.0%	27.2%	16.1%	23.7%	20.1%	23.1%	25.1%
71	339	396	32	388	358	19	376	335	353	20-24
47.7%	44.5%	46.8%	38.6%	46.6%	47.7%	33.9%	47.2%	49.9%	52.9%	44.7%
17	146	122	20	141	107	15	129	101	87	25-29
11.4%	19.2%	14.4%	24.1%	16.9%	14.2%	26.8%	16.2%	15.0%	13.0%	16.3%
18	84	106	17	96	73	11	92	89	66	30-49
12.1%	11.0%	12.5%	20.5%	11.5%	9.7%	19.6%	11.5%	13.2%	9.9%	12.5%
3	5	9	3	7	9	2	11	12	7	50+
2.0%	0.7%	1.1%	3.6%	0.8%	1.2%	3.6%	1.4%	1.8%	1.0%	1.4%
149	761	846	83	832	751	56	797	672	667	

13A.17

Science Enrollment by Gender (Unduplicated) aka HEADCOUNT									
Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
Female	86	16	112	118	13	115	134	10	141
	47.5%	38.1%	49.6%	55.1%	40.6%	52.5%	51.3%	52.6%	59.0%
Male	94	25	112	96	19	100	126	9	96
	51.9%	59.5%	49.6%	44.9%	59.4%	45.7%	48.3%	47.4%	40.2%
Not Reported	1	1	2	0	0	4	1	0	2
	0.6%	2.4%	0.9%	0.0%	0.0%	1.8%	0.4%	0.0%	0.8%
Total	181	42	226	214	32	219	261	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	Average
117	7	137	121	86	140	90	102	93	48.6%
49.2%	38.9%	49.5%	45.7%	50.0%	54.3%	41.7%	48.8%	50.3%	
120	11	139	143	86	117	125	104	90	50.8%
50.4%	61.1%	50.2%	54.0%	50.0%	45.3%	57.9%	49.8%	48.6%	
1	0	1	1	0	1	1	3	2	0.6%
0.4%	0.0%	0.4%	0.4%	0.0%	0.4%	0.5%	1.4%	1.1%	
238	18	277	265	172	258	216	209	185	

Science Enrollment by Gender (Duplicated Student Counts)									
Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
Female	87	16	112	119	13	115	135	10	141
	47.8%	38.1%	49.6%	55.3%	40.6%	52.5%	51.5%	52.6%	59.0%
Male	94	25	112	96	19	100	126	9	96
	51.6%	59.5%	49.6%	44.7%	59.4%	45.7%	48.1%	47.4%	40.2%
Not Reported	1	1	2			4	1		2
	0.5%	2.4%	0.9%	0.0%	0.0%	1.8%	0.4%	0.0%	0.8%
Total	182	42	226	215	32	219	262	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	Average
117	7	137	121	86	140	90	102	93	48.6%
49.2%	38.9%	49.5%	45.7%	50.0%	54.3%	41.7%	48.8%	50.3%	
120	11	139	143	86	117	125	104	90	50.7%
50.4%	61.1%	50.2%	54.0%	50.0%	45.3%	57.9%	49.8%	48.6%	
1		1	1		1	1	3	2	0.6%
0.4%	0.0%	0.4%	0.4%	0.0%	0.4%	0.5%	1.4%	1.1%	
238	18	277	265	172	258	216	209	185	

13A.18

Science Enrollment by Ethnicity (Unduplicated) aka HEADCOUNT									
Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
American Indian/Alaskan Native	1	0	3		1	1	4	0	2
	0.6%	0.0%	1.3%	0.0%	3.1%	0.5%	1.5%	0.0%	0.8%
Asian	27	3	11	10	2	11	24		9
	14.9%	7.1%	4.9%	4.7%	6.3%	5.0%	9.2%	0.0%	3.8%
Black non-Hispanic	11	5	12	18	3	19	20	5	18
	6.1%	11.9%	5.3%	8.4%	9.4%	8.7%	7.7%	26.3%	7.5%
Filipino	4	2	5	8	2	7	8		6
	2.2%	4.8%	2.2%	3.7%	6.3%	3.2%	3.1%	0.0%	2.5%
Hispanic	30	9	45	33	7	30	52	5	54
	16.6%	21.4%	19.9%	15.4%	21.9%	13.7%	19.9%	26.3%	22.6%
Not Reported	21	4	21	16	2	21	16		18
	11.6%	9.5%	9.3%	7.5%	6.3%	9.6%	6.1%	0.0%	7.5%
Pacific Islander	3	1	7	1	0	10	3	0	6
	1.7%	2.4%	3.1%	0.5%	0.0%	4.6%	1.1%	0.0%	2.5%
Two or More	6	0	9	7	1	5	7	1	8
	3.3%	0.0%	4.0%	3.3%	3.1%	2.3%	2.7%	5.3%	3.3%
White non-Hispanic	78	18	113	121	14	115	127	8	118
	43.1%	42.9%	50.0%	56.5%	43.8%	52.5%	48.7%	42.1%	49.4%
Total	181	42	226	214	32	219	261	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	Average
3	0	1	5	2	1	0	0	0	Amer.
1.3%	0.0%	0.4%	1.9%	1.2%	0.4%	0.0%	0.0%	0.0%	0.7%
11	4	15	14	9	11	10	7	3	Asian
4.6%	22.2%	5.4%	5.3%	5.2%	4.3%	4.6%	3.3%	1.6%	6.2%
19	3	18	18	18	24	17	14	12	Black
8.0%	16.7%	6.5%	6.8%	10.5%	9.3%	7.9%	6.7%	6.5%	9.4%
9	1	5	3	9	7	12	3	7	Filipino
3.8%	5.6%	1.8%	1.1%	5.2%	2.7%	5.6%	1.4%	3.8%	3.3%
50	2	61	64	38	62	65	63	69	Hispanic
21.0%	11.1%	22.0%	24.2%	22.1%	24.0%	30.1%	30.1%	37.3%	22.2%
17	1	28	19	11	14	7	4	6	No report
7.1%	5.6%	10.1%	7.2%	6.4%	5.4%	3.2%	1.9%	3.2%	6.5%
3	0	6	1	3	1	4	1	1	Pacific
1.3%	0.0%	2.2%	0.4%	1.7%	0.4%	1.9%	0.5%	0.5%	1.4%
8	0	12	13	9	20	16	17	16	Two
3.4%	0.0%	4.3%	4.9%	5.2%	7.8%	7.4%	8.1%	8.6%	4.3%
118	7	131	128	73	118	85	100	71	White
49.6%	38.9%	47.3%	48.3%	42.4%	45.7%	39.4%	47.8%	38.4%	45.9%
238	18	277	265	172	258	216	209	185	

13A.19

Science Enrollment by Ethnicity (Duplicated Student Counts)									
Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
American Indian/Alaskan Native	1	0	3	0	1	1	4	0	2
	0.5%	0.0%	1.3%	0.0%	3.1%	0.5%	1.5%	0.0%	0.8%
Asian	28	3	11	10	2	11	24	0	9
	15.4%	7.1%	4.9%	4.7%	6.3%	5.0%	9.2%	0.0%	3.8%
Black non-Hispanic	11	5	12	18	3	19	20	5	18
	6.0%	11.9%	5.3%	8.4%	9.4%	8.7%	7.6%	26.3%	7.5%
Filipino	4	2	5	8	2	7	8	0	6
	2.2%	4.8%	2.2%	3.7%	6.3%	3.2%	3.1%	0.0%	2.5%
Hispanic	30	9	45	33	7	30	53	5	54
	16.5%	21.4%	19.9%	15.3%	21.9%	13.7%	20.2%	26.3%	22.6%
Not Reported	21	4	21	16	2	21	16	0	18
	11.5%	9.5%	9.3%	7.4%	6.3%	9.6%	6.1%	0.0%	7.5%
Pacific Islander	3	1	7	1		10	3	0	6
	1.6%	2.4%	3.1%	0.5%	0.0%	4.6%	1.1%	0.0%	2.5%
Two or More	6	0	9	7	1	5	7	1	8
	3.3%	0.0%	4.0%	3.3%	3.1%	2.3%	2.7%	5.3%	3.3%
White non-Hispanic	78	18	113	122	14	115	127	8	118
	42.9%	42.9%	50.0%	56.7%	43.8%	52.5%	48.5%	42.1%	49.4%
Total	182	42	226	215	32	219	262	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	**Average**
3	0	1	5	2	1	0	0	0	Amer.
1.3%	0.0%	0.4%	1.9%	1.2%	0.4%	0.0%	0.0%	0.0%	0.7%
11	4	15	14	9	11	10	7	3	Asian
4.6%	22.2%	5.4%	5.3%	5.2%	4.3%	4.6%	3.3%	1.6%	6.3%
19	3	18	18	18	24	17	14	12	Black
8.0%	16.7%	6.5%	6.8%	10.5%	9.3%	7.9%	6.7%	6.5%	9.4%
9	1	5	3	9	7	12	3	7	Filipino
3.8%	5.6%	1.8%	1.1%	5.2%	2.7%	5.6%	1.4%	3.8%	3.3%
50	2	61	64	38	62	65	63	69	Hispanic
21.0%	11.1%	22.0%	24.2%	22.1%	24.0%	30.1%	30.1%	37.3%	22.2%
17	1	28	19	11	14	7	4	6	None
7.1%	5.6%	10.1%	7.2%	6.4%	5.4%	3.2%	1.9%	3.2%	6.5%
3	0	6	1	3	1	4	1	1	Pacific
1.3%	0.0%	2.2%	0.4%	1.7%	0.4%	1.9%	0.5%	0.5%	1.4%
8	0	12	13	9	20	16	17	16	Two
3.4%	0.0%	4.3%	4.9%	5.2%	7.8%	7.4%	8.1%	8.6%	4.3%
118	7	131	128	73	118	85	100	71	White
49.6%	38.9%	47.3%	48.3%	42.4%	45.7%	39.4%	47.8%	38.4%	45.9%
238	18	277	265	172	258	216	209	185	

13A.20

Science Enrollment by Age (Unduplicated) aka HEADCOUNT

Age	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
> 19	58	14	77	70	6	78	93	6	68
	32.0%	33.3%	34.1%	32.7%	18.8%	35.6%	35.6%	31.6%	28.5%
20-24	95	16	107	96	15	94	107	9	112
	52.5%	38.1%	47.3%	44.9%	46.9%	42.9%	41.0%	47.4%	46.9%
25-29	13	9	23	28	7	22	31	2	35
	7.2%	21.4%	10.2%	13.1%	21.9%	10.0%	11.9%	10.5%	14.6%
30-49	12	2	19	14	3	23	22	2	21
	6.6%	4.8%	8.4%	6.5%	9.4%	10.5%	8.4%	10.5%	8.8%
50+	3	1		6	1	2	8		3
	1.7%	2.4%	0.0%	2.8%	3.1%	0.9%	3.1%	0.0%	1.3%
Total	181	42	226	214	32	219	261	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	**Average**
73	6	107	91	54	79	90	64	63	> 19
30.7%	33.3%	38.6%	34.3%	31.4%	30.6%	41.7%	30.6%	34.1%	32.6%
127	8	115	117	88	110	80	93	79	20-24
53.4%	44.4%	41.5%	44.2%	51.2%	42.6%	37.0%	44.5%	42.7%	45.0%
24	2	33	29	14	48	25	32	25	25-29
10.1%	11.1%	11.9%	10.9%	8.1%	18.6%	11.6%	15.3%	13.5%	12.9%
13	1	19	26	10	19	19	19	17	30-49
5.5%	5.6%	6.9%	9.8%	5.8%	7.4%	8.8%	9.1%	9.2%	7.9%
1	1	3	2	6	2	2	1	1	50+
0.4%	5.6%	1.1%	0.8%	3.5%	0.8%	0.9%	0.5%	0.5%	1.6%
238	18	277	265	172	258	216	209	185	

Science Enrollment by Age (Duplicated Student Counts)

Age Count	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA
> 19	58	14	77	70	6	78	93	6	68
	31.9%	33.3%	34.1%	32.6%	18.8%	35.6%	35.5%	31.6%	28.5%
20-24	96	16	107	97	15	94	108	9	112
	52.7%	38.1%	47.3%	45.1%	46.9%	42.9%	41.2%	47.4%	46.9%
25-29	13	9	23	28	7	22	31	2	35
	7.1%	21.4%	10.2%	13.0%	21.9%	10.0%	11.8%	10.5%	14.6%
30-49	12	2	19	14	3	23	22	2	21
	6.6%	4.8%	8.4%	6.5%	9.4%	10.5%	8.4%	10.5%	8.8%
50+	3	1	0	6	1	2	8	0	3
	1.6%	2.4%	0.0%	2.8%	3.1%	0.9%	3.1%	0.0%	1.3%
Total	182	42	226	215	32	219	262	19	239

2009SP	2009SU	2009FA	2010SP	2010FA	2011SP	2011FA	2012SP	2012FA	**Average**
73	6	107	91	54	79	90	64	63	> 19
30.7%	33.3%	38.6%	34.3%	31.4%	30.6%	41.7%	30.6%	34.1%	32.6%
127	8	115	117	88	110	80	93	79	20-24
53.4%	44.4%	41.5%	44.2%	51.2%	42.6%	37.0%	44.5%	42.7%	45.0%
24	2	33	29	14	48	25	32	25	25-29
10.1%	11.1%	11.9%	10.9%	8.1%	18.6%	11.6%	15.3%	13.5%	12.9%
13	1	19	26	10	19	19	19	17	30-49
5.5%	5.6%	6.9%	9.8%	5.8%	7.4%	8.8%	9.1%	9.2%	7.9%
1	1	3	2	6	2	2	1	1	50+
0.4%	5.6%	1.1%	0.8%	3.5%	0.8%	0.9%	0.5%	0.5%	1.6%
238	18	277	265	172	258	216	209	185	

13A.21

College Enrollment by Gender (Unduplicated) aka HEADCOUNT

Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP	2009SU
Female	9384	4389	9892	9905	4675	10304	10554	4831	10747	11464	5763
	57.4%	60.7%	57.7%	57.3%	59.9%	57.1%	56.8%	60.5%	57.2%	57.6%	59.9%
Male	6872	2796	7152	7281	3084	7617	7889	3067	7893	8243	3767
	42.0%	38.6%	41.7%	42.1%	39.5%	42.2%	42.5%	38.4%	42.0%	41.4%	39.1%
Not Reported	100	50	107	114	46	132	127	84	161	185	94
	0.6%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%	1.1%	0.9%	0.9%	1.0%
Total	16356	7235	17151	17300	7805	18053	18570	7982	18801	19892	9624

2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	Average
11747	11891	3305	11143	11258	1710	11053	10391	226	9952	56.7%
56.4%	56.2%	57.3%	55.6%	55.5%	54.1%	55.1%	55.0%	47.6%	55.0%	
8869	9075	2416	8735	8827	1417	8809	8308	246	8011	42.5%
42.6%	42.9%	41.9%	43.6%	43.6%	44.9%	43.9%	44.0%	51.8%	44.3%	
196	184	48	172	182	32	198	178	3	138	0.8%
0.9%	0.9%	0.8%	0.9%	0.9%	1.0%	1.0%	0.9%	0.6%	0.8%	
20812	21150	5769	20050	20267	3159	20060	18877	475	18101	

College Enrollment by Gender (Duplicated Student Counts)

Gender	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP	2009SU
Female	31995	6677	34083	33212	7237	35318	35525	7310	35621	37704	9031
	56.7%	59.2%	56.8%	56.2%	58.9%	55.9%	55.7%	59.5%	56.2%	56.7%	58.9%
Male	24207	4516	25607	25544	4981	27530	27847	4840	27238	28250	6160
	42.9%	40.1%	42.7%	43.2%	40.6%	43.6%	43.7%	39.4%	43.0%	42.5%	40.2%
Not Reported	263	80	349	379	61	362	376	127	474	541	151
	0.5%	0.7%	0.6%	0.6%	0.5%	0.6%	0.6%	1.0%	0.7%	0.8%	1.0%
Total	56465	11273	60039	59135	12279	63210	63748	12277	63333	66495	15342

2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	Average
38087	34392	4528	32093	31828	2184	31155	28739	291	28387	55.7%
55.2%	55.1%	57.0%	54.9%	54.6%	53.6%	53.9%	54.0%	46.2%	54.0%	
30388	27502	3352	25886	25985	1851	26111	24064	336	23799	43.6%
44.0%	44.1%	42.2%	44.3%	44.6%	45.4%	45.2%	45.2%	53.3%	45.3%	
573	499	66	478	494	43	501	451	3	378	0.7%
0.8%	0.8%	0.8%	0.8%	0.8%	1.1%	0.9%	0.8%	0.5%	0.7%	
69048	62393	7946	58457	58307	4078	57767	53254	630	52564	

13A.22

College Enrollment by Ethnicity (Unduplicated) aka HEADCOUNT

Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP	2009SU
American Indian/Alaskan Native	154	48	165	160	65	180	174	67	164	178	58
	0.9%	0.7%	1.0%	0.9%	0.8%	1.0%	0.9%	0.8%	0.9%	0.9%	0.6%
Asian	1152	555	1141	1170	586	1233	1338	610	1308	1408	679
	7.0%	7.7%	6.7%	6.8%	7.5%	6.8%	7.2%	7.6%	7.0%	7.1%	7.1%
Black non-Hispanic	1140	560	1205	1232	679	1368	1434	630	1406	1510	799
	7.0%	7.7%	7.0%	7.1%	8.7%	7.6%	7.7%	7.9%	7.5%	7.6%	8.3%
Filipino	674	352	712	689	353	743	775	379	876	838	448
	4.1%	4.9%	4.2%	4.0%	4.5%	4.1%	4.2%	4.7%	4.7%	4.2%	4.7%
Hispanic	3163	1402	3373	3462	1570	3621	3750	1636	3849	4049	2125
	19.3%	19.4%	19.7%	20.0%	20.1%	20.1%	20.2%	20.5%	20.5%	20.4%	22.1%
Not Reported	1241	597	1277	1279	637	1343	1414	677	1535	1741	669
	7.6%	8.3%	7.4%	7.4%	8.2%	7.4%	7.6%	8.5%	8.2%	8.8%	7.0%
Pacific Islander	173	94	212	223	95	242	238	101	263	267	109
	1.1%	1.3%	1.2%	1.3%	1.2%	1.3%	1.3%	1.3%	1.4%	1.3%	1.1%
Two or More	478	230	538	564	292	599	619	311	571	662	509
	2.9%	3.2%	3.1%	3.3%	3.7%	3.3%	3.3%	3.9%	3.0%	3.3%	5.3%
White non-Hispanic	8181	3397	8528	8521	3528	8724	8828	3571	8829	9239	4228
	50.0%	47.0%	49.7%	49.3%	45.2%	48.3%	47.5%	44.7%	47.0%	46.4%	43.9%
Total	16356	7235	17151	17300	7805	18053	18570	7982	18801	19892	9624

2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	**Average**
149	155	43	124	108	21	102	72	3	70	American
0.7%	0.7%	0.7%	0.6%	0.5%	0.7%	0.5%	0.4%	0.6%	0.4%	0.7%
1367	1416	425	1298	1309	191	1233	1140	12	1083	Asian
6.6%	6.7%	7.4%	6.5%	6.5%	6.0%	6.1%	6.0%	2.5%	6.0%	6.6%
1590	1674	552	1531	1526	337	1468	1332	70	1201	Black
7.6%	7.9%	9.6%	7.6%	7.5%	10.7%	7.3%	7.1%	14.7%	6.6%	8.1%
857	860	258	877	799	127	784	718	22	734	Filipino
4.1%	4.1%	4.5%	4.4%	3.9%	4.0%	3.9%	3.8%	4.6%	4.1%	4.3%
4603	4850	1309	4858	5088	763	5377	5160	137	5305	Hispanic
22.1%	22.9%	22.7%	24.2%	25.1%	24.2%	26.8%	27.3%	28.8%	29.3%	22.7%
1377	1228	310	931	863	145	672	625	10	459	Not Reported
6.6%	5.8%	5.4%	4.6%	4.3%	4.6%	3.3%	3.3%	2.1%	2.5%	6.1%
252	223	64	184	169	32	171	129	6	123	Pacific
1.2%	1.1%	1.1%	0.9%	0.8%	1.0%	0.9%	0.7%	1.3%	0.7%	1.1%
984	1124	355	1213	1295	215	1382	1317	36	1279	Two or More
4.7%	5.3%	6.2%	6.0%	6.4%	6.8%	6.9%	7.0%	7.6%	7.1%	4.9%
9633	9620	2453	9034	9110	1328	8871	8384	179	7847	White
46.3%	45.5%	42.5%	45.1%	44.9%	42.0%	44.2%	44.4%	37.7%	43.4%	45.5%
20812	21150	5769	20050	20267	3159	20060	18877	475	18101	

13A.23

College Enrollment by Ethnicity (Duplicated Student Counts)

Ethnicity	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP	2009SU
American Indian/Alaskan Native	505	78	560	521	108	610	615	100	546	568	97
	0.9%	0.7%	0.9%	0.9%	0.9%	1.0%	1.0%	0.8%	0.9%	0.9%	0.6%
Asian	4791	961	4770	4937	1001	5289	5535	1017	5500	5991	1217
	8.5%	8.5%	7.9%	8.3%	8.2%	8.4%	8.7%	8.3%	8.7%	9.0%	7.9%
Black non-Hispanic	4351	990	4464	4500	1187	5430	5444	1179	5207	5661	1462
	7.7%	8.8%	7.4%	7.6%	9.7%	8.6%	8.5%	9.6%	8.2%	8.5%	9.5%
Filipino	2396	523	2576	2411	560	2667	2749	565	2986	2809	682
	4.2%	4.6%	4.3%	4.1%	4.6%	4.2%	4.3%	4.6%	4.7%	4.2%	4.4%
Hispanic	10876	2239	11917	11770	2459	12341	12808	2522	12754	13508	3386
	19.3%	19.9%	19.8%	19.9%	20.0%	19.5%	20.1%	20.5%	20.1%	20.3%	22.1%
Not Reported	4208	929	4542	4472	1002	4622	4847	1028	5086	5620	1113
	7.5%	8.2%	7.6%	7.6%	8.2%	7.3%	7.6%	8.4%	8.0%	8.5%	7.3%
Pacific Islander	644	161	793	829	184	989	854	161	1067	1015	177
	1.1%	1.4%	1.3%	1.4%	1.5%	1.6%	1.3%	1.3%	1.7%	1.5%	1.2%
Two or More	1708	388	1924	1994	450	2130	2211	471	1934	2104	819
	3.0%	3.4%	3.2%	3.4%	3.7%	3.4%	3.5%	3.8%	3.1%	3.2%	5.3%
White non-Hispanic	26986	5004	28493	27701	5328	29132	28685	5234	28253	29219	6389
	47.8%	44.4%	47.5%	46.8%	43.4%	46.1%	45.0%	42.6%	44.6%	43.9%	41.6%
Total	56465	11273	60039	59135	12279	63210	63748	12277	63333	66495	15342

2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	**Average**
497	444	63	340	279	25	280	195	4	195	American
0.7%	0.7%	0.8%	0.6%	0.5%	0.6%	0.5%	0.4%	0.6%	0.4%	0.7%
5576	4776	601	4105	4140	238	3783	3495	12	3449	Asian
8.1%	7.7%	7.6%	7.0%	7.1%	5.8%	6.5%	6.6%	1.9%	6.6%	7.5%
5915	5209	835	4637	4632	468	4388	3947	97	3722	Black
8.6%	8.3%	10.5%	7.9%	7.9%	11.5%	7.6%	7.4%	15.4%	7.1%	8.9%
2836	2578	338	2637	2413	156	2334	2182	23	2207	Filipino
4.1%	4.1%	4.3%	4.5%	4.1%	3.8%	4.0%	4.1%	3.7%	4.2%	4.3%
15247	14300	1801	14277	14855	978	15793	14854	195	15623	Hispanic
22.1%	22.9%	22.7%	24.4%	25.5%	24.0%	27.3%	27.9%	31.0%	29.7%	22.8%
4692	3708	421	2674	2401	185	1817	1666	10	1145	Not reported
6.8%	5.9%	5.3%	4.6%	4.1%	4.5%	3.1%	3.1%	1.6%	2.2%	6.1%
924	743	91	600	514	40	517	372	11	376	Pacific
1.3%	1.2%	1.1%	1.0%	0.9%	1.0%	0.9%	0.7%	1.7%	0.7%	1.2%
3226	3218	476	3624	3801	293	4052	3754	50	3719	Two or More
4.7%	5.2%	6.0%	6.2%	6.5%	7.2%	7.0%	7.0%	7.9%	7.1%	4.9%
30135	27417	3320	25563	25272	1695	24803	22789	228	22128	White
43.6%	43.9%	41.8%	43.7%	43.3%	41.6%	42.9%	42.8%	36.2%	42.1%	43.6%
69048	62393	7946	58457	58307	4078	57767	53254	630	52564	

13A.24

College Enrollment by Age (Unduplicated) aka HEADCOUNT

Age	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP
18-19	4530	2041	5267	4780	2337	5650	5171	2383	5851	5413
	27.7%	28.2%	30.7%	27.6%	29.9%	31.3%	27.8%	29.9%	31.1%	27.2%
20-24	6072	2842	6117	6474	2992	6437	6999	3077	6851	7662
	37.1%	39.3%	35.7%	37.4%	38.3%	35.7%	37.7%	38.5%	36.4%	38.5%
25-29	2126	895	2153	2247	1001	2198	2472	1049	2326	2689
	13.0%	12.4%	12.6%	13.0%	12.8%	12.2%	13.3%	13.1%	12.4%	13.5%
30-49	2901	1182	2812	2983	1181	2921	3060	1183	2943	3201
	17.7%	16.3%	16.4%	17.2%	15.1%	16.2%	16.5%	14.8%	15.7%	16.1%
50+	727	275	802	816	294	847	868	290	830	927
	4.4%	3.8%	4.7%	4.7%	3.8%	4.7%	4.7%	3.6%	4.4%	4.7%
Total	16356	7235	17151	17300	7805	18053	18570	7982	18801	19892

2009SU	2009FA	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	**Average**
2758	5885	1461	5743	5187	574	5935	5079	198	5201	18-19
28.7%	28.3%	25.3%	28.6%	25.6%	18.2%	29.6%	26.9%	41.7%	28.7%	28.7%
3684	7697	2152	7525	7781	1123	7310	7338	117	7054	20-24
38.3%	37.0%	37.3%	37.5%	38.4%	35.5%	36.4%	38.9%	24.6%	39.0%	36.9%
1334	2853	937	2767	2939	663	2811	2569	65	2347	25-29
13.9%	13.7%	16.2%	13.8%	14.5%	21.0%	14.0%	13.6%	13.7%	13.0%	13.8%
1488	3418	1033	3184	3506	689	3174	3137	76	2789	30-49
15.5%	16.4%	17.9%	15.9%	17.3%	21.8%	15.8%	16.6%	16.0%	15.4%	16.5%
360	959	186	831	854	110	830	754	19	710	50+
3.7%	4.6%	3.2%	4.1%	4.2%	3.5%	4.1%	4.0%	4.0%	3.9%	4.1%
9624	20812	5769	20050	20267	3159	20060	18877	475	18101	

