ACADEMIC PROGRAM REVIEW

PHYSICS, ASTRONOMY, PHYSICAL SCIENCE

GROSSMONT COLLEGE

For Spring 2006 - Fall 2012

The undersigned full time members of the Department of Physics, Astronomy, and Physical Science concur with the Program Review Report as submitted in the Spring 2014 semester.

_____ _____

Philip Blanco, Instructor **Date**

_____ _____

Brian Carter, Instructor and Department Chair **Date**

_____ _____

Ross Cohen, Instructor **Date**

_____ _____

David Dueñas, Technician **Date**

Physics, Astronomy, and Physical Science Department Faculty and Staff as of Fall 2012

David Dueñas	Full Time Technician	Hired 1996
Ross Cohen	Full Time Faculty	Hired 1999
Philip Blanco	Full Time Faculty	Hired 2005
Brian Carter	Full Time Faculty	Hired 2007
Stephanie Plante	Full Time Faculty	Hired 2008, PT 2011
Douglas Brownell	Part Time Faculty	Hired 2006
Thomas Tsung	Part Time Faculty	Hired 1969, Retired 2005, PT 2009
Rex Paris	Part Time Faculty	Hired 2001
Vesa Junkkarinen	Part Time Faculty	Hired 2002
Jeffrey Cooke	Part Time Faculty	Hired 2002
James Davis	Part Time Faculty	Hired 2005
John Fitzgerald	Part Time Faculty	Hired 2005
Robert Skelton	Part Time Faculty	Hired 2005
Apostol Gramada	Part Time Faculty	Hired 2005
Cezarina Gramada	Part Time Faculty	Hired 2005
Richard Moyer	Part Time Faculty	Hired 2006
Heidi Dos-Hamel	Part Time Faculty	Hired 2007
John Oaks	Cross Departmental	PT in our dept. 2010
Thomas Yager	Part Time Faculty	Hired 2011
Daniel Imbach	Part Time Faculty	Hired 2012
Chad Kishimoto	Part Time Faculty	Hired 2012
Irena Stojimirovic	Part Time Faculty	Hired 2012
Stanley Clayton	Part Time Faculty	Hired 2012

TABLE OF CONTENTS

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.

We have been called upon in our math and science departments to teach science to students to bolster the number of nationwide math and science teachers by 10,000 yearly by 2015. In addition, we are also to train over 100,000 existing teachers.

The quality of math and science teachers is the most important single factor influencing whether students will succeed or fail in science, technology, engineering and math… Passionate educators with issue expertise can make all the difference, enabling hands-on learning that truly engages students—including girls and underrepresented minorities—and preparing them to tackle the grand challenges of the 21st century such as increasing energy independence, improving people's health, protecting the environment, and strengthening national security. - President Obama

At the end of the reporting period, the department consisted of three full-time faculty (Ross Cohen, Philip Blanco, and Brian Carter) and one full time technician (David Dueñas). Ross Cohen primarily taught physics for scientists and engineers lecture and lab, and general education astronomy courses. Philip Blanco taught physics for life science and general education astronomy lecture and lab courses, and Brian Carter taught Physics for scientists and engineers, introductory physics for general education, and Physical Science lecture and lab courses for general education. Stephanie Plante was hired August 2007 as a full time tenure track lecturer and taught physics for scientists and engineers and general education astronomy lecture and lab classes. Stephanie regretfully had to leave her full time position for family reasons in Spring 2010 prior to receiving tenure. Unless significant increases in full time faculty occur, we will not be keeping up our end of the vision of our U.S. President.

The Physics, Astronomy, and Physical Science Department has been in an unstable state. As our previous program review mentioned, we lost Thomas Tsung and Dennis Collins due to retirement. David Devine then left for another local teaching position and was replaced by Philip Blanco. Brian Carter was hired as a replacement for Dennis Collins. Stephanie Plante was hired as a replacement for Thomas Chung, but has since separated from the department leaving the department with a gap in the full time faculty coverage. Comparable programs in our division have 5 full time faculty, while our program currently has 3 full time faculty. This has resulted in uncertainty in the future as there is a fair chance of a retirement in the near future and a possibility of departures related to overburdens related to having too few full time faculty and lack of support. Our department lacks sufficient faculty for meaningful outreach, expansion, and maintenance. Our program has no full time faculty to run our observation program, which would include night labs and use of our 14-inch telescope, or act as a community liaison. Stephanie Plante had filled that position well until her departure in Spring 2010. As a result of under staffing, our department has the second highest

percentage of courses taught by adjuncts in the division, and the lowest number of full time faculty per program. It is extremely difficult to find qualified part time faculty to teach all of the courses we offer, and as a result our students may be suffering. The consequences of being understaffed may be that courses will be taught by marginally experienced adjuncts or in the worst case will be cancelled or taught by inexperienced adjuncts. There is anecdotal evidence that the lack of available full time faculty has caused students to seek core classes from other nearby college districts. Many distance education students are unable to take courses that were once offered by our department – for simple lack of full time instructors. And arguably our strongest attribute – the use of our telescopes – is in the most need of a full time faculty replacement to lead and invigorate our program.

We have 2 new courses that have been developed, ASTR 120 by Philip Blanco and PSC 100 by John Oakes. ASTR 120 was developed for more topic variety and transfers to 4-year universities, and is our first attempt to expand our curriculum to possibly offer students opportunity to receive a transfer degree. PSC 100 was created to renew articulation with SDSU for equivalence with its NS 100 course for students who are preparing for primary education teaching degrees. Additionally, the existing PSC 110 course was developed into an online course by Brian Carter (who also successfully completed the district Developing an Online Course class), and Stephanie Plante offered multiple sections of ASTR 110 online every semester while with our campus, but after separating from Grossmont College our department no longer offers that course online – taking the opportunity of learning astronomy away from as many as 100 distance education learners each semester since her departure. Additionally there was a 20% demographic shift of women during her employment (enrollment of women in Astronomy increased by 20% after Stephanie was hired, and decreased by the same amount after her departure to previous levels.

We also moved into our new home, building 34, in June 2010. We all participated in building design for our new classrooms, laboratories, and office space. This has given our department great opportunity to expand our offerings. Unfortunately we had statewide budget issues that caused the opposite to occur – and we have been displaced from our specially designed classrooms in favor of other non-science departments occupying our space, and have been forced to find other class space on 5 occasions. We have also been plagued with countless security issues since the moment we moved in related to any campus wide faculty members and building contractors unlocking doors and leaving rooms with thousands of dollars of equipment exposed to unsupervised access to the public at large.

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:

Relocate the department into new facilities

(also includes: provide office space for part-time instructors)

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

During the last 6 years, we have actively participated in the design and relocation of our entire department into the new Health and Sciences building. We also utilized budget monies, received bond funds, and more recently one time funds to replace outdated lab equipment with new and more reliable equipment, and also purchased new equipment that didn't exist in our inventory.

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

The rooms we now occupy were specifically designed with the students and instructors needs in mind. The classrooms for physics (34-105 and 34-106) were specifically designed with demonstration areas that could be set up without distraction to the students. Partitions can be removed to allow demonstration in the open area dedicated to this end. Lab space was designed to have additional board space, and ample floor and counter space surrounding the fixed desks. This allows sensitive equipment to be separated from student seating areas as we had in the past making for a safer lab. Students are able to utilize the additional space without having to squeeze their personal belongings amongst lab equipment. The astronomy and physical science classroom (34-171) was designed with a storage cabinet to allow for quick access to common demonstration equipment specific to those disciplines. The room was also designed to take larger class sizes compared to our previous classroom space in building 36.

We also designed an astronomy observation deck onto the roof area of building 34, complete with disabled access via an elevator. The observation deck sports permanent single pole mounts, making it safer for observation courses – as the tripods used in the past were tripping hazards and once accidentally moved made observations impossible requiring realignment and large amounts of wasted time. Each observation mount also has a dedicated power outlet, which again prevents the numerous cords that were tripping hazards. The new observation deck also has permanent lighting that can be turned on at a convenient location.

We now also have a dedicated tutoring/computer lab with a full complement of new computers with software utilized in all of our courses. Previously our lab had a smaller number of computers, and tutoring was not regularly available. We now have tutors available for the majority of the day 4 days a week and seek funding to expand those hours and days.

We have faculty offices nearby our classrooms for all of our full time and part time faculty, as well as staff. This aids in better communication between department members and allows students easy access to instructors.

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

Our new facilities have addressed a number of strategic planning goals and values. Our new classrooms and tutoring center increase our students' access to our faculty and assistance, and "promote student success for historically under served populations". Our new lab space and equipment reflect the excellence we have in our instruction and provide an "exceptional learning environment to promote student success". Our new lab spaces are more accessible that in the past, with a desk in each specifically designed to accommodate any students confined to a wheel chair. All of our rooms have identical computer, projector, and overhead capabilities, and our labs have two projectors to allow for easier viewing from any seat. All rooms also have ample dry erase board space that has helped course instruction and student learning (concepts don't have to be erased during the lecture to make space). Our new facilities should meet long-term community needs for many years, and give our program the opportunity to grow. Building 34, however, is not an ideal location for a planetarium.

For your least successful goal:

Replace all full-time faculty who have separated.

a) What challenges or obstacles have you encountered?

Two replacement faculty were hired, Brian Carter and Stephanie Plante. Brian Carter received his tenure and currently teaches Physics and Physical Science. Stephanie Plante was well on her way to tenure, but had family issues that led to her departure. Her replacement has yet to be offered by the staffing committee despite repeated attempts. Her departure occurred during the hiring freeze, and thus slipped thru the cracks and later seemed to lose any priority due to the length of time since her departure and the district removing the hiring freeze. Our department is very unhappy with committee decisions in favor of staffing other departments/programs (and lack of recognition of our immediate need) when departments of comparable size have twice as many full time faculty. There needs to be an improved method that looks at cold hard irrefutable facts (FT/PT, LED and size of department, success, etc.). Our Astronomy program has grown during and since Stephanie's departure. Even with lowered section counts, our classes currently serve more

students. Our need is great, and being ranked so low repeatedly has demoralized the entire department- both full and part time alike. We have no one to create and maintain our observational program (night time astronomy labs) or to oversee the direction of the program. Our outreach has suffered as a consequence. While we try to make do with what we have – there is only so much one can expect from 3 full time faculty. Other programs make mention of how they cannot continue the quality of their programs without another full time faculty member- we are unable to get the chance to achieve such quality with 3 members of our 3 programs.

b) Has this goal changed and why?

No. Our program has the highest LED per full time faculty currently than comparable departments in our division.

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.

The Program Review Committee offers the following recommendations:

1. Replace all full-time faculty who have separated.

   Upon favorable staffing committee rankings and funding, we have been able to replace faculty. Brian Carter and Stephanie Plante were hired as replacements for retiring faculty. Stephanie Plante left about the same time as a hiring freeze was put in place due to state budget shortfalls. We have since attempted numerous times to ask that the position be offered. Each attempt to fill Stephanie Plante's position has been such that ranking and/or funding has not been sufficient for each request after the hiring freeze was removed.

2. Relocate the department into new facilities.

   We have relocated our department to the lower floor of building 34. We have had some security concerns, thefts of equipment, trespass, that are being addressed with staff, surveillance, and law enforcement. We have also had stiff competition for use of our specially designed classrooms with other departments leading to scheduling issues that have thus far been unresolved.

3. Increase departmental budget to include replacing and updating lab equipment.

   The department budget has not increased or decreased significantly relative to other departments in our division, however, one-time funds have allowed us to replace and update a large portion of our outdated equipment. Progress has been made, and we will continue to seek such funding until permanent augmentation occurs in our budget.

4. Secure permanent funding to staff the physical sciences tutoring center.

   Funding for our tutoring center has been year to year and not guaranteed. The most stable source of our funding has been donated TA hours from large classes taught within our department – and we are still seeking a permanent funding comparable to other departments within our division.

5. Modify or add classes as necessary. Determine the feasibility for creating astronomy and physical science degrees.

   Two new classes have been created (PSC 100 and ASTR 120) and another two have

been offered online (ASTR 110 and PSC 110). Our department has discussed an associate degree for Astronomy, and created our Physics transfer degree. Other degrees have been discussed, but at the moment our department is unable to expand it offering without assuming significant risk. It has been decided to postpone any expansion in Astronomy until after replacement faculty positions have been filled.

6. Increase technician hours to support program and facilities expansion and adding evening classes.

   Attempts have been made to seek a nighttime technician, thus far remain unfunded. Faculty for night courses have been required to set up telescopes themselves or using untrained students from their own courses to assist. Telescopes have required repair as a result of mishandling. Making a TA position has been discussed as a remedy for our might time needs, which may be easier to fund utilizing an astronomy graduate student or similarly qualified person.

7. Create an astronomy center with observatory and planetarium.

   We hope to continue pursuit of our permanent home for a planetarium in the next 6-year cycle. We are currently seeking a portable planetarium for instructors to use on campus, and for use off campus for outreach purposes. This effort may result in more support for a permanent location. Our department also suggests that any observatory and planetarium structure have sufficient functionality to make it on par with other community college planetariums such as Palomar College or San Diego City College. If the college would like to make the planetarium the finest in San Diego County, our department would fully support such efforts and volunteer to assist in any way possible.

8. Provide office space for part-time instructors.

   Within our new building, we have provided for office space for all faculty and staff in our department. Part-time faculty currently share office space with full-time faculty in offices designed for dual occupants. Each occupant has access to a computer, desk, bookshelves, and lockable storage units.

9. Collaboratively write student-learning outcomes and collectively agree upon their assessment methods to be written in course syllabi. Use student-learning outcome data for continued course and program improvement.

   Since the last review we have collaboratively written student learning outcomes (SLOs) for all the Astronomy, Physics, and Physical Science courses we currently teach, and are in an ongoing process of assessing them, according to a schedule submitted to the college SLO coordinator(s). The SLOs are listed in Appendix 4, and instructors have been required by administration to include them in their course syllabi.

10. Using the Course History Information Report, continue to submit curriculum deletion

forms for those courses that have not been offered in the last three years.

Astronomy 105 is the only course that has not been offered in the last 3 years, and it will be decided in future department meetings whether it should be deleted as no current faculty are interested in offering it.

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 following table summarizes the status of the course outlines and alignment with Cuyamaca College as well as the frequency with which each class is offered. All course outlines required for our transfer degree are up to date and have been recently updated. Astronomy 105 is the most out of date and (since last program review) has not been offered. We will update the most outdated course outlines first, and also consider removing Astronomy 105 when we have our replacement faculty in place. Comparison with other local colleges course outlines (CSU and UC) are done periodically to ensure similarity to transfer institutions.

Course	Last Update	Offerings	Aligned
ASTR 110	April 2003	Spring, Summer, Fall	Y
ASTR 112	May 2011	Spring, Summer, Fall	Y
ASTR 120	May 2011	Spring, Fall	Y
PSC 100	April 2009	Spring, Fall	Y
PSC 110	April 2005	Spring, Summer, Fall	Y
PSC 111	April 2005	Spring, Fall	Y
PHYC 110	April 2005	Spring, Summer, Fall	Y
PHYC 130	May 2013	Spring, Fall	Y
PHYC 131	April 2005	Fall	Y
PHYC 140	May 2013	Spring, Fall	N
PHYC 240	May 2013	Spring, Fall	N
PHYC 241	May 2013	Spring	N

All Physics courses are heavily based on problem solving: understanding the laws of nature, assessing which principles are relevant to a given problem, and applying those principles with the appropriate mathematical techniques. All physics lab experiments stress proper collection techniques, analysis of data, and presentation of the analysis in individual written lab reports. Astronomy and Physical Science classes are less problem oriented, emphasis being placed in relating the laws of nature to the observations: "Why is the Universe as it is, and how do we know that?" rather than on memorization of facts. Separate astronomy and physical science labs stress data collection and analysis as well, but with less mathematical manipulation.

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.**

New faculty members meet with the dean and department chair upon hire. They are offered syllabi, course outlines, lecture materials, and sample exams as well as an office next to full time faculty. The department chair explains in detail the expectations of the faculty as well as those of the college. The new faculty member is the given a brief tour of network resources and a tour of the campus where important office and support services are located. They are also informed which full time faculty member teaches the same courses the new faculty is teaching and are encouraged to contact them for any help they might need throughout the semester. Emails are sent for any student learning outcome assessments that may be required that term. The full time members of the department are also informed of new members, and are encouraged to be helpful whenever possible.

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

Faculty members generally rely on staff development workshops and conferences to keep their instruction current. We also communicate with/visit other campuses to stay in touch with colleagues and learn anything new they have learned. We also keep a close eye on publishers of our textbooks and their competitors and have in person and distance education demonstrations of the newest network based learning supplements and learning techniques. We are ever mindful that our entry-level GE courses (ASTR 110, ASTR 120, PSC 100, PSC 110, PHYC 110) are the greatest exposure our program has to "non-science" students. While we would love to convert all of our students into Physics and Astronomy majors, we are still very fulfilled if those students enhance their appreciation and understanding of science. In many cases we have been able to inspire students to seek more courses in these disciplines, and most recently we have received communication from a student who came from one of these GE classes, continued thru our life science Physics series, and is currently seeking a PhD in Physics at the University of Hawaii. For higher-level courses (PHYC 130, PHYC 131, PHYC 140, PHYC 240, PHYC 241), we strongly prepare those students for transfer into 4-year engineering and science degrees. Another student has communicated years after leaving Grossmont College that he was able to pass the

Physics section of the MCAT exam (for Medical School) with very little difficulty and thanked us for the foundation of his understanding.

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.)

We used the GCCCD Reports system to compile grade distributions for all Physics, Astronomy, and Physical Science classes from Fall 2008 through Fall 2012, supplemented with older data covering 2006 and 2007, which had to be transcribed into spreadsheets. For clarity, and because of the different population of students involved, the 3-semester sequence PHYC140/240/241 is plotted separately from the other PHYC classes.

The charts shown in Appendix 3 have been summed over sections (without separating those taught by part-time and full-time faculty, see below) and although many of the instructors in our department have utilized the plus/minus grading scheme after its introduction in 2009, for clarity we have collapsed those grades into “plain letter” grades to make trends more apparent for this review.

The charts also show which classes were offered in one semester, but not another. Especially after deep section cuts, we tried to arrange a schedule where our classes were offered (e.g. PHYC131) in semesters when Cuyamaca was not offering them, in order to keep students progressing through their sequence.

We chose not to split the charts into full and part-time instruction, any comparison would be statistically invalid due to small number of full time faculty and influenced heavily by an individual instructor’s choices. However, some trends are apparent where sections are taught solely by a full-timer, for instance ASTR120 (taught by Dr. Blanco) vs. ASTR110 (taught by a mix of adjuncts and full-time staff). PHYC240 is taught exclusively by Dr. Cohen, while PHYC140 is often taught in parallel by Dr. Carter and at least one adjunct instructor. In general, as expected, full-time instructors turn out to be slightly less generous in grading than part-timers, which also results in higher withdrawal rates.

As a department, the grade distributions show neither obvious evidence of “grade inflation” over time, nor of decreasing performance by the students. High withdrawal rates in PHYC130 and PHYC140 reflect the fact that these classes require good preparation in their pre-requisites, as the first classes in two very demanding sequences. In fact, we are considering a curriculum proposal to remove Math 178 (Business Calculus) as an acceptable pre-requisite for PHYC130, since that math class does not provide students with the foundation in trigonometry they need to succeed in PHYC130 and 131.

Our department has frequent discussions on grading and degree-of-difficulty, at department meetings and informally between instructors of parallel sections. The implementation of

Student Learning Outcomes (SLOs) has fueled these discussions via suggestions of appropriate test questions to ask in multiple sections, in order to assess them uniformly.

In summary, our department's grading policies are consistent, fair, and at an appropriate level to provide students with a good preparation for 4-year schools. The grade distributions reflect our commitment to Grossmont's Educational Objective A - to provide instructional programs composed of:

1. Transfer courses equivalent to the lower division curriculum of universities and colleges for students who plan to continue their education at a baccalaureate institution.
2. Vocational and career education courses to provide technical skills and knowledge for beginning employment, retraining and advancement.
3. General education courses to broaden knowledge, skills, attitudes and values, to develop analytical ability and critical thinking, and to foster interest in life-long learning in the educational, scientific, and cultural fields essential for effective participation in a complex society.
4. Developmental courses to assist inadequately prepared students to succeed in college course work.

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).

The analysis of course grade distribution is one measure for consistency in grading in multiple sections and across semesters. We also maintain academic standards and integrity by using standard textbooks and keeping apprised with programs offered by other community colleges, 4-year institutions, and universities. The full-time faculty meet frequently to discuss course content, student performance, textbook adoptions, and teaching philosophies. We attempt to maintain academic standards in classes taught by adjuncts by carefully evaluating applicants in the interview process and by meeting with hired adjuncts during the semester, and obtaining feedback about their performance though regular institutional evaluations. Physics 140, 240, and 241 courses all use the same textbook and online resources for continuity through our 3-semester sequence. Physics 140 instructors coordinate their coverage and schedules prior to the start of the semester, which assures that all instructors are covering the same material, to the same depth, and are using the same lab experiments. Physics 240, when more than 1 section is offered, is similarly coordinated. Physics 130, and 131 similarly use the same textbook and online resources. Physics 130, when multiple sections are offered, is coordinated similar to Physics 140. Physics 241 and 131 are generally 1 section per semester offered, and most of the time are offered yearly. Astronomy and Physical Science classes have more subject variation, but are governed by the course outlines and maintain a level of rigor and variation similar to local 4-year institutions.

Department meeting topics generally discussed with all faculty are

•What are typical grade distributions for a specific course?

•What should constitute a passing grade in a specific course?

•When should extra credit be used?

•How should we score lab reports?

These topics are also covered in our Student Learning Outcomes and are periodically utilized to determine consistency in our courses.

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

ASTR 120 was developed for more topic variety, addressed student interest, expanded our offerings in an effort moving towards offering an associates degree, and transfers to 4-year universities. The creation of this course was motivated by the recent explosion of knowledge about our solar system and others outside of our own. It is equivalent to ASTR110 (General Astronomy) in terms of transfer/articulation. The new course has proven popular. Other nearby colleges provide a variety of Astronomy courses (Violent Universe, Observational Astronomy, ASTR201 for science majors, etc.) and we would like to do the same, staffing permitting.

PSC 100 was created to renew articulation with SDSU for equivalence with its NS 100 course for students who are preparing for primary education teaching degrees. PSC 110 and ASTR 110 were offered online as an attempt to reach out to students who are unable to attend a traditional course and attain their educational goals because of their work schedules, disabilities, family needs or other reasons. Offering these courses online along with our traditional courses helps all members of our community to reach their educational goals. We would like to continue developing new courses, but unfortunately three major roadblocks exist to the end. We would also like to convert our 4 unit Physics courses into 5 unit Physics courses and align them with Cuyamaca College. Talks with Cuyamaca College peers were informative, but course coverage and content differed from our courses. It is difficult to determine where extra permanent LED will come from to convert our 4 unit courses into 5. Our department is adamant that it does not come at the expense of reducing our current offerings.

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

Our Physics and Physical Science classes directly address many real world issues and discuss them in detail (energy generation, global warming, construction techniques, serving on a jury, and decision making regarding such issues). Our hope is to make students use science in their decision making process and educate those around them to contribute to the betterment of society.

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.)

As we currently offer only one online course (no hybrids), an easy comparison can be made to our on campus courses. The grade distributions for the online courses versus the on campus courses are similar – with slightly more "A's" being awarded online. This could be related to the extensive use of discussion boards – allowing some students to perform better than an on campus class taught by a part time instructor not required to use blackboard to foster communication amongst their students. It may also be that high achieving students can be found more frequently in distance education courses. This was the only difference noted comparing side-by-side courses in the same semester. Comparing full time instructor versus online full time instructor grading patterns – the results were almost identical, but again a slightly higher number of "A" students in online courses. Withdraw rates and distribution of grades were similar with the exception of the highest grade.

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.)

Students who receive a 3 or higher on their Mechanics AP exams are given PHYC 130 credit, and 3 or higher on their EM AP exam are given PHYC 131 credit.

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.**

We ensure that transferable courses remain current and continue to articulate by keeping abreast of curriculum changes, through contacts with colleagues at other colleges and universities, and through professional meetings and journals. In addition, we receive informal feedback from many of our graduates. We maintain good ties with SDSU, CSUSM, and UCSD physics and astronomy programs.

One measure of validity or our articulation efforts is our responsiveness to program changes at SDSU, which resulted in the creation of PSC 100.

Another measure of validity or our articulation efforts is the success of our students after transfer. This can be traced back to a 2003 study, which tracked Grossmont physics students after they transferred to SDSU. Of 22 students who successfully completed Physics 240 at Grossmont, 17 received passing grades in physics at SDSU. Of 23 students who successfully completed Physics 241 at Grossmont, all received passing grades in physics at SDSU. This was an indication that our articulation classes successfully prepare our students. And while this study is dated, no significant changes have occurred since 2003 in the way our program keeps courses articulated.

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **San Diego State** Semester		From: **Grossmont College** Semester		
		====Physics====		
PHYS 107	Introductory Physics with Laboratory (4)	PHYC 110	Introductory Physics (4)	
PHYS 180A **&** PHYS 182A	Fundamentals of Physics (3) Physical Measurements (1)	PHYC 130	Fundamentals of Physics (4)	
PHYS 180B **&** PHYS 182B	Fundamentals of Physics (3) Physical Measurements (1)	PHYC 131	Fundamentals of Physics (4)	
PHYS 195 **&** PHYS 195L	Principles of Physics (3) Principles of Physics Laboratory (1)	PHYC 140	Mechanics of Solids (4)	
PHYS 196 **&** PHYS 196L	Principles of Physics (3) Principles of Physics Laboratory (1)	PHYC 240	Electricity, Magnetism and Heat (4)	
PHYS 197 **&** PHYS 197L	Principles of Physics (3) Principles of Physics Laboratory (1)	PHYC 241	Light, Wave Motion, and Modern Physics (4)	

END OF DEPARTMENT

Note: (1) This document represents what San Diego State University recognizes/accepts for course-to-course articulation with the institution identified above. (2) The transfer courses are acceptable as "comparable/equivalent" (in lieu of) to SDSU courses unless otherwise identified.

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **San Diego State** Semester	From: **Grossmont College** Semester
====Physical Science====	
N SCI 100 Physical Science (3)	PSC 100 Physical Science for Elementary Education (3)

END OF DEPARTMENT

Note: (1) This document represents what San Diego State University recognizes/accepts for course-to-course articulation with the institution identified above. (2) The transfer courses are acceptable as "comparable/equivalent" (in lieu of) to SDSU courses unless otherwise identified.

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **San Diego State**	Semester	From: **Grossmont College**	Semester
		====Astronomy====	
ASTR 101 Principles of Astronomy	(3)	ASTR 110 Descriptive Astronomy	(3)
ASTR 109 Astronomy Laboratory	(1)	ASTR 112 General Astronomy Laboratory	(1)

END OF DEPARTMENT

Note: (1) This document represents what San Diego State University recognizes/accepts for course-to-course articulation with the institution identified above. (2) The transfer courses are acceptable as "comparable/equivalent" (in lieu of) to SDSU courses unless otherwise identified.

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **CSU San Marcos**			From: **Grossmont College**		
11-12 General Catalog		Semester	11-12 General Catalog		Semester
			====Physics====		
PHYS 201	Physics of Mechanics and Sound	(4)	PHYC 140	Mechanics of Solids	(4)
PHYS 202	Physics of Electromagnetism and Optics	(4)	PHYC 240	Electricity, Magnetism and Heat	(4)
PHYS 205	Physics for the Biological Sciences I	(4)	PHYC 130	Fundamentals of Physics	(4)
PHYS 206	Physics for the Biological Sciences II	(4)	PHYC 131	Fundamentals of Physics	(4)

END OF DEPARTMENT

QUESTIONS REGARDING THIS DOCUMENT CAN BE SENT TO ARTICULATION@CSUSM.EDU

FOR CSU SAN MARCOS UNDERGRADUATE ADMISSION REQUIREMENTS REFER TO THE WEB SITE AT http://www.csusm.edu/admissions/

1. PLEASE CONSULT THE CSU GE-BREADTH SECTION OF ASSIST.ORG (UNDER HELP TOPICS) OR YOUR COMMUNITY COLLEGE COUNSELOR FOR ASSISTANCE WITH GENERAL EDUCATION REQUIREMENTS IN CONJUNCTION WITH THIS SECTION FOR LOWER-DIVISION MAJOR PREPARATION.
2**. ARTICULATION AGREEMENTS DO NOT INDICATE REQUIRED PRE-REQUISITES.**
3**. ARTICULATION AGREEMENTS FOR SUBSEQUENT ACADEMIC YEARS ARE SUBJECT TO REVISION. PLEASE CONSULT THE ASSIST WEB SITE FOR EACH SUBSEQUENT, NEW ACADEMIC YEAR TO ENSURE THAT YOU ENROLL IN THE APPROVED COURSES FOR THIS MAJOR**

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **CSU San Marcos**		From: **Grossmont College**	
11-12 General Catalog	Semester	11-12 General Catalog	Semester

====Physical Science====

GES 105	Introduction to Physical Science	(3)	PSC 110	Introduction to the Physical Sciences	(3)

END OF DEPARTMENT

QUESTIONS REGARDING THIS DOCUMENT CAN BE SENT TO ARTICULATION@CSUSM.EDU

FOR CSU SAN MARCOS UNDERGRADUATE ADMISSION REQUIREMENTS REFER TO THE WEB SITE AT http://www.csusm.edu/admissions/

1. PLEASE CONSULT THE CSU GE-BREADTH SECTION OF ASSIST.ORG (UNDER HELP TOPICS) OR YOUR COMMUNITY COLLEGE COUNSELOR FOR ASSISTANCE WITH GENERAL EDUCATION REQUIREMENTS IN CONJUNCTION WITH THIS SECTION FOR LOWER-DIVISION MAJOR PREPARATION.
2. **ARTICULATION AGREEMENTS DO NOT INDICATE REQUIRED PRE-REQUISITES.**
3. **ARTICULATION AGREEMENTS FOR SUBSEQUENT ACADEMIC YEARS ARE SUBJECT TO REVISION. PLEASE CONSULT THE ASSIST WEB SITE FOR EACH SUBSEQUENT, NEW ACADEMIC YEAR TO ENSURE THAT YOU ENROLL IN THE APPROVED COURSES FOR THIS MAJOR**

Articulation Agreement by Department
Effective during the 11-12 Academic Year

To: **CSU San Marcos**		From: **Grossmont College**	
11-12 General Catalog	Semester	11-12 General Catalog	Semester

====Astronomy====

ASTR 101	Introduction to Astronomy (3)	ASTR 110	Descriptive Astronomy (3)

END OF DEPARTMENT

QUESTIONS REGARDING THIS DOCUMENT CAN BE SENT TO ARTICULATION@CSUSM.EDU

FOR CSU SAN MARCOS UNDERGRADUATE ADMISSION REQUIREMENTS REFER TO THE WEB SITE AT http://www.csusm.edu/admissions/

1. PLEASE CONSULT THE CSU GE-BREADTH SECTION OF ASSIST.ORG (UNDER HELP TOPICS) OR YOUR COMMUNITY COLLEGE COUNSELOR FOR ASSISTANCE WITH GENERAL EDUCATION REQUIREMENTS IN CONJUNCTION WITH THIS SECTION FOR LOWER-DIVISION MAJOR PREPARATION.
2. **ARTICULATION AGREEMENTS DO NOT INDICATE REQUIRED PRE-REQUISITES.**
3. **ARTICULATION AGREEMENTS FOR SUBSEQUENT ACADEMIC YEARS ARE SUBJECT TO REVISION. PLEASE CONSULT THE ASSIST WEB SITE FOR EACH SUBSEQUENT, NEW ACADEMIC YEAR TO ENSURE THAT YOU ENROLL IN THE APPROVED COURSES FOR THIS MAJOR**

Articulation Agreement by Department
Effective during the 11-12 Academic Year
Based on the 11-12 UC Transfer Course Agreement

To: **UC San Diego**			From: **Grossmont College**		
11-12 General Catalog	Quarter		11-12 General Catalog		Semester
			====Physics====		
PHYS 1A	Mechanics	(3)	PHYC 130	Fundamentals of Physics	(4)
PHYS 1AL	Mechanics Laboratory	(2)	PHYC 130	Fundamentals of Physics	(4)
PHYS 1B	Electricity and Magnetism	(3)	PHYC 130 **&**	Fundamentals of Physics	(4)
			PHYC 131	Fundamentals of Physics	(4)
PHYS 1BL	Electricity and Magnetism Laboratory	(2)	PHYC 130 **&**	Fundamentals of Physics	(4)
			PHYC 131	Fundamentals of Physics	(4)
PHYS 1C	Waves, Optics, and Modern Physics	(3)	PHYC 131	Fundamentals of Physics	(4)
PHYS 1CL	Waves, Optics, and Modern Physics Laboratory	(2)	PHYC 131	Fundamentals of Physics	(4)
PHYS 2A	Physics-Mechanics	(4)	PHYC 140	Mechanics of Solids	(4)
PHYS 2B	Physics-Electricity and Magnetism	(4)	PHYC 240	Electricity, Magnetism and Heat	(4)
PHYS 2BL	Physics Laboratory-Mechanics and Electrostatics	(2)	PHYC 140	Mechanics of Solids	(4)
PHYS 2C	Physics-Fluids, Waves, Thermodynamics, and Optics	(4)	PHYC 140 **&**	Mechanics of Solids	(4)
			PHYC 240 **&**	Electricity, Magnetism and Heat	(4)
			PHYC 241	Light, Wave Motion, and Modern Physics	(4)
PHYS 2CL	Physics Laboratory-Electricity and Magnetism, Waves, and Optics	(2)	PHYC 240	Electricity, Magnetism and Heat	(4)

Physics (continued)					
PHYS 2D	Physics-Relativity and Quantum Physics	(4)	PHYC 241	Light, Wave Motion, and Modern Physics	(4)
PHYS 2DL	Physics Laboratory-Modern Physics	(2)	PHYC 241	Light, Wave Motion, and Modern Physics	(4)

END OF DEPARTMENT

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 1 –** SLO Assessment Analyses and **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?

Our department held numerous discussions, mostly during flex weeks, in order to carefully determine SLOs for all of our courses. At the start of each semester we discuss which SLOs are due for assessment, and then trade assessment questions back-and-forth via email if necessary between instructors of parallel sections, until a consensus is reached, so that all sections of the same class are assessed consistently. SLO assessment reports are usually compiled by full-time faculty at the end of the semester, for submission to the SLO coordinator.

This is working well to date, however there is room for improvement. In some cases we have fallen behind the assessment schedule while being ahead in others. The major factor is whether full-time faculty are teaching a given section in the semester and can compile the statistics in their own and in adjunct-taught sections. With only 3 full-time faculty in the department we are spread thin between sections. We deem it unfair to ask for additional unpaid work from our adjunct faculty, as does our union. If more part-time instructor involvement is necessary in the future, it is important to secure funding to compensate them for their SLO-related work.

3.2 Using your course-level **SLO Assessment Analyses** (**Appendix 1**), this is part of your annual reporting process, and your **Course-to-Program SLO Mapping Document** (**Appendix 4**), discuss your students' success at meeting your Program SLOs.

Our department has agreed on the criteria for student success in SLO assessment, it is that at least 67% of students score at least 67% on the SLO assessment. Our students have met these goals for almost every SLO assessed.

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? If so, please indicate by clearly designated modifications to your **Course-to-Program SLO Mapping** document in **Appendix 4**. Please discuss any planned modifications (i.e. curricular or other) to the program itself as a result of these various assessment analyses.

For the few SLOs that have not been satisfied by the criteria given above, examination of the assessment questions has revealed some deficiencies (e.g. ambiguous distractors in a multiple-choice question). Also, timing of the assessment may be important – most SLOs have been assessed as part of a cumulative end-of-semester final exam. We are too early in the process to make detailed plan modifications; however before an SLO is assessed for the second time, we shall use the information in the prior SLO report to determine what, if any, changes are necessary.

SECTION 4 - STUDENT ACCESS

4.1 How does facility availability affect access to your program?

One of the biggest issues with our courses and recent cutbacks is regaining use of our "specifically designed for our program" classrooms. Unfortunately for our program, we have 3 classrooms where all of our equipment is stored or access to our equipment is allowed. Those rooms are 34-105, 34-106, and 34-171. When we schedule courses for those rooms, we should have priority use of these facilities since those classrooms were designed specifically for our program. We are obligated to share these rooms with other programs when we are not using them. This is unique in our division, with the exception of Math. Not allowing our courses to be held in the rooms that are specifically designed for their instruction harms all instructors and students in those courses. Instructors forced into using other classrooms will not have access to the required equipment to explain visually our concepts, and the result seems to be offering fewer demonstrations.