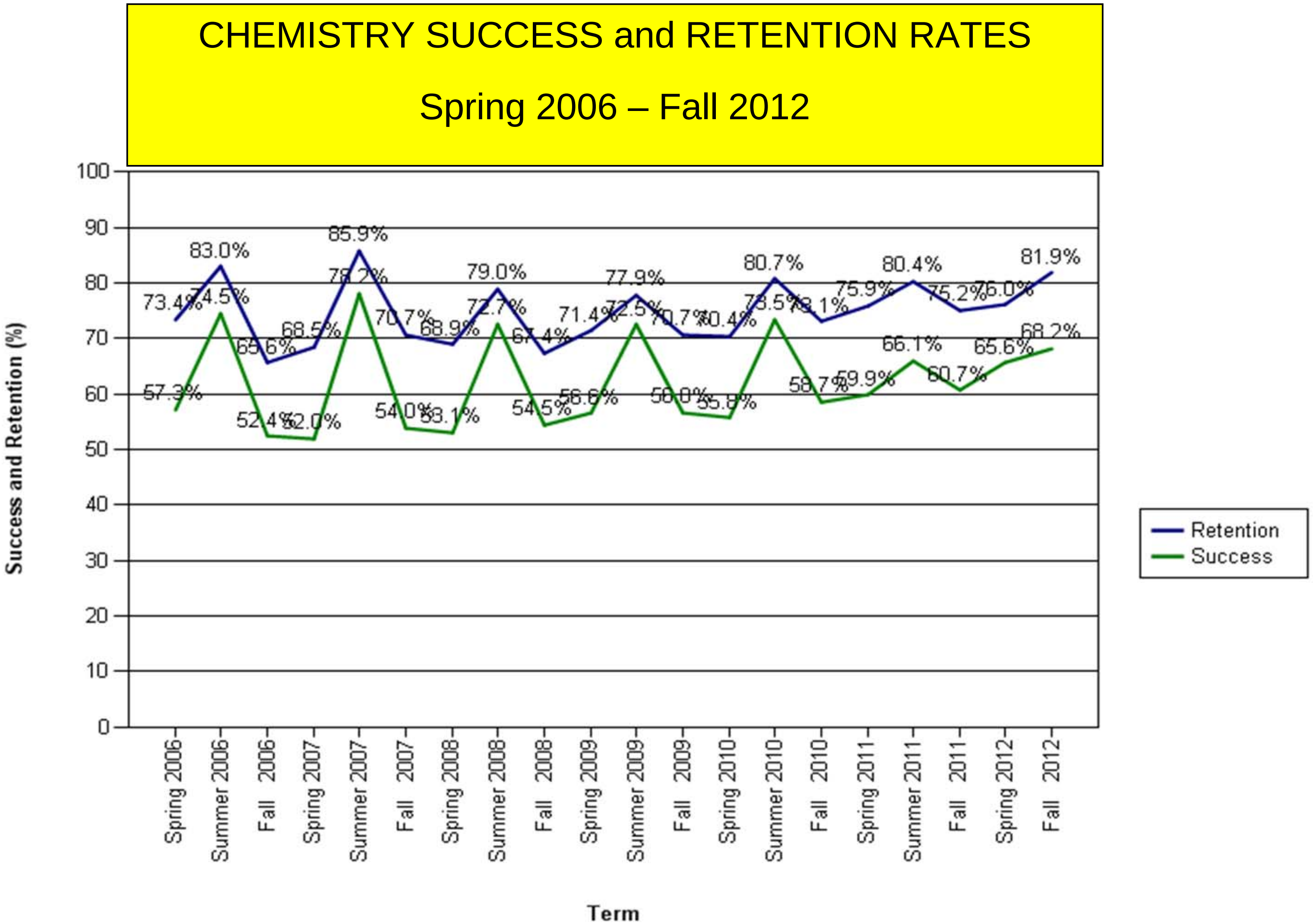
College Enrollment by Age (Duplicated Student Counts)

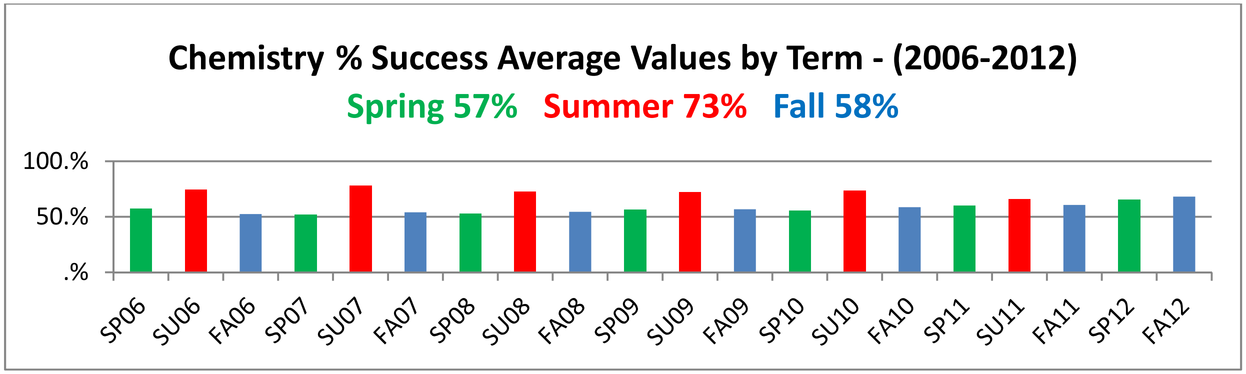
Age	2006SP	2006SU	2006FA	2007SP	2007SU	2007FA	2008SP	2008SU	2008FA	2009SP	2009SU
18-19	18308	3203	21765	19218	3656	23204	20730	3720	22858	21084	4328
	32.4%	28.4%	36.3%	32.5%	29.8%	36.7%	32.5%	30.3%	36.1%	31.7%	28.2%
20-24	21635	4464	22125	23108	4655	23298	25125	4760	23895	26700	6001
	38.3%	39.6%	36.9%	39.1%	37.9%	36.9%	39.4%	38.8%	37.7%	40.2%	39.1%
25-29	6591	1426	6566	6882	1626	6979	7570	1620	6947	7950	2136
	11.7%	12.6%	10.9%	11.6%	13.2%	11.0%	11.9%	13.2%	11.0%	12.0%	13.9%
30-49	8246	1774	7838	8127	1887	7807	8421	1763	7786	8781	2337
	14.6%	15.7%	13.1%	13.7%	15.4%	12.4%	13.2%	14.4%	12.3%	13.2%	15.2%
50+	1685	406	1745	1800	455	1922	1902	414	1847	1980	540
	3.0%	3.6%	2.9%	3.0%	3.7%	3.0%	3.0%	3.4%	2.9%	3.0%	3.5%
Total	56465	11273	60039	59135	12279	63210	63748	12277	63333	66495	15342

2009FA	2010SP	2010SU	2010FA	2011SP	2011SU	2011FA	2012SP	2012SU	2012FA	**Average**
23026	18498	1994	19490	17807	739	19920	16759	296	17509	18-19
33.3%	29.6%	25.1%	33.3%	30.5%	18.1%	34.5%	31.5%	47.0%	33.3%	32.0%
26016	25182	2957	22123	22658	1429	21229	20724	152	20402	20-24%
37.7%	40.4%	37.2%	37.8%	38.9%	35.0%	36.7%	38.9%	24.1%	38.8%	37.6%
8529	7779	1296	7122	7497	854	7247	6558	72	6074	25-29%
12.4%	12.5%	16.3%	12.2%	12.9%	20.9%	12.5%	12.3%	11.4%	11.6%	12.8%
9380	9001	1455	7962	8526	915	7693	7559	86	6999	30-49%
13.6%	14.4%	18.3%	13.6%	14.6%	22.4%	13.3%	14.2%	13.7%	13.3%	14.5%
2097	1933	244	1760	1819	141	1678	1654	24	1580	50+%
3.0%	3.1%	3.1%	3.0%	3.1%	3.5%	2.9%	3.1%	3.8%	3.0%	3.2%
69048	62393	7946	58457	58307	4078	57767	53254	630	52564	

APPENDIX 13B Statistical Data Outcomes Profile (Success and Retention)

- Success and Retention Rate Summaries for Chemistry
- Success and Retention Rate Summaries by Course for Chemistry and Science
- Success and Retention Rate Summaries for Science
- Success and Retention Rate Summaries for College
- Success and Retention for Late Adds in 16+ Week Courses
- Chemistry Letter Grade Distribution Graph
- Success Rates for Day versus Night Courses
- Percent Enrollment Comparison by Ethnic Group
- Success Rates for Full Time versus Part Time Instructors by Course


CHEMISTRY SUCCESS and RETENTION RATES
Spring 2006 – Fall 2012
Success and Retention (%)
Term
Retention
Success
Spring 2006
Summer 2006
Fall 2006
Spring 2007
Summer 2007
Fall 2007
Spring 2008
Summer 2008
Fall 2008
Spring 2009
Summer 2009
Fall 2009
Spring 2010
Summer 2010
Fall 2010
Spring 2011
Summer 2011
Fall 2011
Spring 2012
Fall 2012



Chemistry Success by Gender

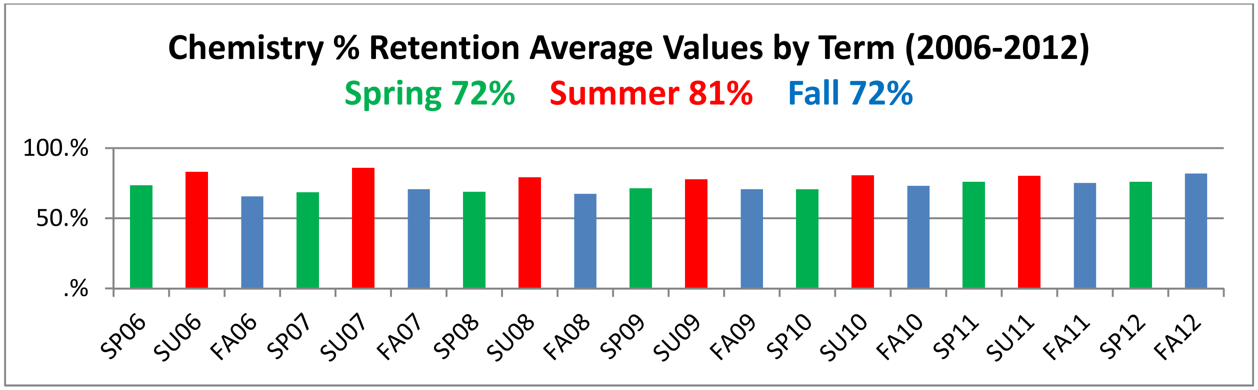
Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	155	59.2%	29	78.4%	153	50.5%	141	54.9%	40	78.4%	167	53.%	146	50.3%	34	72.3%	163	52.4%	154	54.%
Female	244	56.1%	92	74.2%	252	53.5%	229	50.4%	82	78.8%	243	55.1%	230	54.8%	69	73.4%	215	56.7%	261	58.3%
Not Reported	2	66.7%	2	50.%	2	100.%	2	50.%	0	0%	1	20.%	3	75.%	1	50.%	3	33.3%	3	50.%
Total	401	57.3%	123	74.5%	407	52.4%	372	52.%	122	78.2%	411	54.%	379	53.1%	104	72.7%	381	54.5%	418	56.6%

Average %	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
62.2%	34	72.3%	164	52.4%	190	55.2%	22	88.%	214	57.4%	188	57.%	18	69.2%	193	58.5%	192	64.6%	181	66.5%
62.5%	72	72.%	265	59.7%	278	56.5%	38	66.7%	268	60.%	252	61.9%	19	63.3%	287	62.5%	243	66.2%	272	69.2%
57.8%	2	100.%	3	75.%	4	40.%	1	100.%	6	50.%	10	71.4%	0	0%	4	50.%	6	75.%	2	100.%
62.2%	108	72.5%	432	56.8%	472	55.8%	61	73.5%	488	58.7%	450	59.9%	37	66.1%	484	60.7%	441	65.6%	455	68.2%

Chemistry No Success by Gender

Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	36	13.7%	3	8.1%	42	13.9%	35	13.6%	4	7.8%	54	17.1%	53	18.3%	4	8.5%	44	14.1%	51	17.9%
Female	76	17.5%	10	8.1%	60	12.7%	83	18.3%	8	7.7%	71	16.1%	59	14.%	5	5.3%	45	11.9%	57	12.7%
Not Reported	1	33.3%	1	25.%	0	0%	0	0%	0	0%	2	40.%	1	25.%	0	0%	1	11.1%	2	33.3%
Total	113	16.1%	14	8.5%	102	13.1%	118	16.5%	12	7.7%	127	16.7%	113	15.8%	9	6.3%	90	12.9%	110	14.9%

Average %	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
12.9%	3	6.4%	55	17.6%	61	17.7%	0	.%	62	16.6%	58	17.6%	3	11.5%	51	15.5%	30	10.1%	33	12.1%
12.3%	5	5.%	50	11.3%	60	12.2%	6	10.5%	56	12.5%	60	14.7%	5	16.7%	61	13.3%	38	10.4%	58	14.8%
15.8%	0	0%	1	25.%	3	30.%	0	0%	2	16.7%	2	14.3%	0	0%	3	37.5%	2	25.%	0	0%
12.6%	8	5.4%	106	13.9%	124	14.7%	6	7.2%	120	14.4%	120	16.%	8	14.3%	115	14.4%	70	10.4%	91	13.6%



Chemistry Retention by Gender

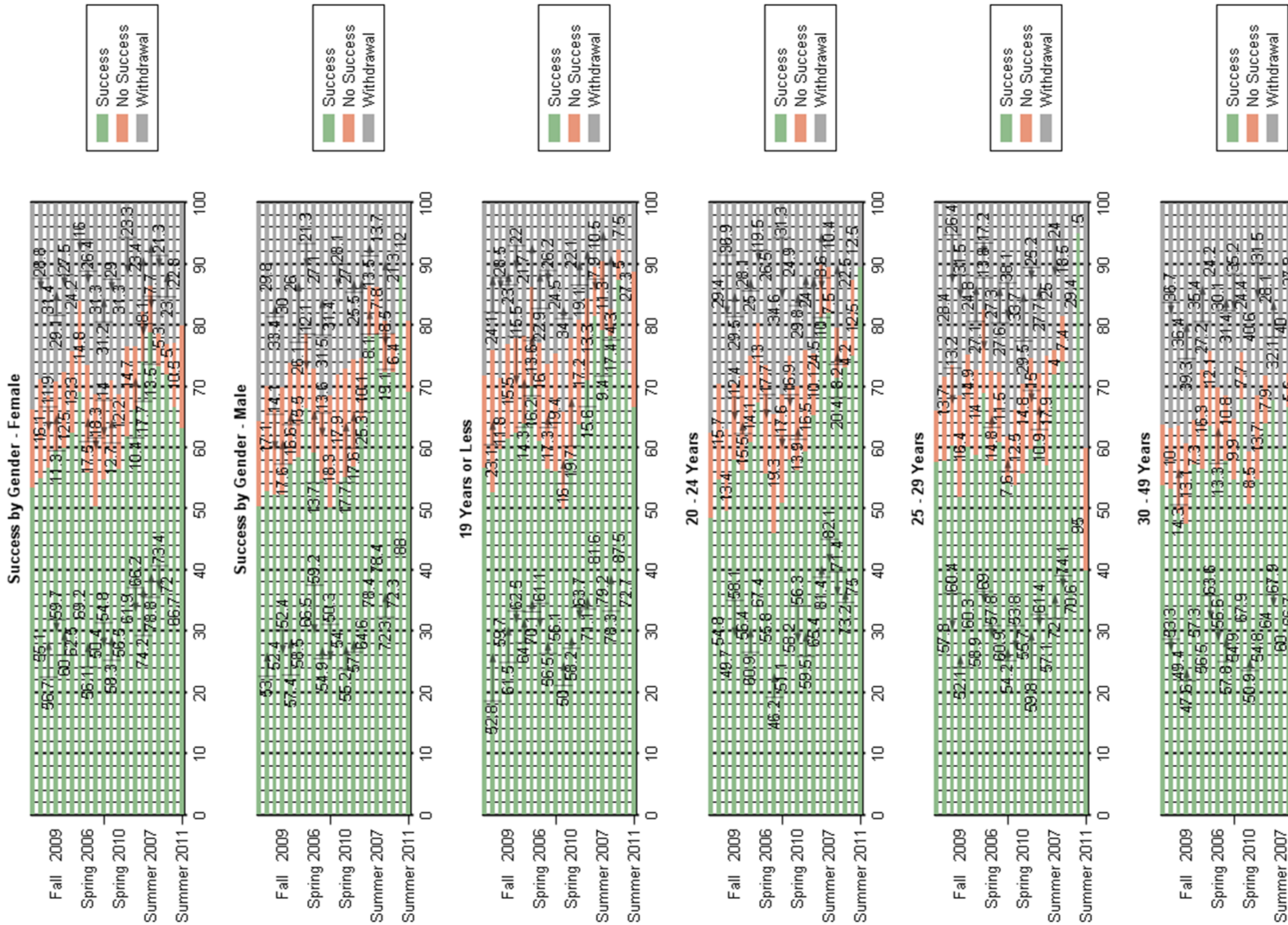
Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	191	72.9%	32	86.5%	195	64.4%	176	68.5%	44	86.3%	221	70.2%	199	68.6%	38	80.9%	207	66.6%	205	71.9%
Female	320	73.6%	102	82.3%	312	66.2%	312	68.7%	90	86.5%	314	71.2%	289	68.8%	74	78.7%	260	68.6%	318	71.%
Not Reported	3	100.%	3	75.%	2	100.%	2	50.%	0	0%	3	60.%	4	100.%	1	50.%	4	44.4%	5	83.3%
Total	514	73.4%	137	83.%	509	65.6%	490	68.5%	134	85.9%	538	70.7%	492	68.9%	113	79.%	471	67.4%	528	71.4%

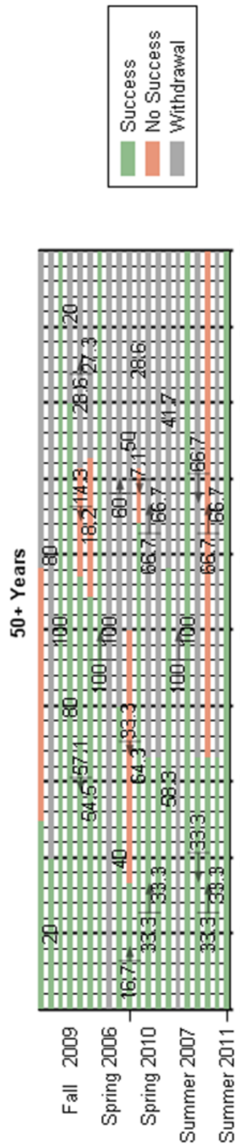
Average %	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
75.1%	37	78.7%	219	70.%	251	73.%	22	88.%	276	74.%	246	74.5%	21	80.8%	244	73.9%	222	74.7%	214	78.7%
74.7%	77	77.%	315	70.9%	338	68.7%	44	77.2%	324	72.5%	312	76.7%	24	80.%	348	75.8%	281	76.6%	330	84.%
73.6%	2	100.%	4	100.%	7	70.%	1	100.%	8	66.7%	12	85.7%	0	0%	7	87.5%	8	100.%	2	100.%
74.8%	116	77.9%	538	70.7%	596	70.4%	67	80.7%	608	73.1%	570	75.9%	45	80.4%	599	75.2%	511	76.%	546	81.9%

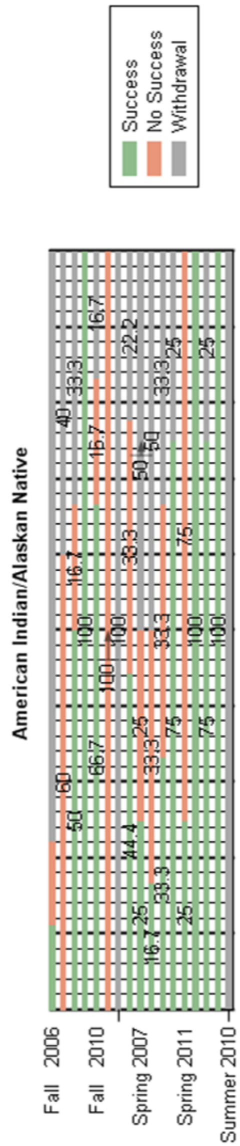
Chemistry Withdrawal by Gender

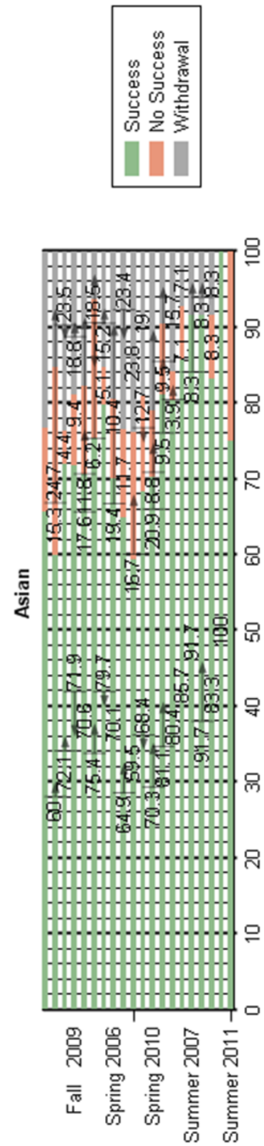
Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	71	27.1%	5	13.5%	108	35.6%	81	31.5%	7	13.7%	94	29.8%	91	31.4%	9	19.1%	104	33.4%	80	28.1%
Female	115	26.4%	22	17.7%	159	33.8%	142	31.3%	14	13.5%	127	28.8%	131	31.2%	20	21.3%	119	31.4%	130	29.%
Not Reported	0	0%	1	25.%	0	0%	2	50.%	1	100.%	2	40.%	0	0%	1	50.%	5	55.6%	1	16.7%
Total	186	26.6%	28	17.%	267	34.4%	225	31.5%	22	14.1%	223	29.3%	222	31.1%	30	21.%	228	32.6%	211	28.6%

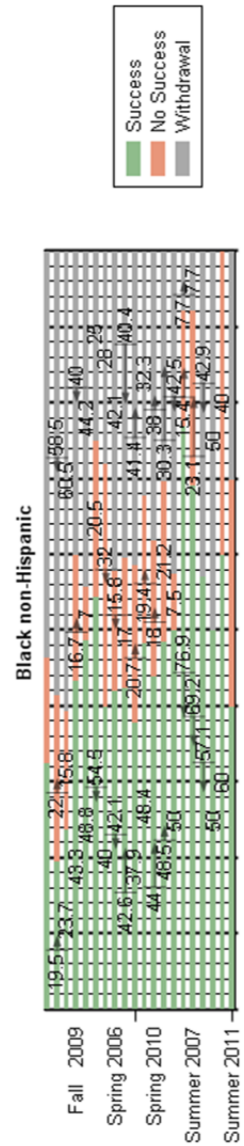
Average %	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
24.9%	10	21.3%	94	30.%	93	27.%	3	12.%	97	26.%	84	25.5%	5	19.2%	86	26.1%	75	25.3%	58	21.3%
25.3%	23	23.%	129	29.1%	154	31.3%	13	22.8%	123	27.5%	95	23.3%	6	20.%	111	24.2%	86	23.4%	63	16.%
21.4%	0	0%	0	0%	3	30.%	0	0%	4	33.3%	2	14.3%	0	0%	1	12.5%	0	0%	0	0%
25.2%	33	22.1%	223	29.3%	250	29.6%	16	19.3%	224	26.9%	181	24.1%	11	19.6%	198	24.8%	161	24.%	121	18.1%

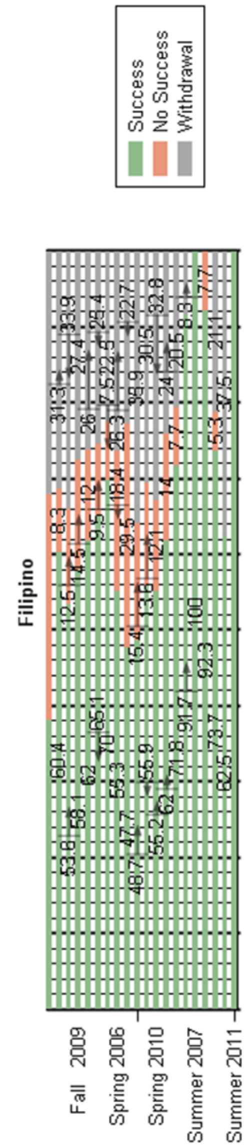

Success by Gender - Female
Success by Gender - Male
19 Years or Less
20 - 24 Years
25 - 29 Years
30 - 49 Years
Success
No Success
Withdrawal

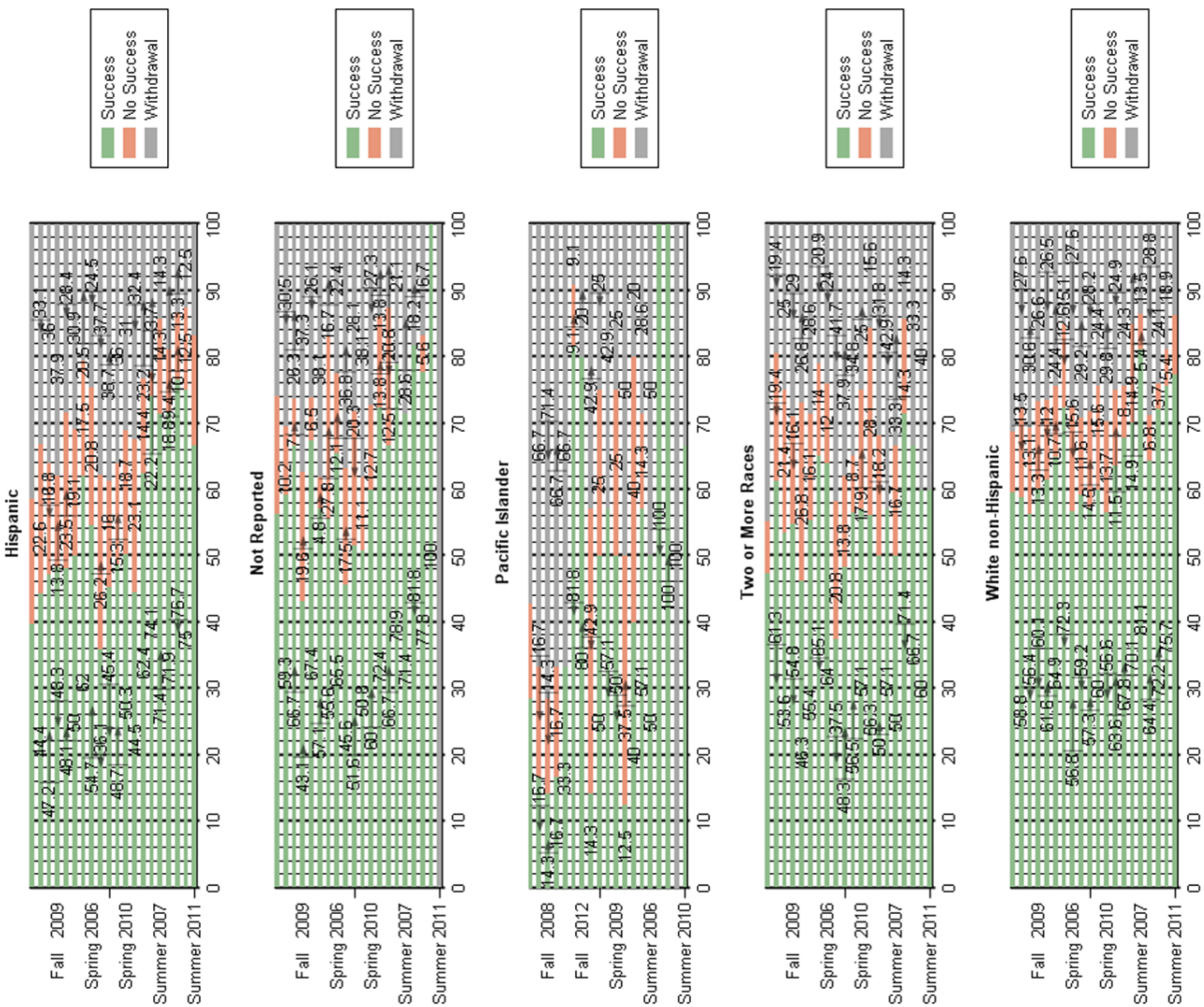

50+ Years
Success
No Success
Withdrawal
Fall 2009
Spring 2006
Spring 2010
Summer 2007
Summer 2011