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

We have been very proactive to offer courses to accommodate as many students as possible. Prior to cutbacks, we offered courses at all times of day and night, Saturday and online. Since we lost a full time faculty position and due to budgets cutbacks, we've had to cutback significantly, and no longer offer Saturday or as many night lab courses as we did prior to the cutbacks. We have avoided scheduling many classes that were not certain to make "minimum" enrollment, in favor of keeping courses at the most popular times to preserve our department. We also were forced to cut our online astronomy courses for lack of qualified full time faculty after losing the full time faculty who taught those courses.

4.3 Based on your analysis of the Student Survey results in **Appendix 5**, what trends did you observe that might affect student access (i.e., course offerings, communication, department and course resources)?

It was gratifying to learn that students believed that lecture, homework, and textbook were the sources of the learning across all of our disciplines. We had believed such to be the case, and it was nice to see it reflected by the students. It was also reaffirming to see that most students spend 3-7 hours weekly preparing and studying for our courses. We generally state to students that they require twice as much out of class time as in class time, making these numbers stated by students on the low side – but not all students were successful in each course, so the results may be rather telling – spend more time studying if you want to increase your performance. It would be interesting to correlate study time with class grade, if only to again prove what we believe to be the truth.

Roughly 2/3 of our Physics students are required to take our course for their major, while 1/3 take the course for GE requirements (even though the students could mark these

responses independently, it is generally an either or answer for our program). The most likely cause of this though, may be related to our course offerings. During the survey semester, we offered two PHYC 110 courses, three PHYC 140, two PHYC 240, one PHYC 130 and one PHYC 131 course. The PHYC 110 courses are generally populated by students fulfilling GE requirements, while the rest of the Physics courses are generally science and engineering majors. Thus one would roughly expect 2/7 of the students to seek GE, which is 28%. The numbers are fairly close on the survey.

Our Physical Science students almost exclusively indicate the reason for taking the course is for GE or transfer, with 17% indicating the course is required for their major. We are aware of only one section of our Physical Science courses that transfers to another institution for the purposes of a degree. That section does not have 17% of our Physical Science students, and we are uncertain which other institutions use our other lecture course to satisfy a requirement for a major.

Our Astronomy students indicate strongly they are taking the course for GE requirements, but a large number express an interest in the subject – significantly more so than Physics or Physical Science. 17% indicate taking the courses as required for major.

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

We need to expand our GE offerings in Physics, while at the least slightly expanding our higher-level offerings. We are still unable to fill our highest-level classes (or offer them every semester), and this is primary due to the feeder classes not being offered in sufficient quantity to have enough successful students to fill them, and lack of other full time faculty to teach them. For our three-semester sequence, we would need to increase our section offerings by almost double at the first courses (Phyc 130 and Phyc 140) and by 50% at the intermediate level (Phyc 240), in order to fill Phyc 241 every semester. Phyc 131 would fill sufficiently every semester if there were 3 sections of Phyc 130 offered every semester.

We need to identify what (if any) other majors require our Physical Science courses (which institutions and which majors) so that we may better serve their interests, or whether students are incorrectly answering the student survey.

Astronomy is by far the most neglected of our programs, the biggest reason is lack of full time specialized faculty to teach observation courses. In addition, we have a huge opportunity - that is sometimes lost - to convert ordinary students who have an interest in the subject, into extraordinary students seeking careers in science. We could definitely improve this area by hiring new full time faculty and replacing the ones we've lost over the years. Unfortunately our pleas for replacement faculty go unheard in committees. We would also like to pursue a permanent structure on campus to house a planetarium at the very least, and perhaps an entire science center similar to the Reuben H Fleet science center – where our campus could have permanent public access to science and astronomy. This could be a campus wide science center embodying other science disciplines across campus, and include other non-science courses such as art and film students who might utilize the same structure, as the planetarium – with sufficient funding and design – be build to show IMAX films. A permanent planetarium will enhance our program to a great extent, and lead

to more Astronomy majors – perhaps more science teachers as we have been called to produce by the President of the United States. A campus planetarium/science center would be a huge step forward to increasing our community outreach and be a magnet for east county education.

4.5 Based on your analysis of questions 3 through 16 in the **Appendix 5 -** Student Survey, identify any changes or improvements you are planning to make in curriculum or instruction.

Since students are having difficulty getting Physics classes they need, we must add more sections back into our schedule. We also need to improve diversity within our department to give students more choices when taking these courses. Most of the improvements we would like to make require funding and campus investments – and during the recent down turn in funding we have found it futile to try exploring any bold ideas with the 3 full time faculty we currently have. Increasing the number of full time faculty in our department is the primary goal, and would lead to exponentially increasing our efforts in other areas.

4.6 Discuss program strategies and/or activities that have been, can be, 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 5**)

The class schedule and course catalog are where most of our students learn of our courses – so it is imperative that those sources are maintained or improved to maximize our exposure to the campus and community at large. Web advisor has incorrectly identified our class sections as full when we have seats available to add students. It has been strongly suggested to admissions that the waitlist are not to be cleared until census – otherwise we lose the opportunity to fill our classes.

It is also interesting to note that a large number of students are referred to our program by other previous students – thus a positive reputation has been established and must be maintained. Losing full time faculty may be affecting this reputation. Having general difficulty finding qualified part time faculty has, on occasion, resulted in courses taught by individuals who would harm our program's reputation. And while substandard evaluations can identify these individuals, one semester of damage can haunt us for many years.

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

We are not allowed to offer under enrolled courses – they were cancelled at the division level if they were fewer than 18 students (out of 35 max) at one point. For other courses that were offered once a year that were under enrolled, we changed scheduling of the courses that led into those courses. For example, PHYC 241 was lightly populated in the spring semester, so we added an extra PHYC 240 course in the fall to compensate, and also allowed students who received high grades in PHYC 140 to enroll concurrently in PHYC 240 and PHYC 241. In the case of our yearly PHYC 131, we noticed Cuyamaca College was offering 2 sections of PHYC 131 in the spring (at the same time we offered our course) – but noticed they didn't offer one in the fall semester. So we moved the PHYC 131 to the fall semester, and it has significantly increased the enrollment. We need administration to allow PHYC 131 and PHYC 241 to be held at lower than average levels, as these courses are required by biology and our physics transfer degree. In addition, the rest of our courses are extremely productive and make our department as a whole very profitable for the campus.

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

All faculty have been made aware that in class videos must be captioned. In response, Philip Blanco, Brian Carter, and Rex Paris all attended district training relating to captioning. Brian Carter has captioned all of his online videos utilized in his online PSC110. While our courses do not indicate any unusual tendencies in success based on ethnicity, age, or gender – our course enrollment saw a shift in female enrollment after the departure of our full time female faculty member. While it is difficult to prove a connection between the two events, there has been a marked shift in Astronomy enrollment. Between Fall 2006 and Spring 2010, women outnumbered men in Astronomy courses by roughly 10%. Prior to Fall 2006 males outnumbered females by 10%. During Spring 2010 and after, the shift returned to 10% more males than females. This corresponds directly with the employment dates of our female FT faculty member. A 20% shift in students is an extremely significant number. There is also a huge gap between men and women in Physics sections, and this might also be the result of lack of diversity within the department.

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 (e.g. ethnicity, age, and gender). Please consult **Appendix 11** for data.

We hire and are fortunate to maintain (due to competition among higher paying districts it is difficult to maintain) a fairly diverse mixture of adjuncts to bridge the gap while we wait for qualified full time faculty replacements and hope they happen to be diverse relative to a current faculty.

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.

From 2007 to the present, Brian Carter developed (and continues to improve) an online exercise and video, and lab experiment website has led to greater student communication and use of our computer and tutoring labs. The website offers immediate feedback to fairly involved calculations for lab courses, and also offers students a free alternative to commercial websites used in other institutions. This has had the beneficial effect of forcing student communication outside of the course for on campus classes, and more communication on discussion boards for the online courses. Field trips and creative assignments have also led students to explore Astronomy and Physical Science at off-campus locations throughout the county. Tutoring opportunities for our best students have been made, and while students are compensated for their time – they also benefit by understanding our subject better from the teaching side. Knowing a subject is one aspect of learning, being able to communicate this to another person is a second aspect to learning!

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

Our department has been unofficially affiliated with the Cuyamaca Engineering Club since Spring 2012, an organization where students and members of the community from various disciplines share the interest in rocket construction and launches. This has led to large student involvement in the projects, with faculty advisement. We have also been involved in campus wide science initiatives such as the Grossmont College Science Festival and the Science Decathlon. Our faculty has also been involved in judging for the San Diego County Science and Engineering Fair. We are proud to have also supported a prize winning middle school student by loaning equipment and advising them in Aerodynamics.

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.

Some classes have filled very quickly at the start of the semester, with long waitlists. PHYC130 is one such example of a high-demand class, as well as sections of ASTR110 and ASTR120 when they are taught at "prime" times of day.

For lecture/lab courses the only solution is to add more sections, budget allocation and instructor availability permitting. For lecture-only classes, another solution is to begin using larger classrooms, such as 34-171, which has a capacity of 75 students. Increasing enrollment limits in online classes.

Our 3rd-semester engineering class, PHYC241, has had low enrollment for some years, partly because students can be accepted to SDSU after taking 2 semesters and so take their 3rd semester physics there. This is in addition to expected attrition. To address this, and the demand for this sequence, we have added additional sections of PHYC140 to "stuff the pipeline" so that a larger fraction of those students will stay on through PHYC241.

Overall, our program seems to be equally successful, more than 80% of students who do not withdraw, across all age groups with the majority of our students being less than 25 years old. In Astronomy, Physics and Physical Science the youngest students are slightly less successful, while the oldest are slightly more successful, while the withdraw rate increases with age, except in the 50+ age group. This may just be a reflection of maturity.

Success rates varied by ethnicity, over all a 78% success rate in Astronomy, with the lowest performing group identifying as Black – non Hispanic at 66%, and the highest success rates belonging to students identifying as Asian at 90%. Retention rates were highest for Asian students, while Pacific Islander and Black – non Hispanic students had the highest withdrawal rates of around 30%. Overall, the average withdrawal rate was around 20%.

Similar trends were noticed in Physics courses. Pacific Islander and Black non-Hispanic students have the lowest success rates (50 and 64%), while Asian students had the highest (83%). Retention rates in Physics courses were uniform, at 80%, with the only deviation being in Asian students with a low withdrawal rate of 14%.

Physical Science students had the most uniform success as a function of ethnicity, again though Asian students success rates were much higher at 86%, while the rest of identifiers all had success rates at or near 70%.

Withdrawal rates in Astronomy and Physics are about 20%, flat across age groups for the most part, but Physical Science has a rate that varies from 20-34% based on increasing age, although the oldest group of students had the lowest withdrawal rate (10%). This anomaly may be explained as a statistical fluke due to low numbers of students in the 50+ range.

Gender does not seem to be a factor that decides success in Astronomy courses, while retention is slightly higher on average in male students. It must be noted that on average, the gender in Astronomy is evenly distributed. But prior to having a female faculty member in Astronomy, there were 10% more male than female students. This trend reversed while we had a female faculty member, and then returned to males outnumbering females. The difference is a 20% change in student population.

Success in Physics does not seem to be gender related, and retention is also gender neutral. There is however a larger number of male students than female. Physical Science classes also exhibit gender independent success and retention. But there are a greater number of female student taking Physical Science classes than male students.

We will discuss our findings during future department meetings and seek to understand any possible causes and solutions if any.

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

We have no federal licensing or registration examinations required in our department or programs.

5.6 Referring to **Appendix 6-** 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.

Our department offers only an associate degree in Physics. On average, our department has produced 1.7 students per year, which is higher than the last 6-year program review cycle. There was a large spike of 6 students who received an associate's degree in Physics, but the reason(s) for this are unknown to us. There is no known requirement for students transferring to a 4-year institution to have an associate degree – so we must conclude that it was an achievement that the students wanted to commemorate with official campus recognition.

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

Philip Blanco and Stephanie Plante have been our high school out reach during the times of their employment. Philip Blanco continues to be involved in out reach for our department with the local middle and high school students. Below is a sampling of the activities of our department:

2006 March: "Moon Mission" presentation by Philip Blanco to Parker Valley Middle School field trip on to campus (received Kudos award).

2006 October: Philip Blanco "The Pluto debate – what's in a name?" invited keynote talk at SMART teacher K-12 conference, Southwestern College. About 40 K-12 teachers were in attendance.

2006 December 9: Department hosted a "Solar system astronomy" workshop for Science Olympiad for local high schools.

2007 and 2008: Working with Cary Willard, our department participated in two BeWISE (Better Education for Women in Science and Engineering) events for high school girls on campus. Philip Blanco and Stephanie Plante led an "egg drop challenge" for about 15 girls.

2007 June 2, First Science Decathlon competition among 40 different middle school and high school students. Brian Carter officiated over the robotics competition. He received a Kudos award for his efforts.

2008 March 8: 2nd Science Decathlon competition among 40 different middle school and high school students. Brian Carter officiated over the robotics competition.

2008 July: Philip Blanco participated in the "build-it, take-it" K-12 workshop sponsored by General Atomics in Sorrento Valley. In addition to making a levitating magnetic coil, the workshop included networking with a number of teachers including Tom Eklund from Grossmont High school physics department.

2009 Mar 21: Grossmont College Science Festival. Our department contributed water rocket launches (Brian Carter), a "solar system walk" (designed by Stephanie Plante), and nighttime observing with multiple telescopes.

2009 May 30: National Science Decathlon competition. Brian Carter again officiated over the robotics competition, with many different middle and high schools represented.

2009 Oct 22: Newton's Laws & Gravity – from the Terrestrial to the Celestial – a 2-part 4 teacher training workshop at the San Diego Supercomputer Center by Philip Blanco. Broadcast by UCSD TV and available on *Youtube*.

2010 Mar 6 - Science Decathlon competition. Brian Carter officiated over the robotics competition – this was the last time Grossmont College hosted the event.

2010 Mar 18 – As part of Women's History Month, Philip Blanco organized a keynote talk and visit by Col. M. W. "Wally" Funk, pioneer aviator and "Mercury 13" astronaut candidate. A special invitation was extended to Grossmont Middle College High school students to meet Col. Funk at a reception after her talk.

2011 June 3 – TeacherTech workshop for high school girls from San Diego County schools: "Moon Walking" by Philip Blanco, at the San Diego Air and Space Museum.

2012 January – Philip Blanco judged at, and was keynote speaker for, the science fair at Magnolia Science Academy, a K-8 charter school close to campus.

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).

We refer students to act as tutors for the tutoring center, and mention to current students the center and its availability. We also refer students to the English writing center for essay deficiencies. We also have good relations with Instructional Media Services and help to maintain working computers and projectors in each of our classrooms.

6.2 Analyze the results of the **Student Survey** - **Appendix 5** and describe student utilization and satisfaction with campus resources **as it relates to your program** (i.e. availability, usage, relevance).

Of those students who utilized the tutorial center (about 1 in 6 students), roughly 65% found the services helpful. A larger number of students (50%) utilized our department computer/tutoring lab and 70-75% of those students indicated it was helpful. Our department tutoring and computer lab has limited hours due to funding sources being linked to donated TA bonuses rather than permanent funding, and tutoring staff is the best we can obtain given other departments are allowed to pay their respective tutors up to $13.50 an hour, while we are currently limited to $12.50 an hour. Even so, students seem to favor our tutoring services either due to the tutoring staff or the proximity to the department instructional sites (classrooms).

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

We have utilized the Institutional Research Office for this program review. We have also attempted to research relating to student mathematics preparation to outcome in our courses.

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.

The library has been provided all of our textbooks on reserve for students to utilize for fixed periods of time within the library. Generally students utilize these at the beginning of the semester when trying to coordinate resources to obtain their own copies of books. Various DVD's on Physics, Physical Science, Astronomy, and related subject material is available at the media desk for instructors and students. All of the media have been screened to include closed captioning. This has been somewhat problematic as some videos we would like to add to the collection do not have any source which included closed captioning, and any attempt to add captioning has been rejected by the library staff since duplication of materials is required and copies are not acceptable to staff.

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?

Our department works very frequently with the Counseling department in evaluating transcripts, clearing prerequisites, and student advising. The counseling department has in turn worked very hard to clear prerequisite requests from our department in a timely fashion.

Our department has maintained a good working relationship with the DSP&S department. Students requiring accommodation receive all such requests without any hesitation. Students with learning skill deficiencies are often reminded by faculty of the DSP&S offices and what resources they have available. To their end, DSP&S has also responded to our requests for scanning and emailing results in a professional and timely fashion which has helped our faculty return materials to DSP&S students at the same time as the rest of the class – which improves student privacy issues.

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 5**, how do students respond to the use of technology?

Of the students responding to the question "was it helpful" in regards to the Tech Mall and Department Computer Lab, 70-80% answered favorably. Many faculty within our department utilize various forms of technology in the classroom to enhance lectures, communicate with students, perform homework exercises, view video recordings of lectures, and check lab experiment calculations. Many of the faculty members' websites rely on ASP and FTP functionality at the district level. The department web page also utilizes ASP functionality. All of the technological advances that have occurred during the last 6 years within our department have been jeopardized by the district moving away from useful web servers into more glossy and less functional accommodations that only serve administration perceived needs. Students appreciate the fact our department has tried to provide cost free options for our PHYC 110 and PSC 110 courses, as well as PHYC 140 students for the lab side of the course. Immediate feedback is greatly appreciated by those students. This may change as the district moves away from supporting faculty and student needs by introducing new less functional web servers.

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

Use of new technology is a double-edged sword, as the advances in technology always outpace our instruction. Attending conferences and keeping informed through various means makes us aware of advances that can affect our instruction. Most recently, there is an exponential increase in usage of portable "pad" type devices. Ensuring that all of our computer based systems function properly has been challenging. At the department level,

this has been accomplished to some extent – although there are always unforeseen outliers that need to be addressed. Presently, in order to show a video lecture, we need to host at least 2 different video formats in order for all browsers to play the video. This means we need double the web space in order to show this video. The district has not increased the storage space (needs to at least double it) given to individual faculty or the department website account in the last 6 years to accommodate this requirement. In addition, for courses that utilize district resources, online courses require more web space. Faculty teaching more than one online course should be given adequate storage for those courses, and the district has been resistant to any increase in individual faculty web space for these instances as well.

In the future, in Physics and Physical Science labs we would like to replace our "wired" lab equipment, with wireless versions – in some cases self contained units. These would greatly enhance the ability of our faculty to devise better experiments that are hindered by "tethering". In Astronomy, we would also like to replace/augment our telescopes with CCD cameras so students can take clear pictures of their observations. Currently students use cell phones to take out of focus images of their observations. While still satisfying to the student, these photos are poor representations of what their eyes view or what a CCD camera could image.

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

Our facilities were specifically designed to our needs. Problems generally arise when other departments have scheduled classes in 34-105 and 34-106. These rooms are where we only teach PHYC 110, PHYC 130, PHYC 131, PHYC 140, PHYC 240, and PHYC 241. We need schedulers to understand that our department should have priority use of these rooms for these classes – since they contain our demonstration areas and equipment. Our department should not have to move classes into unpopular times, which would conflict with other department's schedules (students need to take chemistry and math classes at fixed times) and also jeopardize those classes ability to meet minimum enrollment. Moving the time of Physics classes results in lower enrollment, and possible cancellation. Moving the rooms is not an option, as the equipment and demonstration areas cannot be moved. Courses conflicting with our scheduling do not suffer the same limitations as our courses do. Similarly, all Astronomy courses are taught in 34-171 (possibly 34-150 if available) and should be given priority use of 34-171, which has a demonstration cabinet, located within. If our department is able to utilize 34-150 more frequently, we could purchase duplicate equipment and place another cabinet in that location, as our Astronomy program continues to grow.

We have outgrown our current storage space for equipment, and have to store some of the larger equipment in workspace. To use the workspace, the equipment must be moved outdoors temporarily. We could use more storage space on site for our new equipment.

It is possible in the near future, as our program grows, we would like to use 34-150 more often for Astronomy and Physical Science lectures – as it allows class sizes up to 75

(compared to 50 students in 34-171). We are in fierce competition with other departments both within our division and outside of our division for use of this room.

SECTION 7 - COMMUNITY OUTREACH AND RESPONSE

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

David Dueñas supervised students using Grossmont College equipment at Pershing Middle School and Patrick Henry High School for science competitions held at those locations. Brian Carter and Philip Blanco participated and judged the Science Decathlon and the College Science Festival held for three years at Grossmont College (rockets launcher and robots). Ross Cohen, Stephanie Plante, Philip Blanco, Brian Carter, David Dueñas and John (Brodney) Fitzgerald have held numerous Planet Walks on campus – simulating the distance between the planets and lecturing about each planet. The same group also participated in Open House activities, Health and Science Building grand opening celebrations, Sun Spot viewing, the once in a lifetime Venus Transit, and have shown our holography equipment and holograms. Also refer to section 5.7.

Advisory Committee Recommendation

Some disciplines are required to have advisory committees. Answer this question if this is applicable to your program. In **Appendix 7**, please list the organizations represented on the Advisory Committee and include samples of the meeting minutes.

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 Applicable

SECTION 8 - FACULTY/STAFF PROFESSIONAL DEVELOPMENT

8.1 Highlight how your program's participation in professional development activities including sabbaticals (listed in **Appendix 8**) has resulted in improvement in curriculum, instruction, and currency in the field.

Philip Blanco utilized his sabbatical leave in Fall 2011 to investigate the use of digital recording devices and high-speed cameras in our mechanics labs. His efforts are now used in the physics labs of PHYC 130 and have been very promising for measuring gravitational acceleration and teaching students the relationships of distance, time, velocity, and acceleration as well as showing interesting physical features of collisions that are not apparent to the unaided eye.

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

Our department has participated in attending many professional development activities relating to our instructional needs – including the use of Blackboard, Closed Captioning, Online Instruction, just to name a few. Our department has not offered any campus-wide professional development activities since the last program review due to severe understaffing within our department, but we have offered the campus and community opportunities to use our telescopes on many occasions – most recently to view the Transit of Venus in 2012, a "once in a lifetime" event (technically twice in a lifetime since there are a pair of events 8 years apart), with the next one scheduled for 2117. This was essentially an informal unsanctioned professional development activity, which many faculty and staff outside of our department attended and were given educational materials and lectures while viewing throughout the afternoon on June 5th 2012.

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.).

Philip Blanco obtained ASGC grant and WACC monetary awards for a software license of Mathematica and funds to compensate visiting speakers for various department, Political Economy week, and Woman's History month talks. Brian Carter also wrote a grant proposal for the ASGC award and obtained funding to purchase 100 iclickers for use in all of our courses. This has saved students approximately $40 each in the semesters since, totaling thousands of dollars in savings for students collectively.

Our department actively attends all CCC and Academic Senate meetings (2-3 members). Our department has been represented on the following committees and task forces at various times: Accreditation Standard Team Standard IIA, Health and Science Complex Task Force, Faculty Search Committees for Astronomy and Physics positions, Dean hiring committee, Plus-Minus grading system task force.

SECTION 9 - STAFFING TRENDS AND DECISION-MAKING

From the data provided (include the data source), please fill in the table below:

The following department table has removed any repeated full time and part time faculty teaching across the department and also classified John Oaks as a part-timer as he only teaches one course as overload in our department and is a full time member of the chemistry department.

PHYSICS/ASTRONOMY/PHYSICAL SCIENCE

	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011
# of FT faculty	2	3	4	4	4	3
# of PT faculty	11	7	8	8	11	11
Total Full Time FTEF	1.950	4.000	4.150	4.150	3.250	3.250
Total Reassigned Time	0.3825	0.3825	0.3825	0.3925	0.3825	0.3825
Total Part Time FTEF	4.200	2.150	2.500	2.550	3.650	3.650
Total FTEF	6.150	6.150	6.650	6.700	6.900	6.900
FT % of Total FTEF	31.69	65.02	62.41	61.94	47.10	47.10
Earned WSCH	2820	3072	3258	4110	4299	4464

Grossmont Full Time Part Time Ratio using Census Enrollment for Fall 2006-2011

	#FT	#PT	Total FTEF	Full Time FTE	Part Time FTE	X-Pay FTE	Earned WSCH	FT+XP FTE/ FTE Total	PT FTEF / FTE Total
ASTRONOMY									
SP 2006	1	6	2.400				1119.00		
Fall 2006	1	6	2.400	0.017	2.200	0.182	1248	8.29	91.67
SP 2007	3	4	2.550	0.400	2.150	0.000	1239	15.69	84.31
Fall 2007	3	4	2.400	1.150	1.250	0.000	1236	47.92	52.08
SP 2008	3	4	2.400	1.150	1.250	0.000	1437	47.92	52.08
Fall 2008	3	4	2.400	1.150	1.250	0.000	1413	47.92	52.08
SP 2009	3	5	2.800	1.200	1.600	0.000	1650	42.86	57.14
Fall 2009	3	4	2.600	1.200	1.400	0.000	1782	46.15	53.85
SP 2010	2	5	2.600	0.800	1.800	0.000	1,812.00	30.77	69.23
Fall 2010	2	4	2.600	0.800	1.800	0.000	1,842.00	30.77	69.23
SP 2011	1	5	2.600	0.400	2.200	0.000	1,875.00	15.38	84.62
Fall 2011	2	4	2.600	0.800	1.800	0.000	1,938.00	30.77	69.23
PHYSICS									
SP 2006	2	4	3.150				1170.00		
Fall 2006	2	3	2.800	1.400	1.400	0.000	1128	50.00	50.00
SP 2007	3	3	3.150	1.867	0.900	0.382	1350	71.40	28.57
Fall 2007	3	2	2.650	1.417	0.700	0.532	1302	73.55	26.42
SP 2008	3	2	3.150	1.917	0.550	0.682	1368	82.51	17.46
Fall 2008	4	2	3.150	1.900	0.900	0.350	1284	71.43	28.57
SP 2009	3	4	3.500	1.550	1.600	0.350	1401	54.29	45.71
Fall 2009	4	2	3.150	2.400	0.550	0.200	1722	82.54	17.46
SP 2010	3	3	3.150	1.400	1.400	0.350	1,833.00	55.56	44.44
Fall 2010	3	4	3.150	1.700	1.250	0.200	1,710.00	60.32	39.68
SP 2011	3	4	3.500	1.400	1.750	0.350	1,605.00	50.00	50.00
Fall 2011	3	4	3.150	1.500	1.250	0.400	1,710.00	60.32	39.68
PHYSICAL SCIENCE									
SP 2006	1	2	0.950				393.00		
Fall 2006	1	2	0.950	0.350	0.600	0.000	444	36.84	63.16
SP 2007	1	3	0.950	0.350	0.600	0.000	399	36.84	63.16
Fall 2007	3	1	1.100	0.900	0.200	0.000	534	81.82	18.18
SP 2008	3	2	1.800	0.500	1.300	0.000	510	27.78	72.22
Fall 2008	2	2	1.100	0.750	0.350	0.000	561	68.18	31.82
SP 2009	2	3	1.600	1.000	0.600	0.000	678	62.50	37.50
Fall 2009	1	2	0.950	0.150	0.600	0.200	606.00	36.84	63.16
SP 2010	3	2	1.400	0.600	0.800	0.000	870.00	42.86	57.14
Fall 2010	2	3	1.150	0.350	0.600	0.200	747.00	47.83	52.17
SP 2011	3	0	1.400	0.600	0.800	0.000	864.00	42.86	57.14
Fall 2011	2	3	1.150	0.550	0.600	0.000	816.00	47.83	52.17
PHYSICS, ASTRONOMY, PHYSICAL SCIENCE									
SP 2006	2	12	6.500				2682.000		
Fall 2006	2	11	6.150	1.767	4.200	0.182	2820.000	31.69	68.31
SP 2007	3	10	6.650	2.617	3.650	0.382	2988.000	45.10	54.90
Fall 2007	3	7	6.150	3.467	2.150	0.532	3072.000	65.02	34.98
SP 2008	3	8	7.350	3.567	3.100	0.682	3315.000	57.81	42.19
Fall 2008	4	8	6.650	3.800	2.500	0.350	3258.000	62.41	37.59
SP 2009	4	12	7.900	3.750	3.800	0.350	3729.000	51.90	48.10
Fall 2009	4	8	6.700	3.750	2.550	0.400	4110.000	61.94	38.06
SP 2010	4	10	7.150	2.800	4.000	0.350	4515.000	44.06	55.94
Fall 2010	4	11	6.900	2.850	3.650	0.400	4299.000	47.10	52.90
SP 2011	3	9	7.500	2.400	4.750	0.350	4344.000	36.67	63.33
Fall 2011	3	11	6.900	2.850	3.650	0.400	4464.000	47.10	52.90

Utilizing the data in the table **and the results of your Faculty Survey discussion**, answer the following questions:

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).

Our department has no known accreditation issues. We have gained 2 full time faculty in the last 6 years, and 5 part time faculty. It has been incredibly difficult to find qualified part time faculty as well as obtaining a replacement for separated faculty. Brian Carter received his tenure in 2011 and continues teaching physics and physical science with a 1.4 load. Stephanie Plante separated from full time duties prior to her anticipated reception of tenure. The Astronomy program is currently operating at 66% of what we refer to as normal. Enrollment has increased relative to section offerings in Astronomy and Physical Science due to cut backs and demand related to cut backs. Physics courses have been roughly constant relative to section offerings since those courses generally were full prior to cutbacks. Brian Carter has led the department in online instruction, while Philip Blanco has been extremely active in current trends in teaching and utilizing technology in the lab courses. We severely need a Full Time Astronomy replacement to head our observation program and take lead on a planetarium-building proposal. This absence has hindered our program and is not allowing students the opportunity to utilize all of our resources.

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

Our department has difficulty attracting and retaining qualified adjunct faculty members, both due to small numbers of people qualified to teach these subjects and to salary issues. In a recent set of 6 interviews for physics, two worked for us but are now elsewhere, one didn't have minimum qualifications, one was hired and not asked to return, and two are still with us. In astronomy, we've done most of our recent hiring by calling/emailing other department chairs in desperation, as the hiring pool maintained by the GCCCD web pool contained almost entirely applicants who did not meet the minimum qualifications, had left the area, or had other jobs already.

It is imperative that full time faculty be replaced as soon as possible. Our overall department has dropped to 47% FT/ Overall FTEF after losing a Full Time faculty member, but the Astronomy department has actually dropped to 30% FT/Overall FTEF. This fact should emphasize our anxiety relating to replacement of separated faculty. At the end of the reporting period, there were 3 full time faculty, and 11 part time faculty. Part time faculty count was relatively flat during the entire reporting period. Significant budget cuts should have reduced the part time faculty count – but this affect was sidestepped slightly by the loss of a full time faculty member followed by a sabbatical leave.

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).

Most departments within our division have multiple lab technicians. We have one lab technician, who has been a rock solid partner for our department during the entire 6-year period of this report. We do not anticipate any changes with this technician in the next 6 years. However, our current technician cannot work 14 hours/day – and thus we have portions of the late afternoon through the night that are not covered by a qualified technician. We would like to obtain a late afternoon/night technician for the express purpose of supporting our night classes in the same way our daytime courses are covered. We especially need assistance for faculty setting up and putting away telescopes during night labs. Our lab technician also aids other department technicians within the division when they are uncertain how to repair their electronic equipment, which puts more strain on our limited resource (lab technician). Special projects, equipment research, ordering and follow up with district purchasing personnel, and fabrication of storage units for delicate and expensive equipment also occupies a great deal of our lab technician's time. Our lab technician has also been available during off-hour times for out reach events as well as returning late to secure lab equipment used during night labs. This is an unsustainable situation that puts great strain on our lab technician.

Our lab technician has student assistant(s) from the Federal Work Study program. On some occasions 4-5 work-study students are under the direct supervision of our lab technician – and are utilized to aid in the performance of his duties. Our lab technician is responsible for training the students, their safety, as well as directing their actions. The students generally do not act independently, and are supervised continuously while they work with the lab technician. The work-study students may gain knowledge of physics and astronomy equipment and its proper use while working with our lab technician.

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT

CLASS TITLE: PHYSICAL SCIENCE, PHYSICS AND ASTRONOMY TECHNICIAN RANGE 36

SUMMARY:

Under the direction of an assigned supervisor, perform a variety of responsible, skilled, specialized and technical duties related to the organization, coordination and operation of physics, astronomy and physical science laboratories. Provide information and technical assistance to faculty and students.

ESSENTIAL FUNCTIONS:

Organize, coordinate and schedule the use of physics, astronomy, and physical science laboratories and specialized equipment and materials used in lab set-ups and demonstrations.

Operate a wide variety of specialized equipment including telescopes, lasers, testing and measurement devices, chemical instruments, microscopes, audio-visual and other electronic, electrical and mechanical devices.

Organize and direct the operation and maintenance of stockroom and preparation areas to ensure efficient lab operations.

Isolate and diagnose equipment malfunctions, and determine necessary repairs.

Interpret circuit schematics and perform repairs on sophisticated electronic equipment such as oscilloscopes, oscillators, generators, power supplies, Geiger counters, multimeters, lasers and microwave equipment.

Design and implement modifications to equipment to restore operation and improve performance and reliability.

Design and implement circuit modifications to improve performance of electronic circuits.

Use hand tools for soldering, welding, tapping threads, cutting of glass and plastic.

Use power tools including the table saw, metal lathe, drill press and routers for precision cutting of laboratory materials.

Perform scheduled preventive maintenance on electronic, electrical, and optical equipment including lubricating, calibrating, aligning and replacing defective parts.

Train and provide work direction to students and staff.

Prepare the annual department budget; research budget requests; monitor expenditures; request budget transfers as necessary.

Prepare and maintain a variety of computerized records and reports related to the maintenance and repair of equipment; maintain computerized inventory of all department equipment and reports related to budget and expenditures, and laboratory operations.

Communicate with college and district staff to exchange information, resolve issue and discuss supply and equipment requirements.

Communicate with vendors and manufacturers regarding parts, pricing, purchases and product information; negotiate prices.

Maintain and operate the college observatory, which includes a computerized telescope along with other telescopes, solar filters and a variety of eyepieces.

Mix chemicals, produce and develop 3-D holograms using laser technology.

Maintain laboratory environment in a safe, clean and orderly condition to ensure compliance with established safety procedures and regulations; assure compliance with state and federal regulations governing the use of radioactive samples and toxic substances.

Order, receive and store supplies, materials and equipment; instruct students, lab assistants and instructors in the safe and proper storage, handling and preparation of supplies, materials and equipment.

Maintain departmental videocassettes and super 8 film loops; operate audio-visual equipment.

SECONDARY FUNCTIONS:

Perform a variety of duties in the care of the college weather station including maintaining its mechanical instruments, reading rain gauges and wind speeds.

Dry mount and heat press charts and diagrams.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:
Principles, practices and procedures used in physics, astronomy, and physical science laboratories.
Organization, coordination and operation of physics, astronomy, and physical science laboratories.
Electronic and electrical theory and practices.
Methods, equipment and materials used in the maintenance and repair of electronic equipment.
Operation, care, storage and maintenance of a wide variety of electrical, mechanical, chemical and optical instruments and devices.
Safety regulations governing the storage, use and handling of toxic and radioactive materials.
Safety practices and precautions used in working with high voltage equipment.
Budget preparation and basic accounting principles.
Methods, materials and techniques used in laboratory experiments in the physical sciences.
Proper methods of storing equipment, materials and supplies.
Computer hardware and software packages specifically used in the area of assignment.
Operation and use of a computer network.
Principles and practices of providing work direction and training.
Recordkeeping techniques.
Correct English usage, grammar, spelling, and vocabulary.
Technical aspects of field of specialty.
Oral and written communication skills.
Interpersonal skills using tact, patience and courtesy.

ABILITY TO:
Schedule, coordinate and perform specialized and technical duties to assure efficient lab operations.
Understand District organization, operations, policies and objectives.
Understand curriculum, goals and objectives of the department and division.

Operate, calibrate, adjust and maintain a variety of specialized equipment and apparatus, such as oscilloscopes, oscillators, signal generators, Geiger counters, sound meters, multimeters, lasers, microwave apparatus, spectroscopes, telescopes, computerized telescopes, optical lenses, solar filters, metal lathe, table saw, drill press and various hand and power tools used in physical science classroom and laboratory demonstrations and experiments.
Operate and use a computer network and software including word-processing and database packages.
Perform skilled work in the maintenance and repair of electronic and specialized equipment.
Maintain currency of qualifications for area of assignment.
Understand District organization, operations, policies and objectives.
Know the curriculum and understand the goals and objectives of the department and division.
Train and provide work direction to others; assign and review work.
Plan and organize work to meet schedules and timelines.
Store, use and handle toxic and radioactive materials in accordance with established regulations.
Prepare and monitor departmental budget.
Work independently with little or no direction or as a team member.
Work from plans, specifications, schematic drawings and charts.
Communicate effectively both orally and in writing.
Establish and maintain effective working relationships with others.
Maintain records and prepare reports.
Provide technical information and assistance to students and staff.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: two years college-level course work in physics and mathematics and three years of experience in a physical science laboratory which includes experience working with lasers and microwave equipment, and experience in the repair of electronic equipment.

WORKING CONDITIONS:
Physical science laboratory environment; subject to fumes, lifting, climbing and exposure to hazardous radioactive and toxic materials and equipment.

Est. 5/87
Rev: 07/95
Rev: 02/00
Rev.6/06

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?

Formal meetings are held during Staff Development Week and at the conclusion of the semester, and more frequently when important issues arise. We also are able to have informal meetings in passing, or by email throughout the semester when less pressing issues come up. Occasionally non-critical informal voting is required (rock paper scissors), and formally either by poll or facilitated by the Dean when anonymity is desired.

SECTION 10 - FISCAL PROFILE AND EFFICIENCY

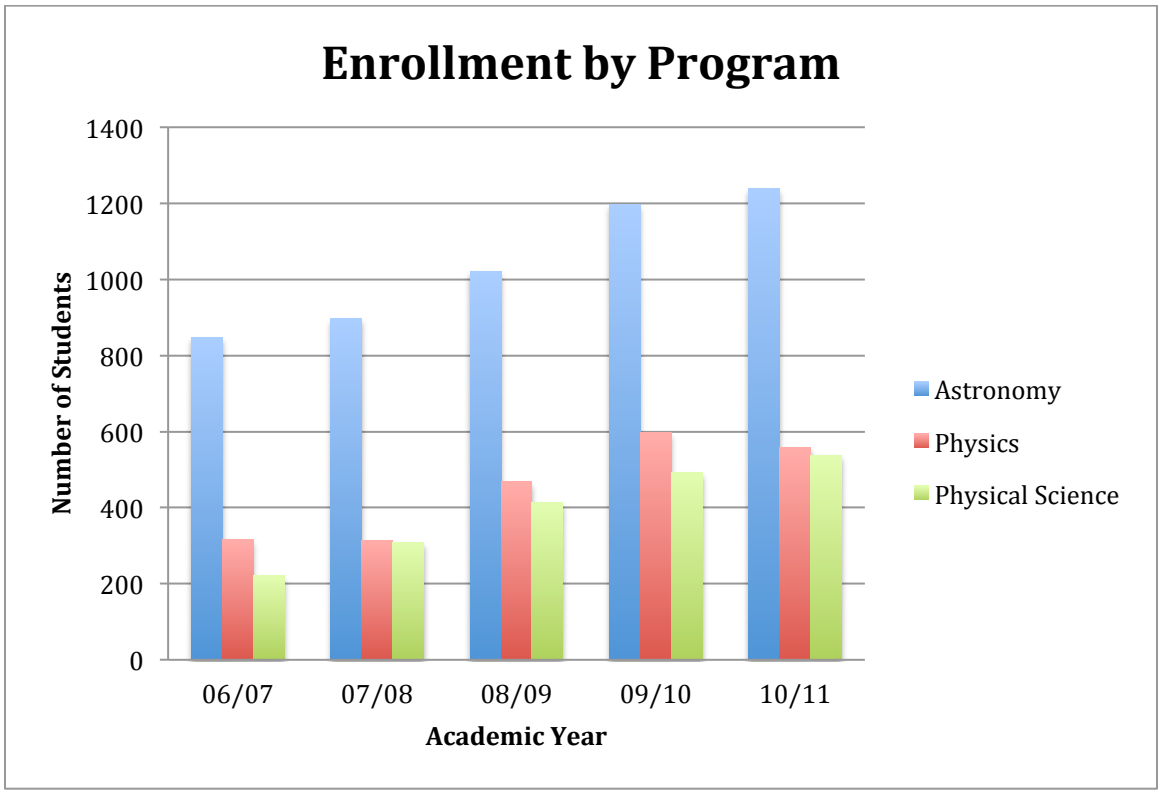
Refer to **Appendix 9 – Grossmont WSCH Analysis** for efficiency. **Appendix 3** has the sections and enrollment. **Appendix 12 – Fiscal Data: Outcomes Profile** also has enrollment information.

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

Analysis of course level data from Fall 2005 to the present shows enrollment has increased significantly across all programs in our department, despite budget issues and section reductions towards the end of the reporting period.

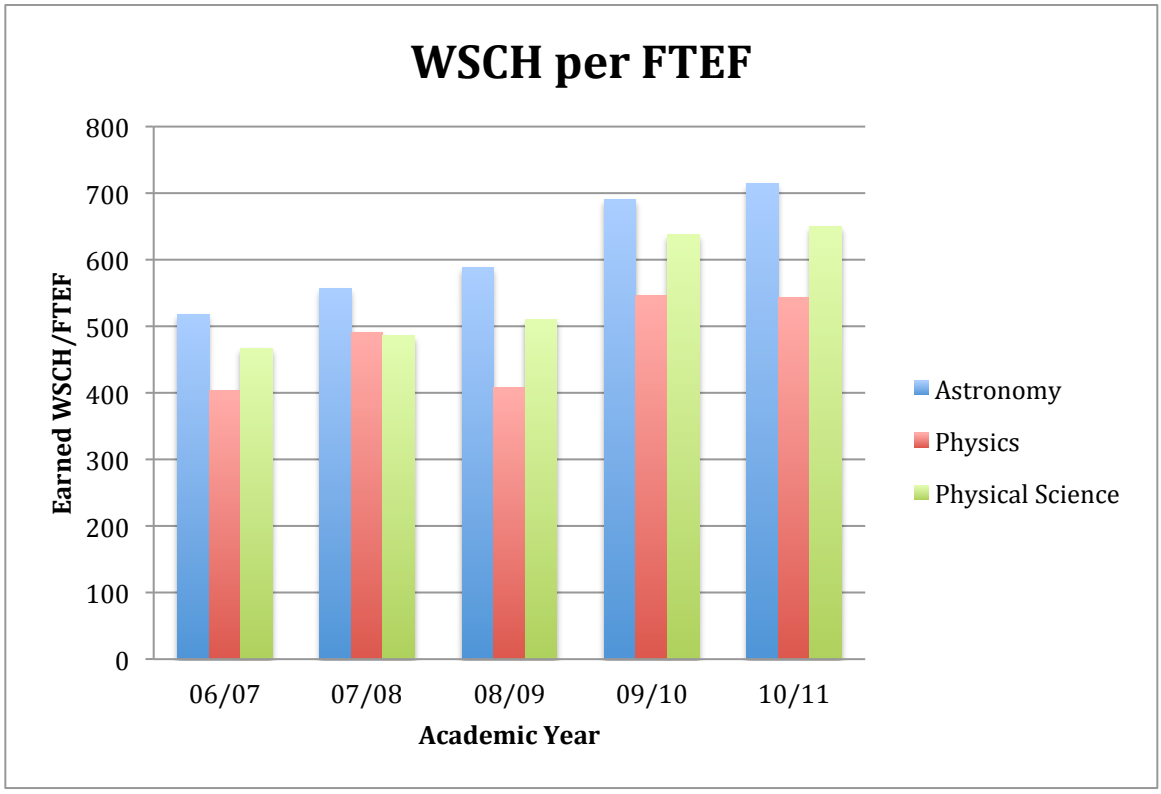
Lecture-only sections of Astronomy and Physical Science have class maximums of 50, while Physics courses have class maximums of 32 due to their associated laboratory time.

Not all physics courses, especially those at the end of a sequence, achieve the class maximum. While enrollment in Astronomy and Physical Science are at/near/and over class maximums on most occasions. At the start of the reporting period, Astronomy constituted about 2/3 of our FTEF, and was subsequently cut more than our other courses when budget cutbacks were mandated.



10.2 Analyze the Earned WSCH/FTEF data in **Appendix 9-** Grossmont WSCH Analysis. Explain trends for your overall program and for specific courses over a five-year period.

WSCH per FTEF has generally increased for Physics, Astronomy, and Physical Science classes during the program review period, while department costs have increased slightly. This is predominantly due to the hire of two full time faculty. Individual programs have seen variation due to faculty assignments and preferences, but as a whole the department trend is clear. The rise in earned WSCH per FTEF is most likely due to progressive reduced section availability and larger overall class size reflecting an increased efficiency – although our programs have not seen as much of an increase in WSCH per FTEF as others in our division since we were already operating at high efficiency prior to budget cuts, which made cutting classes extremely difficult and harmful to student populations requiring our courses. More recently, our courses have not only filled, but had full waitlists – some waitlists comparable to course size, an indication of the dire situation students are experiencing obtaining our courses.

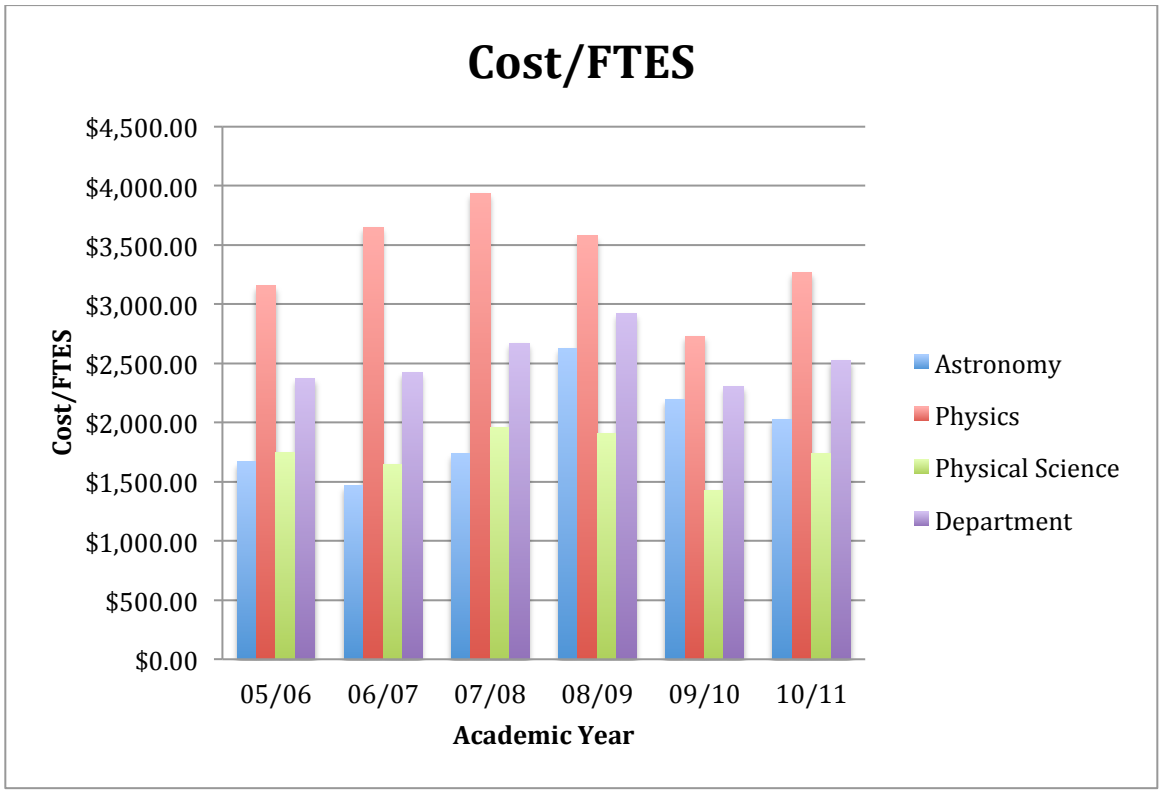


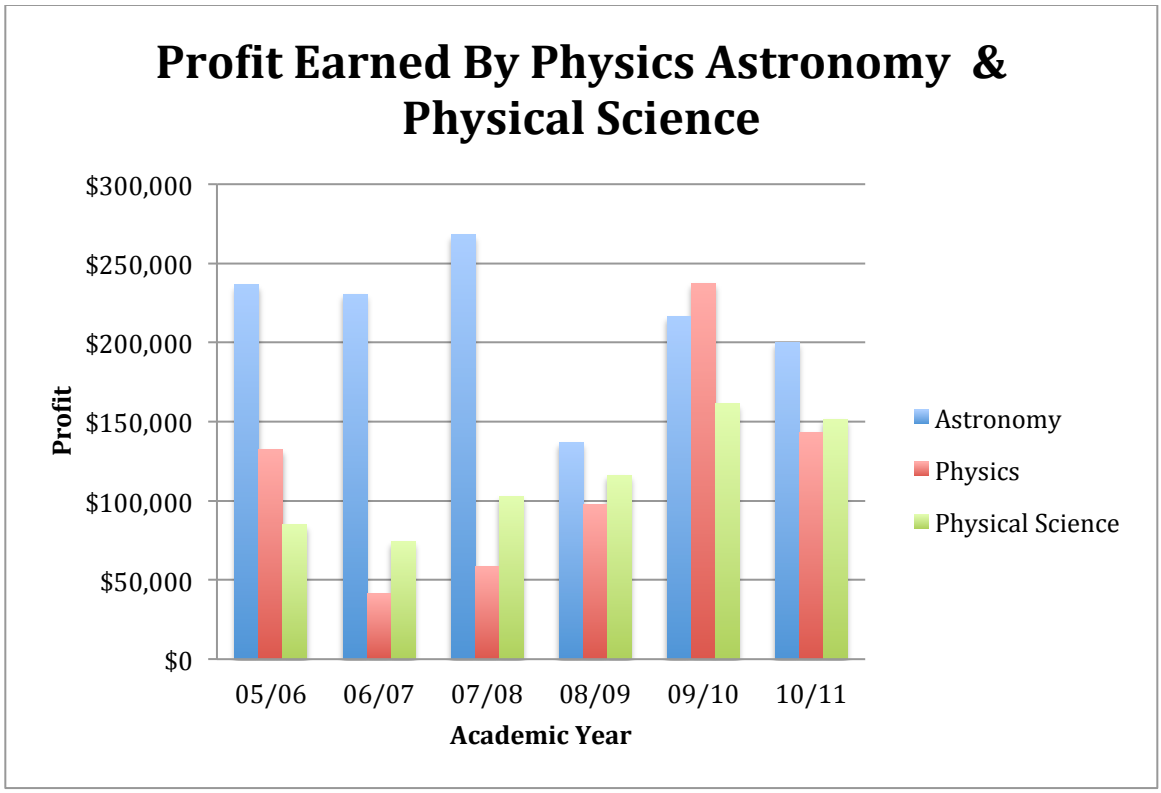
10.3 Using **Appendix 11 -** Fiscal Year FTES Analysis by Program Report and **Appendix 12 -** Fiscal Data: Outcomes Profile, analyze and explain the cost per FTES of the program in relation to the earned WSCH per FTEF.

Overall our program has been highly profitable for the campus, with Astronomy being on average more profitable compared to Physics and Physical Science. Most likely the cause was more Astronomy course sections and the 09/10 tie with Physics was due to budget cuts affecting

Astronomy and Physical Science the most, and a shift in full time faculty resulting in more Astronomy courses being taught by full time faculty – increasing costs as a result.

Physics received the least WSCH per FTEF most likely due to the class sizes being limited to room maximums of 32. One would expect WSCH for a 32-student course to be 64% of the WSCH for a class of 50 students.





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.

Not Applicable

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

Our department programs strive to provide the highest quality academic experience possible given the extraordinary conditions we have been exposed to in the past 6 years. Cutbacks have made it very difficult to satisfy the need of the students seeking our courses – and may have led to students taking courses elsewhere. Lack of full time faculty replacements may have directly affected the number of women attending our classes. In physics, our goal is to ensure that students are prepared to transfer to engineering and science programs at 4-year institutions, and will have the same success as their peers who spent their entire academic careers at those same institutions. We are certain, from the informal feedback we receive from individual students, that local universities recognize Grossmont College Physics students are prepared for their programs. While it is not required that we exceed the quality offered by universities, we do not compromise our value system, and may actually be placing better prepared students into the world that our counterparts. Since moving into our new facilities our program has been more accessible to our students, and assistance in the form of our new computer and tutoring labs has been made available as well. Our programs ensure that students will gain an appreciation of the nature of the scientific process through their study of particular subjects so they can become responsible members of society.

The faculty in our department are committed to seeking new and better teaching methods and materials, and remaining current in their profession.

The department as a whole is cash flow positive, overall bringing in twice as much as our costs – bring a net of $2,689,000 to GCCCD during the program review period.

The department has difficulty attracting and retaining qualified adjunct faculty members, both due to small numbers of people qualified to teach these subjects and to salary issues. It is imperative that full time faculty be replaced as soon as possible.

Physics lectures and labs are now taught in separate rooms – making for better instructional space. Astronomy and Physical Science rooms are appropriately sized. And department storage and workspace are larger in our new facilities than our previous location, but the addition of new equipment has created an additional need for more storage space.

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.

It is definite we will have a retirement within the next 6 years, and this has been openly discussed with one member of our department. It is imperative that we replace our open position prior to this retirement. We have been at a tipping point for the last 2 years, any loss in reliable part time faculty can lead to harm to our program. Losing another full time position to retirement will roll back our progress to unhealthy conditions prior to 2006. We have slightly increased the number of part-time faculty during the last 6 six years. Given budget recovery we may need to hire more part-time faculty to staff replacement courses returned to us by favorable budgets. This will only make worse the fact we have an unfilled full time position in Astronomy.

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. Return the department to operational size thru the hiring process, and by replacement of separated full time faculty. At minimum 2 full time positions bringing the department to 5 full time faculty – on par with similarly sized departments in the division.

2. Obtain funding and build a permanent planetarium building and large telescope observatory nearby building 34 as a focal point for our community outreach and astronomy classes.

3. In addition to replacements, hire an additional faculty member to work with planetarium and allow growth in other areas.

4. Obtain permanent funding for our supervised tutoring center within our department.

5. Obtain funding for replacement of old/outdated laboratory equipment.

6. Replace/repair/update telescopes to CCD camera functionality.

7. Move 14-inch telescope to a more accessible location in a handicapped accessible building.

8. Increase technician's storage area to accommodate new equipment.

9. Maintain department and course websites utilizing ASP programming and FTP access with district personnel – educate those in charge that changing the district website can jeopardize a significant portion of our program's (and other campus program's) success.

10. Update outdated course outlines.

11. With adequate full time faculty, develop additional courses in astronomy to create an astronomy major.

12. Create a physical science major (using current courses).

13. Retire courses not actively being taught (ASTR 105).

14. Increase release time for department chair.

APPENDICES

APPENDIX 1

Annual Program Review Updates

The Program Review Committee offers the following recommendations:

1. Replace all full-time faculty who have separated.
2. Relocate the department into new facilities.
3. Increase departmental budget to include replacing and updating lab equipment.
4. Secure funding to staff the physcial sciences tutoring center.
5. Modify or add classes as necessary. Determine the feasibility for creating astronomy and physical science degrees.
6. Increase technician hours to support program and facilities expansion and adding evening classes.
7. Creat an astronomy center with observatory and planetarium.
8. Provide office space for part-time instructors.
9. Collaboratively write student-learning outcomes and collectively agree upon their assessment methods to be written in course syllabi. Use student-learning outcome data for continued course and program improvement.
10. Using the Course History Information Report, continue to submit curriculum modification proposals for those courses that have not been reviewed by the Curriculum Committee in more than four years or curriculum deletion forms for those courses that have not been offered in the last three years.

College President

Department Chair

Academic Program Review Chair

Grossmont College

Physics/Astronomy/Physical Science

PROGRAM REVIEW COMMITTEE
SUMMARY EVALUATION
Fall 2006

Astronomy

SCHOOL YEAR	FALL SEMESTER		SPRING SEMESTER		COST/FTES	COMMITTEE RECOMMENDATION
	WSCH/FTEF	% of MAX WSCH	WSCH/FTEF	% of MAX WSCH		
99/00	699	105%	561	84%	$1,517	MAINTAIN
00/01	626	94%	440	66%	$1,797	
01/02	629	94%	612	92%	$1,748	
02/03	592	89%	565	84%	$1,814	
03/04	547	81%	565	84%	$2,044	

Physical Science

SCHOOL YEAR	FALL SEMESTER		SPRING SEMESTER		COST/FTES	COMMITTEE RECOMMENDATION
	WSCH/FTEF	% of MAX WSCH	WSCH/FTEF	% of MAX WSCH		
99/00	597	89%	518	77%	$1,546	MAINTAIN
00/01	578	86%	464	74%	$1,714	
01/02	572	85%	486	77%	$1,213	
02/03	609	91%	492	80%	$861	
03/04	572	85%	648	105%	$1,428	

Physics

SCHOOL YEAR	FALL SEMESTER		SPRING SEMESTER		COST/FTES	COMMITTEE RECOMMENDATION
	WSCH/FTEF	% of MAX WSCH	WSCH/FTEF	% of MAX WSCH		
99/00	443	81%	366	67%	$3,172	MAINTAIN
00/01	422	77%	405	74%	$3,836	
01/02	405	74%	378	66%	$3,744	
02/03	482	88%	444	81%	$3,382	
03/04	444	81%	402	73%	$3,467	

The Program Review Committee commends the department for:

1. Maintaining program quality with just two full time faculty, including managing three programs, hiring faculty, managing laborities and involvement in campus activities with a full-time to part-time ratio of just 28/72%.
2. Contributing to facilities planning for the physical science and astronomy departments.
3. Providing community outreach, including hosting groups of elementary school students for hologram and sound demonstrations, coaching middle school students at the Grossmont College Science Olympiad and on-site at Muirlands Middle School, coordinating Project Astro which is a program designed to improve science education in grades 4-8 at local schools and professional contributions to the Reuben H. Fleet Science Center.

Six-Year Department/Unit Plan

Department/Unit Name Physics, Astronomy & Physical Science Month/Year 11/09

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.

Please fill out all portions as completely as possible. Some units in student and administrative services will need to indicate where the sections do not apply.

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 that 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.
The Program Review Committee offers the following recommendations:

1. Replace all full-time faculty who have separated.
2. Relocate the department into new facilities.
3. Increase departmental budget to include replacing and updating lab equipment.
4. Secure funding to staff the physical sciences tutoring center.
5. Modify or add classes as necessary. Determine the feasibility for creating astronomy and physical science degrees.
6. Increase technician hours to support program and facilities expansion and add evening classes.

7. Create an astronomy center with observatory and planetarium.
8. Provide office space for part-time instructors.
9. Collaboratively write student learning outcomes and collectively agree upon their assessment methods to be written in course syllabi. Use student learning outcome data for continued course and program improvement.
10. Using the Course History Information Report, continue to submit curriculum modification proposals for those courses that have not been reviewed by the Curriculum Committee in more than four years or curriculum deletion forms for those courses that have not been offered in the last three years.

B. If applicable, please provide a list of any advisory committee recommendations.
None

C. If applicable, please provide a list of any certification/accreditation recommendations.
None

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 promote our department as a center of excellence for physical science and astronomy for San Diego county.

Briefly explain:

a. why each 6-year plan goal was chosen (include any supporting data)
   There is a desperate shortage of science literate adults and educators in the US.

b. how each 6-year plan goal above supports the college strategic planning priority goals
   goal 2: supports the need for a science literate public
   goal 6: supports the focus of the college on programs of immediate needs
   goal 9: prepares the workforce for a scientific and technological future

2. What strategies/activities would you undertake to accomplish each 6-year plan goal?
   Science decathlon; science festival;public lectures; visiting speakers; conference hosting; star parties.

3. How will you demonstrate that you have accomplished each 6-year plan goal (be sure to include how data will be collected/assessed)?
   Public surveys during our outreach events. Media publicity.

E. Student Success and Support

1. What is/are your six-year goal(s) in this area?
   a) Provide evening technical support.
   b) Provide a learner-centered environment by hiring and training competent tutors and teacher's assistants.
   c) Provide open access to computer lab for tutoring, online homework, multimedia access, etc, during class hours.
   d) Expose students to unique opportunities that they would not otherwise experience.

Briefly explain:

a. why each 6-year plan goal was chosen (include any supporting data)
   a) Classes will run more efficiently.
   b & c) Students will have more opportunities to have one on one assistance.
   d) Students will be challenged to consider new goals for themselves by exposure to high-quality, modern laboratory equipment and telescopes. Student success will be enhanced by use of quality instructional tools.

b. how each 6-year plan goal above supports the college strategic planning priority goals
   goal 1, goal 3, goal 4, goal 5, and goal 7: Provide resources and experiences which might not have been available in the background of all our student populations, particularly the historically under-served and under-prepared. This serves all goals of part E. In particular,

department goals (b) and (c) (tutors and the open-access compuer lab) provide services for institutional goals 1 and 5.

2. What strategies/activities would you undertake to accomplish each 6-year plan goal?
   a) hire a new technician
   b) consider creating a class for teaching assistants to obtain college credits
   c) new equipment and online access to instructional materials
   d) creating a department library

3. How will you demonstrate that you have accomplished each 6-year plan goal (be sure to include how data will be collected/assessed)?
   a) By offering more night time and weekend classes.
   b) By hiring qualified tutors.
   c) By replacing outdated equipment
   d) By stocking the library with a variety of textbooks.

F. Department/Unit Resources and Development

1. What is/are your six-year goal(s) in this area?
   Replace outdated equipment; maintain equipment. Add new equipment, including a planetarium.

Briefly explain:

a. why each 6-year plan goal was chosen (include any supporting data)
   We want equipment that is consistent with current industry and technological standards. We also want our equipment to meet the needs of our classes. To motivate and engage the students with the use of up-to-date equipment.

b. how each 6-year plan goal above supports the college strategic planning priority goals
   goal 2 and 9: use equipment in class similar to that which students will encounter on the job
   goal 3: use equipment which can be readily adapted to learning goals
   goal 7: use equipment of a quality which shows we value our students' learning

2. What strategies/activities would you undertake to accomplish each 6-year plan goal?
   Pursue funding from division and external sources.

3. How will you demonstrate that you have accomplished each 6-year plan goal (be sure to include how data will be collected/assessed)?
   By having the students report on their experimental endeavors.

G. Faculty/Staff Professional Development

1. What is/are your six-year goal(s) in this area?
   To send and support our faculty and staff to national and international conferences and workshops either on education or subject areas. To send our faculty and staff to visit local industries.

Briefly explain:

a. why each 6-year plan goal was chosen (include any supporting data)
To keep our faculty and staff up to date on teaching techniques, technologial advances, safety training, and scientific research, and to support staff training on inclusion and diversity.

b. how each 6-year plan goal above supports the college strategic planning priority goals
goal 9: maintain faculty currency with current, local industry needs and opportunities
goal 10: maintain ties with industry that might enhance our program through donations of equipment while simultaneously demonstrating to employers the value of our students who took part in our program
goal 11: improve employee knowledge on current safety standards.

2. What strategies/activities would you undertake to accomplish each 6-year plan goal?
Sites visit to local industries; seek funding to attend events; obtain safety certification.

3. How will you demonstrate that you have accomplished each 6-year plan goal (be sure to include how data will be collected/assessed)?
By sharing the knowledge gained from conferences and workshop with faculty and staff not in attendance, as well as with the students. By applying the knowledge and techniques learned.

H. Curriculum Development

1. What is/are your six-year goal(s) in this area?
a) develop new classes
b) implement alternative methods of instruction for existing classes
c) consider creating an astronomy as well as a physical science associate's degree

Briefly explain:

a. why each 6-year plan goal was chosen (include any supporting data)
a) We can attract students with a specific subject interest.
b) There is an increased demand for online and hybrid classes. They may attract students from traditionally underserved populations.
c) provide students with more opportunities to meet their goals.

b. how each 6-year plan goal above supports the college strategic planning priority goals
goal 3: a wider variety of classes will enhance student interest
goal 1, goal 2, goal 4, goal 5: alternative methods of instruction may meet the needs of a wider range of students
goal 2: these degrees may meet the needs of particular students.

2. What strategies/activities would you undertake to accomplish each 6-year plan goal?
Evaluate current trends in educational research to develop new classes that address the changing needs of a diverse population.

3. How will you demonstrate that you have accomplished each 6-year plan goal (be sure to include how data will be collected/assessed)?
By offering classes with different methods of instruction and assessing demand through enrollment. By utilizing Institutional Research to track departmental trends.

I. Staffing Needs

1. Please explain your projected needs for staffing (include data to support your needs)?
   We need to hire a night technician to support afternoon, evening, and weekend classes. We need to quickly replace any full time instructional faculty upon separation. Past program review studies have shown that enrollment decreases when faculty are not replaced.

J. Student Outcomes
If you are in an instructional area and 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.

Curriculum Development

Goal: Update and develop curriculum	
Status of goal:	On going
What activities did you undertake to achieve these goals?	Development of new classes Implement alternative methods of instruction for existing classes Implement Physics transfer degree Consider creating an astronomy as well as a physical science associate's degree Evaluate current trends in educational research to develop new classes that address the changing needs of a diverse population.
What challenges/obstacles have you encountered?	Creation of courses required Cuyamaca College involvement, which has been both slow and tedious. Lack sufficient funding and full time faculty. Budget cutbacks…
Report and explain the data that you have to verify progress toward your goal?	Astronomy 120 and PSC 100 created and taught. Online Astr 110 taught. Online PSC 110 developed and taught. Free online homework for PSC 110 and PHYC 110 Free online lab feedback for Physics classes.
Has this goal changed and why	No
How did the achievement of your unit goals help move the college forward toward fulfillment of the planning priority goals in its strategic plan?	Addresses goals 1-5, 11 in the strategic plan.
Additional Comments?	Eventually add hybrid ASTR 120 and PHYC 110 classes

Program Resources and Development

Goal: Provide a modern laboratory with up-to-date technology and pedagogy.	
Status of goal	On going
What activities did you undertake to achieve these goals?	Develop, modernize, and update laboratory experiments. Replace outdated and non-functional equipment
What challenges/obstacles have you encountered?	funding
Report and explain the data that you have to verify progress toward your goal?	A successful activity proposal allowed us to replace our most outdated equipment prior to moving into the new building (F10). An additional grant was obtained for another $140,000 to replace old and outdated One time funding has been granted on several occasions, allowing for significant progress to be made. In the last several years all experiments for Physics 110 and Physics 240 have been rewritten. Introduction of new experiments using video equipment is underway in Physics 130.
Has this goal changed and why	No
How did the achievement of your unit goals help move the college forward toward fulfillment of the planning priority goals in its strategic plan?	Addresses goals 1,3,4,5,7 in the strategic plan.
Additional Comments?	

Student Success and Support

Goal:	
Provide open access to computer lab for tutoring, online homework, multimedia access, etc, during class hours. Provide on-line access to instructional materials. Completely outfit computer room with enough computers for full classes.	
Status of goal	Marginal success
What activities did you undertake to achieve these goals?	Provide easy access to computers for student use.
What challenges/obstacles have you encountered?	Securing permanent funding that does not require adjunct donation of TA hours.
Report and explain the data that you have to verify progress toward your goal?	The computer room has been open as described above. Since Fall 2012, student access computers have also been available adjacent to the instructors' offices for use during office hours. Computers in new computer room have been loaded with software for astronomy and physics simulations and physics lab calculations.
Has this goal changed and why	No
How did the achievement of your unit goals help move the college forward toward fulfillment of the planning priority goals in its strategic plan?	Addresses goals 1,3,4,5,7 in the strategic plan.
Additional Comments?	Seeking funding, more hours of operation.

Faculty/Staff Professional Development

Goal: Send and support our faculty and staff to national and international conferences and workshops either on education or subject areas.	
Status of goal	On going
What activities did you undertake to achieve these goals?	Faculty attended a variety of meetings and workshops. One example: summer 2010 P. Blanco attended video analysis workshop to learn new techniques for mechanics labs with equipment purchased in Fall 2010.
What challenges/obstacles have you encountered?	Covering all costs, including meals.
Report and explain the data that you have to verify progress toward your goal?	Faculty have been sent to national conferences.
Has this goal changed and why	No
How did the achievement of your unit goals help move the college forward toward fulfillment of the planning priority goals in its strategic plan?	Addresses 9,10,11 in the strategic plan.
Additional Comments?	

Community Outreach/Response

Goal: To promote our department as a center of excellence for physical science and astronomy for San Diego County.	
Status of goal	On going
What activities did you undertake to achieve these goals?	Open house, science festival, presentations, public viewing parties.
What challenges/obstacles have you encountered?	Time and lack of full time faculty.
Report and explain the data that you have to verify progress toward your goal?	Set up telescopes and led "solar system walk" at science festival Held presentations at Reuben H. Fleet, S.D. Astronomy Assn., various youth groups Attended Lunar Resources (Political Economy Week), WACO Open to public during Science Building open house, and during Transit of Venus 6/2012
Has this goal changed and why	Yes, we would like to build a planetarium – or perhaps a science center containing the planetarium to be a focal point for science outreach on our campus on par with the Reuben H. Fleet science center.
How did the achievement of your unit goals help move the college forward toward fulfillment of the planning priority goals in its strategic plan?	Addresses goals 2, 6, 9 in the strategic plan.
Additional Comments?	Cost of goal is not trivial…

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	599	623	651
WSCH	1782	1842	1938
FTES	59.4	61.4	64.6
TOTAL FTEF	2.6	2.6	2.6
WSCH/FTEF	685.38	708.46	745.38
Overall Retention Rate	78.00%	77.20%	82.90%
Overall Success Rate	61.30%	62.40%	67.00%

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

Enrollment has risen sharply, continuing a trend from prior semesters.

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.

A new course, ASTR 120 has been implemented. Sections of ASTR 120 replaced sections of ASTR 110, rather than being run as additional sections.

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

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.).

On our most recent ASTR 110 SLO, it became clear that students have trouble understanding how large look-back times to distant galaxies make those objects appear younger, rather than older. Instructors will consider this information when revising their course content. This is only one example.

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.

ASTR classes are making greater use of computer labs and simulations. This increases the need for a full set of computers in the computer lab.

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

Moving our program into the new Health and Sciences complex has improved the work environment and educational quality for all staff and students.

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.

Attendance at workshops by various full and part-time faculty members has led to an increase in the use of interactive activities in astronomy classes.

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.).

Over the course of the past year, all three full-time members served on Academic Senate. One faculty member served on an accreditation task force.

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.

One tenured faculty member departed voluntarily, leaving the department understaffed by 25%. An additional retirment is expected in the next few years which would leave the department staffed at the 50% level.

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	288	284	287
WSCH	1722	1710	1710
FTES	57.4	57	57
TOTAL FTEF	3.15	3.15	3.15
WSCH/FTEF	546.67	542.86	542.86
Overall Retention Rate	79.20%	78.20%	79.10%
Overall Success Rate	60.80%	60.20%	66.60%

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

Enrollment is relatively flat, after large increases in prior years.

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.

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

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.).

On the assessments of PHYC 240 it became clear that there was a subset of skills where the student success was markedly lower than on other areas. This led to changes by the instructor in how the material was presented. On a second assessment of student success in using the second law of thermodynamics, success increaased from 52% to 78%.

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.

the computer lab.

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

Moving our program into the new Health and Sciences complex has improved the work environment and educational quality for all staff and students.

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.

A sabbatical leave project by P. Blanco has developed new experiments using video technology for physics and physical science classes.

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.).

Over the course of the past year, all three full-time members served on Academic Senate. One faculty member served on an accreditation task force.

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.

One tenured faculty member departed voluntarily, leaving the department understaffed by 25%. An additional retirment is expected in the next few years which would leave the department staffed at the 50% level.

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	207	251	276
WSCH	606	747	816
FTES	20.2	24.9	27.2
TOTAL FTEF	0.95	1.15	1.15
WSCH/FTEF	637.89	649.57	709.57
Overall Retention Rate	73.90%	74.50%	73.90%
Overall Success Rate	58.90%	59.40%	59.10%

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

Enrollment is relatively flat, after large increases in prior years.

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.

PSC 100 was created (in collaboration with the chemistry department) to assist students with meeting requirements for elementary education degrees.

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

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.).

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.

computer lab.

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

Moving our program into the new Health and Sciences complex has improved the work environment and educational quality for all staff and students.

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.

A sabbatical leave project by P. Blanco has developed new experiments using video technology for physics and physical science classes.

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.).

Over the course of the past year, all three full-time members served on Academic Senate. One faculty member served on an accreditation task force.

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.

One tenured faculty member departed voluntarily, leaving the department understaffed by 25%. An additional retirment is expected in the next few years which would leave the department staffed at the 50% level.

Section 3B - OTHER LONG-TERM PLANNING GOALS

1. Below, please list any DEPARTMENTAL program review recommendations and other long-term planning goals that you may be pursuing in addition to the recommendations listed in Section 3A.
2. Select the strategic plan goal number(s) and program review area(s) that best fits the listed goal.
3. List the strategies or activities that you plan to undertake to help achieve the goal. As you update the document each year, list when the activity starts and ends.
4. In the Outcomes column, you can keep track of your progress as you go with a bulleted list and then describe the overall outcome when the goal is completed.