American Indian/Alaskan Native
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2010


Asian
Success
No Success
Withdrawal
Fall 2009
Spring 2006
Spring 2010
Summer 2007
Summer 2011


Black non-Hispanic
Success
No Success
Withdrawal
Fall 2009
Spring 2006
Spring 2010
Summer 2007
Summer 2011


Filipino
Success
No Success
Withdrawal
Fall 2009
Spring 2006
Spring 2010
Summer 2007
Summer 2011


Hispanic
Not Reported
Pacific Islander
Two or More Races
White non-Hispanic
Success
No Success
Withdrawal
Fall 2009
Spring 2006
Spring 2010
Summer 2007
Summer 2011
Fall 2008
Fall 2012
Spring 2009
Summer 2006
Summer 2010

Chemistry Success by Age

Age	Spring 2006 n	Spring 2006 %	Summer 2006 n	Summer 2006 %	Fall 2006 n	Fall 2006 %	Spring 2007 n	Spring 2007 %	Summer 2007 n	Summer 2007 %	Fall 2007 n	Fall 2007 %	Spring 2008 n	Spring 2008 %	Summer 2008 n	Summer 2008 %	Fall 2008 n	Fall 2008 %	Spring 2009 n	Spring 2009 %
19 or less	107	61.1%	31	81.6%	117	56.8%	95	56.5%	42	79.2%	114	52.8%	110	56.1%	36	78.3%	132	59.7%	97	50.%
20-24	173	55.8%	57	81.4%	164	48.5%	163	46.2%	55	82.1%	188	54.8%	165	51.1%	35	71.4%	152	49.7%	203	58.2%
25-29	74	57.8%	16	57.1%	68	57.6%	53	60.9%	18	72.%	59	57.8%	64	54.2%	20	74.1%	55	60.4%	56	53.8%
30-49	47	56.6%	19	67.9%	55	53.9%	59	57.8%	6	60.%	48	53.3%	39	54.9%	12	66.7%	38	49.4%	53	67.9%
50+	0	0.0%	0	0.0%	3	25.%	2	40.%	1	100.%	2	20.%	1	16.7%	1	33.3%	4	100.%	9	64.3%
Total	401	57.3%	123	74.5%	407	52.4%	372	52.%	122	78.2%	411	54.%	379	53.1%	104	72.7%	381	54.5%	418	56.6%

Average		Summer 2009 n	Summer 2009 %	Fall 2009 n	Fall 2009 %	Spring 2010 n	Spring 2010 %	Summer 2010 n	Summer 2010 %	Fall 2010 n	Fall 2010 %	Spring 2011 n	Spring 2011 %	Summer 2011 n	Summer 2011 %	Fall 2011 n	Fall 2011 %	Spring 2012 n	Spring 2012 %	Fall 2012 n	Fall 2012 %
> 19	65.5%	35	87.5%	115	61.5%	124	58.2%	8	72.7%	125	62.5%	130	63.7%	6	66.7%	121	64.%	96	71.1%	108	70.1%
20-24	63.%	52	73.2%	197	58.1%	223	56.3%	24	75.%	219	56.4%	213	59.5%	17	89.5%	229	60.9%	219	65.4%	238	67.4%
25-29	61.4%	12	70.6%	76	52.1%	68	55.7%	19	95.%	85	60.3%	64	59.8%	6	40.%	76	58.9%	62	61.4%	60	69.%
30-49	56.8%	8	44.4%	40	47.6%	54	50.9%	9	52.9%	55	57.3%	40	54.8%	6	54.5%	52	56.5%	57	64.%	42	63.6%
50+	54.6%	1	33.3%	4	80.%	3	33.3%	1	33.3%	4	57.1%	3	33.3%	2	100.%	6	54.5%	7	58.3%	7	100.%
Total	62.2%	108	72.5%	432	56.8%	472	55.8%	61	73.5%	488	58.7%	450	59.9%	37	66.1%	484	60.7%	441	65.6%	455	68.2%

Chemistry No Success by Age

Age	Spring 2006 n	Spring 2006 %	Summer 2006 n	Summer 2006 %	Fall 2006 n	Fall 2006 %	Spring 2007 n	Spring 2007 %	Summer 2007 n	Summer 2007 %	Fall 2007 n	Fall 2007 %	Spring 2008 n	Spring 2008 %	Summer 2008 n	Summer 2008 %	Fall 2008 n	Fall 2008 %	Spring 2009 n	Spring 2009 %
19 or less	28	16.%	3	7.9%	31	15.%	29	17.3%	6	11.3%	50	23.1%	38	19.4%	2	4.3%	26	11.8%	31	16.%
20-24	55	17.7%	6	8.6%	47	13.9%	68	19.3%	5	7.5%	54	15.7%	57	17.6%	4	8.2%	41	13.4%	59	16.9%
25-29	19	14.8%	5	17.9%	10	8.5%	10	11.5%	1	4.%	14	13.7%	9	7.6%	2	7.4%	12	13.2%	13	12.5%
30-49	11	13.3%	0	0.0%	10	9.8%	11	10.8%	0	0.0%	9	10.%	7	9.9%	1	5.6%	11	14.3%	6	7.7%
50+	0	0.0%	0	0.0%	4	33.3%	0	0.0%	0	0.0%	0	0.0%	2	33.3%	0	0.0%	0	0.0%	1	7.1%
Total	113	16.1%	14	8.5%	102	13.1%	118	16.5%	12	7.7%	127	16.7%	113	15.8%	9	6.3%	90	12.9%	110	14.9%

	Summer 2009 n	Summer 2009 %	Fall 2009 n	Fall 2009 %	Spring 2010 n	Spring 2010 %	Summer 2010 n	Summer 2010 %	Fall 2010 n	Fall 2010 %	Spring 2011 n	Spring 2011 %	Summer 2011 n	Summer 2011 %	Fall 2011 n	Fall 2011 %	Spring 2012 n	Spring 2012 %	Fall 2012 n	Fall 2012 %
> 19	2	5.%	29	15.5%	42	19.7%	0	0.0%	31	15.5%	35	17.2%	2	22.2%	27	14.3%	18	13.3%	25	16.2%
20-24	3	4.2%	42	12.4%	55	13.9%	4	12.5%	60	15.5%	59	16.5%	0	0.0%	53	14.1%	34	10.1%	46	13.%
25-29	0	0.0%	24	16.4%	18	14.8%	0	0.0%	21	14.9%	16	15.%	3	20.%	18	14.%	11	10.9%	12	13.8%
30-49	1	5.6%	11	13.1%	9	8.5%	2	11.8%	7	7.3%	10	13.7%	3	27.3%	15	16.3%	7	7.9%	8	12.1%
50+	2	66.7%	0	0.0%	0	0.0%	0	0.0%	1	14.3%	0	0.0%	0	0.0%	2	18.2%	0	0.0%	0	0.0%
Total	8	5.4%	106	13.9%	124	14.7%	6	7.2%	120	14.4%	120	16.%	8	14.3%	115	14.4%	70	10.4%	91	13.6%

Chemistry Retention by Age

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less	135	77.1%	34	89.5%	148	71.8%	124	73.8%	48	90.6%	164	75.9%	148	75.5%	38	82.6%	158	71.5%	128	66.%
20-24	228	73.5%	63	90.%	211	62.4%	231	65.4%	60	89.6%	242	70.6%	222	68.7%	39	79.6%	193	63.1%	262	75.1%
25-29	93	72.7%	21	75.%	78	66.1%	63	72.4%	19	76.%	73	71.6%	73	61.9%	22	81.5%	67	73.6%	69	66.3%
30-49	58	69.9%	19	67.9%	65	63.7%	70	68.6%	6	60.%	57	63.3%	46	64.8%	13	72.2%	49	63.6%	59	75.6%
50+	0	0.0%	0	0.0%	7	58.3%	2	40.%	1	100.%	2	20.%	3	50.%	1	33.3%	4	100.%	10	71.4%
Total	514	73.4%	137	83.%	509	65.6%	490	68.5%	134	85.9%	538	70.7%	492	68.9%	113	79.%	471	67.4%	528	71.4%

		Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	**79.6%**	37	92.5%	144	77.%	166	77.9%	8	72.7%	156	78.%	165	80.9%	8	88.9%	148	78.3%	114	84.4%	133	86.4%
20-24	**75.6%**	55	77.5%	239	70.5%	278	70.2%	28	87.5%	279	71.9%	272	76.%	17	89.5%	282	75.%	253	75.5%	284	80.5%
25-29	**73.%**	12	70.6%	100	68.5%	86	70.5%	19	95.%	106	75.2%	80	74.8%	9	60.%	94	72.9%	73	72.3%	72	82.8%
30-49	**67.%**	9	50.%	51	60.7%	63	59.4%	11	64.7%	62	64.6%	50	68.5%	9	81.8%	67	72.8%	64	71.9%	50	75.8%
50+	**64.2%**	3	100.%	4	80.%	3	33.3%	1	33.3%	5	71.4%	3	33.3%	2	100.%	8	72.7%	7	58.3%	7	100.%
Total		116	77.9%	538	70.7%	596	70.4%	67	80.7%	608	73.1%	570	75.9%	45	80.4%	599	75.2%	511	76.%	546	81.9%

Chemistry Withdrawal by Age

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less	40	22.9%	4	10.5%	58	28.2%	44	26.2%	5	9.4%	52	24.1%	48	24.5%	8	17.4%	63	28.5%	66	34.%
20-24	82	26.5%	7	10.%	127	37.6%	122	34.6%	7	10.4%	101	29.4%	101	31.3%	10	20.4%	113	36.9%	87	24.9%
25-29	35	27.3%	7	25.%	40	33.9%	24	27.6%	6	24.%	29	28.4%	45	38.1%	5	18.5%	24	26.4%	35	33.7%
30-49	25	30.1%	9	32.1%	37	36.3%	32	31.4%	4	40.%	33	36.7%	25	35.2%	5	27.8%	28	36.4%	19	24.4%
50+	4	100.%	1	100.%	5	41.7%	3	60.%	0	0.0%	8	80.%	3	50.%	2	66.7%	0	0.0%	4	28.6%
Total	186	26.6%	28	17.%	267	34.4%	225	31.5%	22	14.1%	223	29.3%	222	31.1%	30	21.%	228	32.6%	211	28.6%

	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	3	7.5%	43	23.%	47	22.1%	3	27.3%	44	22.%	39	19.1%	1	11.1%	41	21.7%	21	15.6%	21	13.6%
20-24	16	22.5%	100	29.5%	118	29.8%	4	12.5%	109	28.1%	86	24.%	2	10.5%	94	25.%	82	24.5%	69	19.5%
25-29	5	29.4%	46	31.5%	36	29.5%	1	5.%	35	24.8%	27	25.2%	6	40.%	35	27.1%	28	27.7%	15	17.2%
30-49	9	50.%	33	39.3%	43	40.6%	6	35.3%	34	35.4%	23	31.5%	2	18.2%	25	27.2%	25	28.1%	16	24.2%
50+	0	0.0%	1	20.%	6	66.7%	2	66.7%	2	28.6%	6	66.7%	0	0.0%	3	27.3%	5	41.7%	0	0.0%
Total	33	22.1%	223	29.3%	250	29.6%	16	19.3%	224	26.9%	181	24.1%	11	19.6%	198	24.8%	161	24.%	121	18.1%

Chemistry Success by Ethnicity

Ethnicity	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Nat. Amer. / Alaskan	4	44.4%	3	75.0%	1	11.1%	1	25.0%	0	0.0%	0	0.0%	1	16.7%
Asian	47	70.1%	12	85.7%	48	65.8%	50	64.9%	11	91.7%	51	60.0%	50	59.5%
Black non-Hispanic	16	42.1%	10	76.9%	14	32.6%	20	42.6%	9	69.2%	8	19.5%	11	37.9%
Filipino	21	55.3%	11	91.7%	18	38.3%	21	47.7%	7	100.%	29	60.4%	19	48.7%
Hispanic	58	54.7%	20	74.1%	51	39.8%	44	36.1%	20	71.4%	55	44.4%	54	45.4%
Not Reported	38	65.5%	15	78.9%	35	56.5%	26	45.6%	10	71.4%	35	59.3%	33	51.6%
Pacific Islander	1	14.3%	1	50.0%	2	28.6%	2	50.0%	1	100.%	1	16.7%	4	57.1%
Two or More	16	64.0%	4	57.1%	18	47.4%	9	37.5%	3	50.0%	19	61.3%	14	48.3%
White non-Hispanic	200	56.8%	47	70.1%	220	59.6%	199	59.2%	60	81.1%	213	58.8%	193	57.3%
Total	401	57.3%	123	74.5%	407	52.4%	372	52.%	121	78.1%	411	54.%	379	53.1%

	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	1	100.%	3	50.0%	2	33.3%	0	0.0%	3	100.%	3	75.0%	0	0.0%
Asian	11	91.7%	49	72.1%	54	68.4%	10	83.3%	69	71.9%	64	70.3%	5	100.%
Black non-Hispanic	4	57.1%	9	23.7%	15	48.4%	4	50.0%	13	43.3%	22	44.0%	3	60.0%
Filipino	12	92.3%	30	53.6%	33	55.9%	14	73.7%	36	58.1%	32	55.2%	5	62.5%
Hispanic	23	71.9%	59	47.2%	73	48.7%	23	76.7%	70	48.3%	86	50.3%	12	75.0%
Not Reported	9	81.8%	38	66.7%	32	50.8%	14	77.8%	22	43.1%	33	60.0%	3	100.%
Pacific Islander	1	100.%	1	14.3%	4	50.0%	0	0.0%	1	16.7%	1	12.5%	2	66.7%
Two or More	5	71.4%	15	53.6%	13	56.5%	4	66.7%	17	54.8%	16	57.1%	3	60.0%
White non-Hispanic	38	64.4%	177	56.4%	192	60.0%	39	72.2%	199	60.1%	211	56.6%	28	75.7%
Total	104	72.7%	381	54.5%	418	56.6%	108	72.5%	432	56.8%	472	55.8%	61	73.5%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012		
Amer.	55.6%	4	66.7%	1	25.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	
Asian	75.9%	72	70.6%	60	81.1%	3	75.0%	49	75.4%	41	80.4%	63	79.7%	
Black	46.5%	21	48.8%	16	48.5%	4	40.0%	24	54.5%	20	50.0%	10	40.0%	
Filipino	66.2%	31	62.%	31	62.0%	2	100.0%	41	65.1%	28	71.8%	28	70.0%	
Hispanic	55.9%	78	48.1%	77	44.5%	8	66.7%	97	50.0%	113	62.4%	103	62.0%	
NR	61.4%	31	67.4%	21	72.4%	0	0.0%	12	57.1%	16	66.7%	10	55.6%	
Pacific	43.5%	4	33.3%	4	40.0%	0	0.0%	9	81.8%	4	57.1%	8	80.0%	
> Two	55.9%	19	46.3%	18	56.3%	3	60.0%	31	55.4%	22	50.0%	28	65.1%	
White	64.8%	221	61.6%	215	63.6%	17	77.3%	213	64.9%	187	67.8%	201	72.3%	
Total	62.1%	488	58.7%	450	59.9%	37	66.1%	484	60.7%	440	65.6%	455	68.2%	

Chemistry No Success by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	3	33.3%	0	0.0%	1	11.1%	1	25.0%	0	0.0%	3	60.0%	2	33.3%
Asian	7	10.4%	1	7.1%	8	11.0%	9	11.7%	0	0.0%	21	24.7%	14	16.7%
Black non-Hispanic	6	15.8%	2	15.4%	6	14.0%	8	17.0%	3	23.1%	9	22.0%	6	20.7%
Filipino	7	18.4%	0	0.0%	14	29.8%	13	29.5%	0	0.0%	4	8.3%	6	15.4%
Hispanic	22	20.8%	1	3.7%	24	18.8%	32	26.2%	4	14.3%	28	22.6%	19	16.0%
Not Reported	7	12.1%	0	0.0%	11	17.7%	10	17.5%	0	0.0%	6	10.2%	13	20.3%
Pacific Islander	3	42.9%	0	0.0%	1	14.3%	1	25.0%	0	0.0%	1	16.7%	0	0.0%
Two or More	3	12.0%	0	0.0%	3	7.9%	5	20.8%	1	16.7%	6	19.4%	4	13.8%
White non-Hispanic	55	15.6%	10	14.9%	34	9.2%	39	11.6%	4	5.4%	49	13.5%	49	14.5%
Total	113	16.1%	14	8.5%	102	13.1%	118	16.5%	12	7.7%	127	16.7%	113	15.8%

	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	0	0.0%	1	16.7%	2	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	0	0.0%	3	4.4%	10	12.7%	1	8.3%	9	9.4%	8	8.8%	0	0.0%
Black non-Hispanic	0	0.0%	6	15.8%	6	19.4%	0	0.0%	5	16.7%	9	18.%	2	40.%
Filipino	1	7.7%	7	12.5%	8	13.6%	1	5.3%	9	14.5%	7	12.1%	0	0.0%
Hispanic	3	9.4%	21	16.8%	23	15.3%	3	10.%	20	13.8%	32	18.7%	2	12.5%
Not Reported	0	0.0%	4	7.0%	7	11.1%	1	5.6%	10	19.6%	7	12.7%	0	0.0%
Pacific Islander	0	0.0%	1	14.3%	2	25.0%	0	0.0%	1	16.7%	3	37.5%	0	0.0%
Two or More	1	14.3%	6	21.4%	2	8.7%	0	0.0%	5	16.1%	5	17.9%	0	0.0%
White non-Hispanic	4	6.8%	41	13.1%	50	15.6%	2	3.7%	44	13.3%	51	13.7%	2	5.4%
Total	9	6.3%	90	12.9%	110	14.9%	8	5.4%	106	13.9%	124	14.7%	6	7.2%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012			
Amer.	40.4%	1	16.7%	3	75.0%	0	0.0%	3	100.%	0	0.0%	0	0.0%		
Asian	11.7%	12	11.8%	7	9.5%	1	25.%	12	18.5%	2	3.9%	4	5.1%		
Black	19.8%	3	7.0%	7	21.2%	3	30.%	9	20.5%	3	7.5%	8	32.%		
Filipino	13.6%	6	12.0%	7	14.%	0	0.0%	6	9.5%	3	7.7%	3	7.5%		
Hispanic	16.6%	38	23.5%	40	23.1%	2	16.7%	37	19.1%	26	14.4%	29	17.5%		
NR	13.8%	3	6.5%	4	13.8%	0	0.0%	1	4.8%	5	20.8%	5	27.8%		
Pacific	23.2%	0	0.0%	4	40.%	0	0.0%	1	9.1%	1	14.3%	0	0.0%		
> Two	17.%	11	26.8%	9	28.1%	0	0.0%	9	16.1%	8	18.2%	6	14.0%		
White	11.%	43	12.%	39	11.5%	2	9.1%	35	10.7%	22	8.0%	35	12.6%		
Total	12.6%	120	14.4%	120	16.0%	8	14.3%	115	14.4%	70	10.4%	91	13.6%		

Chemistry Retention by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	7	77.8%	3	75.0%	2	22.2%	2	50.0%	0	0.0%	3	60.0%	3	50.0%
Asian	54	80.6%	13	92.9%	56	76.7%	59	76.6%	11	91.7%	72	84.7%	64	76.2%
Black non-Hispanic	22	57.9%	12	92.3%	20	46.5%	28	59.6%	12	92.3%	17	41.5%	17	58.6%
Filipino	28	73.7%	11	91.7%	32	68.1%	34	77.3%	7	100.0%	33	68.8%	25	64.1%
Hispanic	80	75.5%	21	77.8%	75	58.6%	76	62.3%	24	85.7%	83	66.9%	73	61.3%
Not Reported	45	77.6%	15	78.9%	46	74.2%	36	63.2%	10	71.4%	41	69.5%	46	71.9%
Pacific Islander	4	57.1%	1	50.0%	3	42.9%	3	75.0%	1	100.0%	2	33.3%	4	57.1%
Two or More	19	76.0%	4	57.1%	21	55.3%	14	58.3%	4	66.7%	25	80.6%	18	62.1%
White non-Hispanic	255	72.4%	57	85.1%	254	68.8%	238	70.8%	64	86.5%	262	72.4%	242	71.8%
Total	514	73.4%	137	83.0%	509	65.6%	490	68.5%	133	85.8%	538	70.7%	492	68.9%

	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	1	100.0%	4	66.7%	4	66.7%	0	0.0%	3	100.0%	3	75.0%	0	0.0%
Asian	11	91.7%	52	76.5%	64	81.0%	11	91.7%	78	81.3%	72	79.1%	5	100.0%
Black non-Hispanic	4	57.1%	15	39.5%	21	67.7%	4	50.0%	18	60.0%	31	62.0%	5	100.0%
Filipino	13	100.0%	37	66.1%	41	69.5%	15	78.9%	45	72.6%	39	67.2%	5	62.5%
Hispanic	26	81.3%	80	64.0%	96	64.0%	26	86.7%	90	62.1%	118	69.0%	14	87.5%
Not Reported	9	81.8%	42	73.7%	39	61.9%	15	83.3%	32	62.7%	40	72.7%	3	100.0%
Pacific Islander	1	100.0%	2	28.6%	6	75.0%	0	0.0%	2	33.3%	4	50.0%	2	66.7%
Two or More	6	85.7%	21	75.0%	15	65.2%	4	66.7%	22	71.0%	21	75.0%	3	60.0%
White non-Hispanic	42	71.2%	218	69.4%	242	75.6%	41	75.9%	243	73.4%	262	70.2%	30	81.1%
Total	113	79.0%	471	67.4%	528	71.4%	116	77.9%	538	70.7%	596	70.4%	67	80.7%

		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%
Amer.	75.1%	5	83.3%	4	100.0%	0	0.0%	3	100.0%	1	100.0%	0	0.0%
Asian	85.8%	84	82.4%	67	90.5%	4	100.0%	61	93.8%	43	84.3%	67	84.8%
Black	64.3%	24	55.8%	23	69.7%	7	70.0%	33	75.0%	23	57.5%	18	72.0%
Filipino	77.1%	37	74.0%	38	76.0%	2	100.0%	47	74.6%	31	79.5%	31	77.5%
Hispanic	72.5%	116	71.6%	117	67.6%	10	83.3%	134	69.1%	139	76.8%	132	79.5%
NR	75.6%	34	73.9%	25	86.2%	0	0.0%	13	61.9%	21	87.5%	15	83.3%
Pacific	62.5%	4	33.3%	8	80.0%	0	0.0%	10	90.9%	5	71.4%	8	80.0%
> Two	70.5%	30	73.2%	27	84.4%	3	60.0%	40	71.4%	30	68.2%	34	79.1%
White	75.0%	264	73.5%	254	75.1%	19	86.4%	248	75.6%	209	75.7%	236	84.9%
Total	73.8%	608	73.1%	570	75.9%	45	80.4%	599	75.2%	510	76.0%	546	81.9%

Chemistry Withdrawal by Ethnicity														
	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Nat. Amer. / Alaskan	2	22.2%	1	25.0%	7	77.8%	2	50.0%	0	0.0%	2	40.0%	3	50.0%
Asian	13	19.4%	1	7.1%	17	23.3%	18	23.4%	1	8.3%	13	15.3%	20	23.8%
Black non-Hispanic	16	42.1%	1	7.7%	23	53.5%	19	40.4%	1	7.7%	24	58.5%	12	41.4%
Filipino	10	26.3%	1	8.3%	15	31.9%	10	22.7%	0	0.0%	15	31.3%	14	35.9%
Hispanic	26	24.5%	6	22.2%	53	41.4%	46	37.7%	4	14.3%	41	33.1%	46	38.7%
Not Reported	13	22.4%	4	21.1%	16	25.8%	21	36.8%	4	28.6%	18	30.5%	18	28.1%
Pacific Islander	3	42.9%	1	50.0%	4	57.1%	1	25.0%	0	0.0%	4	66.7%	3	42.9%
Two or More	6	24.0%	3	42.9%	17	44.7%	10	41.7%	2	33.3%	6	19.4%	11	37.9%
White non-Hispanic	97	27.6%	10	14.9%	115	31.2%	98	29.2%	10	13.5%	100	27.6%	95	28.2%
Total	186	26.6%	28	17.0%	267	34.4%	225	31.5%	22	14.2%	223	29.3%	222	31.1%
	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	0	0.0%	2	33.3%	2	33.3%	0	0.0%	0	0.0%	1	25.0%	1	100.0%
Asian	1	8.3%	16	23.5%	15	19.0%	1	8.3%	18	18.8%	19	20.9%	0	0.0%
Black non-Hispanic	3	42.9%	23	60.5%	10	32.3%	4	50.0%	12	40.0%	19	38.0%	0	0.0%
Filipino	0	0.0%	19	33.9%	18	30.5%	4	21.1%	17	27.4%	19	32.8%	3	37.5%
Hispanic	6	18.8%	45	36.0%	54	36.0%	4	13.3%	55	37.9%	53	31.0%	2	12.5%
Not Reported	2	18.2%	15	26.3%	24	38.1%	3	16.7%	19	37.3%	15	27.3%	0	0.0%
Pacific Islander	0	0.0%	5	71.4%	2	25.0%	1	100.0%	4	66.7%	4	50.0%	1	33.3%
Two or More	1	14.3%	7	25.0%	8	34.8%	2	33.3%	9	29.0%	7	25.0%	2	40.0%
White non-Hispanic	17	28.8%	96	30.6%	78	24.4%	13	24.1%	88	26.6%	111	29.8%	7	18.9%
Total	30	21.0%	228	32.6%	211	28.6%	33	22.1%	223	29.3%	250	29.6%	16	19.3%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Fall 2012	
Amer.	47.8%	1	16.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%
Asian	15.8%	18	17.6%	7	9.5%	0	0.0%	4	6.2%	8	15.7%	12	15.2%
Black	37.1%	19	44.2%	10	30.3%	3	30.0%	11	25.0%	17	42.5%	7	28.0%
Filipino	26.9%	13	26.0%	12	24.0%	0	0.0%	16	25.4%	8	20.5%	9	22.5%
Hispanic	27.5%	46	28.4%	56	32.4%	2	16.7%	60	30.9%	42	23.2%	34	20.5%
NR	29.7%	12	26.1%	4	13.8%	1	100.0%	8	38.1%	3	12.5%	3	16.7%
Pacific	65.3%	8	66.7%	2	20.0%	0	0.0%	1	9.1%	2	28.6%	2	20.0%
> Two	30.5%	11	26.8%	5	15.6%	2	40.0%	16	28.6%	14	31.8%	9	20.9%
White	24.2%	95	26.5%	84	24.9%	3	13.6%	80	24.4%	67	24.3%	42	15.1%
Total	25.2%	224	26.9%	181	24.1%	11	19.6%	198	24.8%	161	24.0%	121	18.1%

Success and Retention Rate Summaries by Course for Chemistry and Science

CHEM 110		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		50.0	46.4	36.7	30.9	75.0	70.4	52.6	80.0	34.6	84.3	75.6	80.4	91.3	92.5	64.3
% Retention		50.0	53.6	43.3	63.6	85.7	74.1	63.2	100.0	65.4	94.1	75.6	87.0	97.8	92.5	74.7
% No Success		0.0	7.1	6.7	32.7	10.7	3.7	10.5	20.0	30.8	9.8	0.0	6.5	6.5	0.0	10.4
% W		50.0	46.4	56.7	36.4	14.3	25.9	36.8	0.0	34.6	5.9	24.4	13.0	2.2	7.5	25.3
Enrollment		8	28	30	55	28	27	19	30	26	51	45	46	46	53	35

CHEM 102		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success									63.0	74.1	61.4		69.4	63.0	76.9	68.0
% Retention									66.7	77.8	68.2		77.6	71.7	84.6	74.4
% No Success		Chem 102 offered beginning in Fall 2009							3.7	3.7	6.8		8.2	8.7	7.7	6.5
% W		Not offered in Spring 2011							33.3	22.2	31.8		22.4	28.3	15.4	25.6
Enrollment									27	27	44		49	46	26	37

CHEM 113		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		51.3	65.3	44.7	55.3	54.1	57.5	59.1	60.0	65.9	60.0	65.9	64.0	63.3	68.0	59.6
% Retention		74.4	89.8	57.4	68.1	74.1	65.0	65.9	80.0	82.9	70.0	77.3	78.0	75.5	86.0	74.6
% No Success		23.1	24.5	12.8	12.8	27.0	7.5	6.8	20.0	17.1	10.0	11.4	14.0	12.2	18.0	15.5
% W		25.6	10.2	42.6	31.9	25.9	35.0	34.1	20.0	17.1	30.0	22.7	22.0	24.5	14.0	25.4
Enrollment		39	49	47	47	37	40	44	35	41	50	44	50	49	50	44

Success and Retention Rate Summaries by Course for Chemistry and Science

CHEM 115		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		53.6	52.2	56.8	52.3	45.7	55.3	54.5	56.8	52.5	52.9	56.8	58.6	58.7	64.8	55.1
% Retention		66.9	60.3	74.7	64.2	68.9	67.1	71.7	68.9	68.2	71.6	72.2	71.4	70.3	84.0	70.0
% No Success		13.3	8.2	17.9	17.6	22.5	11.2	17.2	11.7	15.2	18.7	15.4	12.4	11.6	19.2	15.1
% W		33.1	39.7	25.3	35.8	31.1	32.9	28.3	31.1	31.8	28.4	27.8	28.6	29.7	16.0	30.0
Enrollment		181	184	162	176	151	170	198	206	223	155	169	210	138	125	175

CHEM 116		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		67.1	63.8	61.3	54.1	59.0	70.4	67.2	62.5	65.1	76.8	73.3	84.4	77.6	77.1	68.5
% Retention		78.6	72.5	68.0		68.9	79.6	75.0	70.3	69.8	83.9	80.0	92.2	79.6	83.3	77.1
% No Success		11.4	8.7	6.7	16.2	9.8	9.3	7.8	7.8	4.8	7.1	6.7	7.8	2.0	6.3	8.0
% W		21.4	27.5	32.0	29.7	31.1	20.4	25.0	29.7	30.2	16.1	20.0	7.8	20.4	16.7	23.4
Enrollment		70	69	75	74	61	54	64	64	63	56	45	64	49	48	61

Success and Retention Rate Summaries by Course for Chemistry and Science

CHEM 120		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		61.5	48.6	50.3	53.6	47.2	49.5	47.3	50.3	50.0	53.1	58.7	46.6	60.3	64.3	52.9
% Retention		80.2	60.1	68.4	78.8	66.1	63.6	67.8	67.4	67.4	73.5	80.7	68.1	75.0	82.2	71.4
% No Success		18.8	11.5	18.1	25.1	18.9	13.6	20.0	17.1	17.4	20.4	21.7	19.6	14.7	17.8	18.2
% W		19.8	39.9	31.6	21.2	33.9	36.4	32.2	32.6	32.6	26.5	19.3	31.9	25.0	17.8	28.6
Enrollment		192	208	171	179	180	220	205	193	236	260	254	163	156	185	200

CHEM 141		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		50.5	55.7	47.8	61.0	54.9	53.5	55.2	52.0	54.5	59.3	57.4	61.2	73.4	67.0	57.4
% Retention		59.6	67.2	62.0	68.3	60.4	70.3	64.6	66.3	70.0	68.1	69.3	76.7	78.5	79.4	68.6
% No Success		9.1	11.5	14.1	7.3	5.5	16.8	9.4	14.3	15.5	8.8	11.9	13.6	5.1	9.3	10.9
% W		40.4	32.8	38.0	31.7	39.6	29.7	35.4	33.7	30.0	31.9	30.7	23.3	21.5	20.6	31.4
Enrollment		99	122	92	123	91	101	96	98	110	113	101	103	79	97	102

CHEM 142		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		69.0	66.7	74.6	71.1	63.4	66.7	66.0	59.3	78.9	62.7	73.5	52.5	57.7	66.7	66.3
% Retention		78.6	75.0	79.7	82.2	73.2	71.8	76.0	79.6	87.7	74.5	83.7	70.0	69.2	70.0	76.5
% No Success		9.5	8.3	5.1	11.1	9.9	5.1	10.0	20.4	8.8	11.8	10.2	15.0	11.5	3.3	10.0
% W		21.4	25.0	20.3	17.8	26.8	28.2	24.0	20.4	12.3	25.5	16.3	30.0	30.8	30.0	23.5
Enrollment		42	36	59	45	71	39	50	54	57	51	49	40	52	30	48

Success and Retention Rate Summaries by Course for Chemistry and Science

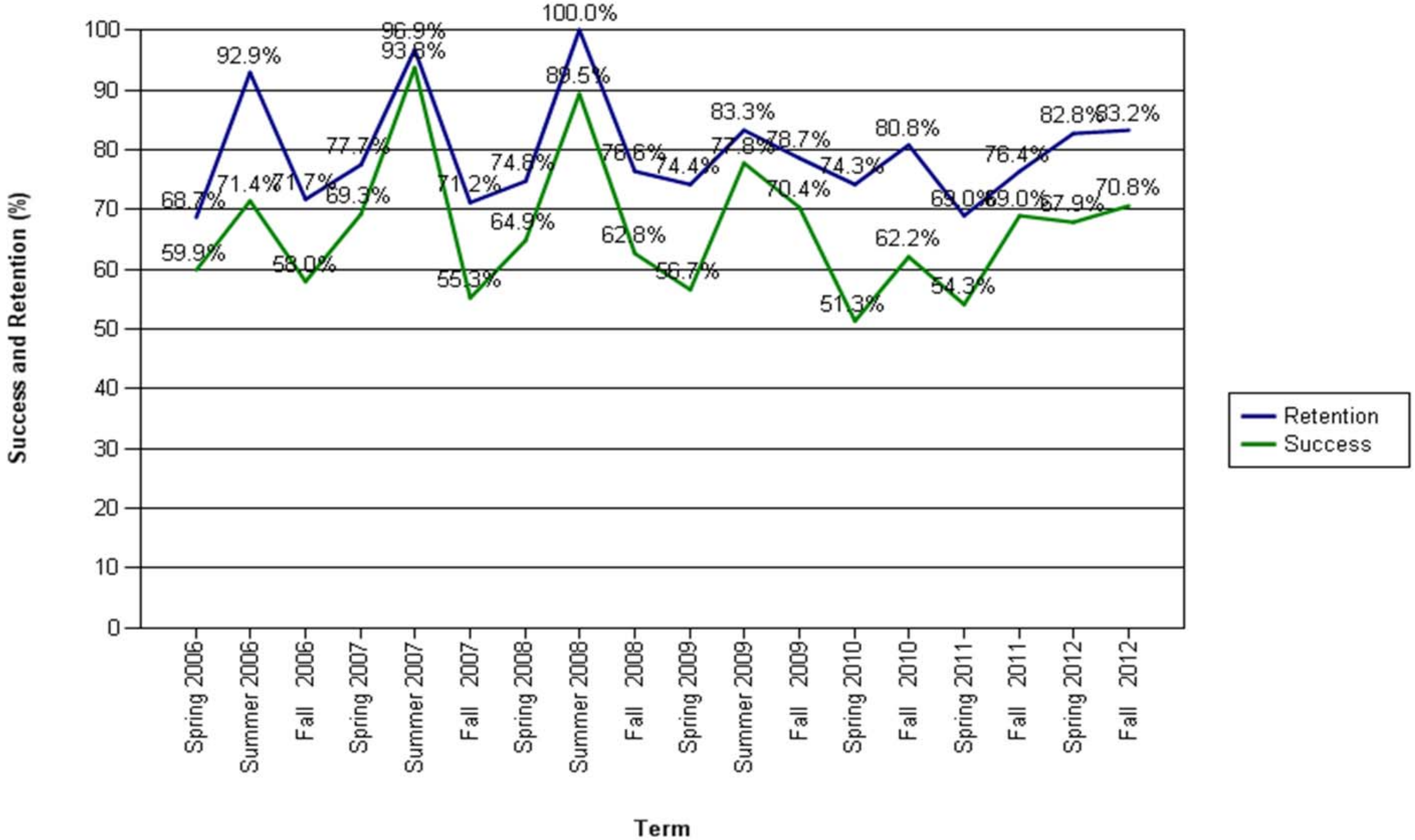
CHEM 231		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		77.8	72.7	40.0	90.5	82.1	66.7	85.2	55.6	52.2	58.7	68.4	47.8	86.4	76.2	68.6
% Retention		94.4	86.4	66.7	90.5	85.7	83.3	92.6	72.2	73.9	73.1	89.5	65.2	100.0	85.7	82.8
% No Success		16.7	13.6	26.7	0.0	3.6	16.7	7.4	16.7	21.7	14.4	21.1	17.4	13.6	9.5	14.2
% W		5.6	13.6	33.3	9.5	14.3	16.7	7.4	27.8	26.1	26.9	10.5	34.8	0.0	14.3	17.2
Enrollment		18	22	15	21	28	12	27	18	23	832	19	23	22	21	79

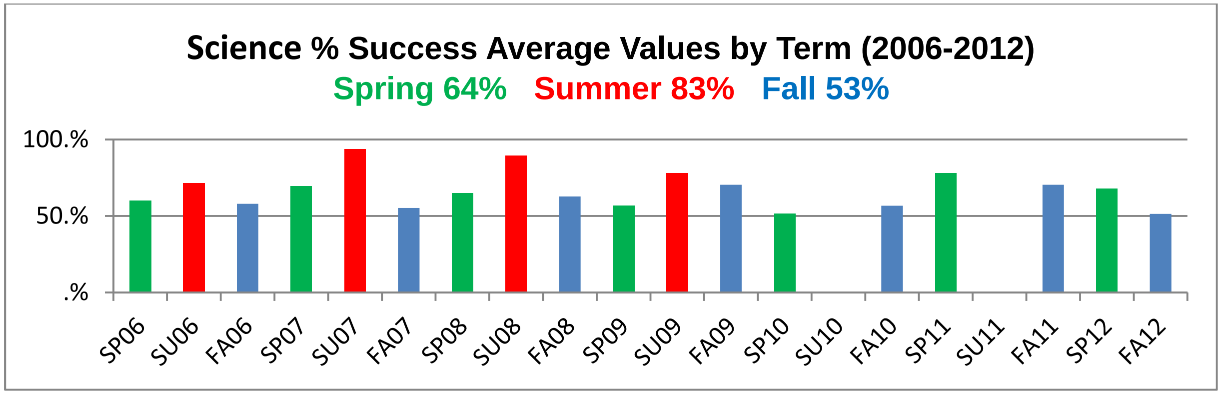
CHEM 232		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		72.7	not offered	80.0	not offered	94.4	not offered	71.4	84.6	84.2	not offered	not offered	75.0	not offered	70.0	79.0
% Retention		90.9		80.0		94.4		85.7	92.3	84.2			75.0		70.0	84.1
% No Success		18.2		0.0		0.0		14.3	7.7	0.0			0.0		0.0	5.0
% W		9.1		20.0		5.6		14.3	7.7	15.8			25.0		30.0	15.9
Enrollment		11		15		18		7	13	19			12		10	13

SCI 110		Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	AVERAGE
% Success		59.9	57.5	69.0	55.0	64.4	62.8	56.7	70.4	51.3	62.2	54.3	69.0	67.9	70.8	62.2
% Retention		68.9	71.4	77.3	70.9	74.2	76.6	74.4	78.7	74.3	80.8	69.0	76.4	82.8	83.2	75.6
% No Success		8.8	13.7	8.3	15.9	9.8	13.0	17.2	7.9	22.3	18.6	14.3	6.9	14.8	12.4	13.1
% W		31.1	28.6	22.7	29.1	25.8	23.4	25.6	21.3	25.7	19.2	31.0	23.6	17.2	16.8	24.4
Enrollment		182	227	216	220	264	183	238	277	265	33	258	216	209	185	212

SCIENCE SUCCESS and RETENTION RATES

Spring 2006 – Fall 2012



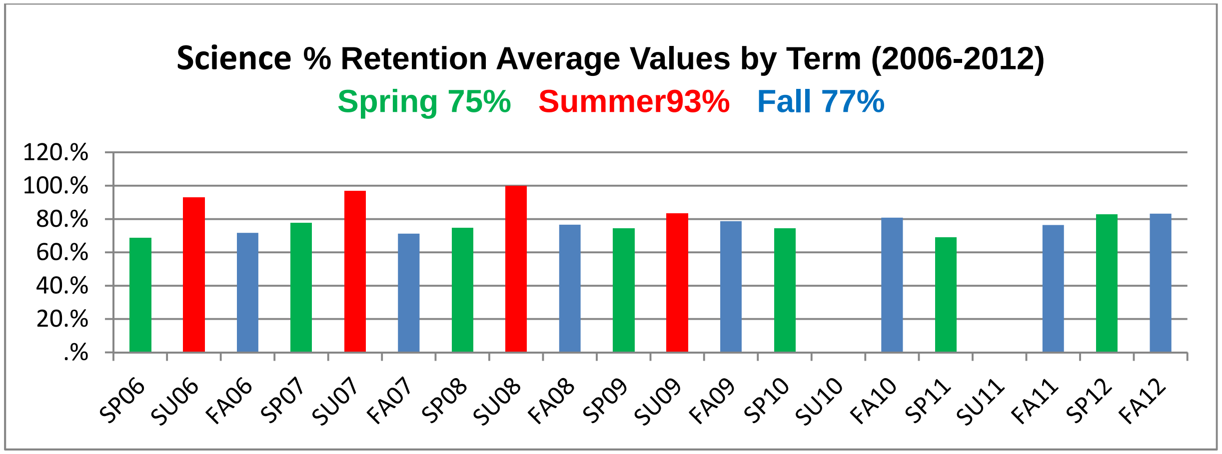


Science Success by Gender

Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	58	61.7%	20	80.%	55	49.1%	71	74.%	18	94.7%	46	46.%	76	60.3%	7	77.8%	55	57.3%
Female	50	57.5%	9	56.3%	74	66.1%	78	65.5%	12	92.3%	74	64.3%	93	68.9%	10	100.%	94	66.7%
Not Reported	1	100.%	1	100.%	2	100.%	0	0.0%		0.0%	1	25.%	1	100.%	0	0.0%	1	50.%
Total	109	59.9%	30	71.4%	131	58.%	149	69.3%	30	93.8%	121	55.3%	170	64.9%	17	89.5%	150	62.8%
	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
66.2%	68	56.7%	10	90.9%	103	74.1%	69	48.3%	50	58.1%	65	55.6%	85	68.%	70	67.3%	65	72.2%
66.7%	67	57.3%	4	57.1%	92	67.2%	66	54.5%	57	66.3%	74	52.9%	63	70.%	69	67.6%	65	69.9%
51.4%	0	0.0%	0	0.0%	0	0.0%	1	100.%	0	0.0%	1	100.%	1	100.%	3	100.%	1	50.%
67.%	135	56.7%	14	77.8%	195	70.4%	136	51.3%	107	62.2%	140	54.3%	149	69.%	142	67.9%	131	70.8%

Science No Success by Gender

Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	9	9.6%	4	16.%	18	16.1%	8	8.3%	0	.%	19	19.%	15	11.9%	2	22.2%	14	14.6%
Female	7	8.%	5	31.3%	13	11.6%	10	8.4%	1	7.7%	16	13.9%	11	8.1%	0	.%	19	13.5%
Not Reported	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	16	8.8%	9	21.4%	31	13.7%	18	8.4%	1	3.1%	35	16.%	26	9.9%	2	10.5%	33	13.8%
	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
	27	22.5%	0	.%	10	7.2%	38	26.6%	19	22.1%	22	18.8%	11	8.8%	16	15.4%	13	14.4%
	15	12.8%	1	14.3%	13	9.5%	23	19.%	13	15.1%	16	11.4%	5	5.6%	15	14.7%	10	10.8%
	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	42	17.6%	1	5.6%	23	8.3%	61	23.%	32	18.6%	38	14.7%	16	7.4%	31	14.8%	23	12.4%

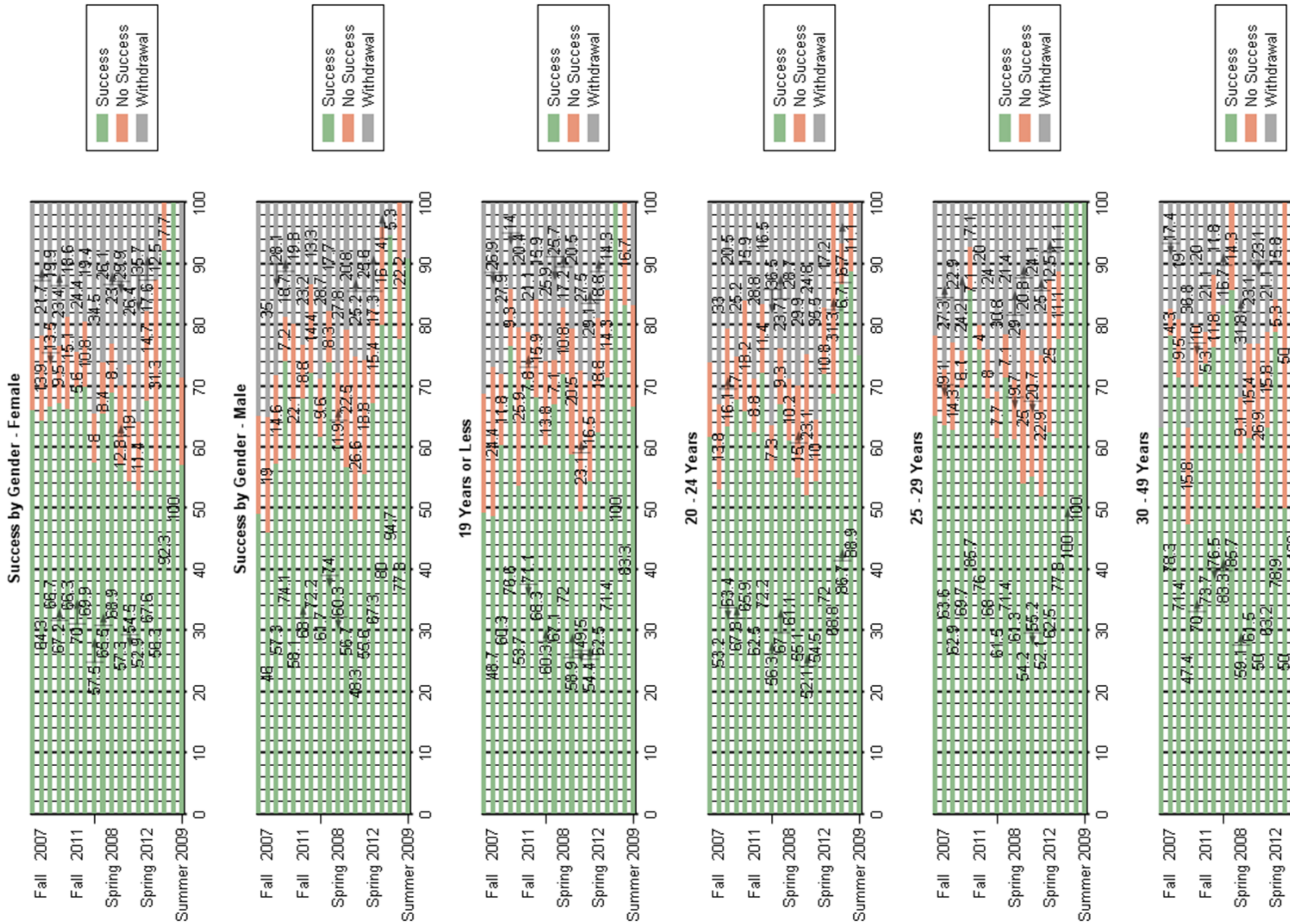


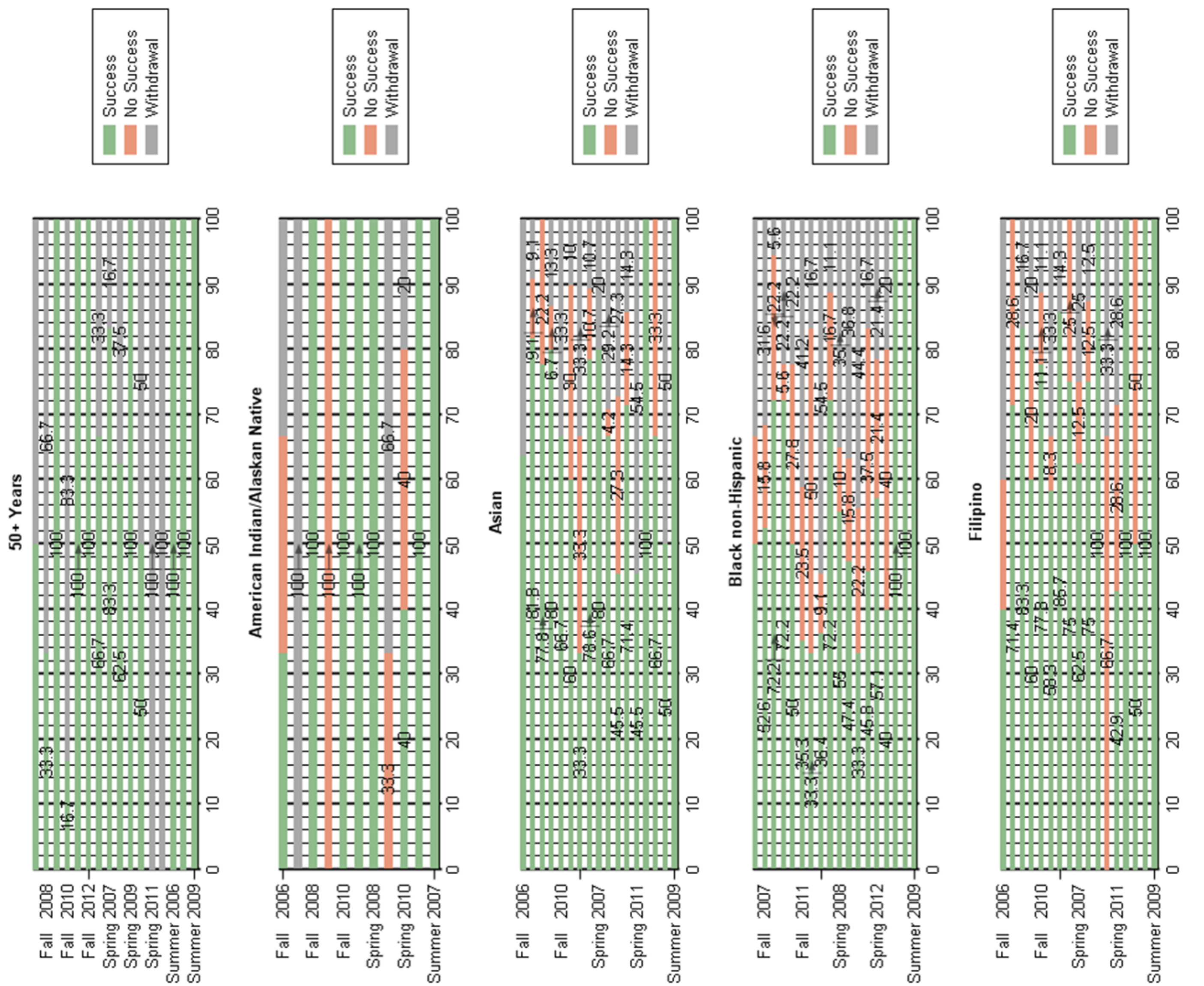
Science Withdrawal by Gender

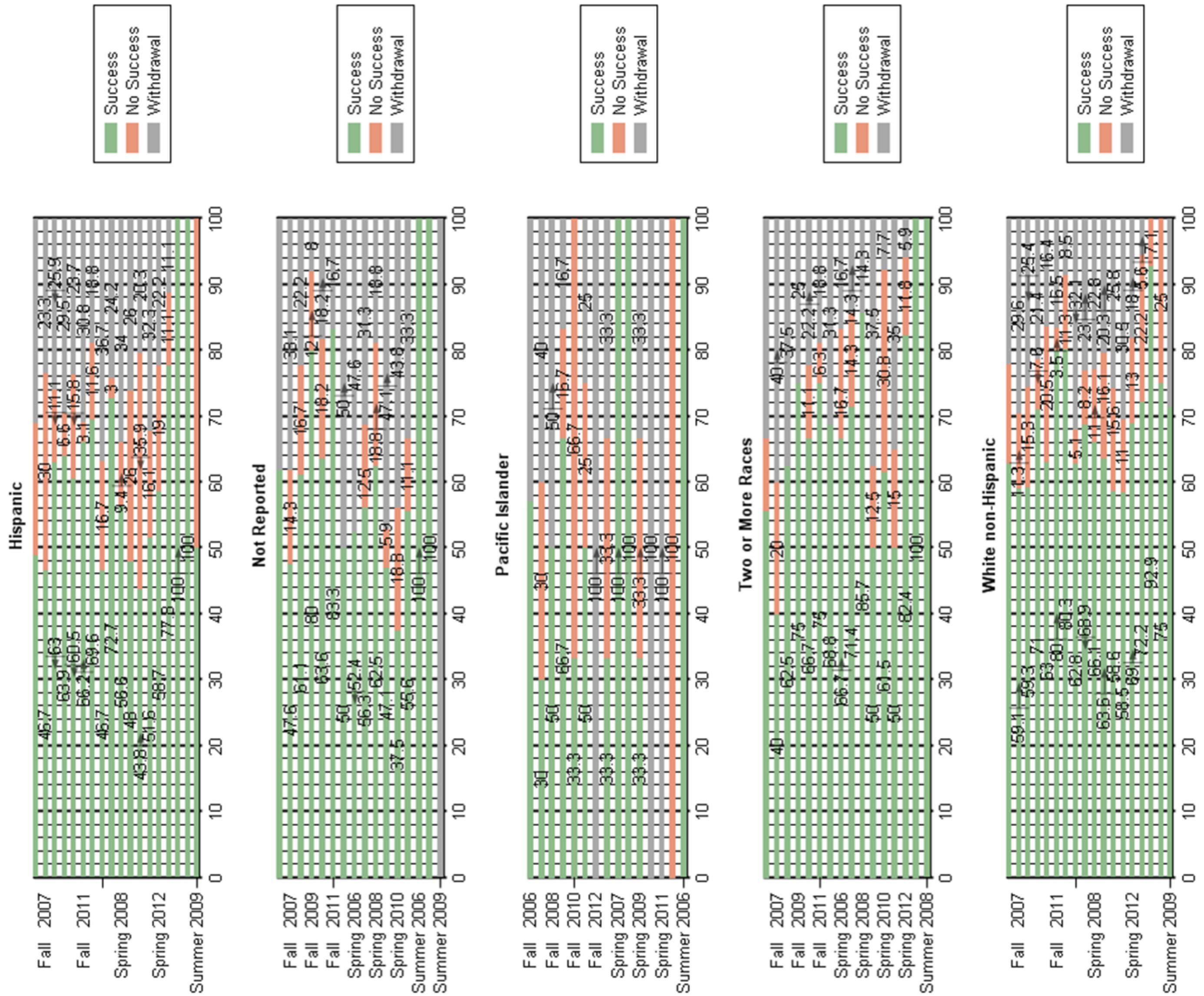
Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	27	28.7%	1	4.%	39	34.8%	17	17.7%	1	5.3%	35	35.%	35	27.8%	0	.%	27	28.1%
Female	30	34.5%	2	12.5%	25	22.3%	31	26.1%	0	.%	25	21.7%	31	23.%	0	.%	28	19.9%
Not Reported	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	75.%	0	0.0%	0	0.0%	1	50.%
Total	57	31.3%	3	7.1%	64	28.3%	48	22.3%	1	3.1%	63	28.8%	66	25.2%	0	.%	56	23.4%
	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
	25	20.8%	1	9.1%	26	18.7%	36	25.2%	17	19.8%	30	25.6%	29	23.2%	18	17.3%	12	13.3%
	35	29.9%	2	28.6%	32	23.4%	32	26.4%	16	18.6%	50	35.7%	22	24.4%	18	17.6%	18	19.4%
	1	100.%	0	0.0%	1	100.%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.%
	61	25.6%	3	16.7%	59	21.3%	68	25.7%	33	19.2%	80	31.%	51	23.6%	36	17.2%	31	16.8%