		Program Review Area								
Planning Goal/ Department Recommendation	**Strategic Plan Goal #**	**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 activites are complete, briefly describe the outcome)
To promote our department as a center of excellence for physical science and astronomy for San Diego County.	**2, 6, 9**				**X**		science festival	2009	cont.	Set up telescopes and led "solar system walk" at science festival
							public lectures	F2011	cont.	Reuben H. Fleet, S.D. Astronomy Assn., various youth groups
							visiting speakers	F2009	cont.	Lunar Resources (Political Economy Week), WACO
							star parties	F2010	cont.	Science Bldg. open house, Transit of Venus
Provide evening technical support.	**1, 3, 4, 5, 7**			**X**			hire a new technician	F2013		We have submitted proposals in the past to hire a technician to work primarily in late afternoon and evening. These proposals have not been successful. We will now submit an activity proposal for a part-time hourly tech.
Provide a learner-centered environment by hiring and training competent tutors and teacher's assistants.	**1, 3, 4, 5, 7**		**X**	**X**			Select excellent advanced students from prior classes or other sources to staff tutoring center	F2010	cont.	Since occupying our new quarters in the Health and Sciences complex, we have staffed our tutoring center approx. 24 h/wk.
							Seek permanent funding for tutoring center	F2011	cont.	Since Fall 2011, most funding for tutors has been through a divisional activity proposal.
							Consider creating a class for teaching assistants to obtain college credits			

Provide open access to computer lab for tutoring, online homework, multimedia access, etc, during class hours.	**1, 3, 4, 5, 7**		**X**	**X**			Provide easy access to computers for student use.	Ages past	cont.	The computer room has been open as described above. Since Fall 2012, student access computers have also been available adjacent to the instructors' offices for use during office hours.
							Provide on-line access to instructional materials.	F2010	cont.	Computers in new computer room have been loaded with software for astronomy and physics simulations and physics lab calculations.
							Completely outfit computer room with enough computers for full classes.	F2012		An activity proposal will be submitted (again).
Provide a modern laboratory with up-to-date technology and pedagogy.	**1, 3, 4, 5, 7**		**X**				Replace outdated and non-functional equipment	cont.	cont.	A successful activity proposal allowed us to replace our most outdated equipment prior to moving into the new building (F10)
							Develop, modernize, and update laboratory experiments.	cont.	cont.	In the last several years all experiments for Physics 110 and Physics 240 have been rewritten. Introduction of new experiments using video equipment is underway in Physics 130.
Enhance student engagement.	**2, 3, 7, 9**			**X**			Implement innovative classroom demonstrations.	cont.	cont.	Demonstrations are continually updated as new equipment is purchased
							Incorporate use of a portable planetarium into the astronomy curriculum.	F2013		Resubmit proposal to purchase portable planetarium.
							Develop a permanent planetarium and astronomy center.			Await passage of appropriate bond measure.
							Improve the department library and relocate in the tutoring center.			
Send and support our faculty and staff to national and international conferences and workshops either on education or subject areas.	**9, 10, 11**					**X**	seek funding to attend events	cont.	cont.	Faculty attend a variety of meetings and workshops. One example: summer 2010 P. Blanco attended video analysis workshop to learn new techniques for mechanics labs with equipment purchesed in Fall 2010
Send our faculty and staff to visit local industries.	**9, 10, 11**				**X**	**X**	Sites visit to local industries			
							obtain safety certification			

Update and develop curriculum	**1-5, 11**	**X**	**X**			**X**	develop new classes	Fall 2011		Astronomy 120 and PSC 100 created and taught
							Implement alternative methods of instruction for existing classes	Fall 2011		On-line PSC 110, on-line homework for PSC 110 and PHYC 110, on-line lab feedback for Physics classes.
								Fall 2013		Eventually add hybrid ASTR 120 and PHYC 110 classes
							Implement Physics transfer degree	Fall 2012		
							consider creating an astronomy as well as a physical science associate's degree			
							Evaluate current trends in educational research to develop new classes that address the changing needs of a diverse population.			

2010-16 Strategic Plan Goals

1) STUDENT ACCESS - Better serve students in historically under-served populations

2) STUDENT ACCESS - Respond to changing community needs

3) LEARNING AND STUDENT SUCCESS - Provide an Exceptional Learning Environment to Promote Student Success

4) LEARNING AND STUDENT SUCCESS - Promote Student Success for Historically Under-served Populations

5) LEARNING AND STUDENT SUCCESS - Promote Student Success for Historically Under-prepared Populations

6) FISCAL AND PHYSICAL RESOURCES - Promote Institutional Effectiveness

7) FISCAL AND PHYSICAL RESOURCES - Develop and maintain an exceptional learning environment

8) FISCAL AND PHYSICAL RESOURCES - Maximize Revenue from Traditional and Non-Traditional Sources

9) ECONOMIC AND COMMUNITY DEVELOPMENT - Enhance Workforce Preparedness

10) ECONOMIC AND COMMUNITY DEVELOPMENT - Develop Innovative Partnerships That Meet Long-term Comm. Needs

11) VALUE AND SUPPORT OF EMPLOYEES - Promote Employee Success

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 course 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 Program-level decisions/changes)
ASTR 110 SLO#4 Explain how the Universe and its components change with time.	x	Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes)	We learned from the analysis that students were able to explain the basics of how stars, galaxies, and the Universe as a whole change with time. For 3 of 6 questions, scores were between 68% and 83%. For the other two questions, scores were between 44% and 56%. This is a lower level of success than then the results for SLOs #2 and #3, when analyzed by question. Overall, 63.1% of students scored 66.6% or better, with a cumulative score of 64.5%. Interesting results were seen for the two questions with the lowest scores, based on the subset of instructors who provided data broken down by individual answer. For question 3, students did clearly recognized that there would be a temporal difference between nearby galaxies and more distant galaxies, but were more likely to answer that more distant galaxies would appear older, rather than younger. For question 4, the students recognized that the abundance of heavy elements in the gas between the stars changes with time in a consistent manner, but were equally likely to answer that the abundance decreased as to answer that it increased. The assessment worked and can be reused to evaluate this SLO in the next cycle, with some changes to reduce the number of concepts tested within each question		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		x	Other (please describe): Conduct according to the schedule with possible changes made to the assessment as described above.	Fall 2016		
		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)
PHYC 130 SLO #2: Students will be able to apply Newton's Laws to static and dynamic systems of particles and rigid bodies		Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes)	30 students: Class average 54% Broken down by Score # students: 10%: 2 students 20%: 3 students 40%: 10 students 60%: 3 students 80%: 10 students 100%: 2 students The SLO itself is fine, the assessment is flawed. It was performed by "picking" existing questions out of the final exam. These questions were not initially designed to test the SLO and this probably reflects in the poor performance reported here, although overall scores in the exam were quite high. Better questions, including use of diagrams perhaps, would provide a better picture of students' learning related to Newton's laws.	x	Conduct further assessment related to the issue and outcome	Fall 2016		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):						

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC110 4142 Fall 2010 Students will apply quantitative reasoning to physics problems	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Four questions were asked on the 2nd midterm exam as multiple choice questions, and student scores for those problems were obtained. 76% of the students sampled (25) were successful (having more than 50% correct) on those targeted questions.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe): Continued development of the online lab submission. Students seem to work harder when provided	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC110 4142 Fall 2010 Students will apply qualitative reasoning to physics problems	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Five questions were asked on the 2nd midterm exam as multiple choice questions, and student scores for those problems were obtained. 72% of the students sampled (25) were successful (having more than 50% correct) on those targeted questions.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe): Continued development of the online lab submission. Students seem to work harder when provided	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC110 4142 Fall 2010 Students will employ laboratory equipment and techniques to collect, organize and evaluate experimental data.	☐Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☒Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Detailed analysis of recorded data and calculations from that data from a lab experiment (conservation of energy) write-up using online submission form. 19 out of 20 students who participated were able to achieve a score of 70% of better, 17 out of 20 were able to get 80% of better, and 12 out of 20 were able to get 90% or better on the objective submission form. Calculations were weighted strongly compared to data. According to our departmental criteria, we succeeded in our SLO with a 95%, well above our criteria of 70%.	☐Conduct further assessment related to the issue and outcome ☐Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☒Other (please describe): Continued development of the online lab submission. Students seem to work harder when provided	☐Fall OR ☐Spring Year: None planned	☒Plan purchase of new equipment or supplies needed for modified student activities, such as: Pursue funding for computer, and press district for more web space above the 12 GB imposed limit. _____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☐No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC110 4142 Fall 2010 Students will have a working knowledge of the language of physics	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Three questions were asked on the 2nd midterm exam as multiple choice questions, and student scores for those problems were obtained. 80% of the students sampled (25) were successful (having more than 50% correct) on those targeted questions.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe): Continued development of the online lab submission. Students seem to work harder when provided	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) – Students will be able to …)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC140 4146,4147 Fall 2010 Students will be able to apply Newton's Laws to static and dynamic systems of particles.	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Detailed analysis of an exam question regarding forces and employing Newton's 2nd law was analyzed. Only the "free body diagram" was used for this SLO. Out of 56 students, 93% were able to achieve a success rate (score) of 60% or better on that task. By our department standards we consider this to be a success.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe):	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) - Students will be able to ...)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC140 4146,4147 Fall 2010 Students will distinguish between conservation principles and apply them appropriately to physical systems.	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Detailed analysis of an exam question regarding rocket launching and requiring use of the conservation of energy was utilized for this SLO. Out of 41 students, 83% were able to achieve a success rate (score) of 60% or better on that task. By our department standards we consider this to be a success.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe):	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) - Students will be able to ...)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC140 8361,8875 Spring 2011 Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.	☐Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☒Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Detailed analysis of recorded data and calculations from that data from all lab experiment write-ups using online submission form. 195 out of 216 submitted lab reports were were of a score of 70% of better, 184 out of 216 were able to get 80% of better, and 163 out of 216 were able to get 90% or better on the objective submission form. Calculations were weighted strongly compared to data. According to our departmental criteria, we succeeded in our SLO with a 89%, well above our criteria of 70%.	☐Conduct further assessment related to the issue and outcome ☐Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☒Other (please describe): Continued development of the online lab submission. Students seem to work harder when provided	☐Fall OR ☐Spring Year: None planned	☒Plan purchase of new equipment or supplies needed for modified student activities, such as: Pursue funding for computer, and press district for more web space above the 12 GB imposed limit. _____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☐No program action will be taken ☐Other (please describe):

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 rows if needed.

Course # and SLO wording (ex. Hist 108(SLO 1) - Students will be able to ...)	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?	Course SLO Action Plan (please indicate how you will use these course assessment results and analysis for course improvement)	Semester when Next Assessment of this SLO will take place	Program Action Plan (please indicate how you will use these SLO assessment results and analysis for continuous program improvement)
PHYC140 4146,4147 Fall 2010 Students will distinguish between conservation principles and apply them appropriately to physical systems.	☒Item analysis of exams, quizzes, problem sets, etc. (items linked to specific outcomes) ☐Assignments based on rubrics (essays/reports, projects, performance analysis) ☐Assignments based on checklists ☐Direct Observation of performances, structured practices or drills, practical exams, small group work, etc. ☐Student Self-Assessments (reflective journals, surveys) ☐Classroom Assessment Techniques (CATS, "clicker" mediated responses, etc.) ☐Capstone projects of final summative assessment (final exams, capstone projects, portfolios, etc.) ☐Student Satisfaction Survey ☐Other (please describe):	Detailed analysis of an exam question regarding an accelerating object subjected to multiple forces was utilized for this SLO. Out of 44 students, 73% were able to achieve a success rate (score) of 60% or better on that task. By our department standards we consider this to be a success.	☐Conduct further assessment related to the issue and outcome ☒Conduct according to the schedule with no changes made to the assessment or SLO ☐Use new or revised teaching methods (i.e. more use of group work, new lecture, etc.), such as: _____ ☐Develop new methods of evaluating student work, such as: _____ ☐Engage in professional development about best practices for this type of class/activity ☐Revise the course syllabus or outline (i.e. change in course topics) ☐Revise the SLO ☐Other (please describe):	☐Fall OR ☐Spring Year: None planned	☐Plan purchase of new equipment or supplies needed for modified student activities, such as:_____ ☐Make changes in staffing plans (i.e. modified job descriptions, requests for new positions, etc.) ☐Revise the course sequence or prerequisites ☒No program action will be taken ☐Other (please describe):

APPENDIX 2

Catalog Descriptions

Orthopedic Technology 214	Supervised Hospital Clinical Practicum II	4
	Total Required	24
	Plus General Education and Elective Requirements	

Certificate of Achievement

Any student who chooses to complete only the courses required for the above major qualifies for a Certificate of Achievement in Orthopedic Technology. 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.

PHILOSOPHY

The Philosophy major is designed to provide a solid background for students wishing to continue their studies in philosophy at four-year institutions. Students who plan to transfer to a four-year institution should check the catalog of the transfer school being considered.

Career Opportunities

Archivist*
Biographer*
College Administrator*
Consultant
Cultural Affairs Officer*
Director, Religious Activities*
Etymologist*
Insurance Agent/Broker
Lawyer*
Librarian*
Manuscript Reader
Peace Corp Worker
Pastoral Assistant
Philologist*
Teacher/Professor*
Writer
*Bachelor's Degree or higher required.

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
Philosophy 110	A General Introduction to Philosophy	3
English 120	College Composition and Reading	3
	Total	6

Select ONE (1) of the following courses:

Subject & Number	Title	Units
Philosophy 125	Critical Thinking	3
Philosophy 130*	Logic	3
	Total	3

*Recommended for students planning to major in philosophy at a university.

Select TWO (2) of the following courses:

Subject & Number	Title	Units
Philosophy 111	Philosophy and Popular Culture	3
Philosophy 112	The Classical Mind	3
Philosophy 114	The Medieval Mind	3
Philosophy 116	The Modern Mind	3
Philosophy 118	The Contemporary Mind	3
Philosophy 140	Problems in Ethics	3
Philosophy 141	Moral Problems in Health Care	3
Philosophy 145	Social and Political Philosophy	3
Philosophy 150	Human Beings and Aesthetic Value	3
	Total	6

Select ONE (1) of the following courses:

Subject & Number	Title	Units
Religious Studies 120	World Religions	3
Religious Studies 130	Scriptures of World Religions	3
Religious Studies 140	Religion and Culture	3
Religious Studies 150	Scriptures of India and China	3
	Total	3

Select ONE (1) of the following courses:

Subject & Number	Title	Units
Humanities 110	Principles of the Humanities	3
Humanities 120	European Humanities	3
Humanities 130	East Asian Humanities	3
Humanities 160	Humanities of the Future	3
Humanities 170	World Humanities	3
	Total	3
	Total Required	21
	Plus General Education and Elective Requirements	

PHYSICS

The Associate in Science Degree Program offers a secure foundation for further study in physics or engineering. The primary emphasis of the program is to prepare students for transfer to four-year institutions as science or engineering majors. Students are asked to consult the catalog of the transfer institution for specific requirements.

In addition to the required and elective courses, physics students are expected to attend at least four physics or engineering colloquia in their last semester.

Career Opportunities

Aerodynamist*
Airplane Navigator*
Air Pollution Operating Specialist
Ballistics Expert
Engineer (Mechanical, Electrical)*
Hydrologist*
Instructor/Professor*
Industrial Hygienist
Pharmacist*
Physicist (Mechanical, Laser, Electrical, Optics, etc.)*
Premedical*
*Bachelor's Degree or higher required.

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
Mathematics 180	Analytic Geometry and Calculus I	5
Mathematics 280	Analytic Geometry and Calculus II	4
Mathematics 281	Intermediate Calculus	4
Physics 140	Mechanics of Solids	4
Physics 240	Electricity, Magnetism and Heat	4
Physics 241	Light, Wave Motion and Modern Physics	4
	Total Required	35
	Plus General Education and Elective Requirements	

Political Science

Political Science is perhaps the oldest organized academic discipline in western civilization, and a major in this field prepares students for a variety of challenges. A major in political science can lead to a transfer to a university where one can continue work leading to a baccalaureate degree in political science, public administration or public policy. In addition, there are selected entry level positions in business and government open to the graduate with an Associate in Arts degree in Political Science. Some individuals follow the steps necessary to go beyond an undergraduate degree and enter graduate schools leading to careers in law, government service, or industry.

Outlined below is the program that fulfills the lower division requirements for most majors in political science in universities. For special requirements, the student should consult the baccalaureate granting institution he/she is considering for matriculation.

Career Opportunities

Book Critic
City Manager*
Congressional District Aide
Consular Officer*
Diplomatic Officer*
Election Supervisor
Fund Raising Director*
Intelligence Specialist*
Labor Relations Specialist*
Lawyer*
Paralegal Assistant
Research Assistant
Urban Planner*
*Bachelor's Degree or higher required.

Associate Degree Major Requirements

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

Subject & Number	Title	Units
Political Science 120	Introduction to Politics and Political Analysis	3
Political Science 121	Introduction to U.S. Government and Politics	3
	Total	6

Select THREE (3) of the following courses after consultation with a member of the political science faculty and a counselor because of differences in transfer requirements at various four year institutions.

Subject & Number	Title	Units
Political Science 124	Introduction to Comparative Government and Politics	3
Political Science 130	Introduction to International Relations	3
Political Science 140	Introduction to California Governments and Politics	3
Political Science 150	Introduction to Political Theory	3
	Total	9

Select ONE (1) of the following courses:

Subject & Number	Title	Units
Economics 120	Principles of Macroeconomics	3
Geography 130	Human and Cultural Geography	3
	Total	3
	Total Required	18
	Plus General Education and Elective Requirements	

Recommended electives:

Students planning to complete a baccalaureate degree in political science are STRONGLY advised to consult with a faculty advisor in political science at Grossmont College and take the following courses:

Subject & Number	Title	Units
Anthropology 120	Cultural Anthropology	3
History 108	Early American History	3
History 109	Modern American History	3
Mathematics 160	Elementary Statistics	3
or		
Psychology 215	Statistics for Life and Behavioral Sciences	(3)
Political Science 135	Model United Nations	1
Sociology 120	Introductory Sociology	3

Associate in Arts in Psychology for Transfer (AA-T)

(Pending State Chancellor's Office approval.)

The Associate in Arts in Psychology for Transfer (AA-T) degree is designed to facilitate transfer to a California State University in keeping with SB 1440. A total of 19-20 units are required to fulfill the major portion of this degree. This degree reflects the Transfer Model Curriculum (TMC) supported by the statewide Academic Senate. Students must also complete the California State University (CSU) General Education Breadth requirements or the Intersegmental General Education Transfer Curriculum (IGETC) for CSU requirements (see the "General Education Requirements and Transfer Information" section of the catalog). Students planning to transfer to SDSU should consult with a counselor.

Psychology is a diverse discipline, grounded in science, but with nearly boundless applications in everyday life. Some psychologists do basic research, developing theories and testing them through carefully honed research methods involving observation, experimentation and analysis. Other psychologists apply the discipline's scientific knowledge to help people, organizations and communities function better (APA).

Art 275 †
Digital Imaging II
3 units, 2 hours lecture, 4 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Art 175 or equivalent.*
Recommended Preparation: *Concurrent enrollment in Art 179 A-B-C-D.*
This course is an advanced study in the principles of digital imaging using industry-standard software applications as primary expressive tools for the artist. Course content will include advanced problems in image scanning, digital capture, file storage and management, file merging in both raster and vector software applications and process control for optimum printing output.
Transfers to CSU

Art 280 †
Sculpture III: The Structure of Sculpture
3 units, 2 hours lecture, 4 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Art 229 or equivalent.*
This course concentrates on the role of structure in sculpture of all media. Basic principles of balance and structural stability; fabrication of shapes and elements; and the design of frameworks, membranes, plates, shells and connection elements will be examined. Students will demonstrate their understanding of the course curriculum by producing individual sculptures. The course offers students the opportunity to learn how medium to large scale sculpture is conceived, planned, constructed and installed.
Transfers to: CSU, UC

Art 281 A-B-C-D †
Studio Workshop in Public Sculpture
3 units, 2 hours lecture, 4 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Art 229 or equivalent.*
This course is designed for advanced students that have an interest in producing sculpture in a public context and/or public art through a commissioning process. The course will cover several aspects and methods used in the production of commissioned works. Issues examined will include negotiation, design and budget through procurement of materials, fabrication and installation. Students will implement skills, techniques and concepts learned in sculpture courses to design and produce sculpture for a public context. In most cases, the department will attempt to secure an actual commission during the course.

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

Art 283 A-B-C-D †
Foundry Technology and Equipment
2 units, 1.5 hours lecture, 2.5 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Art 130 or equivalent.*
The practice, operation and fabrication of sculpture foundry equipment and casting production tools. Students will demonstrate their understanding of the course curriculum by participating in metal casting through the actual operation of furnaces and related foundry equipment. The course will offer students a rare opportunity to learn the theory and practice of refractory, burner and combustion safety systems indispensable to the production of contemporary sculpture. Students may wish to produce their own castings in conjunction with course activities.
Transfers to CSU

Art 298 ††
Selected Topics in Art
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Investigations not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Arts, Languages and Communication in relation to current needs and resources. May be offered in workshop, seminar, lecture, or laboratory format. Pass/No Pass only.
Non-associate degree applicable

Art 299A †
Selected Topics in Art
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Investigations not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Arts, Languages and Communication in relation to current needs and resources. May be offered in workshop, seminar, lecture, or laboratory format.
Associate degree applicable

Art 299B †
Selected Topics in Art
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Investigations not covered by regular catalog offerings. Course content and unit credit to be determined by the Division of Arts, Languages and Communication in relation to current needs and resources. May be offered in workshop, seminar, lecture, or laboratory format.
Baccalaureate level-CSU transfer

See Cross-Cultural Studies for Chicano/ Chicana and Mexican Art (CCS 126) and Introduction to American Indian Art (CCS 134) on page XXX.

Astronomy (ASTR)

Astronomy 105 †
Practice in Observational Astronomy
1 unit, .5 hours lecture, 1.5 hours laboratory
A lecture/field course designed to enhance the student's appreciation of the night sky. Topics include optics and telescopes, constellation study, and interpretation of astronomical phenomena observable with the unaided eyes, binoculars, and telescopes. Evening field trips will be scheduled.
Transfers to CSU

Astronomy 110 †
Descriptive Astronomy
3 units, 3 hours lecture
This course enables students to view the historical development of astronomy, to be aware of the tools of astronomy, and to critically analyze collected data to achieve an appreciation of the nature of the universe. This study begins with the ancient concept of the heavens, through medieval investigations of natural laws, and leads to present concepts in planetary systems, stellar evolution, cosmology and exobiology.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC

Astronomy 112 †
General Astronomy Laboratory
1 unit, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" or concurrent enrollment in Astronomy 110 or Astronomy 120 or equivalent.*
Designed to accompany and augment Astronomy 110 or Astronomy 120. Topics can include constellations and astronomical coordinates, astronomical instruments, the solar system, stars and stellar systems, and the Universe. These will be addressed using naked eye and telescope observations, laboratory experiments, computer simulations and calculations.
Satisfies General Education for: Grossmont College B2; CSU B3; IGETC 5A
Transfers to: CSU, UC

Astronomy 120 †
Exploration of the Solar System
3 units, 3 hours lecture

This course investigates the origin of our Solar System and how its contents change with time. The course surveys and analyzes the physical properties of solar system contents, including the Sun, planets, moons, rings, comets and asteroids. Methods of space exploration will be discussed as related to past, current, and future efforts. Topics include: origins of the chemical elements in our solar system, formation and evolution of the solar system; comparative planetology (geology and atmosphere), gravitational and thermal effects on solar system objects, space exploration, and recent developments in the search for extrasolar planets.
Satisfies General Education for: Grossmont College B2; CSU B1
Transfer to CSU

Astronomy 199
Special Studies or Projects in Astronomy
1-3 units, 3-9 hours
Prerequisite: *Consent of instructor.*

Individual study, research or projects in the field of astronomy 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.

Astronomy 298 ††
Selected Topics in Astronomy
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*

Selected topics in astronomy 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

Astronomy 299A †
Selected Topics in Astronomy
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*

Selected topics in astronomy 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

Astronomy 299B †
Selected Topics in Astronomy
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*

Selected topics in astronomy 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

Biological Sciences (BIO)

Biology 105 †
Life in the Sea
4 units, 3 hours lecture, 3 hours laboratory
Recommended Preparation: *A "Pass" grade in Mathematics 090 and a "C" grade or higher or "Pass" in English 110 or equivalent.*

An introductory college-level course using marine plants and animals and their interrelations with their aquatic environment to develop an understanding of modern biological principles and processes basic to all forms of life. Information dealing with several aspects of taxonomy, evolution, ecology, behavior and physiology of marine organisms is included.
Satisfies General Education for: Grossmont College B1; CSU B2; IGETC 5B
Transfers to: CSU, UC

Biology 110 †
Environmental Biology
4 units, 3 hours lecture, 3 hours laboratory
Recommended Preparation: *A "Pass" grade in Math 090 or a "C" grade or higher or "Pass" in English 110 or equivalent.*

A basic college-level ecology course designed to acquaint the student with living systems and their environment. Local plants and animals and their habitats will be used to investigate fundamental ecological principles. Almost half of the laboratory periods will be devoted to field studies. Due to the time involved, some of these field studies will take place on Saturdays or Sundays.
Satisfies General Education for: Grossmont College B1; CSU B2; IGETC 5B
Transfers to: CSU, UC

Biology 112 †
Contemporary Issues in Environmental Resources
3 units, 3 hours lecture

Through the study of basic ecological concepts, students apply their knowledge to contemporary problems dealing with renewable and non-renewable resources. Environmental resource problems, such as water shortage and pollution, energy shortages, air pollution, increasing human populations and wildlife conservation are integrated with political, economic and social implications. The student will consider alternate lifestyles as possible solutions to existing environmental problems, as well as other means of solving or dealing with these situations.
Satisfies General Education for: Grossmont College B1; CSU B2; IGETC 5B
Transfers to: CSU, UC

Biology 113 †
Introduction to the Biotechnology Lab
2 units, 2 hours lecture, 1 hour laboratory

This course examines biology laboratory technology as it relates to the field of biotechnology. The class addresses skills and techniques common to the biotechnology industry including measuring activity and quantity of proteins, growth and manipulation of bacteria, genetic engineering, polymerase chain reaction and antibody methods. In addition to hands-on skills, the course will provide context for how and why these techniques are used in the industry. This course enhances the laboratory skills of students wishing to be employed by the biotechnology industry. This course is intended for a specific target population. It is not intended as a training course for employment in the biotechnology industry. The course represents the first step in an eight-week program, which has a lengthy application process.
Transfers to CSU

Biology 114 †
Heredity, Evolution and Society
3 units, 3 hours lecture

This course presents the basic principles of heredity and evolution. Following an introduction to scientific methods and characteristics of living systems, the student learns about the process of evolution and the mechanisms of heredity. These genetic studies will equip the student to better understand a number of current issues concerning medical genetics, genetic counseling, biotechnology, the cancer problem and human diversity.
Satisfies General Education for Grossmont College B1; CSU B2; IGETC 5B
Transfers to: CSU, UC

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

PHYSICAL SCIENCE (PSC)

PHYSICAL SCIENCE 100 †
Physical Science for Elementary Education
3 units, 3 hours lecture
Prerequisite: *A "Pass" grade in Math 090 or equivalent*
This course is an introduction to scientific methodology, with an emphasis on knowledge and understanding of chemistry and physics. It is especially designed for those who are interested in teaching science in a primary school setting in which students must both understand the scientific method and master content in the physical sciences. The connection between physical science and global issues such as energy and environment will be emphasized. Topics to be covered include motion, gravity, heat and energy transfer, light and color, electricity, magnetism, the periodic table, ionic and covalent chemical bonding, chemical nomenclature, chemical reactions, solutions, and nuclear reactions.
Satisfies General Education for: Grossmont College B2; CSU B1
Transfers to: CSU, UC

PHYSICAL SCIENCE 110 †
Introduction to the Physical Sciences
3 units, 3 hours lecture
A broad approach to the physical sciences designed primarily for the student who is not majoring in science. Main concepts of such sciences as astronomy, physics, chemistry and the earth sciences will be developed and discussed. Emphasis is on the understanding and significance of fundamental principles. Application of certain concepts to contemporary issues such as energy production and environmental problems will be explored (e.g. nuclear energy). Within this context, the methods and limitations of science will be demonstrated and societal implications will be discussed.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

PHYSICAL SCIENCE 111 †
Physical Science Laboratory
1 unit, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" or concurrent enrollment in Physical Science 110 or equivalent.*
Designed to accompany and augment Physical Science 110. An introductory approach to scientific investigation designed primarily for the student who is not majoring in science. The course provides an opportunity to explore a variety of physical materials, phenomena, and concepts such as motion, power, sound, light, solar energy, and radioactivity.
Satisfies General Education for: Grossmont College B2; CSU B3; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

PHYSICAL SCIENCE 199
Special Studies or Projects in Physical Science
1-3 units, 3-9 hours
Prerequisite: *Consent of instructor.*
Individual study, research or projects in the field of physical science 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.

PHYSICAL SCIENCE 298 ††
Selected Topics in Physical Science
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physical science 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 lecture/laboratory class. Pass/No Pass only.
Non-associate degree applicable

PHYSICAL SCIENCE 299A †
Selected Topics in Physical Science
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physical science 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 lecture/laboratory class.
Associate degree applicable

PHYSICAL SCIENCE 299B †
Selected Topics in Physical Science
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physical science 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 lecture/laboratory class.
Baccalaureate level-CSU transfer

PHYSICS (PHYC)

PHYSICS 110 †
Introductory Physics
4 units, 3 hours lecture, 3 hours laboratory
This physics course is structured for students who have had little or no previous physics or mathematics. The math which is needed is explained as the course progresses. Physics is a study of the real and natural events, laws and phenomena which exist and interact in the universe around us. In this course those laws and events are studied with particular emphasis on the physics normally encountered in everyday living, such as motion, light and human vision, sound and hearing, energy and its use and conservation, gas laws and breathing.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

PHYSICS 130 †
Fundamentals of Physics
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" or concurrent enrollment in Math 178 or Math 180 or equivalent.*
This calculus level course provides a thorough basis in mechanics, kinematics, work, energy, properties of matter, heat, thermal effects, wave motion. The laboratory provides emphasis on measurement of translational motion, forces, torques, rotational systems, heat, and fluids. The course is primarily designed for life science majors and pre-med students. Physics 130 is not open to students with credit in Physics 140.
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.

Physics 131 †
Fundamentals of Physics
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Physics 130 or equivalent.*
A continuation of Physics 130 covering electricity, DC and AC circuits, magnetism, electromagnetic waves, light, optical instruments, holography, atomic and nuclear physics. The laboratory provides emphasis on electrical circuits, oscilloscopes, optics, interference, holography and nuclear counting. The course is primarily designed for life science majors and pre-med students. Physics 131 is not open to students with credit in Physics 240 or 241.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

Physics 140 †
Mechanics of Solids
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Mathematics 180 or equivalent.*
This course is the first of a sequence of three physics courses for engineering, physics, math, and science majors. The course assumes no previous physics study, but makes extensive use of algebra, trigonometry, geometry, and calculus, as appropriate. Topics include linear and rotational kinematics and dynamics with graphical analysis, energy and energy conservation, linear and angular momentum and their conservation laws, and gravitation. Applications include period motion, vibration, fluids, and wave propagation.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

Physics 199
Special Studies or Projects in Physics
1-3 units, 3-9 hours
Prerequisite: *Consent of instructor.*
Individual study, research or projects in the field of physics 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.

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

Physics 240 †
Electricity, Magnetism and Heat
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Physics 140 or equivalent. A "C" grade or higher or "Pass" or concurrent enrollment in Math 280 or equivalent.*
This is the second semester of a three semester calculus level sequence course designed for science, mathematics, physics, and engineering students. The topics of heat, electricity, and magnetism are introduced at the beginning level with reliance upon students' ability to apply topics introduced in Physics 140. The laboratory provides emphasis on measurements using gas laws and of electric and magnetic fields, DC and AC circuits, and oscilloscope techniques.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

Physics 241 †
Light, Optics, and Modern Physics
4 units, 3 hours lecture, 3 hours laboratory
Prerequisite: *A "C" grade or higher or "Pass" in Physics 240 or equivalent. A "C" grade or higher or "Pass" or concurrent enrollment in Math 281 or equivalent.*
This is the third semester of a three-semester, calculus-level sequence course designed for science, mathematics, physics and engineering students. The topics of wave motion, electromagnetic waves, optics, special relativity and atomic and nuclear physics are introduced at the beginning level with reliance upon ability to apply topics introduced in Physics 140 and 240. The laboratory provides experiments in microwaves, optics, lasers, holography and nuclear counting.
Satisfies General Education for: Grossmont College B2; CSU B1; IGETC 5A
Transfers to: CSU, UC (credit limited: see page 37)

Physics 298 ††
Selected Topics in Physics
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physics 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 or lecture class. Pass/No Pass only.
Non-associate degree applicable

Physics 299A †
Selected Topics in Physics
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physics 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 or lecture class.
Associate degree applicable

Physics 299B †
Selected Topics in Physics
1-3 units, 3-9 hours
Prerequisite: *Varies with topic.*
Selected topics in physics 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 or lecture class.
Baccalaureate level-CSU transfer

Political Science (POSC)

Political Science 120 †
Introduction to Politics and Political Analysis
3 units, 3 hours lecture
The primary aim of this course is to assist the student/citizen in the development of a set of skills which can be helpful in analyzing political situations in the world today. In order to accomplish this objective, the student will be introduced to the basic approaches, perspectives, techniques and models of the political scientist. Accordingly, this course covers some universal aspects of political stability and change, ideologies, conflicts, institutions, political economy, and issues.
(Does not meet American Institutions requirement.)
Satisfies General Education for: Grossmont College D1; CSU D8; IGETC 4H
Transfers to: CSU, UC