Science Retention by Gender

Gender	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male	67	71.3%	24	96.%	73	65.2%	79	82.3%	18	94.7%	65	65.%	91	72.2%	9	100.%	69	71.9%
Female	57	65.5%	14	87.5%	87	77.7%	88	73.9%	13	100.%	90	78.3%	104	77.%	10	100.%	113	80.1%
Not Reported	1	100.%	1	100.%	2	100.%	0	0.0%	0	0.0%	1	25.%	1	100.%	0	0.0%	1	50.%
Total	125	68.7%	39	92.9%	162	71.7%	167	77.7%	31	96.9%	156	71.2%	196	74.8%	19	100.%	183	76.6%
	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
80.3%	95	79.2%	10	90.9%	113	81.3%	107	74.8%	69	80.2%	87	74.4%	96	76.8%	86	82.7%	78	86.7%
78.7%	82	70.1%	5	71.4%	105	76.6%	89	73.6%	70	81.4%	90	64.3%	68	75.6%	84	82.4%	75	80.6%
51.4%	0	0.0%	0	0.0%	0	0.0%	1	100.%	0	0.0%	1	100.%	1	100.%	3	100.%	1	50.%
79.6%	177	74.4%	15	83.3%	218	78.7%	197	74.3%	139	80.8%	178	69.%	165	76.4%	173	82.8%	154	83.2%


Success by Gender - Female
Success by Gender - Male
19 Years or Less
20 - 24 Years
25 - 29 Years
30 - 49 Years
Success
No Success
Withdrawal


50+ Years
American Indian/Alaskan Native
Asian
Black non-Hispanic
Filipino
Success
No Success
Withdrawal


Hispanic
Not Reported
Pacific Islander
Two or More Races
White non-Hispanic
Success
No Success
Withdrawal

Science Success by Age

		Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
Age		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less		35	60.3%	10	71.4%	38	49.4%	47	67.1%	6	100.%	38	48.7%	67	72.%	5	83.3%	41	60.3%
20-24		54	56.3%	11	68.8%	66	61.7%	65	67.%	13	86.7%	50	53.2%	66	61.1%	8	88.9%	71	63.4%
25-29		8	61.5%	7	77.8%	15	65.2%	20	71.4%	7	100.%	14	63.6%	19	61.3%	2	100.%	22	62.9%
30-49		10	83.3%	1	50.%	12	63.2%	12	85.7%	3	100.%	18	78.3%	13	59.1%	2	100.%	15	71.4%
50+		2	66.7%	1	100.%	0	0.0%	5	83.3%	1	100.%	1	50.%	5	62.5%	0	0.0%	1	33.3%
Total		109	59.9%	30	71.4%	131	58.%	149	69.3%	30	93.8%	121	55.3%	170	64.9%	17	89.5%	150	62.8%
		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	**65.2%**	43	58.9%	4	66.7%	82	76.6%	45	49.5%	29	53.7%	43	54.4%	64	71.1%	40	62.5%	43	68.3%
20-24	**65.8%**	70	55.1%	6	75.%	78	67.8%	61	52.1%	58	65.9%	60	54.5%	50	62.5%	67	72.%	57	72.2%
25-29	**71.5%**	13	54.2%	2	100.%	23	69.7%	16	55.2%	12	85.7%	25	52.1%	19	76.%	20	62.5%	17	68.%
30-49	**72.9%**	8	61.5%	1	100.%	9	47.4%	13	50.%	7	70.%	12	63.2%	14	73.7%	15	78.9%	13	76.5%
50+	**75.9%**	1	100.%	1	100.%	3	100.%	1	50.%	1	16.7%	0	0.0%	2	100.%	0	0.0%	1	100.%
Total	**67.%**	135	56.7%	14	77.8%	195	70.4%	136	51.3%	107	62.2%	140	54.3%	149	69.0%	142	67.9%	131	70.8%

Science No Success by Age

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less	8	13.8%	2	14.3%	15	19.5%	5	7.1%	0	0.0%	19	24.4%	10	10.8%	1	16.7%	8	11.8%
20-24	7	7.3%	5	31.3%	13	12.1%	9	9.3%	1	6.7%	13	13.8%	11	10.2%	1	11.1%	18	16.1%
25-29	1	7.7%	1	11.1%	3	13.%	2	7.1%	0	0.0%	2	9.1%	3	9.7%	0	0.0%	5	14.3%
30-49	0	.%	1	50.%	0	0.0%	2	14.3%	0	0.0%	1	4.3%	2	9.1%	0	0.0%	2	9.5%
50+	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	16	8.8%	9	21.4%	31	13.7%	18	8.4%	1	3.1%	35	16.%	26	9.9%	2	10.5%	33	13.8%
	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	15	20.5%	1	16.7%	10	9.3%	21	23.1%	14	25.9%	13	16.5%	7	7.8%	12	18.8%	10	15.9%
20-24	19	15.%	0	0.0%	8	7.%	27	23.1%	16	18.2%	11	10.%	7	8.8%	10	10.8%	9	11.4%
25-29	6	25.%	0	0.0%	2	6.1%	6	20.7%	1	7.1%	11	22.9%	1	4.%	8	25.%	2	8.%
30-49	2	15.4%	0	0.0%	3	15.8%	7	26.9%	1	10.%	3	15.8%	1	5.3%	1	5.3%	2	11.8%
50+	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	42	17.6%	1	5.6%	23	8.3%	61	23.%	32	18.6%	38	14.7%	16	7.4%	31	14.8%	23	12.4%

Science Withdrawal by Age

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less	15	25.9%	2	14.3%	24	31.2%	18	25.7%	0	0.0%	21	26.9%	16	17.2%	0	0.0%	19	27.9%
20-24	35	36.5%	0	0.0%	28	26.2%	23	23.7%	1	6.7%	31	33.%	31	28.7%	0	0.0%	23	20.5%
25-29	4	30.8%	1	11.1%	5	21.7%	6	21.4%	0	0.0%	6	27.3%	9	29.%	0	0.0%	8	22.9%
30-49	2	16.7%	0	0.0%	7	36.8%	0	0.0%	0	0.0%	4	17.4%	7	31.8%	0	0.0%	4	19.%
50+	1	33.3%	0	0.0%	0	0.0%	1	16.7%	0	0.0%	1	50.%	3	37.5%	0	0.0%	2	66.7%
Total	57	31.3%	3	7.1%	64	28.3%	48	22.3%	1	3.1%	63	28.8%	66	25.2%	0	0.0%	56	23.4%

	Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	15	20.5%	1	16.7%	15	14.%	25	27.5%	11	20.4%	23	29.1%	19	21.1%	12	18.8%	10	15.9%
20-24	38	29.9%	2	25.%	29	25.2%	29	24.8%	14	15.9%	39	35.5%	23	28.8%	16	17.2%	13	16.5%
25-29	5	20.8%	0	0.0%	8	24.2%	7	24.1%	1	7.1%	12	25.%	5	20.%	4	12.5%	6	24.%
30-49	3	23.1%	0	0.0%	7	36.8%	6	23.1%	2	20.%	4	21.1%	4	21.1%	3	15.8%	2	11.8%
50+	0	0.0%	0	0.0%	0	0.0%	1	50.%	5	83.3%	2	100.%	0	0.0%	1	100.%	0	0.0%
Total	61	25.6%	3	16.7%	59	21.3%	68	25.7%	33	19.2%	80	31.%	51	23.6%	36	17.2%	31	16.8%

Science Retention by Age

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
19 or less	43	74.1%	12	85.7%	53	68.8%	52	74.3%	6	100.%	57	73.1%	77	82.8%	6	100.%	49	72.1%
20-24	61	63.5%	16	100.%	79	73.8%	74	76.3%	14	93.3%	63	67.%	77	71.3%	9	100.%	89	79.5%
25-29	9	69.2%	8	88.9%	18	78.3%	22	78.6%	7	100.%	16	72.7%	22	71.%	2	100.%	27	77.1%
30-49	10	83.3%	2	100.%	12	63.2%	14	100.%	3	100.%	19	82.6%	15	68.2%	2	100.%	17	81.%
50+	2	66.7%	1	100.%	0	0.0%	5	83.3%	1	100.%	1	50.%	5	62.5%	0	0.0%	1	33.3%
Total	125	68.7%	39	92.9%	162	71.7%	167	77.7%	31	96.9%	156	71.2%	196	74.8%	19	100.%	183	76.6%

		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	**80.4%**	58	79.5%	5	83.3%	92	86.%	66	72.5%	43	79.6%	56	70.9%	71	78.9%	52	81.3%	53	84.1%
20-24	**78.1%**	89	70.1%	6	75.%	86	74.8%	88	75.2%	74	84.1%	71	64.5%	57	71.3%	77	82.8%	66	83.5%
25-29	**82.1%**	19	79.2%	2	100.%	25	75.8%	22	75.9%	13	92.9%	36	75.%	20	80.%	28	87.5%	19	76.%
30-49	**83.6%**	10	76.9%	1	100.%	12	63.2%	20	76.9%	8	80.%	15	78.9%	15	78.9%	16	84.2%	15	88.2%
50+	**75.9%**	1	100.%	1	100.%	3	100.%	1	50.%	1	16.7%	0	0.0%	2	100.%	0	0.0%	1	100.%
Total	**79.6%**	177	74.4%	15	83.3%	218	78.7%	197	74.3%	139	80.8%	178	69.%	165	76.4%	173	82.8%	154	83.2%

Science Success by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	1	100.%	0	0.0%	1	33.3%	0	0.0%	1	100.0%	0	0.0%
Asian	22	78.6%	2	66.7%	7	63.6%	8	80.0%	1	50.0%	9	81.8%
Black non-Hispanic	4	36.4%	2	40.0%	6	50.0%	13	72.2%	3	100.0%	10	52.6%
Filipino	3	75.0%	1	50.0%	2	40.0%	5	62.5%	2	100.0%	5	71.4%
Hispanic	14	46.7%	7	77.8%	22	48.9%	24	72.7%	7	100.0%	14	46.7%
Not Reported	11	52.4%	4	100.0%	13	61.9%	9	56.3%	2	100.0%	10	47.6%
Pacific Islander	1	33.3%	1	100.0%	4	57.1%	1	100.0%		0.0%	3	30.0%
Two or More	4	66.7%	0	0.0%	5	55.6%	5	71.4%	1	100.0%	2	40.0%
White non-Hispanic	49	62.8%	13	72.2%	71	62.8%	84	68.9%	13	92.9%	68	59.1%
Total	109	59.9%	30	71.4%	131	58.0%	149	69.3%	30	93.8%	121	55.3%
	Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009	
	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	4	100.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%
Asian	16	66.7%	0	0.0%	7	77.8%	5	45.5%	4	100.0%	12	80.0%
Black non-Hispanic	11	55.0%	5	100.0%	13	72.2%	9	47.4%	3	100.0%	13	72.2%
Filipino	6	75.0%	0	0.0%	5	83.3%	9	100.0%	1	100.0%	3	60.0%
Hispanic	30	56.6%	5	100.0%	34	63.0%	24	48.0%	1	50.0%	39	63.9%
Not Reported	10	62.5%	0	0.0%	11	61.1%	8	47.1%	0	0.0%	20	80.0%
Pacific Islander	3	100.0%	0	0.0%	3	50.0%	1	33.3%	0	0.0%	4	66.7%
Two or More	6	85.7%	1	100.0%	5	62.5%	4	50.0%	0	0.0%	9	75.0%
White non-Hispanic	84	66.1%	6	75.0%	70	59.3%	75	63.6%	5	71.4%	93	71.0%
Total	170	64.9%	17	89.5%	150	62.8%	135	56.7%	14	77.8%	195	70.4%

		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%
Amer.	84.2%	2	40.0%	2	100.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
Asian	68.7%	10	71.4%	6	66.7%	5	45.5%	6	60.0%	7	100.0%	1	33.3%
Black	58.5%	6	33.3%	9	50.0%	11	45.8%	6	35.3%	8	57.1%	4	33.3%
Filipino	73.9%	0	0.0%	7	77.8%	3	42.9%	7	58.3%	3	100.0%	6	85.7%
Hispanic	62.5%	28	43.8%	23	60.5%	32	51.6%	43	66.2%	37	58.7%	48	69.6%
NR	63.9%	6	37.5%	7	63.6%	5	55.6%	5	83.3%	0	0.0%	1	50.0%
Pacific	59.4%	0	0.0%	1	33.3%	0	0.0%	2	50.0%	0	0.0%	0	0.0%
> Two	69.4%	8	61.5%	6	66.7%	10	50.0%	12	75.0%	14	82.4%	11	68.8%
White	68.6%	75	58.6%	46	63.0%	69	58.5%	68	80.0%	69	69.0%	57	80.3%
Total	67.0%	136	51.3%	107	62.2%	140	54.3%	149	69.0%	142	67.9%	131	70.8%

Science No Success by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	0	0.0%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
Asian	3	10.7%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	1	9.1%
Black non-Hispanic	1	9.1%	2	40.0%	2	16.7%	3	16.7%	0	0.0%	3	15.8%
Filipino	1	25.0%	1	50.0%	1	20.0%	1	12.5%	0	0.0%	2	28.6%
Hispanic	5	16.7%	1	11.1%	9	20.0%	1	3.0%	0	0.0%	9	30.0%
Not Reported	0	0.0%	0	0.0%	0	0.0%	2	12.5%	0	0.0%	3	14.3%
Pacific Islander	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	30.0%
Two or More	1	16.7%	0	0.0%	1	11.1%	1	14.3%	0	0.0%	1	20.0%
White non-Hispanic	4	5.1%	4	22.2%	17	15.0%	10	8.2%	1	7.1%	13	11.3%
Total	16	8.8%	9	21.4%	31	13.7%	18	8.4%	1	3.1%	35	16.0%
	Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009	
	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	0	0.0%	0	0.0%	0	0.0%	1	33.3%	0	0.0%	1	100.0%
Asian	1	4.2%	0	0.0%	2	22.2%	3	27.3%	0	0.0%	1	6.7%
Black non-Hispanic	2	10.0%	0	0.0%	4	22.2%	3	15.8%	0	0.0%	1	5.6%
Filipino	1	12.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	20.0%
Hispanic	5	9.4%	0	0.0%	6	11.1%	13	26.0%	1	50.0%	4	6.6%
Not Reported	3	18.8%	0	0.0%	3	16.7%	1	5.9%	0	0.0%	3	12.0%
Pacific Islander	0	0.0%	0	0.0%	0	0.0%	1	33.3%	0	0.0%	1	16.7%
Two or More	0	0.0%	0	0.0%	0	0.0%	1	12.5%	0	0.0%	10	7.6%
White non-Hispanic	14	11.0%	2	25.0%	18	15.3%	19	16.1%	0	0.0%	1	33.3%
Total	26	9.9%	2	10.5%	33	13.8%	42	17.6%	1	5.6%	23	8.3%

		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%
Amer.	51.7%	2	40.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	19.1%	2	14.3%	0	0.0%	0	0.0%	3	30.0%	0	0.0%	1	33.3%
Black	25.8%	4	22.2%	5	27.8%	9	37.5%	4	23.5%	3	21.4%	6	50.0%
Filipino	25.8%	2	66.7%	1	11.1%	2	28.6%	1	8.3%	0	0.0%	0	0.0%
Hispanic	17.8%	23	35.9%	6	15.8%	10	16.1%	2	3.1%	12	19.0%	8	11.6%
NR	15.3%	3	18.8%	2	18.2%	1	11.1%	1	25.0%	0	0.0%	0	0.0%
Pacific	39.6%	4	30.8%	2	66.7%	0	0.0%	1	6.3%	1	100.0%	0	0.0%
> Two	12.7%	20	15.6%	1	11.1%	3	15.0%	3	3.5%	2	11.8%	0	0.0%
White	21.1%	1	33.3%	15	20.5%	13	11.0%	1	100.0%	13	13.0%	8	11.3%
Total	12.7%	61	23.0%	32	18.6%	38	14.7%	16	7.4%	31	14.8%	23	12.4%

Science Retention by Ethnicity

Ethnicity	Spring 2006 n	Spring 2006 %	Summer 2006 n	Summer 2006 %	Fall 2006 n	Fall 2006 %	Spring 2007 n	Spring 2007 %	Summer 2007 n	Summer 2007 %	Fall 2007 n	Fall 2007 %
Nat. Amer. / Alaskan	1	100.%	0	0.0%	2	66.7%	0	0.0%	1	100.0%	0	0.0%
Asian	25	89.3%	3	100.0%	7	63.6%	8	80.0%	1	50.0%	10	90.9%
Black non-Hispanic	5	45.5%	4	80.0%	8	66.7%	16	88.9%	3	100.0%	13	68.4%
Filipino	4	100.%	2	100.0%	3	60.0%	6	75.0%	2	100.0%	7	100.0%
Hispanic	19	63.3%	8	88.9%	31	68.9%	25	75.8%	7	100.0%	23	76.7%
Not Reported	11	52.4%	4	100.0%	13	61.9%	11	68.8%	2	100.0%	13	61.9%
Pacific Islander	2	66.7%	1	100.0%	4	57.1%	1	100.0%	0	0.0%	6	60.0%
Two or More	5	83.3%	0	0.0%	6	66.7%	6	85.7%	1	100.0%	3	60.0%
White non-Hispanic	53	67.9%	17	94.4%	88	77.9%	94	77.0%	14	100.0%	81	70.4%
Total	125	68.7%	39	92.9%	162	71.7%	167	77.7%	31	96.9%	156	71.2%

	Spring 2008 n	Spring 2008 %	Summer 2008 n	Summer 2008 %	Fall 2008 n	Fall 2008 %	Spring 2009 n	Spring 2009 %	Summer 2009 n	Summer 2009 %	Fall 2009 n	Fall 2009 %
Nat. Amer. / Alaskan	4	100.0%	0	0.0%	2	100.0%	1	33.3%	0	0.0%	1	100.0%
Asian	17	70.8%	0	0.0%	9	100.0%	8	72.7%	4	100.0%	13	86.7%
Black non-Hispanic	13	65.0%	5	100.0%	17	94.4%	12	63.2%	3	100.0%	14	77.8%
Filipino	7	87.5%	0	0.0%	5	83.3%	9	100.0%	1	100.0%	4	80.0%
Hispanic	35	66.0%	5	100.0%	40	74.1%	37	74.0%	2	100.0%	43	70.5%
Not Reported	13	81.3%	0	0.0%	14	77.8%	9	52.9%	0	0.0%	23	92.0%
Pacific Islander	3	100.0%	0	0.0%	3	50.0%	2	66.7%	0	0.0%	5	83.3%
Two or More	6	85.7%	1	100.0%	5	62.5%	5	62.5%	0	0.0%	9	75.0%
White non-Hispanic	98	77.2%	8	100.0%	88	74.6%	94	79.7%	5	71.4%	103	78.6%
Total	196	74.8%	19	100.0%	183	76.6%	177	74.4%	15	83.3%	218	78.7%

	Average	Spring 2010 n	Spring 2010 %	Fall 2010 n	Fall 2010 %	Spring 2011 n	Spring 2011 %	Fall 2011 n	Fall 2011 %	Spring 2012 n	Spring 2012 %	Fall 2012 n	Fall 2012 %
Amer.	88.0%	4	80.0%	2	100.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
Asian	79.9%	12	85.7%	6	66.7%	5	45.5%	9	90.0%	7	100.0%	2	66.7%
Black	77.1%	10	55.6%	14	77.8%	20	83.3%	10	58.8%	11	78.6%	10	83.3%
Filipino	86.2%	2	66.7%	8	88.9%	5	71.4%	8	66.7%	3	100.0%	6	85.7%
Hispanic	78.3%	51	79.7%	29	76.3%	42	67.7%	45	69.2%	49	77.8%	56	81.2%
NR	72.5%	9	56.3%	9	81.8%	6	66.7%	5	83.3%	0	0.0%	1	50.0%
Pacific	79.9%	0	0.0%	3	100.0%	0	0.0%	3	75.0%	1	100.0%	0	0.0%
> Two	78.8%	12	92.3%	7	77.8%	13	65.0%	13	81.3%	16	94.1%	11	68.8%
White	80.8%	95	74.2%	61	83.6%	82	69.5%	71	83.5%	82	82.0%	65	91.5%
Total	79.6%	197	74.3%	139	80.8%	178	69.0%	165	76.4%	173	82.8%	154	83.2%

Science Withdrawal by Ethnicity

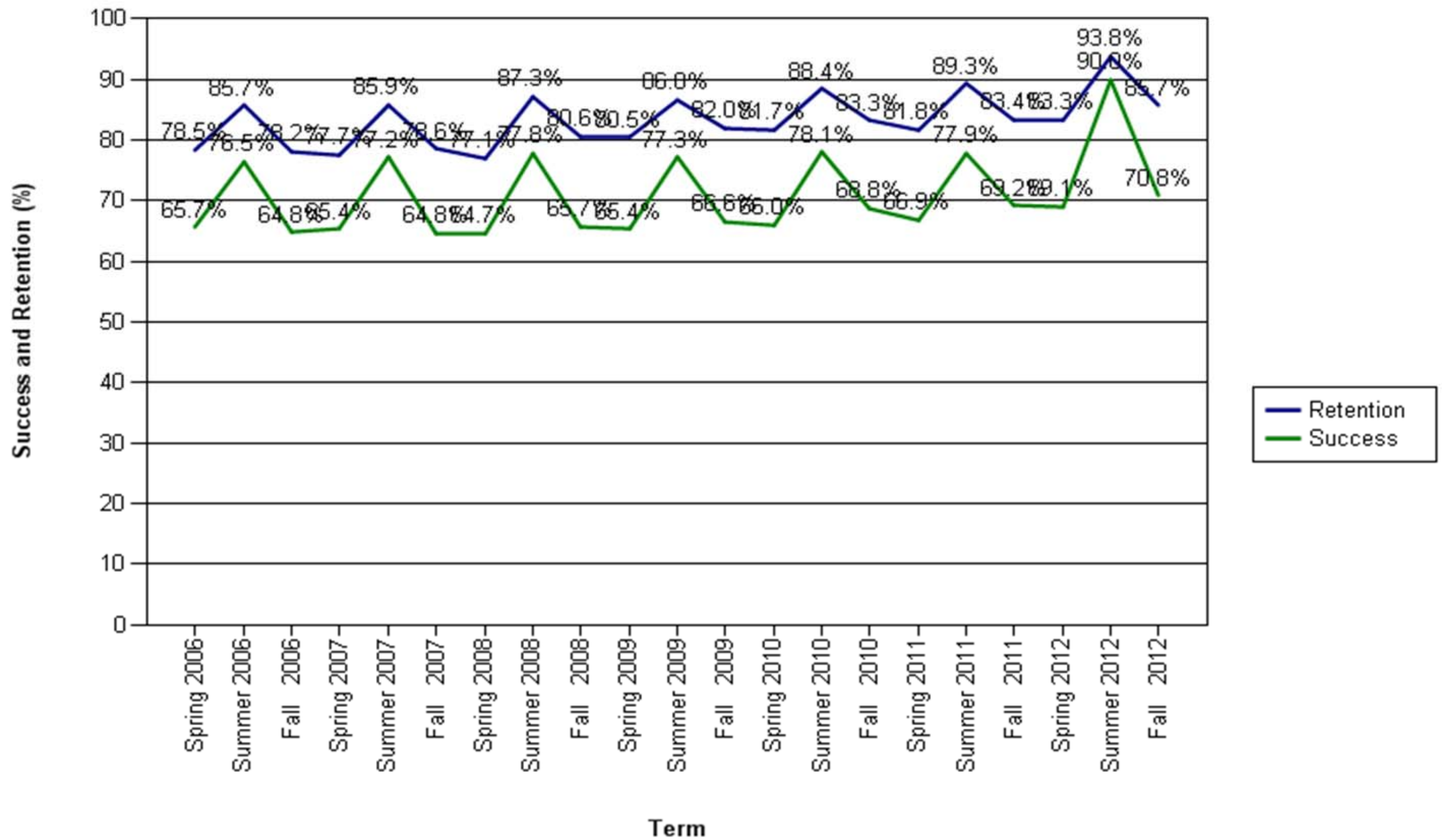
	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	0	0.0%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	1	100.0%
Asian	3	10.7%	0	0.0%	4	36.4%	2	20.0%	1	50.0%	1	9.1%
Black non-Hispanic	6	54.5%	1	20.0%	4	33.3%	2	11.1%	0	0.0%	6	31.6%
Filipino	0	0.0%	0	0.0%	2	40.0%	2	25.0%	0	0.0%	0	0.0%
Hispanic	11	36.7%	1	11.1%	14	31.1%	8	24.2%	0	0.0%	7	23.3%
Not Reported	10	47.6%	0	0.0%	8	38.1%	5	31.3%	0	0.0%	8	38.1%
Pacific Islander	1	33.3%	0	0.0%	3	42.9%	0	0.0%	0	0.0%	4	40.0%
Two or More	1	16.7%	0	0.0%	3	33.3%	1	14.3%	0	0.0%	2	40.0%
White non-Hispanic	25	32.1%	1	5.6%	25	22.1%	28	23.0%	0	0.0%	34	29.6%
Total	57	31.3%	3	7.1%	64	28.3%	48	22.3%	1	3.1%	63	28.8%