APPENDIX 3

Grade Distribution Summary Report

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
ASTR 110 DESCRIPTIVE ASTRONOMY															
3400		3.0	5	4	11		1		1		9	31	93.0	SKELTON	PT
3401		3.0	4	4	13	5	1				18	45	135.0	COHEN	XP
3402		3.0	4	4	3	2	4			1	19	37	111.0	MOYER	PT
3403		3.0	10	5	4	3	5		3		11	41	123.0	DAVIS	PT
3404		3.0	9	10	2		1		1		6	29	87.0	COOKE	PT
3405		3.0	5	4	10	1	2				10	32	96.0	MOYER	PT
3407		3.0	6	11	10				2		10	39	117.0	FITZGERALD	PT
3408N		3.0		2	5	1	4				9	21	63.0	TSUNG	PT
3409		3.0	1	5	5	4	1		2		26	44	132.0	TSUNG	PT
COURSE TOTAL			44	49	63	16	19		9	1	118	319	957.0		
ASTR 112 GENERAL ASTRONOMY LABORATORY															
3411N		3.0	9	9	1		3		1		1	24	72.0	FITZGERALD	PT
3413N		3.0	16	6	1		1				6	30	87.0	DAVIS	PT
3415N		3.0	8	5	1		1				2	17	51.0	DAVIS	PT
3416N		3.0	11	2		5	1		1		7	27	81.0	FITZGERALD	PT
COURSE TOTAL			44	22	3	5	6		2		16	98	291.0		
SUBJECT TOTAL			88	71	66	21	25		11	1	134	417	1248.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PHYC 110 INTRODUCTORY PHYSICS															
7250		6.0	2	3	3	1			1		3	13	78.0	GRAMADA	PT
7256		6.0	5	5	4	3	3				2	22	132.0	PARIS	PT
7258N		6.0	10	8	4	1			1		8	32	192.0	PARIS	PT
COURSE TOTAL			17	16	11	5	3		2		13	67	402.0		
PHYC 130 FUNDAMENTALS OF PHYSICS															
7260		6.0	2	8	4	3	3				14	34	204.0	BLANCO	
COURSE TOTAL			2	8	4	3	3				14	34	204.0		
PHYC 140 MECHANICS OF SOLIDS															
7266		6.0	1	4	6	4	1				11	27	162.0	COHEN	
7278		6.0	5	8	3		2				1	19	114.0	BLANCO	
7284		6.0	2	1	2		1				7	13	78.0	JUNKKARINEN	PT
COURSE TOTAL			8	13	11	4	4				19	59	354.0		
PHYC 240 ELECTRICITY, MAGNETISM & HEAT															
7288		6.0	6	6	10	1	2				3	28	168.0	COHEN	
COURSE TOTAL			6	6	10	1	2				3	28	168.0		
SUBJECT TOTAL			33	43	36	13	12		2		49	188	1128.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PSC 110 INTRO PHYSICAL SCIENCES															
7200		3.0	7	1	4		4				3	19	57.0	GRAMADA	PT
7202		3.0	11	7	5		3		2		4	32	96.0	GRAMADA	PT
7204		3.0	1	3	10	4	4		1		4	27	81.0	BLANCO	
7206		3.0	5	12	8	2	2		1		13	43	129.0	BROWNELL	PT
COURSE TOTAL			24	23	27	6	13		4		24	121	363.0		
PSC 111 PHYSICAL SCIENCE LABORATORY															
7212		3.0	3	8	8				1	1	7	28	81.0	BLANCO	
COURSE TOTAL			3	8	8				1	1	7	28	81.0		
SUBJECT TOTAL			27	31	35	6	13		5	1	31	149	444.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
ASTR 110 DESCRIPTIVE ASTRONOMY															
3401		3.0	5	3	6	2	3				4	23	69.0	PLANTE	PT
3402		3.0	4	9	10	6	9				5	43	129.0	BLANCO	
3403		3.0	6	13	10	5				1	10	45	132.0	FITZGERALD	PT
3404		3.0	5	18	6	1	3				5	38	111.0	COOKE	PT
3406		3.0	6	14	6	3					7	36	108.0	FITZGERALD	PT
3408		3.0	3	4	11	1	4			1	11	35	105.0	COHEN	
3409		3.0	9	8	2	3	4		3	1	15	45	132.0	DAVIS	PT
3410N		3.0	2		6		4			1	13	26	72.0	TSUNG	PT
3411		3.0	4	5	8	3	10		1	1	15	47	135.0	TSUNG	PT
COURSE TOTAL			44	74	65	24	37		4	5	85	338	993.0		
ASTR 112 GENERAL ASTRONOMY LABORATORY															
3412N		3.0	11	5		1				1	6	24	69.0	FITZGERALD	PT
3414N		3.0	9	5	2	2	3		2		3	26	75.0	DAVIS	PT
3416N		3.0	11	1	1		2				7	22	63.0	DAVIS	PT
3417N		3.0	3	7	2	1					1	14	39.0	PLANTE	PT
7701N	4	12.0	6	1			1				1	9	21.9	DAVIS	PT
COURSE TOTAL			40	19	5	4	6		2	1	18	95	267.9		
SUBJECT TOTAL			84	93	70	28	43		6	6	103	433	1260.9		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PHYC 110 INTRODUCTORY PHYSICS															
7010		6.0		2	11	1	1		1		7	23	132.0	GRAMADA	PT
7012		6.0	4	5	8		2				6	25	150.0	CARTER	
7014N		6.0	6	10	7	1	4				1	29	174.0	PARIS	PT
COURSE TOTAL			10	17	26	2	7		1		14	77	456.0		
PHYC 130 FUNDAMENTALS OF PHYSICS															
7019		6.0	5	15	10						11	41	246.0	BLANCO	
COURSE TOTAL			5	15	10						11	41	246.0		
PHYC 131 FUNDAMENTALS OF PHYSICS															
7022		6.0	3	2	9	1	1				3	19	114.0	CARTER	XP
COURSE TOTAL			3	2	9	1	1				3	19	114.0		
PHYC 140 MECHANICS OF SOLIDS															
7030		6.0	4	4	4	3				1	12	28	168.0	COHEN	XP
7036		6.0	4	12	4		3				3	26	156.0	BLANCO	
COURSE TOTAL			8	16	8	3	3			1	15	54	324.0		
PHYC 240 ELECTRICITY, MAGNETISM & HEAT															
7038		6.0	3	9	2	2	2				6	24	144.0	COHEN	
COURSE TOTAL			3	9	2	2	2				6	24	144.0		
PHYC 241 LIGHT, WAVE MOTION & MOD PHYC															
7040		6.0	7	3	1							11	66.0	JUNKKARINEN	PT
COURSE TOTAL			7	3	1							11	66.0		
SUBJECT TOTAL			36	62	56	8	13		1	1	49	226	1350.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PSC 110 INTRO PHYSICAL SCIENCES															
6898		3.0	2	1	3	2	2				12	22	66.0	PARIS	PT
6899		3.0	7	5	5	3	7				6	33	99.0	CARTER	
6900		3.0	3	2	2	4	3		1		7	22	63.0	DOS-HAMMEL	PT
6904		3.0	15	7	4	1			1		4	32	93.0	GRAMADA	PT
COURSE TOTAL			27	15	14	10	12		2		29	109	321.0		
PSC 111 PHYSICAL SCIENCE LABORATORY															
6909		3.0	9	7	6	1					3	26	78.0	CARTER	
COURSE TOTAL			9	7	6	1					3	26	78.0		
SUBJECT TOTAL			36	22	20	11	12		2		32	135	399.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
ASTR 110 DESCRIPTIVE ASTRONOMY															
3400		3.0	6	5	13	4					9	37	111.0	PLANTE	
3401		3.0	6	12	10	3					9	40	120.0	PLANTE	
3402		3.0	6	3	15	3	8		1	1	8	45	135.0	BLANCO	
3404		3.0	7	6	3		1				9	26	78.0	COOKE	PT
3405		3.0	4	5	10	5	9				3	36	108.0	BLANCO	
3406		3.0	2	7	7	4	1				12	33	99.0	COHEN	
3407		3.0	10	10	5	1	10		1		5	42	126.0	DAVIS	PT
3408N		3.0	2	4	6		3				4	19	57.0	TSUNG	PT
3409		3.0	6	5	8	5	13				13	50	147.0	TSUNG	PT
COURSE TOTAL			49	57	77	25	45		2	1	72	328	981.0		
ASTR 112 GENERAL ASTRONOMY LABORATORY															
3411N		3.0	5	15	2	1	1		3		3	30	90.0	PLANTE	
3413N		3.0	17	5	1						2	25	75.0	DAVIS	PT
3415N		3.0	14	2			1				1	18	54.0	DAVIS	PT
3416N		3.0	1	6	2		1				2	12	36.0	FITZGERALD	PT
COURSE TOTAL			37	28	5	1	3		3		8	85	255.0		
SUBJECT TOTAL			86	85	82	26	48		5	1	80	413	1236.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PHYC 110 INTRODUCTORY PHYSICS															
7250		6.0	7	4		1	1		1		8	22	132.0	CARTER	XP
7256		6.0	1	7	6	3	2				6	25	150.0	CARTER	
7258N		6.0	4	5	4		2				4	19	114.0	PARIS	PT
COURSE TOTAL			12	16	10	4	5		1		18	66	396.0		
PHYC 130 FUNDAMENTALS OF PHYSICS															
7260		6.0	4	14	9	2	4				7	40	240.0	BLANCO	
COURSE TOTAL			4	14	9	2	4				7	40	240.0		
PHYC 140 MECHANICS OF SOLIDS															
7266		6.0	5	2	1	2	2				19	31	186.0	CARTER	
7278		6.0	5	3	4	1	3				14	30	174.0	COHEN	
7284		6.0	5	4	3	3	5				6	26	156.0	JUNKKARINEN	PT
COURSE TOTAL			15	9	8	6	10				39	87	516.0		
PHYC 240 ELECTRICITY, MAGNETISM & HEAT															
7288		6.0	3	5	4	3	3				7	25	150.0	COHEN	XP
COURSE TOTAL			3	5	4	3	3				7	25	150.0		
SUBJECT TOTAL			34	44	31	15	22		1		71	218	1302.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PSC 110 INTRO PHYSICAL SCIENCES															
7200		3.0		5	2	1	1				10	19	57.0	PARIS	PT
7202		3.0	4	13	14	2	1		1		8	43	129.0	CARTER	
7204		3.0	4	11	11	5	2				6	39	114.0	PLANTE	
7206		3.0	3	12	13	4	3				4	39	117.0	PLANTE	
COURSE TOTAL			11	41	40	12	7		1		28	140	417.0		
PSC 111 PHYSICAL SCIENCE LABORATORY															
7211		3.0	8	11	1		1				2	23	69.0	CARTER	
7212		3.0	3	4	2		1		1		6	17	48.0	BLANCO	
COURSE TOTAL			11	15	3		2		1		8	40	117.0		
SUBJECT TOTAL			22	56	43	12	9		2		36	180	534.0		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PSC 110 INTRO PHYSICAL SCIENCES															
6899		3.0	1	6	10	3	3		1		6	30	90.0	BLANCO	
6900		3.0	6	11	10	4	3		3		6	43	129.0	PLANTE	
6903	3	16.0	4	3	5	1	1				9	23	38.4	CARTER	XP
6904		3.0	5	12	6	5	2		1	1	11	43	129.0	PLANTE	
6905N	12	4.0	2	4	1		1				2	10	21.9	PARIS	PT
COURSE TOTAL			18	36	32	13	10		5	1	34	149	408.3		
PSC 111 PHYSICAL SCIENCE LABORATORY															
6909		3.0	16	4	1		2					23	69.0	DAVIS	PT
6910		3.0	5	10	8		1		3		4	31	93.0	PLANTE	XP
COURSE TOTAL			21	14	9		3		3		4	54	162.0		
SUBJECT TOTAL			39	50	41	13	13		8	1	38	203	570.3		

MATHEMATICS, NATURAL SCIENCES & PE

	S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PSC 110 INTRO PHYSICAL SCIENCES															
6899		3.0	1	6	10	3	3		1		6	30	90.0	BLANCO	
6900		3.0	6	11	10	4	3		3		6	43	129.0	PLANTE	
6903	3	16.0	4	3	5	1	1				9	23	38.4	CARTER	XP
6904		3.0	5	12	6	5	2		1	1	11	43	129.0	PLANTE	
6905N	12	4.0	2	4	1		1				2	10	21.9	PARIS	PT
COURSE TOTAL			18	36	32	13	10		5	1	34	149	408.3		
PSC 111 PHYSICAL SCIENCE LABORATORY															
6909		3.0	16	4	1		2					23	69.0	DAVIS	PT
6910		3.0	5	10	8		1		3		4	31	93.0	PLANTE	XP
COURSE TOTAL			21	14	9		3		3		4	54	162.0		
SUBJECT TOTAL			39	50	41	13	13		8	1	38	203	570.3		

MATHEMATICS, NATURAL SCIENCES & PE

S.T. WKS	HRS	A	B	C	D	F	I	CR	NC	W	TOTAL ENR	TOTAL WSCH	INSTRUCTOR	
PHYC 110 INTRODUCTORY PHYSICS														
7010	6.0	1	4	6	3	2				10	26	156.0	CARTER	
7012	6.0	5	5	2	3	3		1		5	24	144.0	CARTER	
7014N	6.0	9	8	2	2					3	24	144.0	PARIS	PT
COURSE TOTAL		15	17	10	8	5		1		18	74	444.0		
PHYC 130 FUNDAMENTALS OF PHYSICS														
7019	6.0	5	6	3	2					13	29	174.0	BLANCO	
COURSE TOTAL		5	6	3	2					13	29	174.0		
PHYC 131 FUNDAMENTALS OF PHYSICS														
7022	6.0	4	8	6	1	1				3	23	138.0	CARTER	XP
COURSE TOTAL		4	8	6	1	1				3	23	138.0		
PHYC 140 MECHANICS OF SOLIDS														
7030	6.0	7	2	3		5				11	28	168.0	COHEN	XP
7036	6.0	2	5	6	2	7				12	34	204.0	CARTER	XP
COURSE TOTAL		9	7	9	2	12				23	62	372.0		
PHYC 240 ELECTRICITY, MAGNETISM & HEAT														
7038	6.0	7	11	3		1				4	26	156.0	COHEN	
COURSE TOTAL		7	11	3		1				4	26	156.0		
PHYC 241 LIGHT, WAVE MOTION & MOD PHYC														
7040	6.0	6	6	2							14	84.0	JUNKKARINEN	PT
COURSE TOTAL		6	6	2							14	84.0		
SUBJECT TOTAL		46	55	33	13	19		1		61	228	1368.0		

Grade Distribution by Division
School: Grossmont College -- Term: 2008SU -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
0304	4	3.0	16	0	1	0	0	5	0	0	8	0	1	1	0	0	0	Tsung, Thomas	PT
0305	4	3.0	16	0	4	0	0	5	0	0	4	0	1	2	0	0	0	Tsung, Thomas	PT
0306N	8	3.0	17	0	5	0	0	9	0	0	3	0	0	0	0	0	4	Fitzgerald, John	PT
Course Total			49	0	10	0	0	19	0	0	15	0	2	3	0	0	4		
ASTR-112 General Astronomy Laboratory																			
0217N	4	1.0	16	0	15	0	0	0	0	0	0	0	1	0	0	0	0	Davis, James	PT
Course Total			16	0	15	0	0	0	0	0	0	0	1	0	0	0	0		
Subject Total			65	0	25	0	0	19	0	0	15	0	3	3	0	0	4		
PHYC-110 Introductory Physics																			
0848	8	4.0	29	0	17	0	0	4	0	0	4	1	3	0	0	0	2	Carter, Brian	PT
0939	8	4.0	12	0	2	0	0	3	0	0	6	1	0	0	0	0	5	Carter, Brian	PT
Course Total			41	0	19	0	0	7	0	0	10	2	3	0	0	0	7		
Subject Total			41	0	19	0	0	7	0	0	10	2	3	0	0	0	7		
PSC-110 Intro Physical Sciences																			
0847	8	3.0	6	0	3	0	0	2	0	0	1	0	0	0	0	0	4	Carter, Brian	PT
1900N	8	3.0	11	0	3	0	0	2	0	0	3	1	1	0	0	0	3	Paris, Rex	PT
Course Total			17	0	6	0	0	4	0	0	4	1	1	0	0	0	7		
Subject Total			17	0	6	0	0	4	0	0	4	1	1	0	0	0	7		
Division Total			3245	0	1420	0	0	586	0	0	405	112	154	232	39	0	391		

Grade Distribution by Division
School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
2216		3.0	36	0	6	0	0	15	0	0	8	5	1	1	0	0	9	Fitzgerald, John	PT
2217		3.0	33	0	7	0	0	13	0	0	11	0	2	0	0	0	15	Blanco, Philip	
2218		3.0	31	0	6	0	0	5	0	0	12	0	6	2	0	0	16	Blanco, Philip	
2219		3.0	35	0	15	0	0	8	0	0	4	3	2	0	3	0	2	Cooke, Jeffrey	PT
2220		3.0	32	0	5	0	0	4	0	0	11	5	7	0	0	0	11	Cohen, Ross	
2221		3.0	34	0	3	0	0	12	0	0	11	2	4	2	0	0	13	Plante, Stephanie	
2222		3.0	33	0	3	0	0	7	0	0	14	3	6	0	0	0	4	Cohen, Ross	
2223N		3.0	22	0	3	0	0	2	0	0	10	0	6	1	0	0	7	Tsung, Thomas	PT
2224		3.0	34	0	2	0	0	5	0	0	12	4	11	0	0	0	18	Tsung, Thomas	PT
Course Total			290	0	50	0	0	71	0	0	93	22	45	6	3	0	95		
ASTR-112 General Astronomy Laboratory																			
2225N		1.0	15	0	11	0	0	4	0	0	0	0	0	0	0	0	3	Davis, James	PT
2226N		1.0	20	0	4	0	0	9	0	0	3	1	1	2	0	0	3	Plante, Stephanie	
2227N		1.0	16	0	16	0	0	0	0	0	0	0	0	0	0	0	3	Davis, James	PT
2228N		1.0	23	0	12	0	0	6	0	0	3	1	0	1	0	0	3	Fitzgerald, John	PT
Course Total			74	0	43	0	0	19	0	0	6	2	1	3	0	0	12		
Subject Total			364	0	93	0	0	90	0	0	99	24	46	9	3	0	107		
PHYC-110 Introductory Physics																			
4142		4.0	16	0	1	0	0	3	0	0	4	2	4	2	0	0	5	Carter, Brian	
4143		4.0	22	0	6	0	0	5	0	0	4	2	5	0	0	0	2	Carter, Brian	XP
4144N		4.0	25	0	12	0	0	10	0	0	3	0	0	0	0	0	3	Paris, Rex	PT
Course Total			63	0	19	0	0	18	0	0	11	4	9	2	0	0	10		
PHYC-130 Fundamentals of Physics																			
4145		4.0	20	0	5	0	0	6	0	0	7	1	1	0	0	0	7	Blanco, Philip	
Course Total			20	0	5	0	0	6	0	0	7	1	1	0	0	0	7		
PHYC-140 Mechanics of Solids																			
4146		4.0	23	0	8	0	0	2	0	0	7	1	3	0	0	0	8	Plante, Stephanie	
4147		4.0	19	0	6	0	0	2	0	0	2	5	4	0	0	0	10	Carter, Brian	
4148		4.0	14	0	3	0	0	2	0	0	2	2	5	0	0	0	10	Junkkarinen, Vesa	PT
Course Total			56	0	17	0	0	6	0	0	11	8	12	0	0	0	28		
PHYC-240 Electricity, Magnetism & Heat																			
4150		4.0	20	0	6	0	0	4	0	0	5	2	3	0	0	0	1	Cohen, Ross	
Course Total			20	0	6	0	0	4	0	0	5	2	3	0	0	0	1		
PHYC-241 Light, Wave Motion/Mod Phyc																			
5996		4.0	9	0	4	0	0	5	0	0	0	0	0	0	0	0	0	Junkkarinen, Vesa	PT
Course Total			9	0	4	0	0	5	0	0	0	0	0	0	0	0	0		
Subject Total			168	0	51	0	0	39	0	0	34	15	25	2	0	0	46		
PSC-110 Intro Physical Sciences																			
4136		3.0	19	0	2	0	0	7	0	0	5	2	3	0	0	0	2	Carter, Brian	
4137		3.0	33	0	7	0	0	9	0	0	5	4	5	3	0	0	15	Plante, Stephanie	
4138		3.0	27	0	6	0	0	9	0	0	7	3	2	0	0	0	11	Paris, Rex	PT
4139		3.0	32	0	6	0	0	4	0	0	10	7	3	2	0	0	13	Plante, Stephanie	
Course Total			111	0	21	0	0	29	0	0	27	16	13	5	0	0	41		
PSC-111 Physical Science Laboratory																			
4140		1.0	16	0	8	0	0	1	0	0	6	0	1	0	0	0	4	Carter, Brian	
4141		1.0	13	0	7	0	0	5	0	0	0	0	1	0	0	0	1	Davis, James	PT
Course Total			29	0	15	0	0	6	0	0	6	0	2	0	0	0	5		
Subject Total			140	0	36	0	0	35	0	0	33	16	15	5	0	0	46		
Division Total			14067	0	4193	0	0	2596	0	0	2268	741	1431	766	452	0	3577		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

School: Grossmont College -- Term: 2008FA -- Division: G06 -- Subject: All Subjects -- Course: All Courses

Grade Distribution by Division
School: Grossmont College -- Term: 2009SP -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
6340		3.0	39	0	5	0	0	13	0	0	12	3	1	4	0	0	5	Fitzgerald, John	PT
6341		3.0	32	0	10	0	0	9	0	0	5	2	6	0	0	0	9	Blanco, Philip	
6342		3.0	49	0	12	0	0	13	0	0	8	9	7	0	0	0	6	Davis, James	PT
6343		3.0	28	0	12	0	0	10	0	0	0	2	1	3	0	0	7	Cooke, Jeffrey	PT
6344		3.0	31	0	7	0	0	4	0	0	13	3	3	0	1	0	11	Cohen, Ross	
6345		3.0	36	0	5	0	0	4	0	0	15	3	6	1	2	0	10	Blanco, Philip	
6346		3.0	27	0	7	0	0	5	0	0	9	1	3	2	0	0	9	Cohen, Ross	
6347N		3.0	21	0	3	0	0	3	0	0	6	3	6	0	0	0	7	Tsung, Thomas	PT
6348		3.0	39	0	7	0	0	9	0	0	3	4	16	0	0	0	25	Tsung, Thomas	PT
8868		3.0	31	0	4	0	0	11	0	0	8	5	3	0	0	0	12	Plante, Stephanie	
Course Total			333	0	72	0	0	81	0	0	79	35	52	10	3	0	101		
ASTR-112 General Astronomy Laboratory																			
6349N		1.0	29	0	14	0	0	8	0	0	0	0	6	1	0	0	2	Davis, James	PT
6350N		1.0	26	0	9	0	0	7	0	0	5	4	1	0	0	0	2	Plante, Stephanie	PT
6351N		1.0	30	0	17	0	0	9	0	0	2	0	2	0	0	0	3	Davis, James	PT
6352N		1.0	24	0	13	0	0	8	0	0	3	0	0	0	0	0	2	Fitzgerald, John	PT
Course Total			109	0	53	0	0	32	0	0	10	4	9	1	0	0	9		
Subject Total			442	0	125	0	0	113	0	0	89	39	61	11	3	0	110		
PHYC-110 Introductory Physics																			
8356		4.0	20	0	8	0	0	6	0	0	1	1	4	0	0	0	4	Brownell, Douglas	PT
8357		4.0	28	0	10	0	0	8	0	0	5	2	2	1	0	0	2	Brownell, Douglas	PT
8358N		4.0	21	0	7	0	0	7	0	0	2	4	0	0	0	0	2	Paris, Rex	PT
Course Total			69	0	25	0	0	21	0	0	8	7	6	1	0	0	8		
PHYC-130 Fundamentals of Physics																			
8359		4.0	24	0	8	0	0	7	0	0	2	2	4	0	0	0	8	Blanco, Philip	
Course Total			24	0	8	0	0	7	0	0	2	2	4	0	0	0	8		
PHYC-131 Fundamentals of Physics																			
8360		4.0	8	0	3	0	0	2	0	0	2	1	0	0	0	0	3	Carter, Brian	XP
Course Total			8	0	3	0	0	2	0	0	2	1	0	0	0	0	3		
PHYC-140 Mechanics of Solids																			
8361		4.0	27	0	3	0	0	9	0	0	3	3	9	0	0	0	5	Carter, Brian	
8362		4.0	25	0	9	0	0	7	0	0	6	2	1	0	0	0	9	Plante, Stephanie	PT
8875		4.0	23	0	4	0	0	2	0	0	5	3	9	0	0	0	3	Carter, Brian	
Course Total			75	0	16	0	0	18	0	0	14	8	19	0	0	0	17		
PHYC-240 Electricity, Magnetism & Heat																			
8364		4.0	25	0	7	0	0	10	0	0	5	1	1	1	0	0	4	Cohen, Ross	
Course Total			25	0	7	0	0	10	0	0	5	1	1	1	0	0	4		
PHYC-241 Light, Wave Motion & Mod Phyc																			
8365		4.0	12	0	7	0	0	4	0	0	1	0	0	0	0	0	1	Junkkarinen, Vesa	PT
Course Total			12	0	7	0	0	4	0	0	1	0	0	0	0	0	1		
Subject Total			213	0	66	0	0	62	0	0	32	19	30	2	0	0	41		
PSC-110 Intro Physical Sciences																			
8349		3.0	26	0	3	0	0	2	0	0	6	1	13	1	0	0	5	Blanco, Philip	
8350		3.0	31	0	6	0	0	8	0	0	6	5	5	1	0	0	8	Brownell, Douglas	PT
8351	3	3.0	31	0	8	0	0	13	0	0	6	1	2	1	0	0	7	Carter, Brian	XP
8352		3.0	21	0	6	0	0	5	0	0	6	0	4	0	0	0	14	Skelton, Robert	PT
8876		3.0	31	0	8	0	0	8	0	0	4	3	7	1	0	0	19	Carter, Brian	
Course Total			140	0	31	0	0	36	0	0	28	10	31	4	0	0	53		
PSC-111 Physical Science Laboratory																			
8354		1.0	20	0	9	0	0	6	0	0	1	2	2	0	0	0	1	Carter, Brian	
8355		1.0	19	0	7	0	0	5	0	0	4	0	2	1	0	0	0	Davis, James	PT
Course Total			39	0	16	0	0	11	0	0	5	2	4	1	0	0	1		
Subject Total			179	0	47	0	0	47	0	0	33	12	35	5	0	0	54		
Division Total			14738	0	4746	0	0	2802	0	0	2156	759	1537	673	392	0	3523		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

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

Grade Distribution by Division
School: Grossmont College -- Term: 2009SU -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
0304	4	3.0	45	0	13	0	0	13	0	0	11	2	6	0	0	0	0	Davis, James	PT
0306N	8	3.0	26	0	3	0	0	12	0	0	9	0	1	1	0	0	3	Fitzgerald, John	PT
9292	8	3.0	26	0	5	0	0	12	0	0	2	3	4	0	0	0	25	Plante, Stephanie	PT
Course Total			97	0	21	0	0	37	0	0	22	5	11	1	0	0	28		
ASTR-112 General Astronomy Laboratory																			
0217N	4	1.0	28	0	22	0	0	4	0	0	1	0	1	0	0	0	1	Davis, James	PT
Course Total			28	0	22	0	0	4	0	0	1	0	1	0	0	0	1		
Subject Total			125	0	43	0	0	41	0	0	23	5	12	1	0	0	29		
PHYC-110 Introductory Physics																			
0848	8	4.0	33	0	13	0	0	8	0	0	10	1	1	0	0	0	0	Carter, Brian	PT
0939N	8	4.0	21	0	11	0	0	8	0	0	1	1	0	0	0	0	4	Paris, Rex	PT
Course Total			54	0	24	0	0	16	0	0	11	2	1	0	0	0	4		
Subject Total			54	0	24	0	0	16	0	0	11	2	1	0	0	0	4		
PSC-110 Intro Physical Sciences																			
0847	8	3.0	16	0	4	0	0	7	0	0	2	1	2	0	0	0	6	Carter, Brian	PT
Course Total			16	0	4	0	0	7	0	0	2	1	2	0	0	0	6		
Subject Total			16	0	4	0	0	7	0	0	2	1	2	0	0	0	6		
Division Total			3916	0	1740	0	0	750	0	0	531	142	242	172	46	0	531		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

School: Grossmont College -- Term: 2009SU -- Division: G06 -- Subject: All Subjects -- Course: All Courses

Grade Distribution by Division
School: Grossmont College -- Term: 2009FA -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
2216		3.0	39	0	7	0	0	17	0	0	9	2	2	2	0	0	6	Fitzgerald, John	PT
2217		3.0	49	4	5	3	8	9	5	3	4	5	3	0	0	0	5	Davis, James	PT
2218		3.0	37	1	0	1	2	4	7	5	6	4	7	0	0	0	10	Blanco, Philip	
2219		3.0	27	0	12	0	0	8	0	0	5	0	1	1	0	0	17	Cooke, Jeffrey	PT
2220		3.0	37	0	3	1	1	6	1	1	14	1	9	0	0	0	14	Cohen, Ross	
2221		3.0	37	2	0	5	3	2	4	3	3	5	10	0	0	0	9	Blanco, Philip	
2222		3.0	34	0	5	1	1	6	3	0	9	7	2	0	0	0	14	Cohen, Ross	
2223N		3.0	35	0	5	4	2	5	0	0	4	5	9	0	0	0	5	Junkkarinen, Vesa	PT
2224		3.0	33	0	4	0	0	10	0	0	5	5	8	1	0	0	19	Plante, Stephanie	
9472		3.0	25	0	3	0	0	11	0	0	7	0	3	0	1	0	24	Plante, Stephanie	
Course Total			353	7	44	15	17	78	20	12	66	34	54	4	1	0	123		
ASTR-112 General Astronomy Laboratory																			
2225N		1.0	32	6	6	5	5	3	1	1	1	0	3	1	0	0	1	Davis, James	PT
2226N		1.0	27	5	5	3	5	0	1	1	3	2	2	0	0	0	5	Davis, James	PT
2227N		1.0	27	7	3	4	2	3	2	2	0	0	2	2	0	0	2	Davis, James	PT
2228N		1.0	28	0	14	0	0	10	0	0	3	1	0	0	0	0	1	Fitzgerald, John	PT
Course Total			114	18	28	12	12	16	4	4	7	3	7	3	0	0	9		
Subject Total			467	25	72	27	29	94	24	16	73	37	61	7	1	0	132		
PHYC-110 Introductory Physics																			
4142		4.0	26	0	1	0	0	9	0	0	7	1	8	0	0	0	5	Carter, Brian	
4143		4.0	26	0	5	0	0	6	0	0	8	4	3	0	0	0	6	Carter, Brian	
4144N		4.0	32	0	7	0	0	12	0	0	7	4	2	0	0	0	0	Paris, Rex	PT
Course Total			84	0	13	0	0	27	0	0	22	9	13	0	0	0	11		
PHYC-130 Fundamentals of Physics																			
4145		4.0	22	1	2	2	4	1	3	2	2	2	2	0	1	0	11	Blanco, Philip	
Course Total			22	1	2	2	4	1	3	2	2	2	2	0	1	0	11		
PHYC-140 Mechanics of Solids																			
4146		4.0	28	0	5	0	0	7	0	0	8	3	5	0	0	0	12	Carter, Brian	XP
4147		4.0	24	0	2	0	0	11	0	0	5	3	2	0	0	0	9	Plante, Stephanie	
4148		4.0	29	0	8	0	0	10	0	0	5	6	0	0	0	0	7	Plante, Stephanie	
Course Total			81	0	15	0	0	28	0	0	18	12	7	0	0	0	28		
PHYC-240 Electricity, Magnetism & Heat																			
4150		4.0	23	0	2	0	4	7	3	1	1	2	3	0	0	0	10	Cohen, Ross	
Course Total			23	0	2	0	4	7	3	1	1	2	3	0	0	0	10		
PHYC-241 Light, Wave Motion/Mod Phyc																			
5996		4.0	18	5	7	0	2	3	0	0	0	0	1	0	0	0	0	Junkkarinen, Vesa	PT
Course Total			18	5	7	0	2	3	0	0	0	0	1	0	0	0	0		
Subject Total			228	6	39	2	10	66	6	3	43	25	26	0	1	0	60		
PSC-110 Intro Physical Sciences																			
4136		3.0	26	0	15	0	0	7	0	0	4	0	0	0	0	0	27	Carter, Brian	XP
4137		3.0	41	0	5	0	0	4	0	0	22	6	4	0	0	0	6	Paris, Rex	PT
4138		3.0	32	0	7	0	0	10	0	0	6	1	7	1	0	0	9	Brownell, Douglas	PT
4139		3.0	35	0	11	0	0	13	0	0	2	1	8	0	0	0	8	Brownell, Douglas	PT
Course Total			134	0	38	0	0	34	0	0	34	8	19	1	0	0	50		
PSC-111 Physical Science Laboratory																			
4140		1.0	19	0	7	0	0	5	0	0	3	2	2	0	0	0	4	Carter, Brian	
Course Total			19	0	7	0	0	5	0	0	3	2	2	0	0	0	4		
Subject Total			153	0	45	0	0	39	0	0	37	10	21	1	0	0	54		
Division Total			14531	368	4142	348	306	2573	302	221	2322	864	1683	903	429	0	3697		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

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

Grade Distribution by Division
School: Grossmont College -- Term: 2010SP -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
6340		3.0	38	0	2	0	0	19	0	0	10	3	2	2	0	0	7	Fitzgerald, John	PT
6341		3.0	48	1	2	6	3	7	7	2	5	6	8	0	1	0	8	Blanco, Philip	
6342		3.0	52	3	9	4	3	9	0	1	7	1	7	8	0	0	7	Davis, James	PT
6343		3.0	42	0	14	0	0	20	0	0	1	0	4	3	0	0	3	Cooke, Jeffrey	PT
6344		3.0	33	0	1	0	1	4	1	1	9	6	10	0	0	0	13	Cohen, Ross	
6345		3.0	46	0	1	4	7	2	0	2	8	6	15	1	0	0	10	Blanco, Philip	
6346		3.0	30	1	4	0	3	5	0	1	11	2	3	0	0	0	19	Cohen, Ross	
6347N		3.0	39	0	7	0	0	7	1	1	6	2	14	1	0	0	5	Junkkarinen, Vesa	PT
6348		3.0	28	0	6	0	0	7	0	0	10	1	4	0	0	0	21	Plante, Stephanie	PT
8868		3.0	33	0	8	0	0	7	0	0	11	4	2	1	0	0	16	Plante, Stephanie	PT
Course Total			389	5	54	14	17	87	9	8	78	31	69	16	1	0	109		
ASTR-112 General Astronomy Laboratory																			
6349N		1.0	23	4	8	5	2	1	0	0	0	0	2	1	0	0	2	Davis, James	PT
6350N		1.0	31	2	8	8	2	2	1	0	1	0	5	2	0	0	1	Davis, James	PT
6351N		1.0	29	5	13	4	0	4	1	0	1	0	0	1	0	0	0	Davis, James	PT
6352N		1.0	19	0	11	0	0	6	0	0	1	1	0	0	0	0	1	Fitzgerald, John	PT
Course Total			102	11	40	17	4	13	2	0	3	1	7	4	0	0	4		
Subject Total			491	16	94	31	21	100	11	8	81	32	76	20	1	0	113		
PHYC-110 Introductory Physics																			
8356		4.0	31	0	8	0	0	12	0	0	6	1	4	0	0	0	5	Brownell, Douglas	PT
8357		4.0	28	0	7	0	0	11	0	0	5	1	4	0	0	0	4	Brownell, Douglas	PT
8358N		4.0	32	0	10	0	0	13	0	0	6	3	0	0	0	0	1	Paris, Rex	PT
Course Total			91	0	25	0	0	36	0	0	17	5	8	0	0	0	10		
PHYC-130 Fundamentals of Physics																			
8359		4.0	35	0	13	0	0	10	0	0	5	3	4	0	0	0	8	Carter, Brian	
Course Total			35	0	13	0	0	10	0	0	5	3	4	0	0	0	8		
PHYC-131 Fundamentals of Physics																			
8360		4.0	8	1	3	0	2	1	0	0	0	0	1	0	0	0	3	Carter, Brian	XP
Course Total			8	1	3	0	2	1	0	0	0	0	1	0	0	0	3		
PHYC-140 Mechanics of Solids																			
8361		4.0	23	1	2	4	4	0	5	2	0	4	1	0	0	0	19	Blanco, Philip	
8362		4.0	33	3	5	0	0	9	0	0	7	2	6	0	0	0	9	Junkkarinen, Vesa	PT
8875		4.0	26	1	5	0	0	8	0	0	5	3	4	0	0	0	11	Carter, Brian	
Course Total			82	5	12	4	4	17	5	2	12	9	11	0	0	0	39		
PHYC-240 Electricity, Magnetism & Heat																			
8364		4.0	30	1	3	0	4	5	7	1	6	2	1	0	0	0	4	Cohen, Ross	
Course Total			30	1	3	0	4	5	7	1	6	2	1	0	0	0	4		
Subject Total			246	7	56	4	10	69	12	3	40	19	25	0	0	0	64		
PSC-100 Physical Sci for Elementary Ed																			
9809		3.0	33	0	2	5	5	7	5	1	3	2	3	0	0	0	13	Oakes, John	
Course Total			33	0	2	5	5	7	5	1	3	2	3	0	0	0	13		
PSC-110 Intro Physical Sciences																			
8349		3.0	42	0	0	2	1	8	7	4	3	7	9	0	0	0	7	Blanco, Philip	
8350		3.0	26	0	10	0	0	5	0	0	4	1	2	1	3	0	23	Skelton, Robert	PT
8352		3.0	43	0	11	0	0	15	0	0	7	2	6	1	0	0	7	Brownell, Douglas	PT
8876		3.0	30	0	8	0	0	8	0	0	4	2	4	4	0	0	21	Carter, Brian	
Course Total			141	0	29	2	1	36	7	4	18	12	21	6	3	0	58		
PSC-111 Physical Science Laboratory																			
8354		1.0	20	0	13	0	0	6	0	0	1	0	0	0	0	0	7	Carter, Brian	
8355		1.0	18	0	3	1	2	3	2	3	1	1	1	0	0	0	3	Blanco, Philip	
Course Total			38	0	16	1	2	9	2	3	2	1	1	0	0	0	10		
Subject Total			212	0	47	8	8	52	14	8	23	15	25	6	3	0	81		
Division Total			14297	276	4481	362	272	2448	252	210	2101	789	1766	827	466	0	3643		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Grade Distribution by Division
School: Grossmont College -- Term: 2010SU -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
0306N	6	3.0	38	0	9	0	0	19	0	0	9	1	0	0	0	0	5	Fitzgerald, John	PT
Course Total			38	0	9	0	0	19	0	0	9	1	0	0	0	0	5		
ASTR-112 General Astronomy Laboratory																			
0217	6	1.0	16	4	6	2	0	0	0	0	0	1	3	0	0	0	4	Davis, James	PT
Course Total			16	4	6	2	0	0	0	0	0	1	3	0	0	0	4		
Subject Total			54	4	15	2	0	19	0	0	9	2	3	0	0	0	9		
PHYC-110 Introductory Physics																			
0848	6	4.0	28	0	5	0	0	14	0	0	6	2	1	0	0	0	0	Carter, Brian	PT
Course Total			28	0	5	0	0	14	0	0	6	2	1	0	0	0	0		
Subject Total			28	0	5	0	0	14	0	0	6	2	1	0	0	0	0		
PSC-110 Intro Physical Sciences																			
0847	6	3.0	29	1	3	0	0	5	0	0	10	1	7	2	0	0	7	Carter, Brian	PT
Course Total			29	1	3	0	0	5	0	0	10	1	7	2	0	0	7		
Subject Total			29	1	3	0	0	5	0	0	10	1	7	2	0	0	7		
Division Total			2163	62	985	55	72	337	30	28	238	69	153	113	15	0	290		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

School: Grossmont College -- Term: 2010SU -- Division: G06 -- Subject: All Subjects -- Course: All Courses