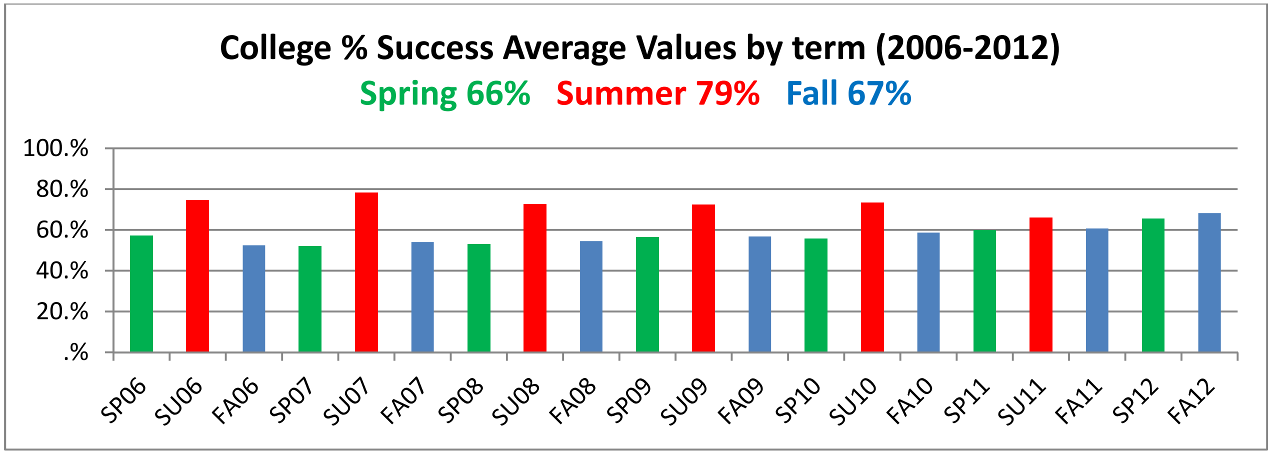
	Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009	
	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	0	0.0%	0	0.0%	0	0.0%	2	66.7%	0	0.0%	0	0.0%
Asian	7	29.2%	0	0.0%	0	0.0%	3	27.3%	0	0.0%	2	13.3%
Black non-Hispanic	7	35.0%	0	0.0%	1	5.6%	7	36.8%	0	0.0%	4	22.2%
Filipino	1	12.5%	0	0.0%	1	16.7%	0	0.0%	0	0.0%	1	20.0%
Hispanic	18	34.0%	0	0.0%	14	25.9%	13	26.0%	0	0.0%	18	29.5%
Not Reported	3	18.8%	0	0.0%	4	22.2%	8	47.1%	1	100.0%	2	8.0%
Pacific Islander	0	0.0%	0	0.0%	3	50.0%	1	33.3%	0	0.0%	1	16.7%
Two or More	1	14.3%	0	0.0%	3	37.5%	3	37.5%	0	0.0%	3	25.0%
White non-Hispanic	29	22.8%	0	0.0%	30	25.4%	24	20.3%	2	28.6%	28	21.4%
Total	66	25.2%	0	0.0%	56	23.4%	61	25.6%	3	16.7%	59	21.3%

		Spring 2010		Fall 2010		Spring 2011		Fall 2011		Spring 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%
Amer.	55.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Asian	26.3%	2	14.3%	3	33.3%	6	54.5%	1	10.0%	0	0.0%	1	33.3%
Black	27.5%	8	44.4%	4	22.2%	4	16.7%	7	41.2%	3	21.4%	2	16.7%
Filipino	23.5%	1	33.3%	1	11.1%	2	28.6%	4	33.3%	0	0.0%	1	14.3%
Hispanic	26.0%	13	20.3%	9	23.7%	20	32.3%	20	30.8%	14	22.2%	13	18.8%
NR	36.6%	7	43.8%	2	18.2%	3	33.3%	1	16.7%	0	0.0%	1	50.0%
Pacific	54.1%	1	100.0%	0	0.0%	1	100.0%	1	25.0%	0	0.0%	1	100.0%
> Two	24.2%	1	7.7%	2	22.2%	7	35.0%	3	18.8%	1	5.9%	5	31.3%
White	21.7%	33	25.8%	12	16.4%	36	30.5%	14	16.5%	18	18.0%	6	8.5%
Total	21.6%	68	25.7%	33	19.2%	80	31.0%	51	23.6%	36	17.2%	31	16.8%

COLLEGE SUCCESS and RETENTION RATES

Spring 2006 – Fall 2012



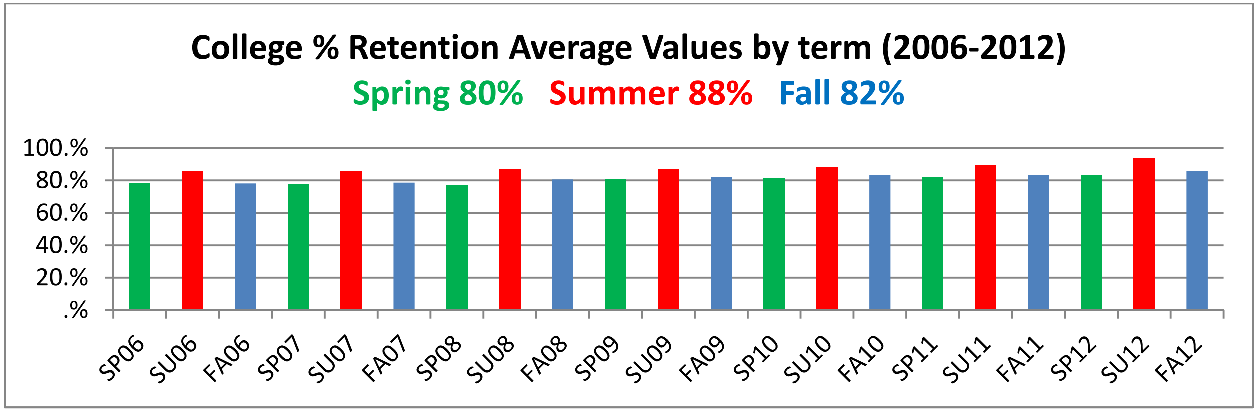


College Success by Gender

			Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Gender			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male			13,589	63.9%	2,936	75.8%	13,996	63.4%	14,192	63.6%	3,374	77.5%	14,748	62.6%	14,924	62.1%	3,358	77.7%	15,097	63.%	15,960	63.8%
Female			18,383	67.1%	4,501	77.1%	18,828	65.9%	18,922	66.8%	4,867	76.9%	19,690	66.5%	20,197	66.8%	5,064	77.8%	20,840	67.9%	21,876	66.6%
No Report			152	67.%	52	72.2%	200	67.1%	232	71.6%	47	88.7%	208	66.9%	223	69.9%	90	84.1%	280	67.6%	308	65.7%
Total			32,124	65.7%	7,489	76.5%	33,024	64.8%	33,346	65.4%	8,288	77.2%	34,646	64.8%	35,344	64.7%	8,512	77.8%	36,217	65.7%	38,144	65.4%
	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Average	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
69.7%	4,285	77.8%	17,415	65.1%	17,290	64.2%	2,595	77.6%	17,240	67.6%	16,898	65.8%	1,429	78.%	17,435	67.9%	16,108	67.8%	298	88.7%	16,121	68.7%
71.9%	6,230	76.9%	22,391	67.8%	22,599	67.5%	3,514	78.4%	21,987	69.8%	21,326	67.9%	1,673	77.6%	21,484	70.4%	19,833	70.2%	267	91.8%	20,273	72.6%
71.2%	102	75.6%	327	66.5%	320	66.1%	53	80.3%	301	64.6%	331	68.%	36	83.7%	327	66.3%	313	70.2%	2	66.7%	244	66.8%
70.9%	10,617	77.3%	40,133	66.6%	40,209	66.%	6,162	78.1%	39,528	68.8%	38,555	66.9%	3,138	77.9%	39,246	69.2%	36,254	69.1%	567	90.%	36,638	70.8%

College No Success by Gender

			Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Gender			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male			3,026	14.2%	392	10.1%	3,214	14.6%	3,017	13.5%	385	8.8%	3,591	15.2%	3,305	13.8%	448	10.4%	3,984	16.6%	4,234	16.9%
Female			3,195	11.7%	496	8.5%	3,558	12.4%	3,217	11.4%	544	8.6%	3,783	12.8%	3,394	11.2%	575	8.8%	4,136	13.5%	4,541	13.8%
Not Reported			27	11.9%	8	11.1%	43	14.4%	33	10.2%	3	5.7%	37	11.9%	32	10.%	7	6.5%	50	12.1%	76	16.2%
Total			6,248	12.8%	896	9.2%	6,815	13.4%	6,267	12.3%	932	8.7%	7,411	13.9%	6,731	12.3%	1,030	9.4%	8,170	14.8%	8,851	15.2%
	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
	535	9.7%	4,512	16.9%	4,692	17.4%	396	11.8%	4,041	15.8%	4,108	16.%	228	12.5%	3,968	15.5%	3,663	15.4%	14	4.2%	3,898	16.6%
	744	9.2%	4,741	14.3%	4,779	14.3%	414	9.2%	4,239	13.5%	4,369	13.9%	227	10.5%	4,028	13.2%	3,728	13.2%	10	3.4%	3,737	13.4%
	26	19.3%	54	11.%	76	15.7%	7	10.6%	67	14.4%	61	12.5%	5	11.6%	65	13.2%	65	14.6%		.%	65	17.8%
	1,305	9.5%	9,307	15.4%	9,547	15.7%	817	10.4%	8,347	14.5%	8,538	14.8%	460	11.4%	8,061	14.2%	7,456	14.2%	24	3.8%	7,700	14.9%

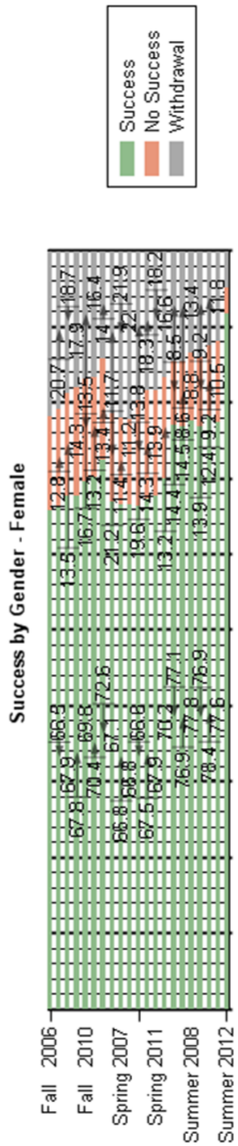


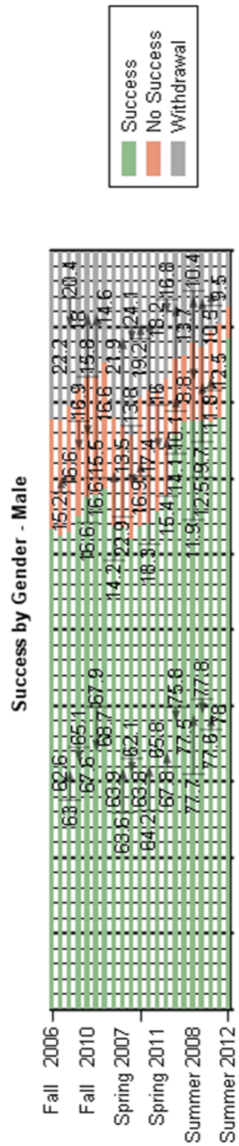
College Withdrawal by Gender

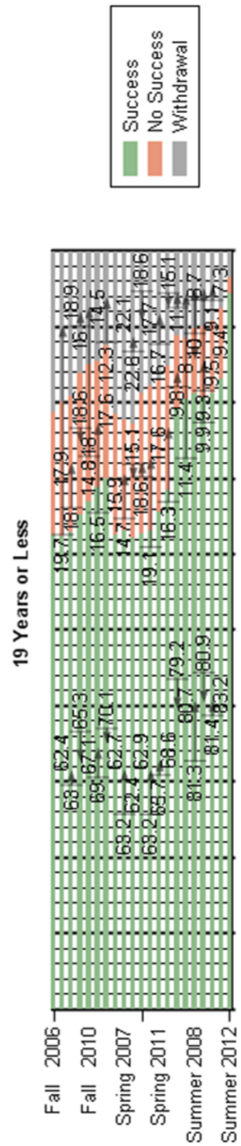
			Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Gender			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male			4,661	21.9%	547	14.1%	4,872	22.1%	5,116	22.9%	595	13.7%	5,237	22.2%	5,786	24.1%	515	11.9%	4,883	20.4%	4,813	19.2%
Female			5,814	21.2%	840	14.4%	6,205	21.7%	6,203	21.9%	915	14.5%	6,143	20.7%	6,666	22.%	869	13.4%	5,730	18.7%	6,454	19.6%
Not Reported			48	21.1%	12	16.7%	55	18.5%	59	18.2%	3	5.7%	66	21.2%	64	20.1%	10	9.3%	84	20.3%	85	18.1%
Total			10,523	21.5%	1,399	14.3%	11,132	21.8%	11,378	22.3%	1,513	14.1%	11,446	21.4%	12,516	22.9%	1,394	12.7%	10,697	19.4%	11,352	19.5%
	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
	687	12.5%	4,805	18.%	4,932	18.3%	352	10.5%	4,233	16.6%	4,684	18.2%	174	9.5%	4,261	16.6%	3,979	16.8%	24	7.1%	3,433	14.6%
	1,126	13.9%	5,916	17.9%	6,122	18.3%	555	12.4%	5,264	16.7%	5,727	18.2%	255	11.8%	5,023	16.4%	4,696	16.6%	14	4.8%	3,905	14.%
	7	5.2%	111	22.6%	88	18.2%	6	9.1%	98	21.%	95	19.5%	2	4.7%	101	20.5%	68	15.2%	1	33.3%	56	15.3%
	1,820	13.2%	10,832	18.%	11,142	18.3%	913	11.6%	9,595	16.7%	10,506	18.2%	431	10.7%	9,385	16.6%	8,743	16.7%	39	6.2%	7,394	14.3%

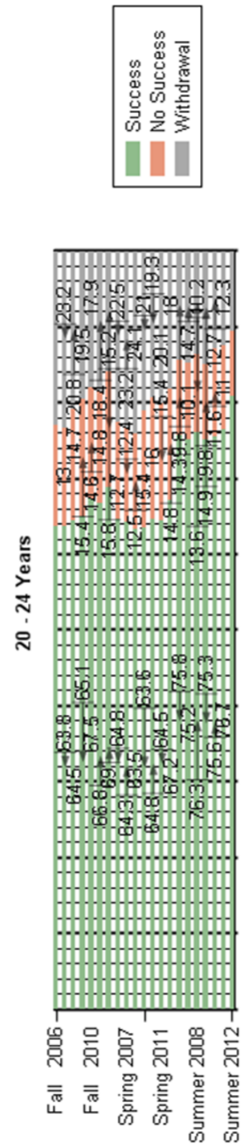
College Retention by Gender

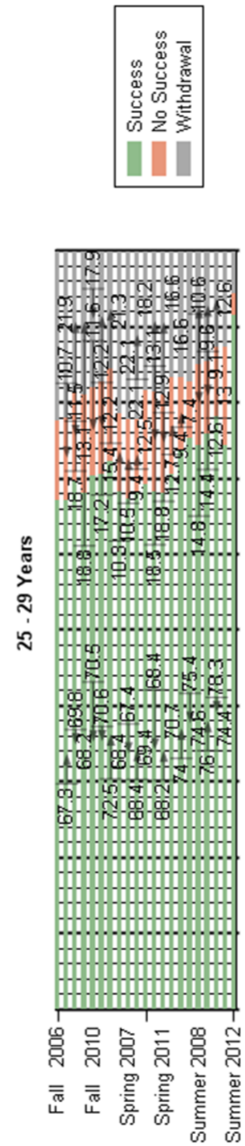
			Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009	
Gender			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male			16,615	78.1%	3,328	85.9%	17,210	77.9%	17,209	77.1%	3,759	86.3%	18,339	77.8%	18,229	75.9%	3,806	88.1%	19,081	79.6%	20,194	80.8%
Female			21,578	78.8%	4,997	85.6%	22,386	78.3%	22,139	78.1%	5,411	85.5%	23,473	79.3%	23,591	78.%	5,639	86.6%	24,976	81.3%	26,417	80.4%
Not Reported			179	78.9%	60	83.3%	243	81.5%	265	81.8%	50	94.3%	245	78.8%	255	79.9%	97	90.7%	330	79.7%	384	81.9%
Total			38,372	78.5%	8,385	85.7%	39,839	78.2%	39,613	77.7%	9,220	85.9%	42,057	78.6%	42,075	77.1%	9,542	87.3%	44,387	80.6%	46,995	80.5%
	Summer 2009		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Average	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
83.3%	4,820	87.5%	21,927	82.%	21,982	81.7%	2,991	89.5%	21,281	83.4%	21,006	81.8%	1,657	90.5%	21,403	83.4%	19,771	83.2%	312	92.9%	20,019	85.4%
83.4%	6,974	86.1%	27,132	82.1%	27,378	81.7%	3,928	87.6%	26,226	83.3%	25,695	81.8%	1,900	88.2%	25,512	83.6%	23,561	83.4%	277	95.2%	24,010	86.%
83.2%	128	94.8%	381	77.4%	396	81.8%	60	90.9%	368	79.%	392	80.5%	41	95.3%	392	79.5%	378	84.8%	2	66.7%	309	84.7%
83.3%	11,922	86.8%	49,440	82.%	49,756	81.7%	6,979	88.4%	47,875	83.3%	47,093	81.8%	3,598	89.3%	47,307	83.4%	43,710	83.3%	591	93.8%	44,338	85.7%

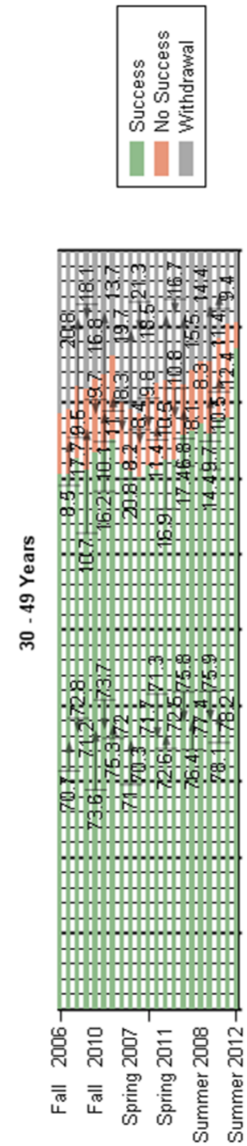

Success by Gender - Female
Success
No Success
Withdrawal

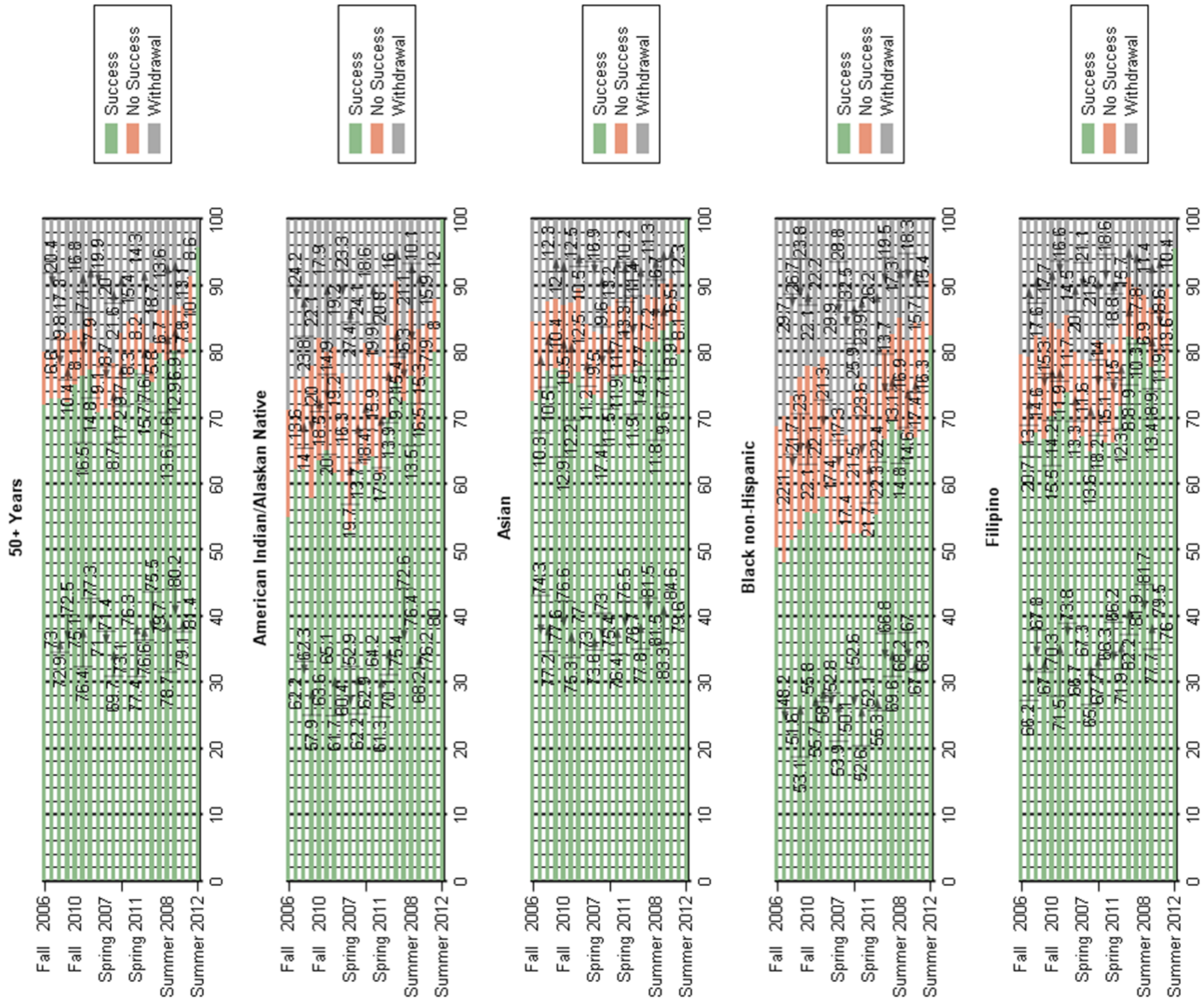

Success by Gender - Male
Success
No Success
Withdrawal

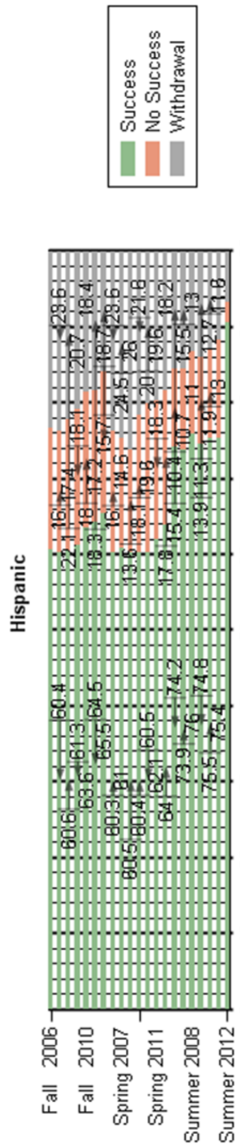

19 Years or Less
Success
No Success
Withdrawal

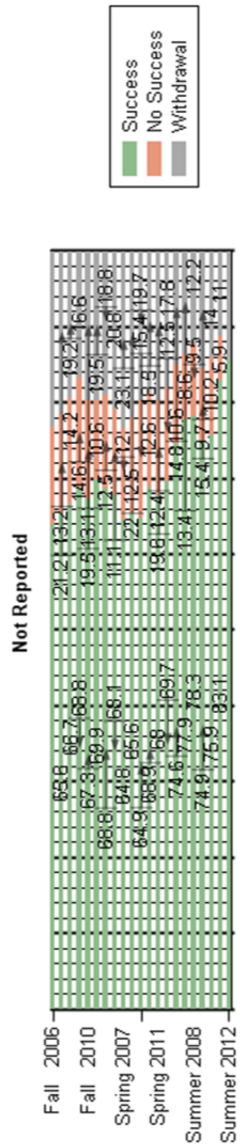

20 - 24 Years
Success
No Success
Withdrawal

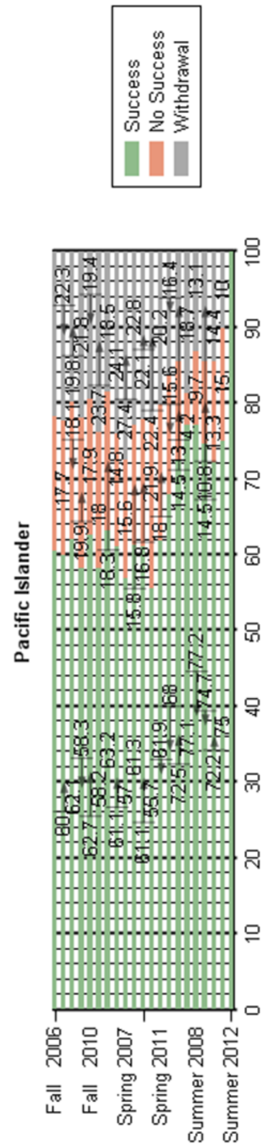

25 - 29 Years
Success
No Success
Withdrawal

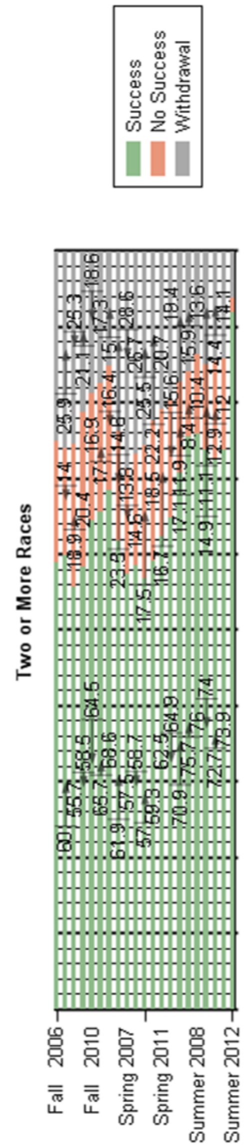

30 - 49 Years
Success
No Success
Withdrawal

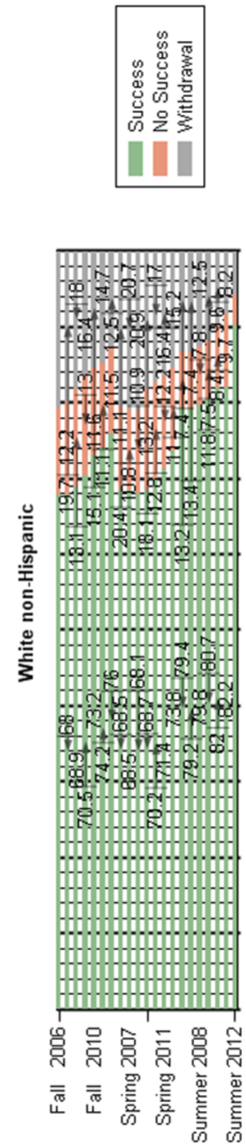

50+ Years
American Indian/Alaskan Native
Asian
Black non-Hispanic
Filipino
Success
No Success
Withdrawal


Hispanic
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2008
Summer 2012
0
10
20
30
40
50
60
70
80
90
100


Not Reported
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2008
Summer 2012
0
10
20
30
40
50
60
70
80
90
100


Pacific Islander
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2008
Summer 2012
0
10
20
30
40
50
60
70
80
90
100


Two or More Races
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2008
Summer 2012
0
10
20
30
40
50
60
70
80
90
100


White non-Hispanic
Success
No Success
Withdrawal
Fall 2006
Fall 2010
Spring 2007
Spring 2011
Summer 2008
Summer 2012
0
10
20
30
40
50
60
70
80
90
100