Grade Distribution by Division
School: Grossmont College -- Term: 2010FA -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
2216		3.0	42	0	4	0	0	19	0	0	13	0	2	3	1	0	7	Fitzgerald, John	PT
2217		3.0	48	2	5	6	4	7	5	4	3	4	6	0	2	0	8	Davis, James	PT
2218		3.0	50	4	2	5	10	5	8	5	5	3	3	0	0	0	11	Blanco, Philip	
2219		3.0	27	0	8	0	0	13	0	0	1	4	1	0	0	0	16	Fitzgerald, John	PT
2220		3.0	39	1	1	4	3	1	2	4	10	5	6	0	1	0	14	Cohen, Ross	
2221		3.0	40	1	2	4	2	9	4	6	9	0	2	0	1	0	12	Blanco, Philip	
2222		3.0	44	1	3	1	0	3	1	8	12	7	8	0	0	0	8	Cohen, Ross	
2223N		3.0	37	1	5	2	1	6	0	4	7	3	8	0	0	0	12	Junkkarinen, Vesa	PT
2224		3.0	33	0	5	0	0	7	0	0	12	1	6	0	1	0	14	Plante, Stephanie	PT
9472		3.0	26	0	5	0	0	10	0	0	7	1	3	0	0	0	24	Plante, Stephanie	PT
Course Total			386	10	40	22	20	80	20	31	79	28	45	3	6	0	126		
ASTR-112 General Astronomy Laboratory																			
2225N		1.0	27	4	6	8	2	2	0	0	1	1	2	0	1	0	4	Davis, James	PT
2226N		1.0	27	3	11	4	5	2	1	1	0	0	0	0	0	0	1	Davis, James	PT
2227N		1.0	21	2	8	3	0	2	0	0	1	1	4	0	0	0	7	Davis, James	PT
2228N		1.0	19	0	6	0	0	6	0	0	5	1	0	0	1	0	4	Fitzgerald, John	PT
Course Total			94	9	31	15	7	12	1	1	7	3	6	0	2	0	16		
Subject Total			480	19	71	37	27	92	21	32	86	31	51	3	8	0	142		
PHYC-110 Introductory Physics																			
4142		4.0	25	0	1	0	0	9	0	0	4	2	9	0	0	0	5	Carter, Brian	
4143		4.0	26	1	12	0	1	2	1	1	5	1	1	0	1	0	7	Skelton, Robert	PT
4144N		4.0	29	0	11	0	0	9	0	0	8	1	0	0	0	0	3	Paris, Rex	PT
Course Total			80	1	24	0	1	20	1	1	17	4	10	0	1	0	15		
PHYC-130 Fundamentals of Physics																			
4145		4.0	18	3	0	1	3	0	4	2	0	2	3	0	0	0	17	Blanco, Philip	
Course Total			18	3	0	1	3	0	4	2	0	2	3	0	0	0	17		
PHYC-140 Mechanics of Solids																			
4146		4.0	25	0	3	0	0	3	0	0	6	1	12	0	0	0	7	Carter, Brian	XP
4147		4.0	25	0	8	0	0	4	0	0	6	3	4	0	0	0	7	Carter, Brian	
4148		4.0	32	0	6	0	0	9	0	0	7	3	6	0	1	0	5	Brownell, Douglas	PT
Course Total			82	0	17	0	0	16	0	0	19	7	22	0	1	0	19		
PHYC-240 Electricity, Magnetism & Heat																			
4150		4.0	26	0	5	1	6	3	3	3	4	0	1	0	0	0	11	Cohen, Ross	
Course Total			26	0	5	1	6	3	3	3	4	0	1	0	0	0	11		
PHYC-241 Light, Wave Motion/Mod Phyc																			
5996		4.0	16	2	8	2	2	1	1	0	0	0	0	0	0	0	0	Junkkarinen, Vesa	PT
Course Total			16	2	8	2	2	1	1	0	0	0	0	0	0	0	0		
Subject Total			222	6	54	4	12	40	9	6	40	13	36	0	2	0	62		
PSC-100 Physical Sci for Elementary Ed																			
5370		3.0	34	2	1	4	0	5	9	3	6	2	2	0	0	0	17	Oakes, John	
Course Total			34	2	1	4	0	5	9	3	6	2	2	0	0	0	17		
PSC-110 Intro Physical Sciences																			
4136		3.0	31	0	9	0	0	5	0	0	8	1	7	1	0	0	20	Carter, Brian	XP
4137		3.0	35	2	7	1	1	9	0	0	8	3	1	3	0	0	7	Skelton, Robert	PT
4138		3.0	34	0	5	0	0	10	0	0	12	4	3	0	0	0	8	Paris, Rex	PT
4139		3.0	28	0	7	0	0	12	0	0	3	1	4	0	1	0	9	Brownell, Douglas	PT
Course Total			128	2	28	1	1	36	0	0	31	9	15	4	1	0	44		
PSC-111 Physical Science Laboratory																			
4140		1.0	25	0	5	0	0	2	0	0	9	4	5	0	0	0	3	Carter, Brian	
Course Total			25	0	5	0	0	2	0	0	9	4	5	0	0	0	3		
Subject Total			187	4	34	5	1	43	9	3	46	15	22	4	1	0	64		
Division Total			14182	335	4308	353	290	2301	355	253	2254	840	1523	947	391	0	3316		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

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

Grade Distribution by Division
School: Grossmont College -- Term: 2011SP -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
6340		3.0	43	0	5	0	0	17	0	0	14	4	2	1	0	0	8	Fitzgerald, John	PT
6341		3.0	39	1	2	2	3	4	3	5	14	3	2	0	0	0	14	Cohen, Ross	
6342		3.0	58	9	7	3	6	10	2	1	4	5	7	4	0	0	9	Davis, James	PT
6343		3.0	35	0	11	0	0	9	0	0	9	0	3	3	0	0	11	Fitzgerald, John	PT
6344		3.0	45	0	1	3	3	4	5	6	11	6	6	0	0	0	6	Cohen, Ross	
6345		3.0	42	0	1	4	0	3	0	0	30	2	1	0	0	0	8	Skelton, Robert	PT
6346		3.0	33	0	4	0	0	5	0	0	16	3	3	2	0	0	18	Skelton, Robert	PT
6347N		3.0	37	1	7	1	4	2	2	1	8	3	7	1	0	0	11	Junkkarinen, Vesa	PT
6348		3.0	31	0	13	0	0	11	0	0	1	2	3	1	0	0	17	Plante, Stephanie	PT
8868		3.0	28	0	2	0	0	11	0	0	6	7	2	0	0	0	20	Plante, Stephanie	PT
Course Total			391	11	53	13	16	76	12	13	113	35	36	12	0	0	122		
ASTR-112 General Astronomy Laboratory																			
6349N		1.0	29	9	10	5	1	1	0	0	1	1	1	0	0	0	3	Davis, James	PT
6350N		1.0	29	5	11	6	3	0	0	0	1	0	1	2	0	0	2	Davis, James	PT
6351N		1.0	27	6	8	7	1	0	0	0	0	2	3	0	0	0	2	Davis, James	PT
6352N		1.0	27	0	10	0	0	12	0	0	3	0	2	0	0	0	2	Fitzgerald, John	PT
Course Total			112	20	39	18	5	13	0	0	5	3	7	2	0	0	9		
Subject Total			503	31	92	31	21	89	12	13	118	38	43	14	0	0	131		
PHYC-110 Introductory Physics																			
8356		4.0	26	0	3	0	0	11	0	0	7	0	4	1	0	0	2	Brownell, Douglas	PT
8357		4.0	26	0	10	0	0	11	0	0	2	2	0	1	0	0	4	Paris, Rex	PT
8358N		4.0	26	0	12	0	0	3	0	0	5	4	1	1	0	0	3	Paris, Rex	PT
Course Total			78	0	25	0	0	25	0	0	14	6	5	3	0	0	9		
PHYC-130 Fundamentals of Physics																			
8359		4.0	19	0	3	2	3	3	3	2	2	1	0	0	0	0	9	Blanco, Philip	
Course Total			19	0	3	2	3	3	3	2	2	1	0	0	0	0	9		
PHYC-131 Fundamentals of Physics																			
8360		4.0	10	0	4	0	0	3	0	0	1	0	2	0	0	0	3	Carter, Brian	XP
Course Total			10	0	4	0	0	3	0	0	1	0	2	0	0	0	3		
PHYC-140 Mechanics of Solids																			
7336N		4.0	24	0	6	0	0	6	0	0	5	2	5	0	0	0	3	Brownell, Douglas	PT
8361		4.0	23	0	5	0	0	5	0	0	3	0	10	0	0	0	3	Carter, Brian	
8362		4.0	22	2	6	2	0	6	2	1	2	1	0	0	0	0	7	Junkkarinen, Vesa	PT
8875		4.0	22	0	5	0	0	5	0	0	2	3	7	0	0	0	8	Carter, Brian	
Course Total			91	2	22	2	0	22	2	1	12	6	22	0	0	0	21		
PHYC-240 Electricity, Magnetism & Heat																			
8364		4.0	28	1	1	3	1	3	7	0	7	3	2	0	0	0	5	Cohen, Ross	
Course Total			28	1	1	3	1	3	7	0	7	3	2	0	0	0	5		
Subject Total			226	3	55	7	4	56	12	3	36	16	31	3	0	0	47		
PSC-100 Physical Sci for Elementary Ed																			
9809		3.0	35	1	3	3	1	8	3	0	4	5	7	0	0	0	9	Oakes, John	
Course Total			35	1	3	3	1	8	3	0	4	5	7	0	0	0	9		
PSC-110 Intro Physical Sciences																			
8349		3.0	39	0	0	4	3	7	2	4	5	2	12	0	0	0	9	Blanco, Philip	
8350		3.0	46	1	0	2	4	4	6	6	5	5	13	0	0	0	8	Blanco, Philip	
8352		3.0	34	1	2	6	1	3	2	4	2	1	11	0	1	0	18	Blanco, Philip	
8876		3.0	34	0	10	0	0	9	0	0	7	1	7	0	0	0	16	Carter, Brian	
Course Total			153	2	12	12	8	23	10	14	19	9	43	0	1	0	51		
PSC-111 Physical Science Laboratory																			
8354		1.0	17	0	6	0	0	2	0	0	3	2	4	0	0	0	3	Carter, Brian	
8355		1.0	21	0	5	2	4	3	2	2	0	0	3	0	0	0	3	Blanco, Philip	
Course Total			38	0	11	2	4	5	2	2	3	2	7	0	0	0	6		
Subject Total			226	3	26	17	13	36	15	16	26	16	57	0	1	0	66		
Division Total			13451	302	4020	371	329	2238	289	239	2029	869	1519	888	333	0	3315		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

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

Grade Distribution by Division
School: Grossmont College -- Term: 2011SU -- Division: G06 -- Subject: All Subjects -- 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																			
PHYC-110 Introductory Physics																			
0848	6	4.0	30	0	6	0	0	13	0	0	7	1	2	0	1	0	0	Carter, Brian	PT
Course Total			30	0	6	0	0	13	0	0	7	1	2	0	1	0	0		
Subject Total			30	0	6	0	0	13	0	0	7	1	2	0	1	0	0		
PSC-110 Intro Physical Sciences																			
0847	6	3.0	41	0	5	0	0	11	0	0	7	4	13	0	0	0	6	Carter, Brian	PT
Course Total			41	0	5	0	0	11	0	0	7	4	13	0	0	0	6		
Subject Total			41	0	5	0	0	11	0	0	7	4	13	0	0	0	6		
Division Total			1148	18	544	21	26	185	7	11	143	41	80	49	21	0	122		

Grade Distribution by Division
School: Grossmont College -- Term: 2011FA -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
2216		3.0	45	0	8	0	0	15	0	0	14	4	4	0	0	0	8	Fitzgerald, John	PT
2217		3.0	54	0	2	1	3	13	10	6	9	0	10	0	0	0	9	Blanco, Philip	
2219		3.0	42	0	13	0	0	11	0	0	10	4	3	1	0	0	6	Fitzgerald, John	PT
2220		3.0	57	7	12	7	1	12	3	6	7	1	0	1	0	0	2	Davis, James	PT
2222		3.0	48	0	0	3	4	5	5	2	17	4	8	0	0	0	9	Cohen, Ross	
2223N		3.0	40	1	6	0	3	6	1	1	12	7	2	0	1	0	11	Junkkarinen, Vesa	PT
2224		3.0	27	0	8	0	0	6	0	0	7	0	3	2	1	0	20	Plante, Stephanie	PT
8678		3.0	33	0	6	0	0	6	0	0	9	3	8	1	0	0	16	Plante, Stephanie	PT
Course Total			346	8	55	11	11	74	19	15	85	23	38	5	2	0	81		
ASTR-112 General Astronomy Laboratory																			
2225N		1.0	26	7	12	2	1	3	0	0	0	0	1	0	0	0	3	Davis, James	PT
2226N		1.0	26	6	7	8	0	0	0	0	1	1	3	0	0	0	2	Davis, James	PT
2227N		1.0	27	5	11	5	1	3	1	0	0	0	1	0	0	0	4	Davis, James	PT
2228N		1.0	27	0	10	0	0	16	0	0	1	0	0	0	0	0	2	Fitzgerald, John	PT
Course Total			106	18	40	15	2	22	1	0	2	1	5	0	0	0	11		
ASTR-120 Exploration of Solar System																			
8528		3.0	45	1	2	3	1	7	3	2	6	5	14	0	0	0	11	Blanco, Philip	
8529		3.0	43	1	0	1	6	3	5	5	6	1	14	1	0	0	8	Blanco, Philip	
Course Total			88	2	2	4	7	10	8	7	12	6	28	1	0	0	19		
Subject Total			540	28	97	30	20	106	28	22	99	30	71	6	2	0	111		
PHYC-110 Introductory Physics																			
4142		4.0	28	0	7	0	0	10	0	0	8	1	2	0	0	0	11	Carter, Brian	XP
4143		4.0	23	1	1	3	2	5	3	4	1	1	1	1	0	0	7	Gramada, Apostol	PT
4144N		4.0	28	0	7	0	0	13	0	0	1	3	3	1	0	0	5	Paris, Rex	PT
Course Total			79	1	15	3	2	28	3	4	10	5	6	2	0	0	23		
PHYC-130 Fundamentals of Physics																			
4145		4.0	32	2	3	6	1	2	7	2	5	3	1	0	0	0	2	Blanco, Philip	
Course Total			32	2	3	6	1	2	7	2	5	3	1	0	0	0	2		
PHYC-140 Mechanics of Solids																			
4146		4.0	27	0	7	0	0	1	0	0	8	3	8	0	0	0	8	Carter, Brian	XP
4147		4.0	25	0	2	0	0	10	0	0	5	2	6	0	0	0	9	Carter, Brian	
4148		4.0	21	0	5	0	0	9	0	0	5	1	1	0	0	0	12	Brownell, Douglas	PT
Course Total			73	0	14	0	0	20	0	0	18	6	15	0	0	0	29		
PHYC-240 Electricity, Magnetism & Heat																			
4150		4.0	30	3	1	4	4	3	4	7	4	0	0	0	0	0	5	Cohen, Ross	
Course Total			30	3	1	4	4	3	4	7	4	0	0	0	0	0	5		
PHYC-241 Light, Wave Motion/Mod Phyc																			
5996		4.0	13	1	8	0	1	2	0	1	0	0	0	0	0	0	1	Junkkarinen, Vesa	PT
Course Total			13	1	8	0	1	2	0	1	0	0	0	0	0	0	1		
Subject Total			227	7	41	13	8	55	14	14	37	14	22	2	0	0	60		
PSC-100 Physical Sci for Elementary Ed																			
5370		3.0	30	1	0	8	1	3	0	2	6	4	4	1	0	0	16	Oakes, John	
Course Total			30	1	0	8	1	3	0	2	6	4	4	1	0	0	16		
PSC-110 Intro Physical Sciences																			
4136		3.0	38	0	11	0	0	10	0	0	7	5	4	1	0	0	18	Carter, Brian	
4137		3.0	40	0	5	0	0	16	0	0	7	5	7	0	0	0	14	Paris, Rex	PT
4138		3.0	37	0	4	0	0	13	0	0	14	3	3	0	0	0	7	Brownell, Douglas	PT
4139		3.0	31	1	4	1	2	9	2	3	5	0	3	1	0	0	15	Skelton, Robert	PT
Course Total			146	1	24	1	2	48	2	3	33	13	17	2	0	0	54		
PSC-111 Physical Science Laboratory																			
4140		1.0	28	0	21	0	0	3	0	0	1	1	2	0	0	0	2	Carter, Brian	
Course Total			28	0	21	0	0	3	0	0	1	1	2	0	0	0	2		
Subject Total			204	2	45	9	3	54	2	5	40	18	23	3	0	0	72		
Division Total			13565	264	3838	419	336	2351	347	261	2108	894	1247	1063	425	0	3153		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Grade Distribution by Division
School: Grossmont College -- Term: 2012SP -- Division: G06 -- Subject: All Subjects -- 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																			
ASTR-110 Descriptive Astronomy																			
6340		3.0	44	0	8	0	0	13	0	0	15	3	3	2	0	0	9	Fitzgerald, John	PT
6341		3.0	48	0	6	0	0	26	0	0	13	2	0	1	0	0	3	Fitzgerald, John	PT
6342		3.0	51	5	3	6	10	7	2	3	5	3	2	5	0	0	9	Davis, James	PT
6344		3.0	43	0	3	0	3	4	2	2	23	3	2	0	1	0	9	Skelton, Robert	PT
6345		3.0	35	3	3	4	1	2	3	4	6	3	6	0	0	0	16	Cohen, Ross	
6346		3.0	44	0	2	0	2	8	0	3	24	1	2	2	0	0	10	Skelton, Robert	PT
6347N		3.0	33	0	7	6	1	1	6	0	6	2	4	0	0	0	6	Kishimoto, Chad	PT
6348		3.0	28	0	4	0	0	10	0	0	10	1	2	1	0	0	18	Plante, Stephanie	PT
Course Total			326	8	36	16	17	71	13	12	102	18	21	11	1	0	80		
ASTR-112 General Astronomy Laboratory																			
6349N		1.0	32	14	15	1	0	1	0	0	0	0	0	1	0	0	0	Davis, James	PT
6350N		1.0	25	4	14	1	2	0	0	1	0	0	3	0	0	0	3	Davis, James	PT
6351N		1.0	30	12	6	1	0	3	0	0	0	1	4	3	0	0	0	Davis, James	PT
6352N		1.0	27	0	14	0	0	8	0	0	2	1	1	1	0	0	4	Fitzgerald, John	PT
Course Total			114	30	49	3	2	12	0	1	2	2	8	5	0	0	7		
Subject Total			440	38	85	19	19	83	13	13	104	20	29	16	1	0	87		
PHYC-110 Introductory Physics																			
8356		4.0	31	0	3	0	0	11	0	0	7	6	4	0	0	0	4	Carter, Brian	XP
8357		4.0	27	0	5	1	0	9	1	1	8	1	1	0	0	0	6	Yager, Thomas	PT
8358N		4.0	25	0	11	0	0	12	0	0	1	1	0	0	0	0	2	Paris, Rex	PT
Course Total			83	0	19	1	0	32	1	1	16	8	5	0	0	0	12		
PHYC-130 Fundamentals of Physics																			
8359		4.0	29	0	3	0	0	5	0	0	12	3	4	0	2	0	4	Imbach, Daniel	PT
Course Total			29	0	3	0	0	5	0	0	12	3	4	0	2	0	4		
PHYC-140 Mechanics of Solids																			
8361		4.0	23	0	10	0	0	3	0	0	6	1	3	0	0	0	9	Carter, Brian	XP
8362		4.0	29	0	6	0	0	8	0	0	11	1	3	0	0	0	6	Brownell, Douglas	PT
8875		4.0	23	0	6	0	0	6	0	0	3	5	3	0	0	0	12	Carter, Brian	
Course Total			75	0	22	0	0	17	0	0	20	7	9	0	0	0	27		
PHYC-240 Electricity, Magnetism & Heat																			
8364		4.0	31	1	3	2	3	7	3	2	7	2	1	0	0	0	5	Cohen, Ross	
Course Total			31	1	3	2	3	7	3	2	7	2	1	0	0	0	5		
Subject Total			218	1	47	3	3	61	4	3	55	20	19	0	2	0	48		
PSC-100 Physical Sci for Elementary Ed																			
9809		3.0	23	0	2	4	1	2	2	1	6	4	1	0	0	0	18	Oakes, John	
Course Total			23	0	2	4	1	2	2	1	6	4	1	0	0	0	18		
PSC-110 Intro Physical Sciences																			
8349		3.0	44	0	6	0	0	18	0	0	12	6	1	1	0	0	11	Paris, Rex	PT
8350		3.0	38	0	12	0	0	20	0	0	3	0	3	0	0	0	11	Brownell, Douglas	PT
8876		3.0	31	0	3	0	0	9	0	0	5	5	8	1	0	0	23	Carter, Brian	
Course Total			113	0	21	0	0	47	0	0	20	11	12	2	0	0	45		
PSC-111 Physical Science Laboratory																			
8354		1.0	18	0	14	0	0	4	0	0	0	0	0	0	0	0	7	Carter, Brian	
Course Total			18	0	14	0	0	4	0	0	0	0	0	0	0	0	7		
Subject Total			154	0	37	4	1	53	2	1	26	15	13	2	0	0	70		
Division Total			12236	343	3587	330	285	2107	230	184	1937	703	1285	892	345	0	2812		

** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

Printed on: 3/07/2014

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

Grade Distribution by Division
School: Grossmont College -- Term: 2012SU -- Division: G06 -- Subject: All Subjects -- 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																		
Division Total			358	0	309	0	5	13	0	0	9	0	20	2	0	0	26	

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

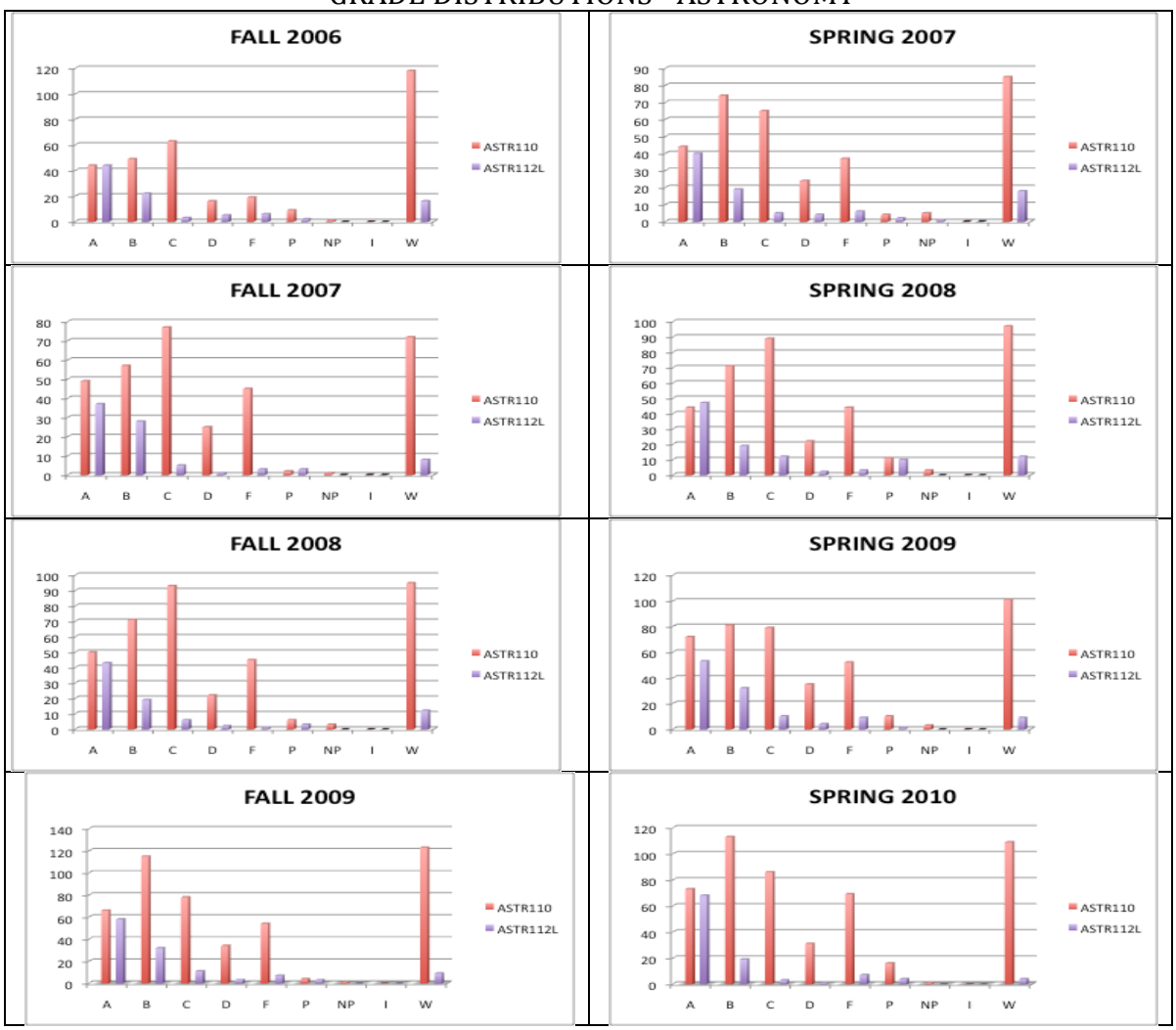
Section N = Night ** = Not Valid for ADA	S.T. Wks	Hrs	Enrollment	A+	A	A-	B+	B	B-	C+	C	D	F	Pass	NoPass	Inc	W	Instructor	
G06 -- Mathematics Natural Sciences Ex Sci																			
ASTR-110 Descriptive Astronomy																			
2216		3.0	44	0	0	1	1	8	2	5	20	1	5	1	0	0	10	Skelton, Robert	PT
2217		3.0	38	0	2	2	1	3	2	5	15	4	4	0	0	0	14	Cohen, Ross	
2220		3.0	54	0	8	0	0	19	0	0	19	1	3	4	0	0	0	Fitzgerald, John	PT
2222		3.0	45	0	9	0	0	17	0	0	12	4	0	3	0	0	8	Fitzgerald, John	PT
2223N		3.0	30	0	8	2	3	2	1	4	5	1	4	0	0	0	23	Kishimoto, Chad	PT
Course Total			211	0	27	5	5	49	5	14	71	11	16	8	0	0	55		
ASTR-112 General Astronomy Laboratory																			
2225N		1.0	23	0	7	4	2	2	3	2	2	0	0	1	0	0	5	Clayton, Stanley	PT
2227N		1.0	25	0	14	0	0	10	0	0	0	0	1	0	0	0	6	Stojimirovic, Irena	PT
2228N		1.0	30	0	13	0	0	14	0	0	2	0	0	1	0	0	1	Fitzgerald, John	PT
Course Total			78	0	34	4	2	26	3	2	4	0	1	2	0	0	12		
ASTR-120 Exploration of Solar System																			
8528		3.0	47	1	0	4	3	7	7	4	9	1	10	0	1	0	14	Blanco, Philip	
8529		3.0	41	1	4	2	3	5	2	2	4	4	14	0	0	0	12	Blanco, Philip	
Course Total			88	2	4	6	6	12	9	6	13	5	24	0	1	0	26		
Subject Total			377	2	65	15	13	87	17	22	88	16	41	10	1	0	93		
PHYC-110 Introductory Physics																			
4143		4.0	34	0	5	1	3	8	0	4	7	3	2	0	1	0	2	Yager, Thomas	PT
4144N		4.0	37	0	14	0	0	8	0	0	8	4	1	2	0	0	0	Paris, Rex	PT
Course Total			71	0	19	1	3	16	0	4	15	7	3	2	1	0	2		
PHYC-130 Fundamentals of Physics																			
4145		4.0	32	1	3	6	4	3	3	3	4	3	2	0	0	0	3	Blanco, Philip	
Course Total			32	1	3	6	4	3	3	3	4	3	2	0	0	0	3		
PHYC-131 Fundamentals of Physics																			
0400		4.0	13	2	3	0	2	2	0	2	0	2	0	0	0	0	2	Carter, Brian	XP
Course Total			13	2	3	0	2	2	0	2	0	2	0	0	0	0	2		
PHYC-140 Mechanics of Solids																			
4146		4.0	29	0	3	0	0	10	0	0	5	4	7	0	0	0	7	Carter, Brian	XP
4147		4.0	30	0	4	0	0	5	0	0	10	6	5	0	0	0	3	Carter, Brian	
4148N		4.0	24	0	8	0	0	4	0	0	8	1	3	0	0	0	10	Brownell, Douglas	PT
Course Total			83	0	15	0	0	19	0	0	23	11	15	0	0	0	20		
PHYC-240 Electricity, Magnetism & Heat																			
4150		4.0	31	4	4	1	2	5	6	2	7	0	0	0	0	0	6	Cohen, Ross	
Course Total			31	4	4	1	2	5	6	2	7	0	0	0	0	0	6		
PHYC-241 Light, Wave Motion/Mod Phyc																			
5996		4.0	12	3	2	1	1	2	0	1	0	1	1	0	0	0	0	Junkkarinen, Vesa	PT
Course Total			12	3	2	1	1	2	0	1	0	1	1	0	0	0	0		
Subject Total			242	10	46	9	12	47	9	12	49	24	21	2	1	0	33		
PSC-100 Physical Sci for Elementary Ed																			
5370		3.0	32	0	2	2	1	5	3	1	8	4	6	0	0	0	8	Oakes, John	XP
Course Total			32	0	2	2	1	5	3	1	8	4	6	0	0	0	8		
PSC-110 Intro Physical Sciences																			
4136		3.0	30	0	6	0	0	9	0	0	6	3	6	0	0	0	20	Carter, Brian	
4137		3.0	32	0	3	0	0	8	0	0	11	6	4	0	0	0	13	Paris, Rex	PT
4138		3.0	46	0	18	0	0	6	0	0	10	3	7	2	0	0	7	Brownell, Douglas	PT
4139		3.0	32	1	3	0	1	3	2	11	7	1	3	0	0	0	14	Skelton, Robert	PT
Course Total			140	1	30	0	1	26	2	11	34	13	20	2	0	0	54		
PSC-111 Physical Science Laboratory																			
4140		1.0	21	1	1	4	5	5	2	2	0	0	0	1	0	0	3	Blanco, Philip	
Course Total			21	1	1	4	5	5	2	2	0	0	0	1	0	0	3		
Subject Total			193	2	33	6	7	36	7	14	42	17	26	3	0	0	65		
Division Total			12565	218	3417	368	312	2123	357	289	2059	839	1262	964	356	0	2387		

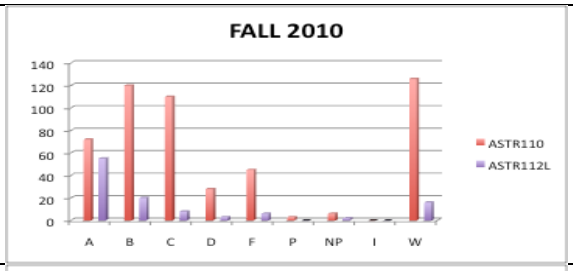
** = Not Valid for ADA -- Not included in totals
Grade Distribution by Division

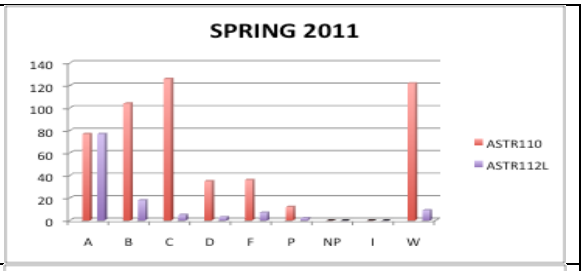
Printed on: 3/07/2014

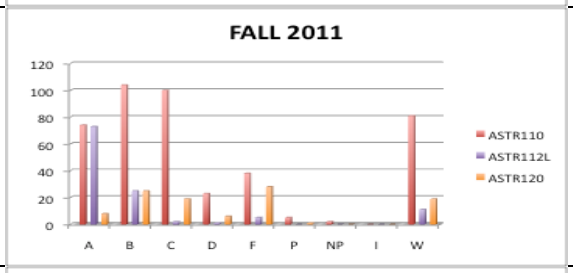
School: Grossmont College -- Term: 2012FA -- Division: G06 -- Subject: All Subjects -- Course: All Courses

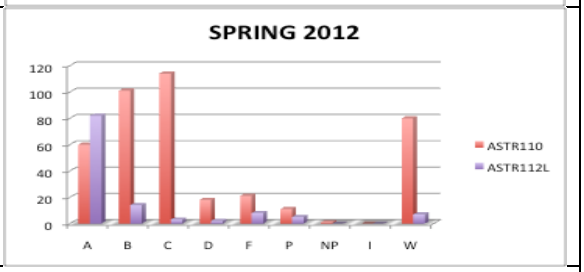
GRADE DISTRIBUTIONS - ASTRONOMY

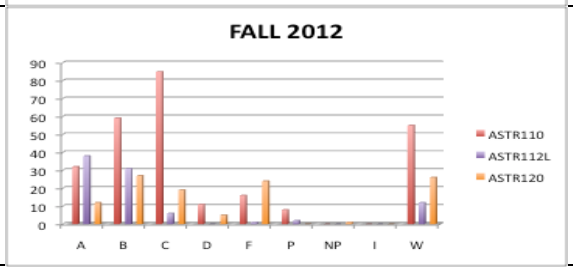






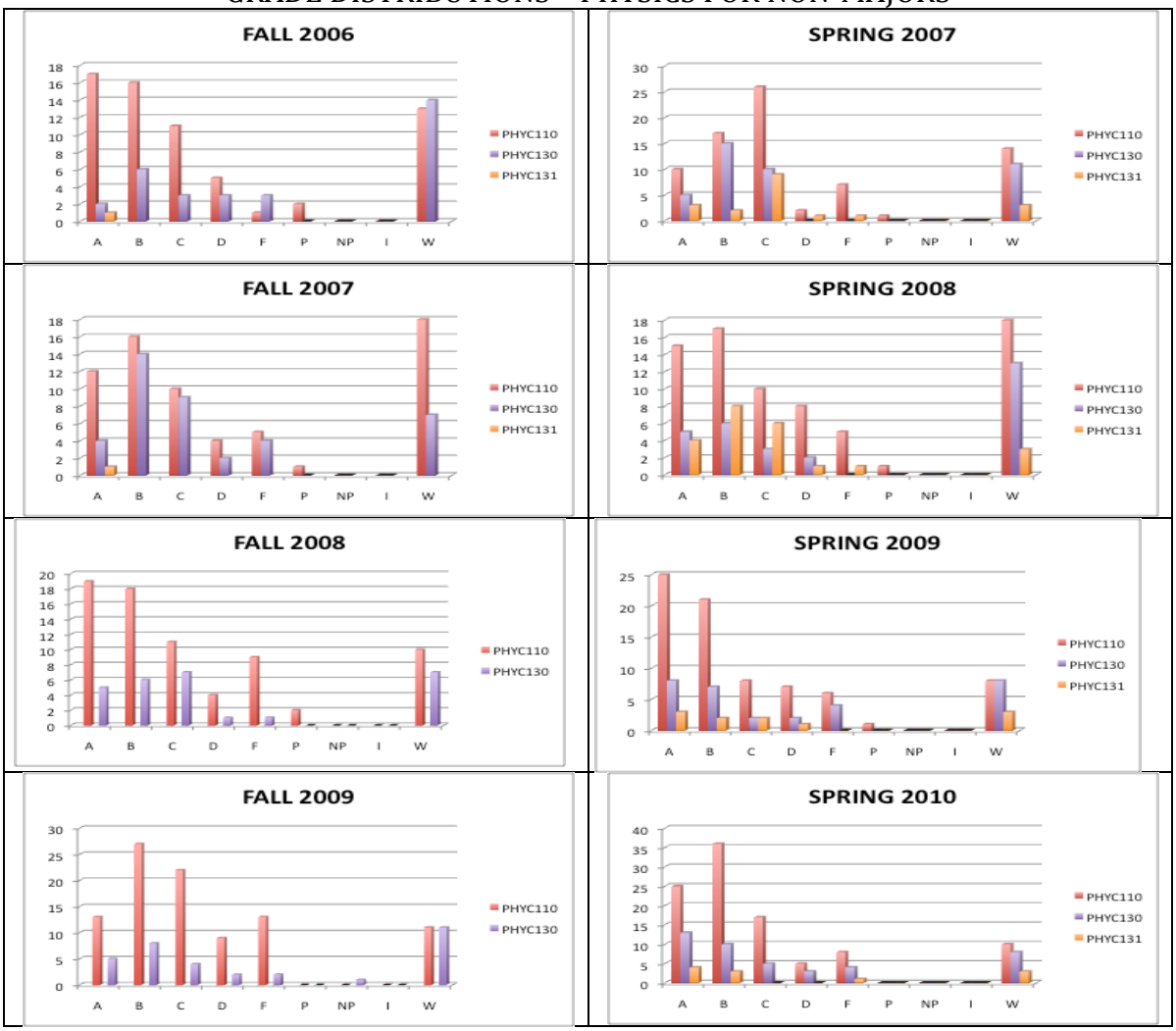


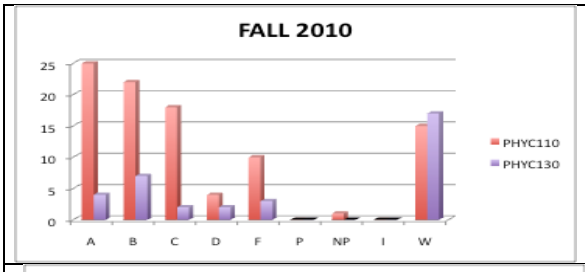


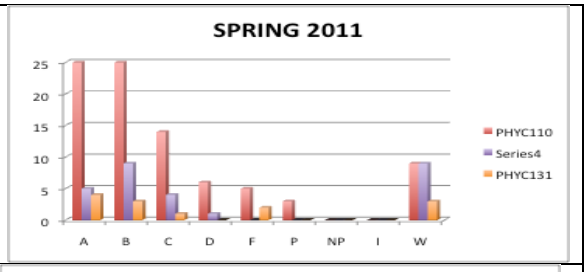


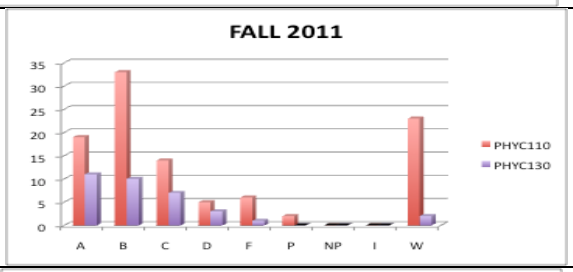
ASTR110 (3 units, lecture):
General education astronomy
ASTR112 (1 unit, lab):
General education astronomy (requires ASTR110 or ASTR120)
ASTR120 (3 units, lecture):
General education solar system

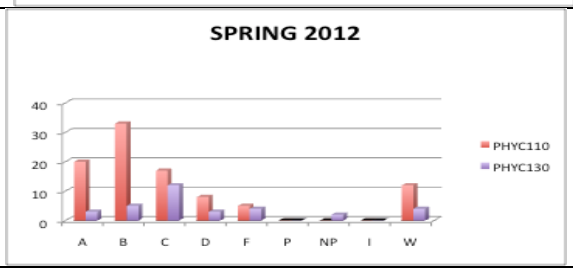
GRADE DISTRIBUTIONS – PHYSICS FOR NON-MAJORS

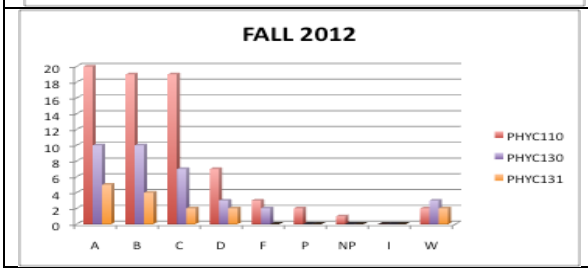








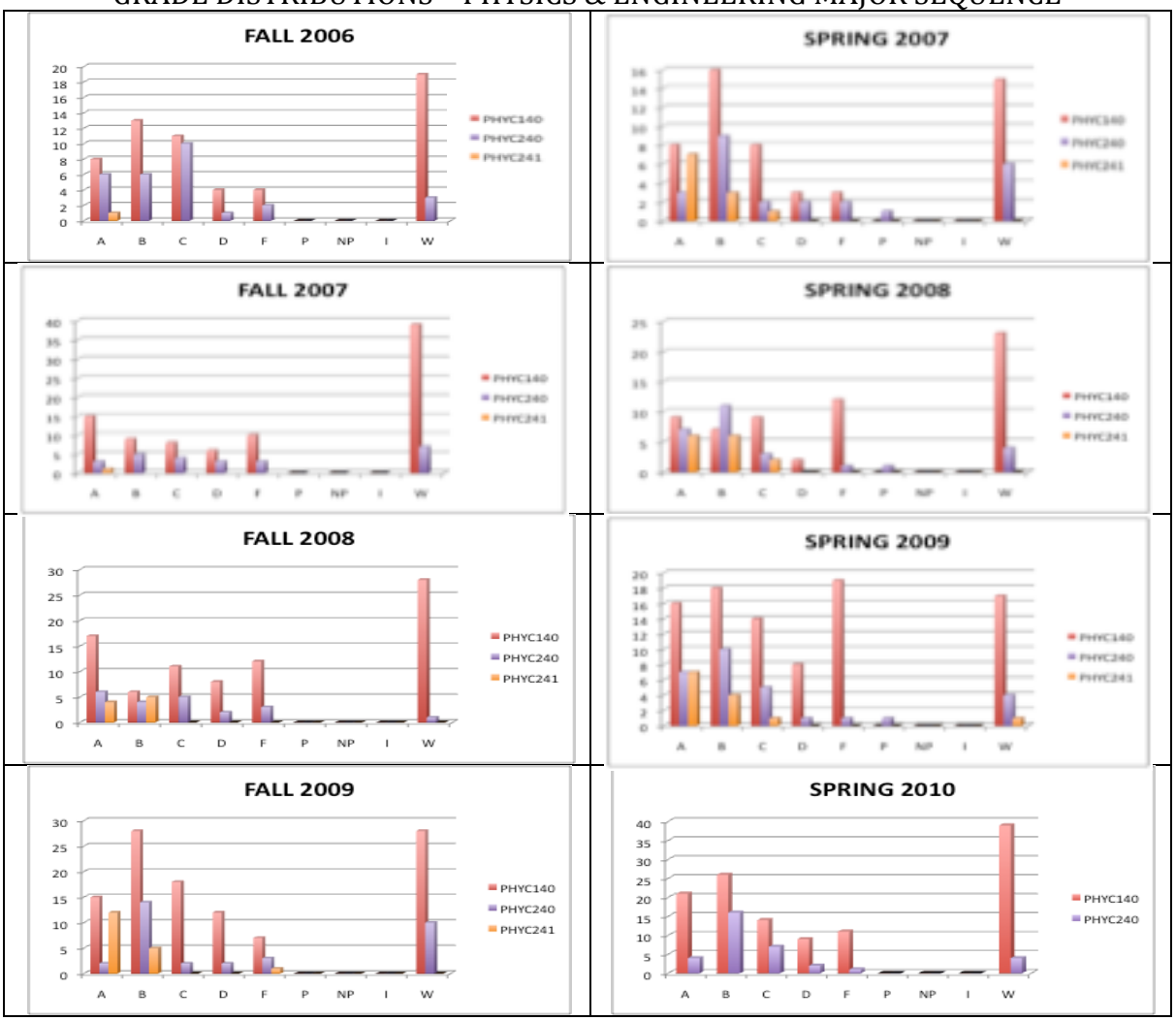


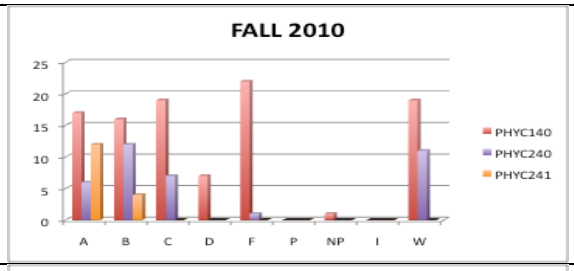


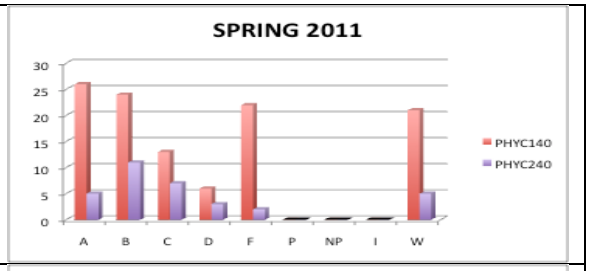
PHYC110 (4 units, lecture+lab):
1-semester physics, algebra-based physics

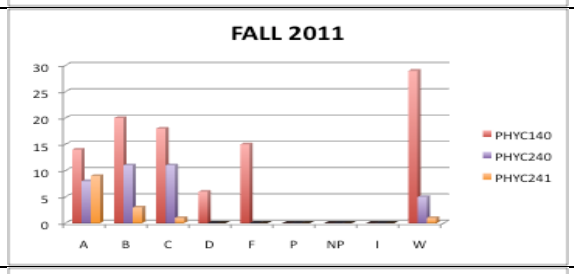
PHYC130/131 (4 units each, lecture+lab):
a 2-semester, calculus-based physics sequence for life-science majors (equivalent to Physics 1 series at UCSD)

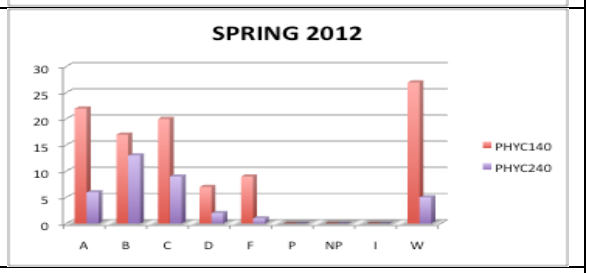
GRADE DISTRIBUTIONS – PHYSICS & ENGINEERING MAJOR SEQUENCE

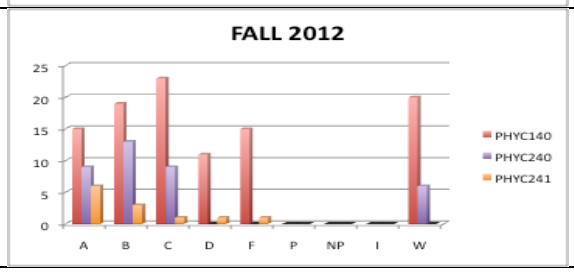






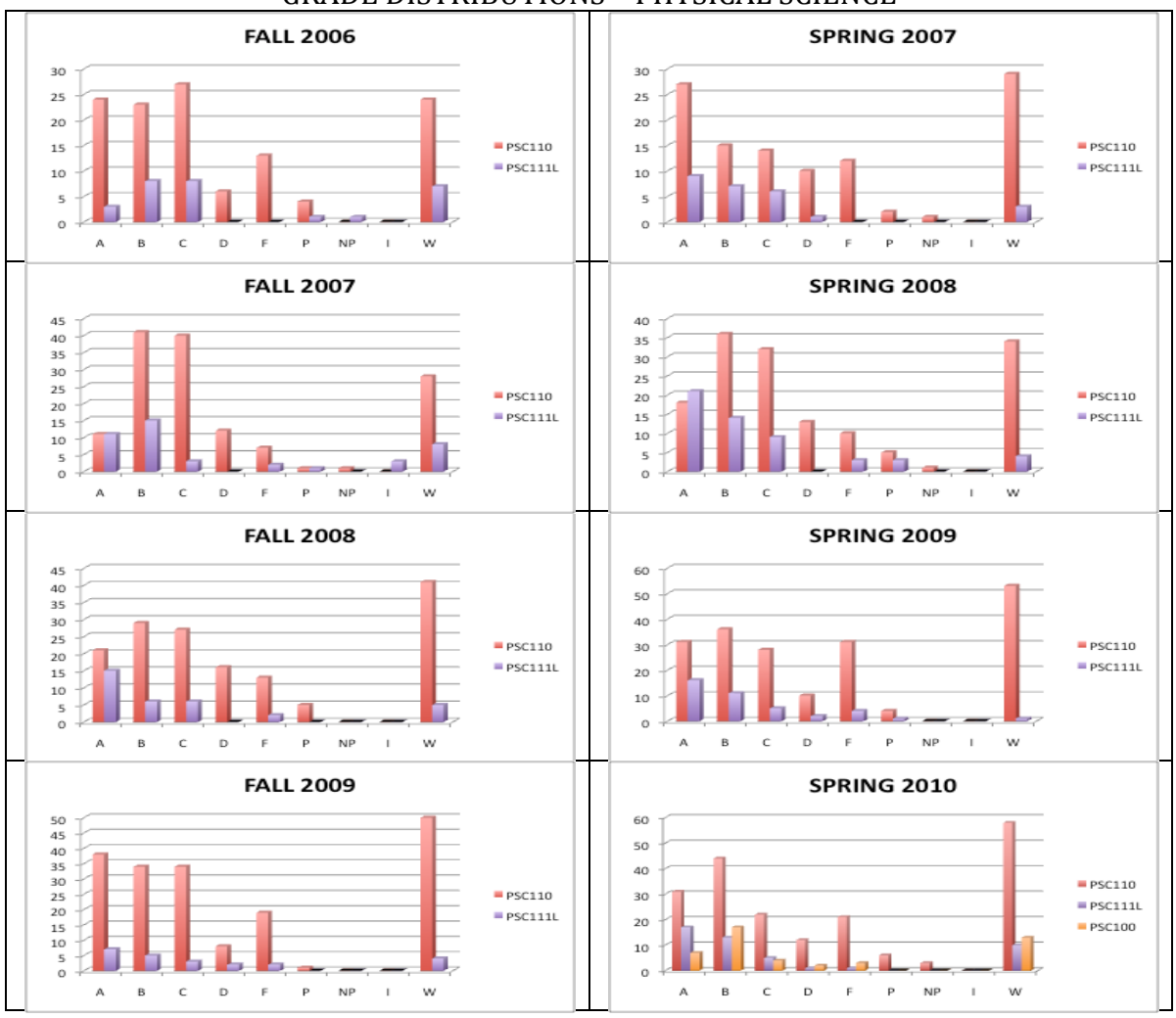


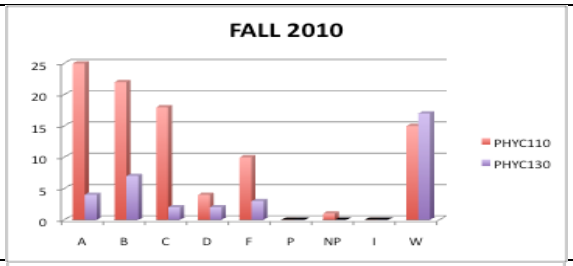


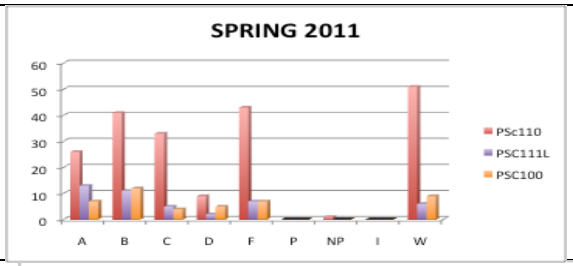


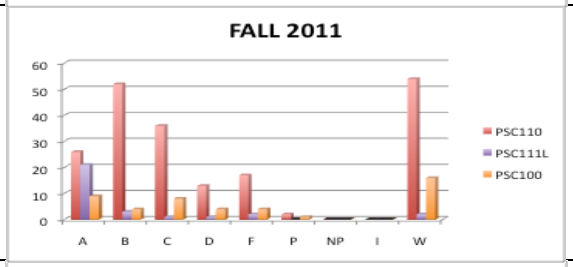
PHYC140/240/241 (4 units ea., lecture+lab): a 3-semester, calculus-based physics sequence for physics & engineering majors (equivalent to Physics 2 series at UCSD)

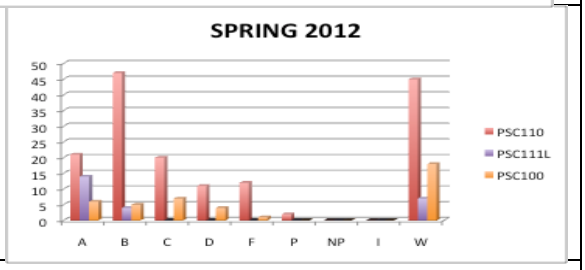
GRADE DISTRIBUTIONS – PHYSICAL SCIENCE

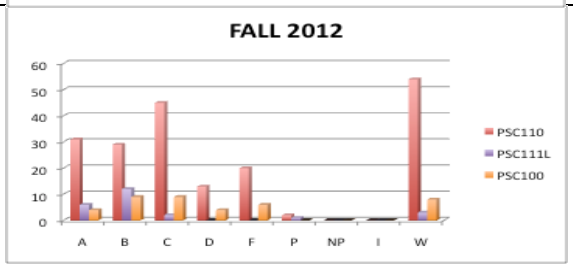












PSC110 (3 units, lecture): general education physical science
PSC111 (1 unit, lab): General education physical science (requires PSC110)
PSC100 (3 units, lecture): physical science for K-12 educators

APPENDIX 4

Course-to-Program SLO Mapping Document

COURSE #	SLO	
ASTR 110	1	evaluate how the scientific method and astronomical observations are used to improve our understanding of the Universe and its contents.
	2	be able to identify the important components and fundamental forces of the Universe.
	3	explain the relationships between the components of the Universe.
	4	explain how the Universe and its components change with time.
	5	recognize how the physical laws are responsible for the behavior of the Universe.
ASTR 112	1	Students will employ laboratory equipment to obtain measurements
	2	Students will interpret data obtained in an experimental setting
	3	Students will communicate experimental results in a coherent manner
ASTR120	1	identify the important components of the solar system.
	2	recognize how scientific observations and methods are used to improve our understanding of the solar system
	3	identify the fundamental forces and physical processes affecting the solar system.
	4	explain the relationships between components of the Solar System.
	5	explain how the Solar System and its components change with time.

COURSE #	SLO	
PSC 100	1	Students will have a working knowledge of the language of chemistry and physics
	2	Students will apply qualitative reasoning to chemistry and physics problems
	3	Students will apply quantitative reasoning to chemistry and physics problems
PSC 110	1	Students will have a working knowledge of the language of physical sciences
	2	Students will apply qualitative reasoning to physical science problems
	3	Students will apply quantitative reasoning to physical science problems
PSC 111	1	Students will employ laboratory equipment to obtain measurements
	2	Students will interpret data obtained in an experimental setting
	3	Students will communicate experimental results in a coherent manner
PSC 199	1	Students will be able to identify, examine, and assess a component of the discipline in a study of individualized content.
PSC 298	1	Students will be able to describe, distinguish and apply components of the discipline within a specialized topic of the discipline.
PSC 299	1	A: Students will be able to define and analyze components of the discipline within a specialized topic of the discipline.
	2	B: Students will be able to define, analyze, and synthesize components of the discipline within a specialized topic of the discipline.

COURSE #	SLO#	SLO
PHYC 110	1	Students will have a working knowledge of the language of physics
	2	Students will apply qualitative reasoning to physics problems
	3	Students will apply quantitative reasoning to physics problems
	4	Students will employ laboratory equipment and techniques to collect, organize and evaluate experimental data.
PHYC 130	1	Students will be able to apply thermodynamic principles to systems involving solids and ideal gasses.
	2	Students will be able to apply Newton's Laws to static and dynamic systems of particles and rigid bodies
	3	Students will distinguish between conservation principles and apply them appropriately to physical systems.
	4	Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.
PHYC 131	1	Students will be able to calculate electric fields, magnetic fields and electrical potentials.
	2	Students will be able to apply the laws of motion and conservation principles to charged particles.
	3	Students will be able to analyze electrical circuits containing a variety of components.
	4	Students will be able to calculate the behavior of light and matter using quantum mechanical principles
	5	Students will be able to analyze the propagation of light through optical systems
	6	Students will be able to apply the principles of special relativity to the motion of objects.
	7	Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.
PHYC 140	1	Students will be able to apply Newton's Laws to static and dynamic systems of particles.
	2	Students will apply Newton’s laws to static and dynamic systems of rigid bodies.
	3	Students will distinguish between conservation principles and apply them appropriately to physical systems.
	4	Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.
PHYC 198	1	Students will be able to recognize essential discipline skills and content and apply them to a related course.

PHYC 199	1	Students will be able to identify, examine, and assess a component of the discipline in a study of individualized content.
PHYC 240	1	Students will be able to apply fhe first and second laws of thermodynamics to systems involving solids and ideal gasses.
	2	Students will be able to calculate electric fields and potentials.
	3	Students will be able to recognize when magnetic fields are present and calculate their properties.
	4	Students will be able to apply the laws of motion and conservation principles to charged particles.
	5	Students will be able to analyze electrical circuits containing a variety of components.
	6	Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.
PHYC 241	1	Students will be able to apply the laws of physics to the propagation of mechanical and E&M waves.
	2	Students will be able to analyze the propagation of light through optical systems.
	3	Students will be able to calculate the behavior of light and matter using quantum mechanical principles.
	4	Students will be able to apply the principles of special relativity to the motion of objects.
	5	Students will employ laboratory equipment and techniques to acquire experimental measurements, interpret the data, and communicate the results in a coherent manner.
PHYC 298	1	Students will be able to describe, distinguish and apply components of the discipline within a specialized topic of the discipline.
PHYC 299	1	A: students will be able to define and analyze components of the discipline within a specialized topic of the discipline.
	2	B: Students will be able to define, analyze, and synthesize components of the discipline within a specialized topic of the discipline.

APPENDIX 5

Student Survey

Astronomy

Physics

Physical Science

Faculty Survey

Astronomy

Physical Science/Physics

Grossmont College
Spring 2013
N = 283
Response Rate = 95.9%

Course

	Frequency	Percent
110	183	64.7
112	60	21.2
120	40	14.1
Total	**283**	**100.0**

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

	Frequency	Percent
General education requirement	213	75.3
General interest	120	42.4
Transfer	76	26.9
Required for major	25	8.8
Improve basic skills/college success (reading, writing, English, math, computer skills)	14	4.9
Other	11	3.9
Prerequisite	8	2.8
Improve job skills	2	.7

*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., 283).

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

	Frequency
Personal interest	2
Advancing the space frontier	1
Easier than biology or chem lab	1
For fun	1
Friends	1
High scool graduation requirement	1
Middle College High School	1
Not many open classes	1
Recommendation	1
The universe is fascinating	1
Total	**11**

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

	Frequency	Percent
Class schedule or college catalog	236	83.7
Friend or family member	38	13.5
Other student recommendation	28	9.9
Grossmont College counselor	19	6.7
Other	11	3.9
Instructor	6	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., 282).

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

	Frequency
RateMyProfessor.com	2
WebAdvisor	2
Advisor (Janielle Frankenburger)	1
Assist.org	1
Course Catalog	1
Cuyamaca College counselor	1
Found it during registration	1
Found while picking classes	1
Middle college counselor	1
Total	**11**

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

	Frequency	Percent
One	157	56.3
Two	92	33.0
Three	10	3.6
More than three	20	7.2
Total	**279**	**100.0**
No Response	4	
Total	283	

Q4. This class was delivered:

	Frequency	Percent
In a traditional classroom setting	260	92.2
As a hybrid (part in classroom/part online)	18	6.4
Other	4	1.4
Total	**282**	**100.0**
No Response	1	
Total	283	

Q4. This class was delivered: (Other)

	Frequency
Traditional/ Lab	3
Traditional/ Homework online	1
Total	**4**

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

	Frequency	Percent
Email	266	94.3
Face to face	263	93.3
Telephone/voice mail	80	28.4
Other	14	5.0

*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., 282).

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

	Frequency
Blackboard	9
Website	2
After class	1
Instructor website	1
Mastering Astronomy	1
Total	**14**

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

	Frequency	Percent
Face to face	123	52.8
Email	110	47.2
Total	**233**	**100.0**
No Response	50	
Total	283	

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

	Frequency	Percent
Email	127	55.5
Face to face	100	43.7
Other	2	.9
Total	**229**	**100.0**
No Response	54	
Total	283	

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

	Frequency
Classtime	1
Handwritten	1
Total	**2**

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

	Frequency	Percent
Blackboard Announcements	103	47.0
Email	99	45.2
Other	17	7.8
Total	**219**	**100.0**
No Response	64	
Total	283	

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

	Frequency
Website	8
Instructor website	5
Mastering Astronomy	2
Course website	1
Internet	1
Total	**17**

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	155	64.0
Via email	55	22.7
Never (explain why)	17	7.0
During office hours/appointment	15	6.2
Total	**242**	**100.0**
No Response	41	
Total	283	

Q9. When I have questions or need to talk about course content or assignments, I usually meet/talk to my instructor: (never, explain why)

	Frequency
No questions	7
I ask a peer first	2
All the info is online	1
Class website	1
He is not approachable	1
I talk to other students	1
I understand content/assignments	1
My questions get answered in class	1
Shy	1
Too uncomfortable to ask for help	1
Total	**17**

Q10. Who else or what else do you turn to for extra help?

	Frequency	Percent
Friends who have taken the class	97	42.9
Textbook website	66	29.2
Other	34	15.0
Tutor/tutoring center	29	12.8
Total	**226**	**100.0**
No Response	57	
Total	283	

Q10. Who else or what else do you turn to for extra help? (Other)

	Frequency
Internet	10
Classmates	6
Textbook	4
Blackboard	1
Brian	1
Classmates/ Teacher	1
DSPS	1
I don't need extra help	1
I don't usually ask outside of class	1
Internet (Youtube)	1
Internet/ Course webpage	1
Internet/ Textbook	1
Lecture slides on Blackboard	1
Lecture slides on Blackboard/Classmates/Notes	1
Oscar	1
Textbook/ Blackboard	1
Textbook/ Class notes	1
Total	**34**

Q11. Which of the following course resources helped you learn the course material? (Check all that apply)

	Frequency	Percent
Lecture	229	83.9
Homework/Assignments	166	60.8
Power Point slides	151	55.3
Textbook	150	54.9
Quizzes	124	45.4
Group work in class	105	38.5
Handouts	91	33.3
Computer presentations	60	22.0
Instructor website	43	15.8
Videos/DVDs	38	13.9
Study groups	29	10.6
Other	16	5.9
Transparencies	4	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., 273).

Q11. Which of the following course resources helped you learn the course material? (Select all that apply) (Other)

	Frequency
Class demonstrations	2
Course webpage	1
Flashcards	1
Internet	1
Jeopardy	1
Lab	1
Lecture tutotrial	1
Mastering Astronomy	1
Note cards	1
Starry Night	1
Stellarium	1
Taking the lab concurrently	1
Test prep games	1
Video clips	1
Winging it	1
Total	**16**

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	6	10.0
Voluntarily Used	54	90.0
Total	**60**	**100.0**
No Response	223	
Total	283	

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	47	52.2
Not Helpful	43	47.8
Total	**90**	**100.0**
No Response	193	
Total	283	

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	4	7.8
Voluntarily Used	47	92.2
Total	**51**	**100.0**
No Response	232	
Total	283	

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	43	46.7
Not Helpful	49	53.3
Total	**92**	**100.0**
No Response	191	
Total	283	

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	11	11.0
Voluntarily Used	89	89.0
Total	**100**	**100.0**
No Response	183	
Total	283	

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	76	73.8
Not Helpful	27	26.2
Total	**103**	**100.0**
No Response	180	
Total	283	

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	9.6
Voluntarily Used	75	90.4
Total	**83**	**100.0**
No Response	200	
Total	283	

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	74	77.1
Not Helpful	22	22.9
Total	**96**	**100.0**
No Response	187	
Total	283	

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	5	5.5
Voluntarily Used	86	94.5
Total	**91**	**100.0**
No Response	192	
Total	283	

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	76	77.6
Not Helpful	22	22.4
Total	**98**	**100.0**
No Response	185	
Total	283	

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	10.5
Voluntarily Used	51	89.5
Total	**57**	**100.0**
No Response	226	
Total	283	

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	48	54.5
Not Helpful	40	45.5
Total	**88**	**100.0**
No Response	195	
Total	283	

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	4	7.7
Voluntarily Used	48	92.3
Total	**52**	**100.0**
No Response	231	
Total	283	

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	53	63.9
Not Helpful	30	36.1
Total	**83**	**100.0**
No Response	200	
Total	283	

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	2	4.8
Voluntarily Used	40	95.2
Total	**42**	**100.0**
No Response	241	
Total	283	

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	35	42.7
Not Helpful	47	57.3
Total	**82**	**100.0**
No Response	201	
Total	283	

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
Voluntarily Used	36	100.0
No Response	247	
Total	**283**	

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	32	40.0
Not Helpful	48	60.0
Total	**80**	**100.0**
No Response	203	
Total	283	

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	29	35.4
Voluntarily Used	53	64.6
Total	**82**	**100.0**
No Response	201	
Total	283	

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	59	72.0
Not Helpful	23	28.0
Total	**82**	**100.0**
No Response	201	
Total	283	

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	12	18.5
Voluntarily Used	53	81.5
Total	**65**	**100.0**
No Response	218	
Total	283	

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	46	56.8
Not Helpful	35	43.2
Total	**81**	**100.0**
No Response	202	
Total	283	

Q12A_Other. 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	Percent
Textbook (Voluntary)	1	33.3
Starry Night program in lab (Required)	1	33.3
Mastering Astronomy (Required)	1	33.3
Total	**3**	**100.0**

Q12B_Other. 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	Percent
Textbook (Helpful)	1	33.3
Starry Night program in lab (Helpful)	1	33.3
Internet (Helpful)	1	33.3
Total	**3**	**100.0**

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	227	81.9
No	50	18.1
Total	**277**	**100.0**
No Response	6	
Total	283	

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	46	56.8
Not Helpful	35	43.2
Total	**81**	**100.0**
No Response	202	
Total	283	

Q12A_Other. 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	Percent
Textbook (Voluntary)	1	33.3
Starry Night program in lab (Required)	1	33.3
Mastering Astronomy (Required)	1	33.3
Total	**3**	**100.0**

Q12B_Other. 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	Percent
Textbook (Helpful)	1	33.3
Starry Night program in lab (Helpful)	1	33.3
Internet (Helpful)	1	33.3
Total	**3**	**100.0**

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	227	81.9
No	50	18.1
Total	**277**	**100.0**
No Response	6	
Total	283	

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	20	7.2
1-2	109	39.4
3-5	118	42.6
5-7	22	7.9
7-10	4	1.4
More than 10	4	1.4
Total	**277**	**100.0**
No Response	6	
Total	283	

Grossmont College
Spring 2013
Physics
N = 166
Response Rate = 61.7%

Course

	Frequency	Percent
110	55	33.1
130	18	10.8
140	67	40.4
240	26	15.7
Total	**166**	**100.0**

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

	Frequency	Percent
Required for major	100	60.6
Transfer	62	37.6
General education requirement	53	32.1
Prerequisite	38	23.0
General interest	31	18.8
Improve basic skills/college success (reading, writing, English, math, computer skills)	17	10.3
Improve job skills	9	5.5
Other	3	1.8

*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., 165).

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

	Frequency
Accidentally	1
I like science	1
Teacher is nice	1
Total	**3**

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

	Frequency	Percent
Class schedule or college catalog	136	82.4
Grossmont College counselor	35	21.2
Other student recommendation	10	6.1
Other	7	4.2
Friend or family member	4	2.4
Instructor	4	2.4
Public media (radio, TV, newspaper, ad)	4	2.4
Grossmont College presentation or special event (teacher came to class; attended fair or campus activity)	1	.6
Work referral	1	.6

*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., 165).

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

	Frequency
Assist.org	5
College counselor (Unspecified)	1
Webassign.net	1
Total	**7**

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

	Frequency	Percent
One	99	59.6
Two	43	25.9
Three	8	4.8
More than three	16	9.6
Total	**166**	**100.0**

Q4. This class was delivered:

	Frequency	Percent
In a traditional classroom setting	127	78.4
As a hybrid (part in classroom/part online)	31	19.1
Other	4	2.5
Total	**162**	**100.0**
No Response	4	
Total	166	

Q4. This class was delivered: (Other)

	Frequency
Traditional/ Homework online	3
Traditional/ Lab	1
Total	**4**

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

	Frequency	Percent
Face to face	156	95.1
Email	147	89.6
Telephone/voice mail	41	25.0
Other	2	1.2

*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., 164).

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

	Frequency
Webassign.net	1
Wiley plus	1
Total	**2**

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

	Frequency	Percent
Face to face	79	55.6
Email	62	43.7
Telephone/voice mail	1	.7
Total	**142**	**100.0**
No Response	24	
Total	166	

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

	Frequency	Percent
Email	63	49.2
Face to face	62	48.4
Telephone/voice mail	2	1.6
Other	1	.8
Total	**128**	**100.0**
No Response	38	
Total	166	

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

	Frequency
All	1
Total	**1**

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

	Frequency	Percent
Email	77	53.8
Blackboard Announcements	43	30.1
Other	23	16.1
Total	**143**	**100.0**
No Response	23	
Total	166	

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

	Frequency
Instructor website	11
Webassign.net	5
Wiley plus	2
Course website	1
Internet	1
Mastering physics/ Instructor website	1
Mastering physics or in class	1
Syllabus	1
Total	**23**

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	78	58.6
Via email	34	25.6
During office hours/appointment	19	14.3
Never (explain why)	2	1.5
Total	**133**	**100.0**
No Response	33	
Total	166	

Q9. When I have questions or need to talk about course content or assignments, I usually meet/talk to my instructor: (never, explain why)

	Frequency
Because he's terrible	1
Khanacadamey.org	1
Total	**2**

Q10. Who else or what else do you turn to for extra help?

	Frequency	Percent
Tutor/tutoring center	35	30.2
Friends who have taken the class	34	29.3
Other	25	21.6
Textbook website	22	19.0
Total	**116**	**100.0**
No Response	50	
Total	166	

Q10. Who else or what else do you turn to for extra help? (Other)

	Frequency
Internet (Unspecified)	13
Internet (Khanacademy.org)	3
Classmates	3
Internet (Youtube)	2
Internet (KhanAcademy/MITopencourseware)	1
Internet (Webassign.net)	1
My father	1
Myself	1
Total	**25**

Q11. Which of the following course resources helped you learn the course material? (Check all that apply)

	Frequency	Percent
Homework/Assignments	124	76.1
Lecture	109	66.9
Textbook	74	45.4
Power Point slides	47	28.8
Instructor website	39	23.9
Quizzes	38	23.3
Group work in class	38	23.3
Study groups	36	22.1
Videos/DVDs	32	19.6
Computer presentations	20	12.3
Other	20	12.3
Handouts	18	11.0
Course Blackboard site	1	.6
Transparencies	1	.6

*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., 163).

Q11. Which of the following course resources helped you learn the course material? (Select all that apply) (Other)

	Frequency
Internet (Khanacademy.org)	4
Internet (Unspecified)	4
Workbook	3
Internet (Youtube)	2
Labs	2
Friends/Chem lab tutor	1
Internet (KhanAcademy/MITopencoursework)	1
Internet (Webassign.net)	1
My job	1
Tutor	1
Total	**20**

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	11	23.4
Voluntarily Used	36	76.6
Total	**47**	**100.0**
No Response	119	
Total	166	

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	31	57.4
Not Helpful	23	42.6
Total	**54**	**100.0**
No Response	112	
Total	166	

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	2	6.5
Voluntarily Used	29	93.5
Total	**31**	**100.0**
No Response	135	
Total	166	

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	24	44.4
Not Helpful	30	55.6
Total	**54**	**100.0**
No Response	112	
Total	166	

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	12	15.8
Voluntarily Used	64	84.2
Total	**76**	**100.0**
No Response	90	
Total	166	

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	51	79.7
Not Helpful	13	20.3
Total	**64**	**100.0**
No Response	102	
Total	166	

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	5	9.3
Voluntarily Used	49	90.7
Total	**54**	**100.0**
No Response	112	
Total	166	

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	40	65.6
Not Helpful	21	34.4
Total	**61**	**100.0**
No Response	105	
Total	166	

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	3	6.3
Voluntarily Used	45	93.8
Total	**48**	**100.0**
No Response	118	
Total	166	

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	41	64.1
Not Helpful	23	35.9
Total	**64**	**100.0**
No Response	102	
Total	166	

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	5	9.6
Voluntarily Used	47	90.4
Total	**52**	**100.0**
No Response	114	
Total	166	

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	47	78.3
Not Helpful	13	21.7
Total	**60**	**100.0**
No Response	106	
Total	166	

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	4	6.6
Voluntarily Used	57	93.4
Total	**61**	**100.0**
No Response	105	
Total	166	

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	41	69.5
Not Helpful	18	30.5
Total	**59**	**100.0**
No Response	107	
Total	166	

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	4	13.8
Voluntarily Used	25	86.2
Total	**29**	**100.0**
No Response	137	
Total	166	

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	14	30.4
Not Helpful	32	69.6
Total	**46**	**100.0**
No Response	120	
Total	166	

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	3	9.7
Voluntarily Used	28	90.3
Total	**31**	**100.0**
No Response	135	
Total	166	

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	15	34.9
Not Helpful	28	65.1
Total	**43**	**100.0**
No Response	123	
Total	166	

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	13	19.7
Voluntarily Used	53	80.3
Total	**66**	**100.0**
No Response	100	
Total	166	

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	50	75.8
Not Helpful	16	24.2
Total	**66**	**100.0**
No Response	100	
Total	166	

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	24	46.2
Not Helpful	28	53.8
Total	**52**	**100.0**
No Response	114	
Total	166	

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	7	21.2
Voluntarily Used	26	78.8
Total	**33**	**100.0**
No Response	133	
Total	166	

Q12A_Other. 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	Percent
Khanacademy.org (Required)	3	33.3
Webassign.net (Required)	3	33.3
Mastering physics (Required)	1	11.1
Webassign.net (Voluntary)	1	11.1
Wiley and homework website(Required)	1	11.1
Total	**9**	**100.0**

Q12B_Other. 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	Percent
Webassign.net (Helpful)	1	25.0
Mastering physics (Helpful)	2	50.0
Wiley and homework website(Helpful)	1	25.0
Total	**4**	**100.0**

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	138	84.7
No	25	15.3
Total	**163**	**100.0**
No Response	3	
Total	166	

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	6	3.8
1-2	18	11.4
3-5	65	41.1
5-7	33	20.9
7-10	21	13.3
More than 10	15	9.5
Total	**158**	**100.0**
No Response	8	
Total	166	

Grossmont College
Spring 2013
Physical Science
N = 47
Response Rate = 73.4%

Course

	Frequency	Percent
110	30	63.8
111	17	36.2
Total	**47**	**100.0**

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

	Frequency	Percent
General education requirement	36	76.6
Transfer	15	31.9
Required for major	8	17.0
General interest	7	14.9
Improve basic skills/college success (reading, writing, English, math, computer skills)	3	6.4
Improve job skills	2	4.3
Prerequisite	1	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., 47).