College Success by Age

Age	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	10,151	62.7%	2,223	79.2%	11,718	62.6%	10,665	63.2%	2,651	80.7%	12,420	62.4%	11,250	62.4%	2,759	81.3%	12,764	63.%	11,809	62.9%	3,166	80.9%
20-24	12,301	64.8%	2,951	75.8%	12,143	63.8%	12,941	64.3%	3,056	75.2%	12,620	63.8%	13,670	63.5%	3,200	76.3%	13,414	64.5%	14,943	63.6%	4,025	75.3%
25-29	3,832	68.4%	900	74.%	3,678	67.3%	3,921	67.4%	1,069	75.4%	3,899	67.3%	4,390	68.4%	1,058	74.6%	4,165	69.8%	4,791	69.4%	1,455	76.%
30-49	4,836	72.%	1,144	75.8%	4,436	70.6%	4,733	71.%	1,201	76.4%	4,531	70.7%	4,915	70.3%	1,206	77.4%	4,742	72.8%	5,361	71.7%	1,578	75.9%
50+	1,004	71.%	271	75.5%	1,049	72.%	1,086	71.4%	311	79.7%	1,176	73.%	1,119	69.7%	289	78.7%	1,132	72.9%	1,240	73.1%	393	80.2%
Total	32,124	65.7%	7,489	76.5%	33,024	64.8%	33,346	65.4%	8,288	77.2%	34,646	64.8%	35,344	64.7%	8,512	77.8%	36,217	65.7%	38,144	65.4%	10,617	77.3%

		Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Average		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	**70.9%**	13,314	65.3%	11,406	63.2%	1,617	81.4%	12,848	67.1%	11,548	65.7%	601	83.2%	13,417	69.%	11,278	68.6%	280	94.6%	12,026	70.1%
20-24	**69.%**	14,880	65.1%	16,035	64.8%	2,223	75.6%	14,782	67.5%	14,515	64.5%	1,085	76.7%	14,024	66.8%	13,803	67.2%	123	80.9%	13,944	69.%
25-29	**72.%**	4,984	68.2%	5,178	68.4%	1,004	78.3%	4,937	70.5%	5,059	68.2%	632	74.4%	5,028	70.6%	4,584	70.7%	66	91.7%	4,339	72.5%
30-49	**74.2%**	5,668	71.2%	6,186	71.3%	1,125	78.1%	5,689	73.6%	6,081	72.6%	706	78.2%	5,544	73.7%	5,366	72.5%	75	87.2%	5,162	75.3%
50+	**76.4%**	1,287	72.5%	1,404	76.3%	193	79.1%	1,272	75.1%	1,352	77.4%	114	81.4%	1,233	76.4%	1,223	76.6%	23	95.8%	1,167	77.3%
Total	**70.9%**	40,133	66.6%	40,209	66.%	6,162	78.1%	39,528	68.8%	38,555	66.9%	3,138	77.9%	39,246	69.2%	36,254	69.1%	567	90.%	36,638	70.8%

College No Success by Age

Age	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	2,578	15.9%	275	9.8%	3,054	16.3%	2,475	14.7%	262	8.%	3,558	17.9%	2,717	15.1%	296	8.7%	3,651	18.%	3,484	18.6%	363	9.3%
20-24	2,405	12.7%	383	9.8%	2,556	13.4%	2,503	12.4%	411	10.1%	2,578	13.%	2,682	12.5%	426	10.2%	3,061	14.7%	3,613	15.4%	523	9.8%
25-29	579	10.3%	114	9.4%	576	10.5%	613	10.5%	105	7.4%	622	10.7%	606	9.4%	151	10.6%	687	11.5%	860	12.5%	184	9.6%
30-49	557	8.3%	103	6.8%	512	8.1%	544	8.2%	128	8.1%	547	8.5%	586	8.4%	129	8.3%	619	9.5%	729	9.8%	201	9.7%
50+	129	9.1%	21	5.8%	117	8.%	132	8.7%	26	6.7%	106	6.6%	140	8.7%	28	7.6%	152	9.8%	165	9.7%	34	6.9%
Total	6,248	12.8%	896	9.2%	6,815	13.4%	6,267	12.3%	932	8.7%	7,411	13.9%	6,731	12.3%	1,030	9.4%	8,170	14.8%	8,851	15.2%	1,305	9.5%

	Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Age	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	3,796	18.6%	3,457	19.1%	188	9.5%	3,450	18.%	3,094	17.6%	68	9.4%	3,217	16.5%	2,674	16.3%	6	2.%	3,020	17.6%
20-24	3,518	15.4%	3,957	16.%	342	11.6%	3,201	14.6%	3,464	15.4%	156	11.%	3,099	14.8%	3,038	14.8%	13	8.6%	3,079	15.2%
25-29	954	13.1%	992	13.1%	117	9.1%	812	11.6%	960	12.9%	110	13.%	871	12.2%	824	12.7%	2	2.8%	728	12.2%
30-49	855	10.7%	989	11.4%	151	10.5%	747	9.7%	876	10.5%	112	12.4%	760	10.1%	798	10.8%	3	3.5%	754	11.%
50+	184	10.4%	152	8.3%	19	7.8%	137	8.1%	144	8.2%	14	10.%	114	7.1%	122	7.6%	0	0.0%	119	7.9%
Total	9,307	15.4%	9,547	15.7%	817	10.4%	8,347	14.5%	8,538	14.8%	460	11.4%	8,061	14.2%	7,456	14.2%	24	3.8%	7,700	14.9%

College Retention by Age

Age	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	12,729	78.6%	2,498	89.%	14,772	78.9%	13,140	77.9%	2,913	88.6%	15,978	80.3%	13,967	77.4%	3,055	90.0%	16,415	81.1%	15,293	81.4%	3,529	90.1%
20-24	14,706	77.5%	3,334	85.7%	14,699	77.2%	15,444	76.8%	3,467	85.3%	15,198	76.8%	16,352	75.9%	3,626	86.4%	16,475	79.2%	18,556	79.%	4,548	85.1%
25-29	4,411	78.7%	1,014	83.4%	4,254	77.8%	4,534	77.9%	1,174	82.8%	4,521	78.1%	4,996	77.9%	1,209	85.2%	4,852	81.3%	5,651	81.8%	1,639	85.6%
30-49	5,393	80.3%	1,247	82.6%	4,948	78.8%	5,277	79.2%	1,329	84.5%	5,078	79.2%	5,501	78.7%	1,335	85.6%	5,361	82.3%	6,090	81.5%	1,779	85.6%
50+	1,133	80.1%	292	81.3%	1,166	80.1%	1,218	80.%	337	86.4%	1,282	79.6%	1,259	78.4%	317	86.4%	1,284	82.7%	1,405	82.8%	427	87.1%
Total	38,372	78.5%	8,385	85.7%	39,839	78.2%	39,613	77.7%	9,220	85.9%	42,057	78.6%	42,075	77.1%	9,542	87.3%	44,387	80.6%	46,995	80.5%	11,922	86.8%
			Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Average			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19		**85.1%**	17,110	84.%	14,863	82.3%	1,805	90.9%	16,298	85.2%	14,642	83.3%	669	92.7%	16,634	85.5%	13,952	84.9%	286	96.6%	15,046	87.7%
20-24		**81.9%**	18,398	80.5%	19,992	80.7%	2,565	87.3%	17,983	82.1%	17,979	79.9%	1,241	87.7%	17,123	81.6%	16,841	82.%	136	89.5%	17,023	84.2%
25-29		**82.7%**	5,938	81.2%	6,170	81.5%	1,121	87.4%	5,749	82.1%	6,019	81.2%	742	87.4%	5,899	82.8%	5,408	83.4%	68	94.4%	5,067	84.6%
30-49		**83.5%**	6,523	81.9%	7,175	82.7%	1,276	88.6%	6,436	83.2%	6,957	83.1%	818	90.6%	6,304	83.8%	6,164	83.3%	78	90.7%	5,916	86.3%
50+		**84.2%**	1,471	82.8%	1,556	84.6%	212	86.9%	1,409	83.2%	1,496	85.7%	128	91.4%	1,347	83.5%	1,345	84.3%	23	95.8%	1,286	85.2%
Total		**83.3%**	49,440	82.%	49,756	81.7%	6,979	88.4%	47,875	83.3%	47,093	81.8%	3,598	89.3%	47,307	83.4%	43,710	83.3%	591	93.8%	44,338	85.7%

College Withdrawal by Age

Age	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008		Summer 2008		Fall 2008		Spring 2009		Summer 2009	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19	3,458	21.4%	310	11.%	3,947	21.1%	3,722	22.1%	374	11.4%	3,924	19.7%	4,076	22.6%	340	10.%	3,836	18.9%	3,486	18.6%	386	9.9%
20-24	4,267	22.5%	557	14.3%	4,347	22.8%	4,678	23.2%	598	14.7%	4,592	23.2%	5,182	24.1%	570	13.6%	4,320	20.8%	4,937	21.%	797	14.9%
25-29	1,193	21.3%	202	16.6%	1,213	22.2%	1,287	22.1%	244	17.2%	1,270	21.9%	1,418	22.1%	210	14.8%	1,117	18.7%	1,255	18.2%	275	14.4%
30-49	1,323	19.7%	263	17.4%	1,335	21.2%	1,387	20.8%	244	15.5%	1,332	20.8%	1,493	21.3%	224	14.4%	1,156	17.7%	1,382	18.5%	299	14.4%
50+	282	19.9%	67	18.7%	290	19.9%	304	20.%	53	13.6%	328	20.4%	347	21.6%	50	13.6%	268	17.3%	292	17.2%	63	12.9%
Total	10,523	21.5%	1,399	14.3%	11,132	21.8%	11,378	22.3%	1,513	14.1%	11,446	21.4%	12,516	22.9%	1,394	12.7%	10,697	19.4%	11,352	19.5%	1,820	13.2%
			Fall 2009		Spring 2010		Summer 2010		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Age			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
> 19			3,266	16.%	3,192	17.7%	181	9.1%	2,837	14.8%	2,932	16.7%	53	7.3%	2,815	14.5%	2,484	15.1%	10	3.4%	2,116	12.3%
20-24			4,448	19.5%	4,770	19.3%	374	12.7%	3,923	17.9%	4,510	20.1%	174	12.3%	3,861	18.4%	3,698	18.%	16	10.5%	3,200	15.8%
25-29			1,372	18.8%	1,399	18.5%	162	12.6%	1,253	17.9%	1,398	18.8%	107	12.6%	1,224	17.2%	1,075	16.6%	4	5.6%	919	15.4%
30-49			1,441	18.1%	1,497	17.3%	164	11.4%	1,297	16.8%	1,416	16.9%	85	9.4%	1,219	16.2%	1,235	16.7%	8	9.3%	936	13.7%
50+			305	17.2%	284	15.4%	32	13.1%	285	16.8%	250	14.3%	12	8.6%	266	16.5%	251	15.7%	1	4.2%	223	14.8%
Total			10,832	18.%	11,142	18.3%	913	11.6%	9,595	16.7%	10,506	18.2%	431	10.7%	9,385	16.6%	8,743	16.7%	39	6.2%	7,394	14.3%

College Success by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	267	60.4%	49	75.4%	257	55.%	228	52.9%	69	72.6%	321	62.2%	327	62.2%
Asian	2,960	73.%	590	77.8%	2,883	72.6%	3,041	73.6%	677	81.5%	3,185	74.3%	3,314	73.%
Black non-Hispanic	1,904	52.8%	548	66.8%	1,820	50.5%	2,016	53.9%	692	69.6%	2,106	48.2%	2,234	50.1%
Filipino	1,303	66.7%	375	82.2%	1,381	66.2%	1,354	67.3%	399	81.9%	1,464	66.2%	1,505	65.%
Hispanic	5,657	60.3%	1,433	74.2%	6,087	60.8%	6,112	61.%	1,579	73.9%	6,233	60.4%	6,558	60.5%
Not Reported	2,449	68.1%	611	74.6%	2,449	64.%	2,493	64.8%	668	77.9%	2,544	65.6%	2,676	65.6%
Pacific Islander	343	61.1%	100	72.5%	406	60.5%	417	57.%	128	77.1%	492	60.%	446	61.3%
Two or More	920	61.9%	232	70.9%	958	59.%	982	57.5%	296	75.7%	1,077	60.%	1,108	58.7%
White non-Hispanic	16,315	68.5%	3,550	79.4%	16,776	67.9%	16,695	68.5%	3,776	79.2%	17,216	68.%	17,166	68.1%
Total	32,118	65.7%	7,488	76.5%	33,017	64.8%	33,338	65.4%	8,284	77.2%	34,638	64.8%	35,337	64.7%
	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	68	76.4%	299	62.3%	314	62.9%	58	68.2%	254	57.9%	278	64.2%	48	76.2%
Asian	685	81.5%	3,443	77.2%	3,702	75.4%	831	83.3%	3,515	77.6%	3,584	76.4%	506	84.6%
Black non-Hispanic	694	68.2%	2,250	51.6%	2,501	52.6%	830	67.%	2,623	53.1%	2,619	52.6%	552	67.%
Filipino	414	81.7%	1,727	67.8%	1,669	67.7%	489	77.7%	1,680	67.%	1,687	66.3%	267	79.5%
Hispanic	1,691	76.%	6,676	60.6%	7,076	60.4%	2,250	74.8%	8,084	61.3%	8,374	60.5%	1,348	75.5%
Not Reported	707	78.3%	2,911	66.7%	3,111	64.9%	627	74.9%	2,308	68.8%	2,010	68.9%	239	75.9%
Pacific Islander	112	77.2%	574	62.1%	544	61.1%	124	74.7%	467	58.3%	402	55.7%	65	72.2%
Two or More	308	76.%	931	55.7%	1,061	57.%	546	74.%	1,647	58.5%	1,857	59.3%	344	72.7%
White non-Hispanic	3,826	79.8%	17,392	68.9%	18,108	68.7%	4,763	80.7%	19,044	70.5%	18,875	70.2%	2,708	82.%
Total	8,510	77.8%	36,214	65.8%	38,140	65.4%	10,617	77.3%	40,133	66.6%	40,209	66.%	6,162	78.1%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Amer.	67.2%	213	63.6%	171	61.3%	20	80.%	179	65.1%	136	70.1%	4	100.%	119	61.7%
Asian	78.3%	3,109	76.6%	3,150	76.5%	187	79.6%	2,821	75.3%	2,656	76.7%	12	100.%	2,630	77.%
Black	58.7%	2,516	55.8%	2,377	52.1%	314	68.3%	2,380	55.7%	2,131	55.3%	80	82.5%	2,108	58.%
Filipino	72.8%	1,820	70.3%	1,582	66.2%	117	76.%	1,650	71.5%	1,549	71.9%	22	95.7%	1,609	73.8%
Hispanic	66.9%	8,896	63.6%	9,099	62.1%	727	75.4%	9,945	64.5%	9,316	64.%	177	90.8%	10,047	65.5%
NR	71.0%	1,283	67.3%	1,087	68.%	98	83.1%	733	69.9%	646	69.7%	6	85.7%	392	68.8%
Pacific	66.7%	368	62.7%	310	61.9%	30	75.%	297	58.2%	249	68.%	11	100.%	232	63.2%
> Two	66.2%	2,301	64.5%	2,342	62.5%	215	73.9%	2,619	65.7%	2,404	64.9%	46	92.%	2,515	68.6%
White	74.4%	18,458	73.2%	17,844	71.4%	1,379	82.2%	18,080	74.2%	16,614	73.8%	206	90.4%	16,574	76.%
Total	70.9%	39,528	68.8%	38,555	66.9%	3,138	77.9%	39,245	69.2%	36,253	69.1%	567	90.%	36,638	70.8%

College No Success by Ethnicity

Ethnicity	Spring 2006 n	Spring 2006 %	Summer 2006 n	Summer 2006 %	Fall 2006 n	Fall 2006 %	Spring 2007 n	Spring 2007 %	Summer 2007 n	Summer 2007 %	Fall 2007 n	Fall 2007 %	Spring 2008 n	Spring 2008 %
Nat. Amer. / Alaskan	81	16.3%	10	15.4%	76	16.3%	85	19.7%	6	6.3%	70	13.6%	72	13.7%
Asian	455	11.2%	58	7.7%	478	12.%	393	9.5%	60	7.2%	440	10.3%	438	9.6%
Black non-Hispanic	626	17.4%	112	13.7%	661	18.3%	648	17.3%	130	13.1%	966	22.1%	776	17.4%
Filipino	260	13.3%	41	9.%	281	13.5%	233	11.6%	38	7.8%	288	13.%	315	13.6%
Hispanic	1,501	16.%	200	10.4%	1,604	16.%	1,462	14.6%	228	10.7%	1,648	16.%	1,471	13.6%
Not Reported	398	11.1%	87	10.6%	493	12.9%	463	12.%	74	8.6%	510	13.2%	510	12.5%
Pacific Islander	83	14.8%	18	13.%	120	17.9%	114	15.6%	7	4.2%	145	17.7%	115	15.8%
Two or More	217	14.6%	39	11.9%	260	16.%	236	13.8%	33	8.4%	252	14.%	276	14.6%
White non-Hispanic	2,634	11.1%	331	7.4%	2,841	11.5%	2,633	10.8%	355	7.4%	3,090	12.2%	2,758	10.9%
Total	6,246	12.8%	896	9.2%	6,814	13.4%	6,267	12.3%	931	8.7%	7,409	13.9%	6,731	12.3%

	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	9	10.1%	67	14.%	92	18.4%	13	15.3%	88	20.%	69	15.9%	5	7.9%
Asian	56	6.7%	467	10.5%	563	11.5%	71	7.1%	472	10.4%	550	11.7%	39	6.5%
Black non-Hispanic	172	16.9%	948	21.7%	1,020	21.5%	181	14.6%	1,137	23.%	1,174	23.6%	143	17.4%
Filipino	35	6.9%	372	14.6%	346	14.%	56	8.9%	385	15.3%	384	15.1%	29	8.6%
Hispanic	244	11.%	1,912	17.4%	2,117	18.1%	341	11.3%	2,385	18.1%	2,712	19.6%	212	11.9%
Not Reported	86	9.5%	618	14.2%	738	15.4%	81	9.7%	489	14.6%	368	12.6%	32	10.2%
Pacific Islander	14	9.7%	167	18.1%	150	16.8%	18	10.8%	159	19.9%	158	21.9%	12	13.3%
Two or More	42	10.4%	316	18.9%	325	17.5%	82	11.1%	574	20.4%	579	18.5%	61	12.9%
White non-Hispanic	372	7.8%	3,297	13.1%	3,489	13.2%	444	7.5%	3,518	13.%	3,446	12.8%	277	8.4%
Total	1,030	9.4%	8,167	14.8%	8,851	15.2%	1,305	9.5%	9,307	15.4%	9,547	15.7%	817	10.4%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Amer.	14.8%	62	18.5%	50	17.9%	2	8.%	41	14.9%	27	13.9%	0	0.0%	37	19.2%
Asian	9.8%	425	10.5%	418	10.2%	19	8.1%	459	12.2%	396	11.4%	0	0.0%	427	12.5%
Black	18.7%	995	22.1%	991	21.7%	75	16.3%	944	22.1%	861	22.4%	9	9.3%	775	21.3%
Filipino	12.2%	367	14.2%	359	15.%	21	13.6%	274	11.9%	266	12.3%	0	0.0%	254	11.7%
Hispanic	14.8%	2,519	18.%	2,684	18.3%	125	13.%	2,657	17.2%	2,592	17.8%	5	2.6%	2,874	18.7%
NR	11.7%	250	13.1%	198	12.4%	7	5.9%	111	10.6%	116	12.5%	0	0.0%	71	12.5%
Pacific	15.6%	105	17.9%	90	18.%	6	15.%	92	18.%	57	15.6%	0	0.0%	67	18.3%
> Two	14.3%	601	16.9%	626	16.7%	35	12.%	679	17.%	578	15.6%	1	2.%	602	16.4%
White	10.4%	2,933	11.6%	3,046	12.2%	162	9.7%	2,702	11.1%	2,481	11.%	9	3.9%	2,507	11.5%
Total	12.4%	8,347	14.5%	8,538	14.8%	460	11.4%	8,061	14.2%	7,456	14.2%	24	3.8%	7,700	14.9%

College Retention by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskan	339	76.7%	59	90.8%	333	71.3%	313	72.6%	75	78.9%	391	75.8%	399	75.9%
Asian	3,415	84.3%	648	85.5%	3,361	84.7%	3,434	83.1%	737	88.7%	3,625	84.6%	3,752	82.6%
Black non-Hispanic	2,530	70.1%	660	80.5%	2,481	68.8%	2,664	71.2%	822	82.7%	3,072	70.3%	3,010	67.5%
Filipino	1,563	80.0%	416	91.2%	1,662	79.6%	1,587	78.9%	437	89.7%	1,752	79.3%	1,820	78.5%
Hispanic	7,158	76.4%	1,633	84.6%	7,691	76.8%	7,574	75.5%	1,807	84.5%	7,881	76.4%	8,029	74.0%
Not Reported	2,847	79.2%	698	85.2%	2,942	76.9%	2,956	76.9%	742	86.6%	3,054	78.8%	3,186	78.0%
Pacific Islander	426	75.9%	118	85.5%	526	78.4%	531	72.6%	135	81.3%	637	77.7%	561	77.2%
Two or More	1,137	76.5%	271	82.9%	1,218	75.0%	1,218	71.4%	329	84.1%	1,329	74.1%	1,384	73.3%
White non-Hispanic	18,949	79.6%	3,881	86.8%	19,617	79.4%	19,328	79.3%	4,131	86.6%	20,306	80.3%	19,924	79.1%
Total	38,364	78.5%	8,384	85.7%	39,831	78.2%	39,605	77.7%	9,215	85.9%	42,047	78.6%	42,068	77.1%
	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskan	77	86.5%	366	76.3%	406	81.4%	71	83.5%	342	77.9%	347	80.1%	53	84.1%
Asian	741	88.2%	3,910	87.7%	4,265	86.8%	902	90.4%	3,987	88.0%	4,134	88.1%	545	91.1%
Black non-Hispanic	866	85.2%	3,198	73.3%	3,521	74.1%	1,011	81.7%	3,760	76.2%	3,793	76.1%	695	84.3%
Filipino	449	88.6%	2,099	82.4%	2,015	81.8%	545	86.6%	2,065	82.3%	2,071	81.4%	296	88.1%
Hispanic	1,935	87.0%	8,588	77.9%	9,193	78.4%	2,591	86.1%	10,469	79.3%	11,086	80.0%	1,560	87.3%
Not Reported	793	87.8%	3,529	80.8%	3,849	80.3%	708	84.6%	2,797	83.4%	2,378	81.5%	271	86.0%
Pacific Islander	126	86.9%	741	80.2%	694	77.9%	142	85.5%	626	78.2%	560	77.6%	77	85.6%
Two or More	350	86.4%	1,247	74.7%	1,386	74.5%	628	85.1%	2,221	78.9%	2,436	77.8%	405	85.6%
White non-Hispanic	4,198	87.5%	20,689	82.0%	21,597	81.9%	5,207	88.2%	22,562	83.6%	22,321	83.0%	2,985	90.4%
Total	9,540	87.3%	44,381	80.6%	46,991	80.5%	11,922	86.8%	49,440	82.0%	49,756	81.7%	6,979	88.4%
Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012
Amer.	81.2%	275	82.1%	221	79.2%	22	88.0%	220	80.0%	163	84.0%	4	100.%	156	80.8%
Asian	87.6%	3,534	87.1%	3,568	86.7%	206	87.7%	3,280	87.5%	3,052	88.1%	12	100.%	3,057	89.5%
Black	77.4%	3,511	77.9%	3,368	73.8%	389	84.6%	3,324	77.8%	2,992	77.7%	89	91.8%	2,883	79.4%
Filipino	84.4%	2,187	84.5%	1,941	81.2%	138	89.6%	1,924	83.4%	1,815	84.3%	22	95.7%	1,863	85.5%
Hispani	81.7%	11,415	81.6%	11,783	80.4%	852	88.4%	12,602	81.7%	11,908	81.8%	182	93.3%	12,921	84.3%
NR	82.2%	1,533	80.5%	1,285	80.4%	105	89.0%	844	80.5%	762	82.2%	6	85.7%	463	81.2%
Pacific	81.5%	473	80.6%	400	79.8%	36	90.0%	389	76.3%	306	83.6%	11	100.%	299	81.5%
> Two	80.4%	2,902	81.4%	2,968	79.3%	250	85.9%	3,298	82.7%	2,982	80.6%	47	94.0%	3,117	85.0%
White	84.8%	21,391	84.9%	20,890	83.6%	1,541	91.8%	20,782	85.3%	19,095	84.8%	215	94.3%	19,081	87.5%
Total	83.3%	47,875	83.3%	47,093	81.8%	3,598	89.3%	47,306	83.4%	43,709	83.3%	591	93.8%	44,338	85.7%

College Withdrawal by Ethnicity

	Spring 2006		Summer 2006		Fall 2006		Spring 2007		Summer 2007		Fall 2007		Spring 2008	
Ethnicity	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Nat. Amer. / Alaskai	103	23.3%	6	9.2%	134	28.7%	118	27.4%	20	21.1%	125	24.2%	127	24.1%
Asian	638	15.7%	110	14.5%	609	15.3%	697	16.9%	94	11.3%	659	15.4%	789	17.4%
Black non-Hispanic	1,078	29.9%	160	19.5%	1,126	31.2%	1,075	28.8%	172	17.3%	1,297	29.7%	1,451	32.5%
Filipino	391	20.0%	40	8.8%	425	20.4%	425	21.1%	50	10.3%	458	20.7%	497	21.5%
Hispanic	2,217	23.6%	298	15.4%	2,323	23.2%	2,453	24.5%	331	15.5%	2,437	23.6%	2,819	26.0%
Not Reported	749	20.8%	121	14.8%	884	23.1%	890	23.1%	115	13.4%	824	21.2%	896	22.0%
Pacific Islander	135	24.1%	20	14.5%	145	21.6%	200	27.4%	31	18.7%	183	22.3%	166	22.8%
Two or More	350	23.5%	56	17.1%	406	25.0%	489	28.6%	62	15.9%	465	25.9%	504	26.7%
White non-Hispanic	4,861	20.4%	588	13.2%	5,076	20.6%	5,031	20.7%	638	13.4%	4,996	19.7%	5,267	20.9%
Total	10,522	21.5%	1,399	14.3%	11,128	21.8%	11,378	22.3%	1,513	14.1%	11,444	21.4%	12,516	22.9%

	Summer 2008		Fall 2008		Spring 2009		Summer 2009		Fall 2009		Spring 2010		Summer 2010	
Nat. Amer. / Alaskai	12	13.5%	114	23.8%	93	18.6%	14	16.5%	97	22.1%	86	19.9%	10	15.9%
Asian	99	11.8%	550	12.3%	646	13.2%	96	9.6%	544	12.0%	559	11.9%	53	8.9%
Black non-Hispanic	151	14.8%	1,163	26.7%	1,230	25.9%	227	18.3%	1,177	23.8%	1,188	23.9%	129	15.7%
Filipino	58	11.4%	448	17.6%	449	18.2%	84	13.4%	444	17.7%	474	18.6%	40	11.9%
Hispanic	290	13.0%	2,430	22.1%	2,530	21.6%	418	13.9%	2,725	20.7%	2,766	20.0%	226	12.7%
Not Reported	110	12.2%	836	19.2%	942	19.7%	129	15.4%	557	16.6%	540	18.5%	44	14.0%
Pacific Islander	19	13.1%	183	19.8%	197	22.1%	24	14.5%	175	21.8%	162	22.4%	13	14.4%
Two or More	55	13.6%	423	25.3%	474	25.5%	110	14.9%	595	21.1%	694	22.2%	68	14.4%
White non-Hispanic	597	12.5%	4,546	18.0%	4,780	18.1%	698	11.8%	4,436	16.4%	4,579	17.0%	316	9.6%
Total	1,394	12.7%	10,697	19.4%	11,352	19.5%	1,820	13.2%	10,832	18.0%	11,142	18.3%	913	11.6%

Average		Fall 2010		Spring 2011		Summer 2011		Fall 2011		Spring 2012		Summer 2012		Fall 2012	
Amer.	19.7%	60	17.9%	58	20.8%	3	12.0%	55	20.0%	31	16.0%	0	0.0%	37	19.2%
Asian	13.%	523	12.9%	548	13.3%	29	12.3%	468	12.5%	411	11.9%	0	0.0%	357	10.5%
Black	22.6%	998	22.1%	1,195	26.2%	71	15.4%	949	22.2%	859	22.3%	8	8.2%	750	20.6%
Filipino	15.6%	402	15.5%	448	18.8%	16	10.4%	384	16.6%	339	15.7%	1	4.3%	316	14.5%
Hispanic	18.3%	2,571	18.4%	2,866	19.6%	112	11.6%	2,822	18.3%	2,654	18.2%	13	6.7%	2,413	15.7%
NR	17.8%	372	19.5%	313	19.6%	13	11.0%	205	19.5%	165	17.8%	1	14.3%	107	18.8%
Pacific	19.4%	114	19.4%	101	20.2%	4	10.0%	121	23.7%	60	16.4%	0	0.0%	68	18.5%
> Two	19.6%	663	18.6%	777	20.7%	41	14.1%	690	17.3%	720	19.4%	3	6.0%	548	15.0%
White	15.2%	3,812	15.1%	4,094	16.4%	137	8.2%	3,589	14.7%	3,417	15.2%	13	5.7%	2,737	12.5%
Total	16.7%	9,595	16.7%	10,506	18.2%	431	10.7%	9,385	16.6%	8,743	16.7%	39	6.2%	7,394	14.3%

Success and Retention for Late Adds in 16+ Week Courses

Grossmont College

Fall 2008 - Spring 2009

This report presents 2008-09 course success and retention rates by discipline for enrollments in full-term (16+ week) classes added prior to the start of the semester as compared with enrollments added on or after the first day of classes. Only graded and Pass/No Pass courses are included.

Enrollment time frame was determined using students' current status for each enrollment that terminated with a grade (A, B, C, D, F, Pass, No Pass). For enrollments that terminated with a withdrawal, students' initial enrollment status was used.

Overall, course success rates for enrollments added prior to the start of the semester were significantly higher than course success rates for enrollments added on or after the first day of the semester ($\chi^2 = 255.6$, $p < .05$). Overall, course retention rates were not significantly different ($\chi^2 = 2.15$, $p > .05$). That is, when students enrolled in a class prior to the start of the semester, they had higher course success rates (grades of A, B, C, or Pass), lower rates of unsuccessful outcomes (grades of D, F, or No Pass), and similar rates of withdrawal as compared to enrollments added on or after the first day of the semester. However, this pattern does not hold across all disciplines.

Success and Retention for Late Adds in 16+ Week Courses

The table below contains data for full-term (16+ week) classes only. Enrollments and outcomes for short term classes are not included.

Dark blue shading indicates that the rate for students enrolled **prior to** the start of the semester is significantly higher based on a chi-square test.

Green shading indicates that the rate for students who enrolled **on/after** the start of the semester is significantly higher based on a chi-square test.

Subject	Enrollment Count (#)			Retention Rate (%)			Success Rate (%)		
	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments
	Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes	
ANTH	1,259	334	1,593	83.9	80.5	83.2	73.6	65.0	71.8
AOJ	2,244	397	2,641	82.4	81.1	82.2	68.3	63.2	67.5
ARBC	214	107	321	81.8	77.6	80.4	66.4	63.6	65.4
ART	2,280	813	3,093	84.3	84.4	84.4	71.7	71.3	71.6
ASL	941	184	1,125	87.5	84.2	86.9	82.3	73.4	80.8
ASTR	858	165	1,023	80.2	71.5	78.8	63.3	52.1	61.5
BIO	3,482	1,003	4,485	78.3	76.9	78.0	65.9	59.8	64.5
BOT*	923	1,529	2,452	67.3	76.3	72.9	51.8	61.3	57.7
BUS	2,700	435	3,135	80.2	80.9	80.3	66.3	63.2	65.9
CA	761	452	1,213	81.9	93.8	86.3	70.8	87.2	76.9
CCS	494	146	640	84.2	84.2	84.2	73.5	69.2	72.5
CD	1,910	411	2,321	81.7	82.2	81.8	60.6	61.3	60.7
CHEM	1,112	328	1,440	70.9	64.6	69.4	58.5	45.4	55.5
CHIN	46	15	61	93.5	86.7	91.8	82.6	66.7	78.7
COMM	2,918	578	3,496	85.6	83.6	85.2	72.5	60.9	70.6
CSIS*	1,445	334	1,779	76.9	68.6	75.3	64.3	52.7	62.1
CVTE	606	270	876	97.5	88.9	94.9	93.6	87.0	91.6
DANC	698	509	1,207	76.4	79.6	77.7	68.1	69.0	68.4
ECON	1,557	1,264	2,821	77.1	76.7	76.9	50.9	48.9	50.0
ED	128	16	144	75.8	75.0	75.7	60.9	56.3	60.4
ENGL	9,206	1,758	10,964	79.2	78.9	79.1	66.2	64.1	65.8
ES	5,648	2,158	7,806	83.1	81.8	82.7	76.5	73.2	75.6
ESL	1,662	429	2,091	90.9	87.6	90.2	79.9	70.2	77.9
FREN	378	80	458	79.1	87.5	80.6	68.5	63.8	67.7
FS	192	30	222	72.4	80.0	73.4	46.9	43.3	46.4
GEOG	1,072	222	1,294	78.4	70.3	77.0	50.0	36.9	47.8
GEOL	436	63	499	70.6	60.3	69.3	47.7	27.0	45.1
GERM	368	50	418	78.8	90.0	80.1	70.9	78.0	71.8
HED	1,214	375	1,589	83.2	79.7	82.4	66.7	59.2	64.9
HESC	29	22	51	82.8	77.3	80.4	79.3	72.7	76.5

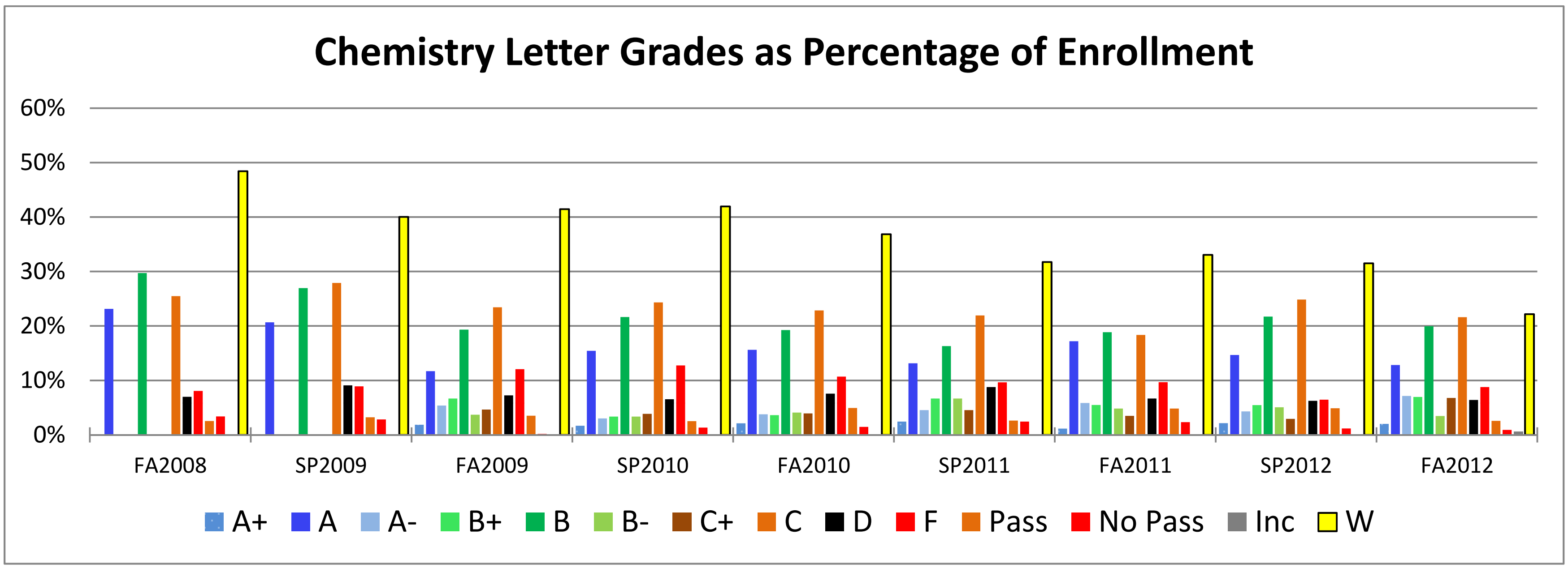
Success and Retention for Late Adds in 16+ Week Courses

Subject	Enrollment Count (#)			Retention Rate (%)			Success Rate (%)		
	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments	Enrolled		Total: All 16+ Week Enrollments
	Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes		Prior to the First Day of Classes	On or After First Day of Classes	
HIST	4,322	944	5,266	79.2	79.9	79.3	65.3	61.8	64.7
HUM	936	239	1,175	80.1	70.7	78.2	67.3	54.4	64.7
ITAL	132	32	164	72.0	78.1	73.2	62.1	65.6	62.8
JAPN	405	93	498	77.3	73.1	76.5	64.4	50.5	61.8
LIR	No full-term classes			No full-term classes			No full-term classes		
MATH	8,681	2,009	10,690	75.4	75.6	75.5	54.0	51.3	53.5
MCOM	1,004	319	1,323	86.7	93.4	88.3	78.0	81.5	78.8
MM	7		7	85.7		85.7	71.4		71.4
MUS	2,476	989	3,465	86.7	89.4	87.4	77.7	75.5	77.1
NURS	193	108	301	97.4	98.1	97.7	91.2	94.4	92.4
OCEA	368	60	428	77.4	76.7	77.3	51.9	40.0	50.2
OT	5	103	108	100.0	98.1	98.1	100.0	91.3	91.7
OTA	207	21	228	99.0	100.0	99.1	95.2	90.5	94.7
PDC	152	71	223	87.5	84.5	86.5	76.3	66.2	73.1
PDSS	142	149	291	83.8	89.9	86.9	80.3	81.9	81.1
PHIL	1,139	243	1,382	78.4	74.9	77.8	66.0	58.4	64.7
PHOT	450	530	980	82.0	88.1	85.3	73.3	26.0	47.8
PHYC	408	59	467	81.6	79.7	81.4	63.7	47.5	61.7
POSC	1,256	243	1,499	79.9	78.6	79.7	60.9	47.7	58.8
PSC	310	71	381	75.8	74.6	75.6	57.7	46.5	55.6
PSY	3,346	728	4,074	77.9	75.5	77.5	58.2	47.9	56.4
RELG	287	66	353	81.9	83.3	82.2	65.9	65.2	65.7
RESP	486	33	519	100.0	100.0	100.0	97.9	100.0	98.1
RUSS	143	44	187	91.6	86.4	90.4	84.6	70.5	81.3
SCI	403	74	477	76.2	71.6	75.5	61.5	50.0	59.7
SLPA	224	34	258	96.4	91.2	95.7	94.2	82.4	92.6
SOC	1,952	513	2,465	79.7	77.2	79.2	60.4	48.9	58.0
SPAN	1,979	388	2,367	81.5	78.9	81.0	72.6	67.3	71.7
SPDV	19	57	76	100.0	91.2	93.4	94.7	89.5	90.8
THTR	527	157	684	85.8	77.7	83.9	70.0	68.2	69.6
Overall	**78,740**	**22,854**	**101,594**	**80.6**	**80.1**	**80.5**	**66.3**	**61.8**	**65.3**

* Note that BOT and CSIS include enrollments in full-term FlexCourses that permit adds through the 12th week of the semester.

Chemistry Letter Grade Distribution Fall 2008 through Fall 2012

	E	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	No Pass	Inc	W
FA2008	471	0	109	0	0	140	0	0	120	33	38	12	16	0	228
SP2009	527	0	109	0	0	142	0	0	147	48	47	17	15	0	211
FA2009	538	10	63	29	36	104	20	25	126	39	65	19	1	0	223
SP2010	596	10	92	18	20	129	20	23	145	39	76	15	8	0	250
FA2010	608	13	95	23	22	117	25	24	139	46	65	30	9	0	224
SP2011	570	14	75	26	38	93	38	26	125	50	55	15	14	0	181
FA2011	599	7	103	35	33	113	29	21	110	40	58	29	14	0	198
SP2012	511	11	75	22	28	111	26	15	127	32	33	25	6	0	161
FA2012	546	11	70	39	38	109	19	37	118	35	48	14	5	3	121
total	4966	76	791	192	215	1058	177	171	1157	362	485	176	88	3	1797

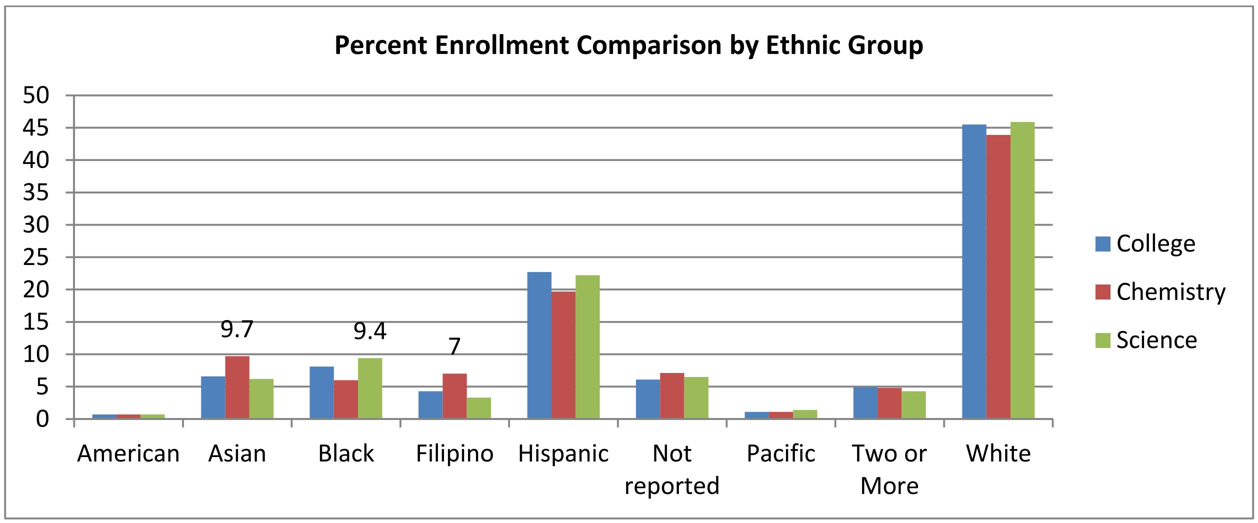


Success Rates for Day versus Night Courses

		2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	Average
CHEM110	Day	66.7%	41.4%	52.0%	75.0%	58.9%	81.1%	62.5%
	Night	not offered	not offered	60.0%	83.3%	not offered	not offered	71.7%
CHEM113	Day	55.4%	44.7%	54.8%	58.3%	63.2%	65.9%	57.0%
	Night	not offered	65.3%	not offered	not offered	not offered	60.0%	62.7%
CHEM115	Day	49.5%	58.7%	50.7%	56.0%	57.8%	62.9%	55.9%
	Night	59.7%	59.8%	67.6%	61.8%	60.2%	47.5%	59.4%
CHEM116	Day	67.0%	59.5%	58.4%	61.1%	67.8%	not offered	62.8%
	Night	63.6%	71.1%	58.8%	75.0%	64.0%	76.7%	68.2%
CHEM120	Day	57.0%	54.7%	53.7%	45.1%	51.8%	53.7%	52.6%
	Night	69.6%	47.6%	55.0%	70.2%	52.1%	64.8%	59.9%
CHEM141	Day	51.8%	52.0%	56.9%	51.0%	54.6%	61.1%	54.6%
	Night	49.2%	53.7%	61.7%	64.6%	48.2%	46.2%	53.9%
CHEM142	Day	80.4%	73.7%	64.4%	73.1%	72.7%	75.0%	73.2%
	Night	58.3%	68.4%	68.4%	43.5%	64.9%	61.9%	60.9%
CHEM231	Day	73.0%	59.5%	82.1%	79.5%	53.7%	61.2%	68.2%
	Night	not offered	not offered	90.5%	not offered	not offered	not offered	90.5%
CHEM232	Day	72.7%	80.0%	not offered	71.4%	84.4%	not offered	77.1%
	Night	not offered	not offered	94.4%	not offered	not offered	not offered	94.4%
SCI 110	Day	61.5%	65.0%	65.6%	63.6%	69.3%	61.8%	64.4%
	Night	61.6%	76.6%	71.7%	60.5%	69.0%	55.6%	65.8%

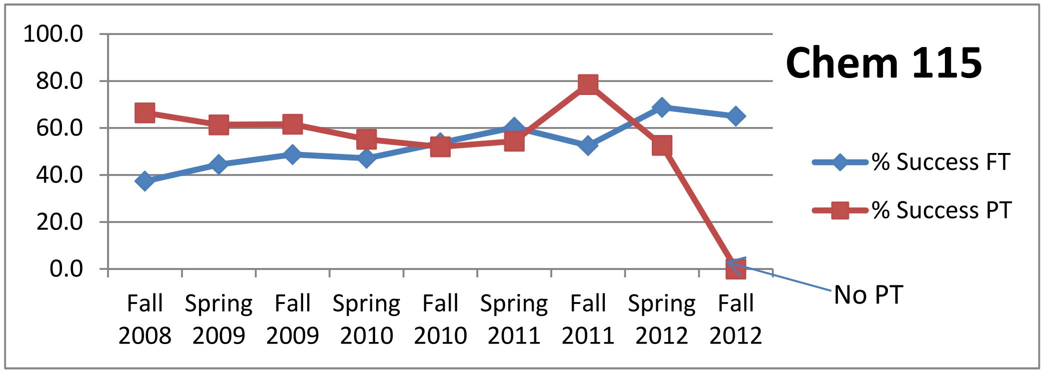
Percent Enrollment Comparison by Ethnic Group

Ethnicity	College	Chemistry	Science
American	0.7	0.7	0.7
Asian	6.6	9.7	6.2
Black	8.1	6	9.4
Filipino	4.3	7	3.3
Hispanic	22.7	19.7	22.2
Not reported	6.1	7.1	6.5
Pacific	1.1	1.1	1.4
Two or More	4.9	4.8	4.3
White	45.5	43.9	45.9

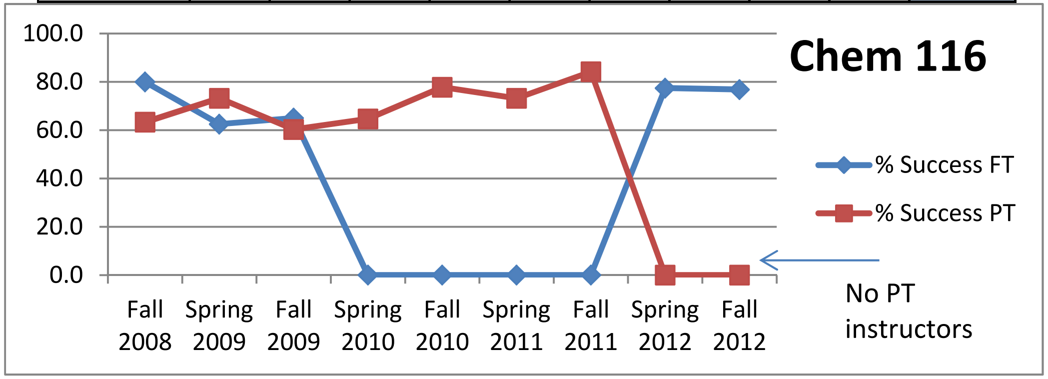


Success Rates for Full Time versus Part Time Instructors by Course

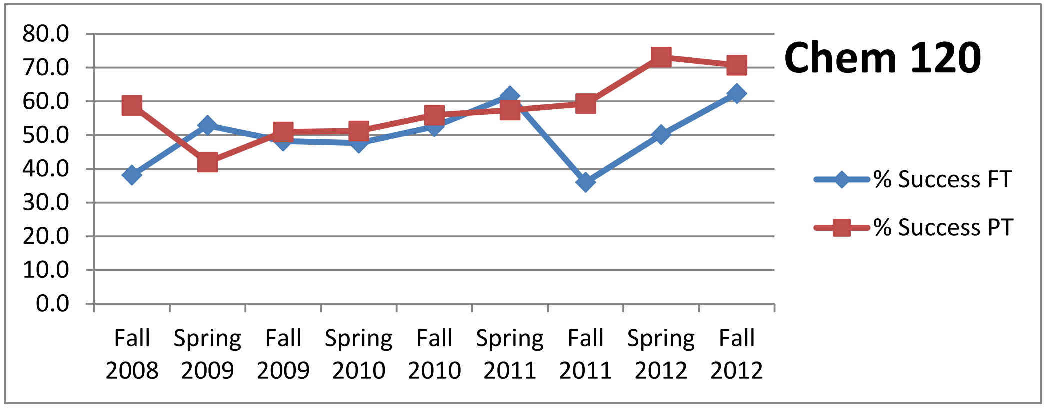
CHEM 115	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	37.4	44.4	48.7	47.1	53.7	60.3	52.5	68.8	65.0	53.1
% Success PT	66.5	61.4	61.6	55.2	52.0	54.4	78.5	52.6	0.0	60.3



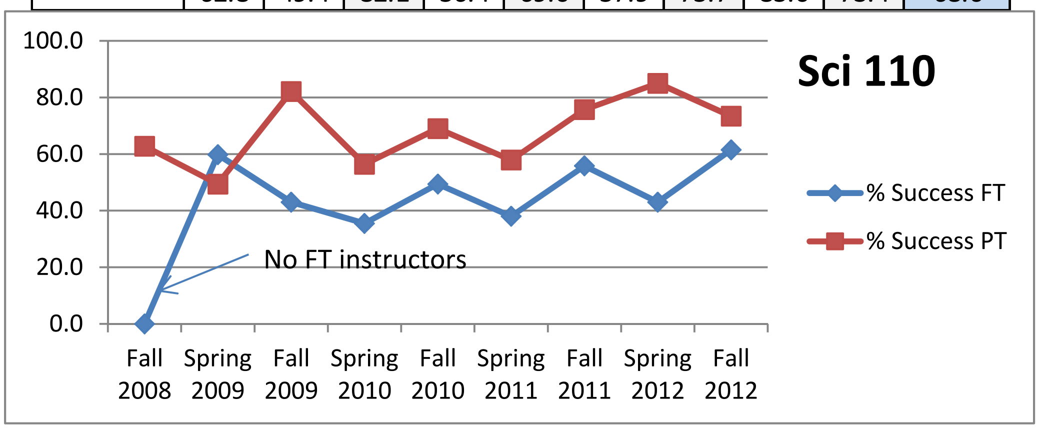
CHEM 116	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	80.0	62.5	65.0	0.0	0.0	0.0	0.0	77.4	76.8	72.3
% Success PT	63.3	73.2	60.3	64.7	77.8	73.2	84.2	0.0	0.0	71.0



CHEM 120	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	38.1	52.9	48.2	47.6	52.5	61.6	36.0	50.1	62.3	49.9
% Success PT	58.8	42.0	50.9	51.2	55.9	57.4	59.3	73.1	70.7	57.7



SCI 110	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Average
% Success FT	0.0	59.8	43.0	35.5	49.4	38.0	55.8	43.0	61.5	42.9
% Success PT	62.8	49.4	82.1	56.4	69.0	57.9	75.7	85.0	73.4	68.0



APPENDIX 14 Fiscal Year FTES Analysis

Chemistry (190500)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Course #								
CHEM 110								
CHEM 113								
CHEM 115								
CHEM 115T								
CHEM 116								
CHEM 120								
CHEM 141								
CHEM 142								
CHEM 122								
CHEM 231								
CHEM 232								
WSCH/FTES								
Summer- WSCH	1,122.00	1,020.00	1,032.00	990.00	930.00	894.00	876.00	0.00
Fall- WSCH	4,927.00	4,463.00	4,557.00	4,932.00	4,836.00	4,380.00	4,909.00	5,282.00
Spring- WSCH	4,833.00	4,821.20	4,580.40	4,578.80	4,674.80	4,824.00	5,559.00	4,794.00
Total WSCH	10,882.00	10,304.20	10,169.40	10,500.80	10,440.80	10,098.00	11,344.00	10,076.00
Total FTES	362.73	343.47	338.98	350.03	348.03	336.60	378.13	335.87
Unrestricted General Fund Cost	671,776	693,575	811,225	919,681	976,114	1,055,967	1,035,721	1,018,461
Costs per FTES	1,852.00	2,019.32	2,393.14	2,627.43	2,804.68	3,137.16	2,739.06	3,032.31
Restricted General Fund Cost (Grants, Categorical funds)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX 15 Fiscal Data- Outcomes Profile

Semester/Year	2006FA	2007SP	2007FA	2008SP	2008FA	2009SP	2009FA	2010SP	2010FA	2011SP
1. Enrollment (Undup/Dup)	717 / 776	668 / 715	719 / 761	664 / 714	662 / 699	718 / 739	742 / 761	827 / 846	811 / 832	727 / 751
2. Earned WSCH/FTEF	580.23	508.75	509.05	474.59	492.12	497.32	538.44	557.74	579.36	574.13
3. Total FTES	350.03		348.03		336.6		378.13		355.87	
4. Cost/FTES	$2,627		$2,805		$3,137		$2,739		$3,032	
5. Total Cost/Fiscal Year	$919,679		$976,113		$1,055,968		$1,035,721		$1,079,108	
6 Total Revenue*	$1,443,174		$1,588,698		$1,536,522		$1,726,099		$1,624,486	
7. Other Revenue	$0		$0		$0		$0		$0	

1. data from Appendix 13A
2. data from Appendix 11
3. data from Appendix 14
4. data from Appendix 14
5. Total Cost/Fiscal Year = (Cost/FTES) * (Total FTES)
6. *Fall 2006-Spring 2007 based on $4,123.00 per FTES
   *Fall 2007-Spring 2011 based on $4,564.83 per FTES

COST – Cost will vary from one department/program to another for many reasons, e.g., department size. Further variation can be caused by (1) the specific step and class standing of the individual faculty members in a department/program, (2) the lack of costs associated with a chair or coordinator (i.e., another department is carrying this charge), and (3) the costs charged to the department/program for fulfilling a college or district function (e.g., miscellaneous reassigned time).

EARNED WSCH/FTEF – These numbers are found in "Reports" or can be taken from the Earned WSCH/FTE in Appendix 11-Grossmont WSCH Analysis Report. They reflect a department/program's revenue per faculty costs. ("Earned" WSCH is actual student enrollment as compared to "Max" WSCH which is determined purely by classroom size.)

COST/FTES – These figures are taken from Appendix 14, Fiscal Year FTES Analysis by Program/TOPS report. They will most often inversely reflect the WSCH PER FTEF ratio (i.e., a department/program with a low COST PER FTES will have a high WSCH PER FTEF). If this is not the case, then the figures indicate that an above average percentage of the direct COST of the department/program is attributed to non-faculty costs.

TOTAL REVENUE – General fund money that the department/program earns from the state for each Full -Time Equivalent Student (FTES). For example, in spring 2010, the state paid $4564.83 for Credit FTES and $2744.96 for non-credit FTES. Other revenue is non-general fund money such as fees, grants, donations, non-resident student tuition.