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

	Frequency	Percent
Class schedule or college catalog	33	70.2
Grossmont College counselor	9	19.1
Other	3	6.4
Other student recommendation	3	6.4
Friend or family member	3	6.4
Instructor	2	4.3
Public media (radio, TV, newspaper, ad)	1	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., 47).

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

	Frequency
Couldn't get into physics	1
Self research	1
Web Advisor	1
Total	**3**

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

	Frequency	Percent
One	22	46.8
Two	13	27.7
Three	8	17.0
More than three	4	8.5
Total	**47**	**100.0**

Q4. This class was delivered:

	Frequency	Percent
In a traditional classroom setting	37	78.7
As a hybrid (part in classroom/part online)	10	21.3
Total	**47**	**100.0**

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

	Frequency	Percent
Face to face	44	95.7
Email	40	87.0
Telephone/voice mail	8	17.4
Other	1	2.2

*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., 46).

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

	Frequency
Blackboard	1
Total	**1**

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

	Frequency	Percent
Face to face	26	70.3
Email	11	29.7
Total	**37**	**100.0**
No Response	10	
Total	47	

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

	Frequency	Percent
Face to face	19	57.6
Email	14	42.4
Total	**33**	**100.0**
No Response	14	
Total	47	

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

	Frequency	Percent
Email	22	56.4
Blackboard Announcements	14	35.9
Other	3	7.7
Total	**39**	**100.0**
No Response	8	
Total	47	

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

	Frequency
Instructor	1
Mastering physics	1
Syllabus	1
Total	**3**

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	20	64.5
Via email	8	25.8
During office hours/appointment	3	9.7
Total	**31**	**100.0**
No Response	16	
Total	47	

Q10. Who else or what else do you turn to for extra help?

	Frequency	Percent
Friends who have taken the class	9	25.7
Other	5	14.3
Tutor/tutoring center	5	14.3
Textbook website	16	45.7
Total	**35**	**100.0**
No Response	12	
Total	47	

Q10. Who else or what else do you turn to for extra help? (Other)

	Frequency
Classmates	3
Internet	1
Karen/Internet	1
Total	**5**

Q11. Which of the following course resources helped you learn the course material? (Check all that apply)

	Frequency	Percent
Lecture	33	70.2
Textbook	32	68.1
Homework/Assignments	28	59.6
Power Point slides	15	31.9
Group work in class	12	25.5
Instructor website	7	14.9
Study groups	6	12.8
Quizzes	5	10.6
Videos/DVDs	5	10.6
Computer presentations	3	6.4
Handouts	2	4.3
Other	1	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., 47).

Q11. Which of the following course resources helped you learn the course material? (Select all that apply) (Other)

	Frequency
Internet	1
Total	**1**

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	7	43.8
Voluntarily Used	9	56.3
Total	**16**	**100.0**
No Response	31	
Total	47	

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	3	21.4
Not Helpful	11	78.6
Total	**14**	**100.0**
No Response	33	
Total	47	

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	4	50.0
Voluntarily Used	4	50.0
Total	**8**	**100.0**
No Response	39	
Total	47	

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	6	33.3
Not Helpful	12	66.7
Total	**18**	**100.0**
No Response	29	
Total	47	

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
Voluntarily Used	17	100.0
No Response	30	
Total	**47**	

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	14	70.0
Not Helpful	6	30.0
Total	**20**	**100.0**
No Response	27	
Total	47	

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	2	11.8
Voluntarily Used	15	88.2
Total	**17**	**100.0**
No Response	30	
Total	47	

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	14	66.7
Not Helpful	7	33.3
Total	**21**	**100.0**
No Response	26	
Total	47	

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
Voluntarily Used	16	100.0
No Response	31	
Total	**47**	

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	14	70.0
Not Helpful	6	30.0
Total	**20**	**100.0**
No Response	27	
Total	47	

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	1	6.7
Voluntarily Used	14	93.3
Total	**15**	**100.0**
No Response	32	
Total	47	

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	12	60.0
Not Helpful	8	40.0
Total	**20**	**100.0**
No Response	27	
Total	47	

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	1	6.7
Voluntarily Used	14	93.3
Total	**15**	**100.0**
No Response	32	
Total	47	

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	10	55.6
Not Helpful	8	44.4
Total	**18**	**100.0**
No Response	29	
Total	47	

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	27.3
Voluntarily Used	8	72.7
Total	**11**	**100.0**
No Response	36	
Total	47	

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	8	53.3
Not Helpful	7	46.7
Total	**15**	**100.0**
No Response	32	
Total	47	

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	1	12.5
Voluntarily Used	7	87.5
Total	**8**	**100.0**
No Response	39	
Total	47	

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	7	50.0
Not Helpful	7	50.0
Total	**14**	**100.0**
No Response	33	
Total	47	

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	6	37.5
Voluntarily Used	10	62.5
Total	**16**	**100.0**
No Response	31	
Total	47	

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	12	75.0
Not Helpful	4	25.0
Total	**16**	**100.0**
No Response	31	
Total	47	

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	1	7.7
Voluntarily Used	12	92.3
Total	**13**	**100.0**
No Response	34	
Total	47	

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	8	47.1
Not Helpful	9	52.9
Total	**17**	**100.0**
No Response	30	
Total	47	

Q12A_Other. 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	Percent
Mastering Physics (Required)	1	100.0
Total	**1**	**100.0**

Q12B_Other. 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	Percent
Mastering Physics (Helpful)	1	100.0
Total	**1**	**100.0**

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	35	74.5
No	12	25.5
Total	**47**	**100.0**

Q14. How many hours per week do yo spend outside of class (including both lecture and lab periods) preparing and studying for this course?

	Frequency	Percent
None	4	8.5
1-2	20	42.6
3-5	18	38.3
5-7	3	6.4
More than 10	2	4.3
Total	**47**	**100.0**

GC Program Review Faculty Survey for Astronomy

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	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**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	2	50.0
Agree	1	25.0
Disagree	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	2	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**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	2	50.0
Agree	2	50.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	3	75.0
Agree	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	2	50.0
Agree	1	25.0
Disagree	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	2	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**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	2	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	2	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	2	50.0
Agree	1	25.0
Neutral	1	25.0
Total	**4**	**100.0**

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

	Frequency	Percent
Strongly Agree	3	75.0
Neutral	1	25.0
Total	**4**	**100.0**

9. My employment status with the college is:

	Frequency	Percent
Full-time Faculty	1	25.0
Part-time Faculty	3	75.0
Total	**4**	**100.0**

GC Program Review Faculty Survey for Physics and Physical Science

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	3	60.0
Agree	1	20.0
Neutral	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	2	40.0
Agree	2	40.0
Neutral	1	20.0
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	3	60.0
Agree	1	20.0
Disagree	1	20.0
Total	**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	2	40.0
Agree	2	40.0
Neutral	1	20.0
Total	**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	3	60.0
Neutral	2	40.0
Total	**5**	**100.0**

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

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

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

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

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

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

9. My employment status with the college is:

	Frequency	Percent
Full-time Faculty	2	40.0
Part-time Faculty	3	60.0
Total	**5**	**100.0**

APPENDIX 6

Headcounts for Degrees and Certificates Awarded

Headcounts for Physics Associate Degree Awarded

	2006		2007		2008		2009		2010		2011		2012	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
Physics	1	0	1	0	0	1	0	0	4	2	0	1	0	0

APPENDIX 7

Organizations Represented on Advisory Committees

None/ Not Applicable

APPENDIX 8

Sabbaticals, Conference, Workshop and Staff Development

Sabbaticals, Conference, Workshop and Staff Development Activities

Name	Activity	Relevance
Brian Carter	2012 TracDat Training	Department Chair Necessity
Brian Carter, Rex Paris, Philip Blanco	2012 Closed Captioning Training	ADA compliance and student success
Brian Carter	Online Course Development	For teaching online course
Philip Blanco	2012 Spring Sabbatical Projects	Add digital, and high speed cameras, and modern physics equipment to physics and physical science laboratories
Philip Blanco	2010-2012 SPACEUP conferences	Stay current in discipline
Philip Blanco	2008-2012 So. Cal. Teaching Exchanges, Mira Costa College	Professional development
Philip Blanco	2011 FINESSE /NASA educators workshop, San Diego	Professional development
Philip Blanco	Fall 2010 ED214 – developing an online course (grade: A)	Preparation for teaching online
Philip Blanco	2008 AIAA conference, San Diego	Stay current in discipline
Philip Blanco	Fall 2010 ED214 – developing an online course (A)	Preparation for teaching online
Philip Blanco	2008 Center For Astronomy Education workshop, Santiago Canyon College, Orange, CA	Stay current in discipline
Philip Blanco	2008 Women in Aviation conference, San Diego	Networking with other educators, learn about resources available to engage students
Philip Blanco	2007 Universe in the Classroom conference, Pasadena, CA.	Professional development, networking with other astronomy educators and researchers
Philip Blanco	2007 Jan – Ctr. For Astronomy Education workshop / Amer. Astron. Soc. Meeting, Seattle WA.	Professional development and stay current in discipline

APPENDIX 9

Grossmont WSCH Analysis

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	906.00	503.33	73.66	SPRING 2006
ASTR112	191100	0.600	384.00	640.00	213.00	355.00	55.47	SPRING 2006
ASTR		2.400	1614.00	672.50	1119.00	466.25	69.33	SPRING 2006
PHYC110	190200	0.700	384.00	548.57	270.00	385.71	70.31	SPRING 2006
PHYC130	190200	0.350	192.00	548.57	150.00	428.57	78.12	SPRING 2006
PHYC131	190200	0.350	192.00	548.57	90.00	257.14	46.87	SPRING 2006
PHYC140	190200	1.050	576.00	548.57	432.00	411.43	75.00	SPRING 2006
PHYC199	190200							SPRING 2006
PHYC240	190200	0.350	192.00	548.57	132.00	377.14	68.75	SPRING 2006
PHYC241	190200	0.350	192.00	548.57	96.00	274.29	50.00	SPRING 2006
PHYC		3.150	1728.00	548.57	1170.00	371.43	67.71	SPRING 2006
PSC110	190100	0.800	540.00	675.00	300.00	375.00	55.56	SPRING 2006
PSC111	190100	0.150	96.00	640.00	93.00	620.00	96.88	SPRING 2006
PSC	190100	0.950	636.00	669.47	393.00	413.68	61.79	SPRING 2006

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	957.00	531.67	77.80	FALL 2006
ASTR112	191100	0.600	384.00	640.00	291.00	485.00	75.78	FALL 2006
ASTR		2.400	1614.00	672.50	1248.00	520.00	77.32	FALL 2006
PHYC110	190200	1.050	576.00	548.57	402.00	382.86	69.79	FALL 2006
PHYC130	190200	0.350	192.00	548.57	204.00	582.86	106.25	FALL 2006
PHYC131	190200							FALL 2006
PHYC140	190200	1.050	576.00	548.57	354.00	337.14	61.46	FALL 2006
PHYC199	190200		3.00	3.00				FALL 2006
PHYC240	190200	0.350	192.00	548.57	168.00	480.00	87.50	FALL 2006
PHYC241	190200							FALL 2006
PHYC		2.800	1539.00	549.64	1128.00	402.86	73.29	FALL 2006
PSC110	190100	0.800	540.00	675.00	363.00	453.75	67.22	FALL 2006
PSC111	190100	0.150	96.00	640.00	81.00	540.00	84.38	FALL 2006
PSC	190100	0.950	636.00	669.47	444.00	467.37	69.81	FALL 2006
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	993.00	551.67	80.73	SPRING 2007
ASTR112	191100	0.600	384.00	640.00	246.00	410.00	64.06	SPRING 2007
ASTR		2.400	1614.00	672.50	1239.00	516.25	76.77	SPRING 2007
PHYC110	190200	1.050	576.00	548.57	456.00	434.29	79.17	SPRING 2007
PHYC130	190200	0.350	192.00	548.57	246.00	702.86	128.13	SPRING 2007
PHYC131	190200	0.350	192.00	548.57	114.00	325.71	59.37	SPRING 2007
PHYC140	190200	0.700	384.00	548.57	324.00	462.86	84.37	SPRING 2007
PHYC199	190200							SPRING 2007
PHYC240	190200	0.350	192.00	548.57	144.00	411.43	75.00	SPRING 2007
PHYC241	190200	0.350	192.00	548.57	66.00	188.57	34.37	SPRING 2007
PHYC		3.150	1728.00	548.57	1350.00	428.57	78.12	SPRING 2007
PSC110	190100	0.800	540.00	675.00	321.00	401.25	59.44	SPRING 2007
PSC111	190100	0.150	96.00	640.00	78.00	520.00	81.25	SPRING 2007
PSC	190100	0.950	636.00	669.47	399.00	420.00	62.74	SPRING 2007

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	981.00	545.00	79.76	FALL 2007
ASTR112	191100	0.600	384.00	640.00	255.00	425.00	66.41	FALL 2007
ASTR		2.400	1614.00	672.50	1236.00	515.00	76.58	FALL 2007
PHYC110	190200	0.900	576.00	640.00	396.00	440.00	68.75	FALL 2007
PHYC130	190200	0.350	192.00	548.57	240.00	685.71	125.00	FALL 2007
PHYC131	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	FALL 2007
PHYC140	190200	1.050	576.00	548.57	516.00	491.43	89.58	FALL 2007
PHYC199	190200							FALL 2007
PHYC240	190200	0.350	192.00	548.57	150.00	428.57	78.12	FALL 2007
PHYC241	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	FALL 2007
PHYC		2.650	1536.00	579.62	1302.00	491.32	84.77	FALL 2007
PSC110	190100	0.800	540.00	675.00	417.00	521.25	77.22	FALL 2007
PSC111	190100	0.300	192.00	640.00	117.00	390.00	60.94	FALL 2007
PSC	190100	1.100	732.00	665.45	534.00	485.45	72.95	FALL 2007
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	1131.00	628.33	91.95	SPRING 2008
ASTR112	191100	0.600	384.00	640.00	306.00	510.00	79.69	SPRING 2008
ASTR		2.400	1614.00	672.50	1437.00	598.75	89.03	SPRING 2008
PHYC110	190200	1.050	576.00	548.57	444.00	422.86	77.08	SPRING 2008
PHYC130	190200	0.350	192.00	548.57	174.00	497.14	90.62	SPRING 2008
PHYC131	190200	0.350	192.00	548.57	138.00	394.29	71.87	SPRING 2008
PHYC140	190200	0.700	384.00	548.57	372.00	531.43	96.87	SPRING 2008
PHYC199	190200							SPRING 2008
PHYC240	190200	0.350	192.00	548.57	156.00	445.71	81.25	SPRING 2008
PHYC241	190200	0.350	192.00	548.57	84.00	240.00	43.75	SPRING 2008
PHYC		3.150	1728.00	548.57	1368.00	434.29	79.17	SPRING 2008
PSC110	190100	0.600	405.00	675.00	348.00	580.00	85.93	SPRING 2008
PSC111	190100	0.300	192.00	640.00	162.00	540.00	84.38	SPRING 2008
PSC	190100	0.900	597.00	663.33	510.00	566.67	85.43	SPRING 2008

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.800	1230.00	683.33	1155.00	641.67	93.90	FALL 2008
ASTR112	191100	0.600	384.00	640.00	258.00	430.00	67.19	FALL 2008
ASTR		2.400	1614.00	672.50	1413.00	588.75	87.55	FALL 2008
PHYC110	190200	1.050	576.00	548.57	432.00	411.43	75.00	FALL 2008
PHYC130	190200	0.350	192.00	548.57	162.00	462.86	84.37	FALL 2008
PHYC131	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	FALL 2008
PHYC140	190200	1.050	576.00	548.57	510.00	485.71	88.54	FALL 2008
PHYC199	190200							FALL 2008
PHYC240	190200	0.350	192.00	548.57	126.00	360.00	65.62	FALL 2008
PHYC241	190200	0.350	192.00	548.57	54.00	154.29	28.12	FALL 2008
PHYC		3.150	1728.00	548.57	1284.00	407.62	74.31	FALL 2008
PSC110	190100	0.800	501.00	626.25	459.00	573.75	91.62	FALL 2008
PSC111	190100	0.300	192.00	640.00	102.00	340.00	53.13	FALL 2008
PSC	190100	1.100	693.00	630.00	561.00	510.00	80.95	FALL 2008
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	2.200	1380.00	627.27	1296.00	589.09	93.91	SPRING 2009
ASTR112	191100	0.600	384.00	640.00	354.00	590.00	92.19	SPRING 2009
ASTR		2.800	1764.00	630.00	1650.00	589.29	93.54	SPRING 2009
PHYC110	190200	1.050	480.00	457.14	372.00	354.29	77.50	SPRING 2009
PHYC130	190200	0.350	192.00	548.57	192.00	548.57	100.00	SPRING 2009
PHYC131	190200	0.350	96.00	274.29	33.00	94.29	34.38	SPRING 2009
PHYC140	190200	1.050	576.00	548.57	552.00	525.71	95.83	SPRING 2009
PHYC199	190200							SPRING 2009
PHYC240	190200	0.350	192.00	548.57	174.00	497.14	90.62	SPRING 2009
PHYC241	190200	0.350	192.00	548.57	78.00	222.86	40.62	SPRING 2009
PHYC		3.500	1728.00	493.71	1401.00	400.29	81.08	SPRING 2009
PSC110	190100	1.000	690.00	690.00	558.00	558.00	80.87	SPRING 2009
PSC111	190100	0.300	192.00	640.00	120.00	400.00	62.50	SPRING 2009
PSC	190100	1.300	882.00	678.46	678.00	521.54	76.87	SPRING 2009

SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	2.000	1380.00	690.00	1416.00	708.00	102.61	FALL 2009
ASTR112	191100	0.600	384.00	640.00	366.00	610.00	95.31	FALL 2009
ASTR		2.600	1764.00	678.46	1782.00	685.38	101.02	FALL 2009
PHYC110	190200	1.050	576.00	548.57	570.00	542.86	98.96	FALL 2009
PHYC130	190200	0.350	192.00	548.57	198.00	565.71	103.13	FALL 2009
PHYC131	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	FALL 2009
PHYC140	190200	1.050	576.00	548.57	648.00	617.14	112.50	FALL 2009
PHYC199	190200							FALL 2009
PHYC240	190200	0.350	192.00	548.57	198.00	565.71	103.13	FALL 2009
PHYC241	190200	0.350	192.00	548.57	108.00	308.57	56.25	FALL 2009
PHYC		3.150	1728.00	548.57	1722.00	546.67	99.65	FALL 2009
PSC110	190100	0.800	555.00	693.75	537.00	671.25	96.76	FALL 2009
PSC111	190100	0.150	96.00	640.00	69.00	460.00	71.88	FALL 2009
PSC	190100	0.950	651.00	685.26	606.00	637.89	93.09	FALL 2009
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	2.000	1380.00	690.00	1494.00	747.00	108.26	SPRING 2010
ASTR112	191100	0.600	384.00	640.00	318.00	530.00	82.81	SPRING 2010
ASTR		2.600	1764.00	678.46	1812.00	696.92	102.72	SPRING 2010
PHYC110	190200	1.050	576.00	548.57	612.00	582.86	106.25	SPRING 2010
PHYC130	190200	0.350	192.00	548.57	258.00	737.14	134.38	SPRING 2010
PHYC131	190200	0.350	96.00	274.29	33.00	94.29	34.38	SPRING 2010
PHYC140	190200	1.050	576.00	548.57	726.00	691.43	126.04	SPRING 2010
PHYC199	190200							SPRING 2010
PHYC240	190200	0.350	192.00	548.57	204.00	582.86	106.25	SPRING 2010
PHYC241	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	SPRING 2010
PHYC		3.150	1632.00	518.10	1833.00	581.90	112.32	SPRING 2010
PSC100	190100	0.200	135.00	675.00	138.00	690.00	102.22	SPRING 2010
PSC110	190100	0.800	555.00	693.75	591.00	738.75	106.49	SPRING 2010
PSC111	190100	0.300	192.00	640.00	141.00	470.00	73.44	SPRING 2010
PSC	190100	1.300	882.00	678.46	870.00	669.23	98.64	SPRING 2010

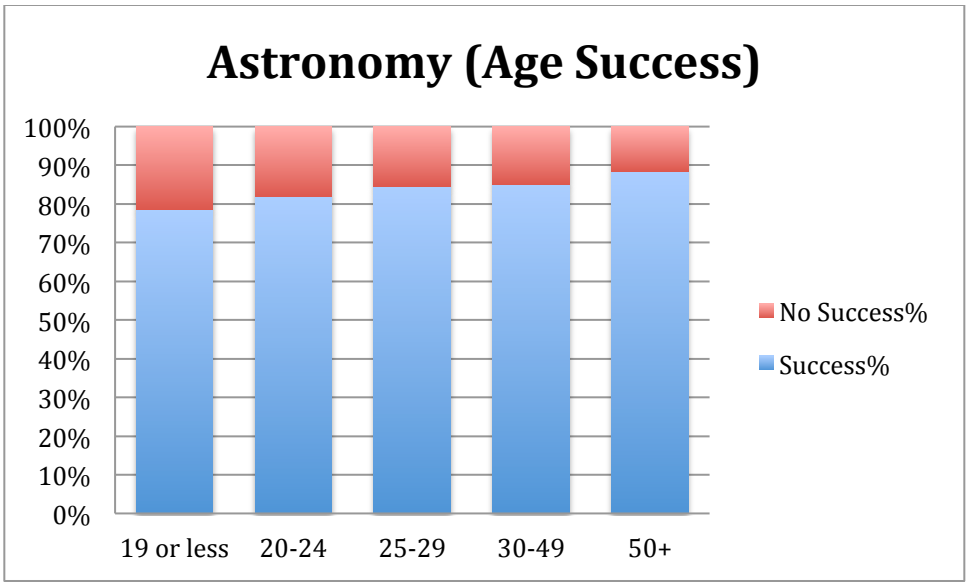
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	2.000	1500.00	750.00	1524.00	762.00	101.60	FALL 2010
ASTR112	191100	0.600	384.00	640.00	318.00	530.00	82.81	FALL 2010
ASTR		2.600	1884.00	724.62	1842.00	708.46	97.77	FALL 2010
PHYC110	190200	1.050	576.00	548.57	576.00	548.57	100.00	FALL 2010
PHYC130	190200	0.350	192.00	548.57	210.00	600.00	109.38	FALL 2010
PHYC131	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	FALL 2010
PHYC140	190200	1.050	576.00	548.57	606.00	577.14	105.21	FALL 2010
PHYC199	190200							FALL 2010
PHYC240	190200	0.350	192.00	548.57	222.00	634.29	115.63	FALL 2010
PHYC241	190200	0.350	192.00	548.57	96.00	274.29	50.00	FALL 2010
PHYC		3.150	1728.00	548.57	1710.00	542.86	98.96	FALL 2010
PSC100	190100	0.200	147.00	735.00	150.00	750.00	102.04	FALL 2010
PSC110	190100	0.800	600.00	750.00	513.00	641.25	85.50	FALL 2010
PSC111	190100	0.150	96.00	640.00	84.00	560.00	87.50	FALL 2010
PSC	190100	1.150	843.00	733.04	747.00	649.57	88.61	FALL 2010
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	2.000	1500.00	750.00	1515.00	757.50	101.00	SPRING 2011
ASTR112	191100	0.600	384.00	640.00	360.00	600.00	93.75	SPRING 2011
ASTR		2.600	1884.00	724.62	1875.00	721.15	99.52	SPRING 2011
PHYC110	190200	1.050	576.00	548.57	522.00	497.14	90.62	SPRING 2011
PHYC130	190200	0.350	192.00	548.57	162.00	462.86	84.37	SPRING 2011
PHYC131	190200	0.350	96.00	274.29	39.00	111.43	40.63	SPRING 2011
PHYC140	190200	1.400	768.00	548.57	684.00	488.57	89.06	SPRING 2011
PHYC199	190200							SPRING 2011
PHYC240	190200	0.350	192.00	548.57	198.00	565.71	103.13	SPRING 2011
PHYC241	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	SPRING 2011
PHYC		3.500	1824.00	521.14	1605.00	458.57	87.99	SPRING 2011
PSC100	190100	0.200	144.00	720.00	132.00	660.00	91.67	SPRING 2011
PSC110	190100	0.800	600.00	750.00	600.00	750.00	100.00	SPRING 2011
PSC111	190100	0.300	192.00	640.00	132.00	440.00	68.75	SPRING 2011
PSC	190100	1.300	936.00	720.00	864.00	664.62	92.31	SPRING 2011

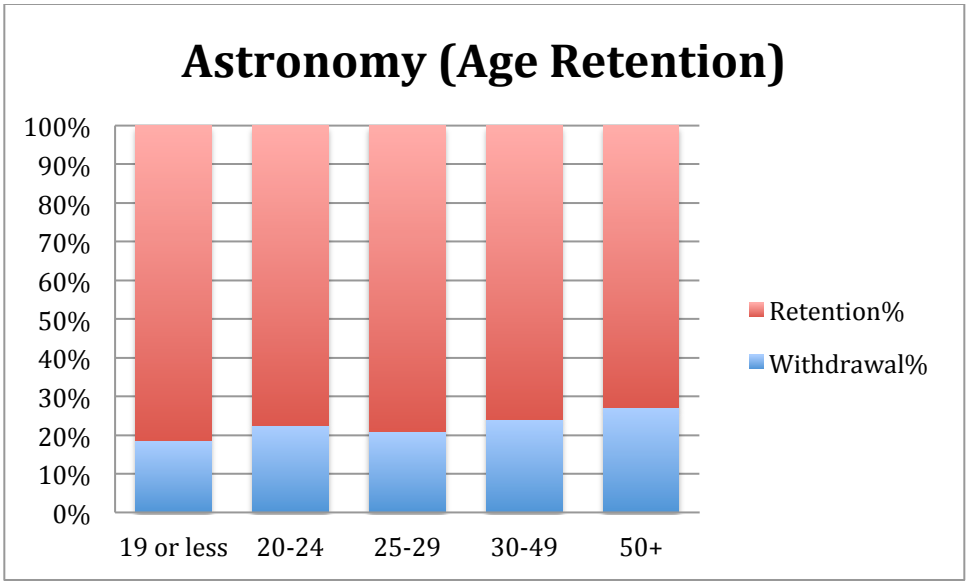
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.600	1200.00	750.00	1272.00	795.00	106.00	FALL 2011
ASTR112	191100	0.600	384.00	640.00	345.00	575.00	89.84	FALL 2011
ASTR120	191100	0.400	300.00	750.00	321.00	802.50	107.00	FALL 2011
ASTR		2.600	1884.00	724.62	1938.00	745.38	102.87	FALL 2011
PHYC110	190200	1.050	576.00	548.57	600.00	571.43	104.17	FALL 2011
PHYC130	190200	0.350	192.00	548.57	204.00	582.86	106.25	FALL 2011
PHYC131	190200			#DIV/0!		#DIV/0!	#DIV/0!	FALL 2011
PHYC140	190200	1.050	576.00	548.57	612.00	582.86	106.25	FALL 2011
PHYC199	190200							FALL 2011
PHYC240	190200	0.350	192.00	548.57	210.00	600.00	109.38	FALL 2011
PHYC241	190200	0.350	192.00	548.57	84.00	240.00	43.75	FALL 2011
PHYC		3.150	1728.00	548.57	1710.00	542.86	98.96	FALL 2011
PSC100	190100	0.200	147.00	735.00	135.00	675.00	91.84	FALL 2011
PSC110	190100	0.800	600.00	750.00	591.00	738.75	98.50	FALL 2011
PSC111	190100	0.150	96.00	640.00	90.00	600.00	93.75	FALL 2011
PSC	190100	1.150	843.00	733.04	816.00	709.57	96.80	FALL 2011
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.600	1200.00	750.00	1212.00	757.50	101.00	SPRING 2012
ASTR112	191100	0.600	384.00	640.00	363.00	605.00	94.53	SPRING 2012
ASTR120	191100			#DIV/0!		#DIV/0!	#DIV/0!	SPRING 2012
ASTR		2.200	1584.00	720.00	1575.00	715.91	99.43	SPRING 2012
PHYC110	190200	1.050	576.00	548.57	570.00	542.86	98.96	SPRING 2012
PHYC130	190200	0.350	192.00	548.57	198.00	565.71	103.13	SPRING 2012
PHYC131	190200			#DIV/0!		#DIV/0!	#DIV/0!	SPRING 2012
PHYC140	190200	1.050	576.00	548.57	606.00	577.14	105.21	SPRING 2012
PHYC199	190200							SPRING 2012
PHYC240	190200	0.350	192.00	548.57	216.00	617.14	112.50	SPRING 2012
PHYC241	190200		0.00	#DIV/0!		#DIV/0!	#DIV/0!	SPRING 2012
PHYC		2.800	1536.00	548.57	1590.00	567.86	103.52	SPRING 2012
PSC100	190100	0.200	144.00	720.00	123.00	615.00	85.42	SPRING 2012
PSC110	190100	0.600	450.00	750.00	474.00	790.00	105.33	SPRING 2012
PSC111	190100	0.150	96.00	640.00	75.00	500.00	78.13	SPRING 2012
PSC	190100	0.950	690.00	726.32	672.00	707.37	97.39	SPRING 2012

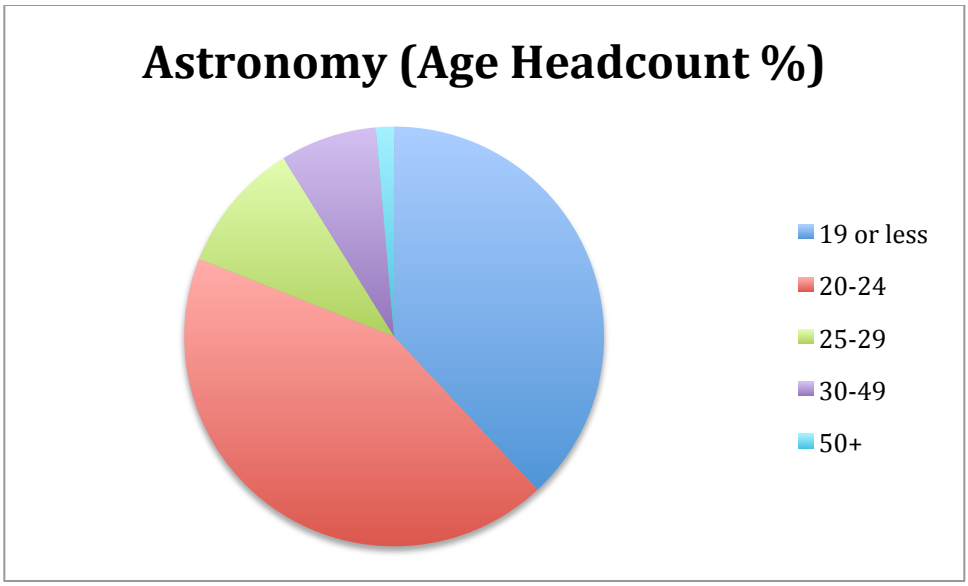
SUBJECT	TOP	TOTAL FTEF	MAX WSCH	MAX WSCH/FTEF	EARNED WSCH	Earned WSCH/FTEF	% OF MAX	Semester
ASTR110	191100	1.000	750.00	750.00	795.00	795.00	106.00	FALL 2012
ASTR112	191100	0.450	288.00	640.00	267.00	593.33	92.71	FALL 2012
ASTR120	191100	0.400	300.00	750.00	345.00	862.50	115.00	FALL 2012
ASTR		1.850	1338.00	723.24	1407.00	760.54	105.16	FALL 2012
PHYC110	190200	0.700	384.00	548.57	438.00	625.71	114.06	FALL 2012
PHYC130	190200	0.350	192.00	548.57	210.00	600.00	109.38	FALL 2012
PHYC131	190200	0.350	192.00	548.57	90.00	257.14	46.87	FALL 2012
PHYC140	190200	1.050	576.00	548.57	612.00	582.86	106.25	FALL 2012
PHYC199	190200							FALL 2012
PHYC240	190200	0.350	192.00	548.57	222.00	634.29	115.63	FALL 2012
PHYC241	190200	0.350	192.00	548.57	72.00	205.71	37.50	FALL 2012
PHYC		3.150	1728.00	548.57	1644.00	521.90	95.14	FALL 2012
PSC100	190100	0.200	132.00	660.00	117.00	585.00	88.64	FALL 2012
PSC110	190100	0.800	600.00	750.00	573.00	716.25	95.50	FALL 2012
PSC111	190100	0.150	96.00	640.00	72.00	480.00	75.00	FALL 2012
PSC	190100	1.150	828.00	720.00	762.00	662.61	92.03	FALL 2012

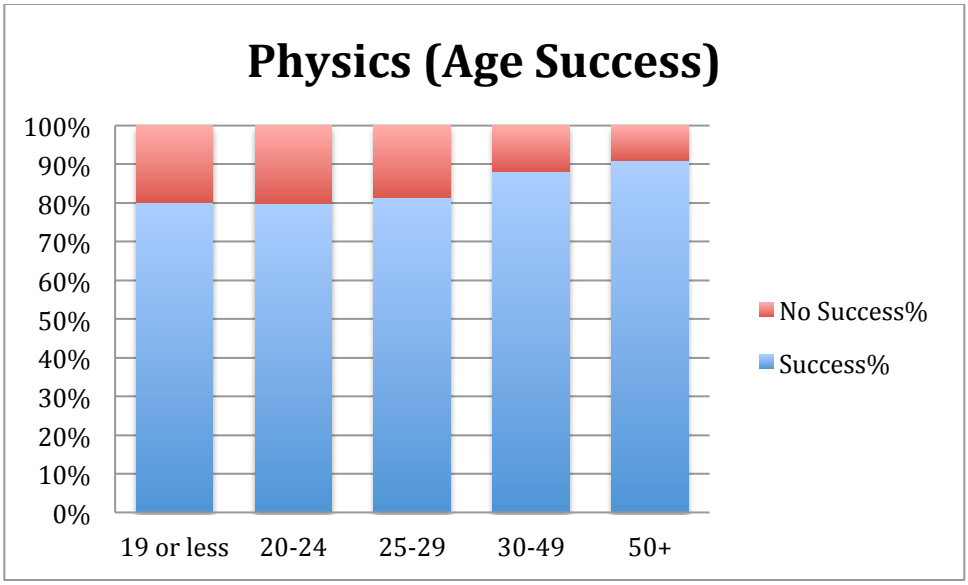
APPENDIX 10

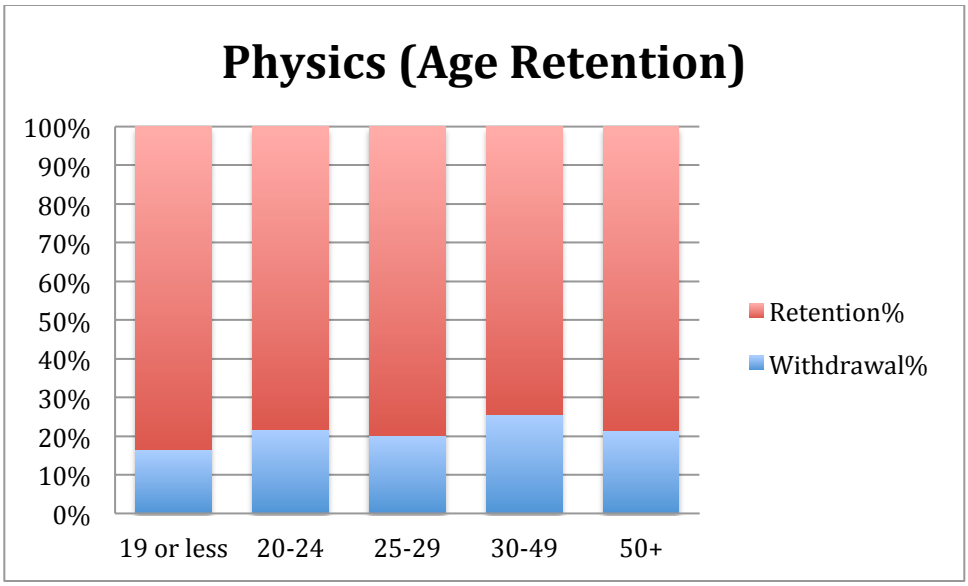
Success and Retention by Age, Ethnicity, and Gender

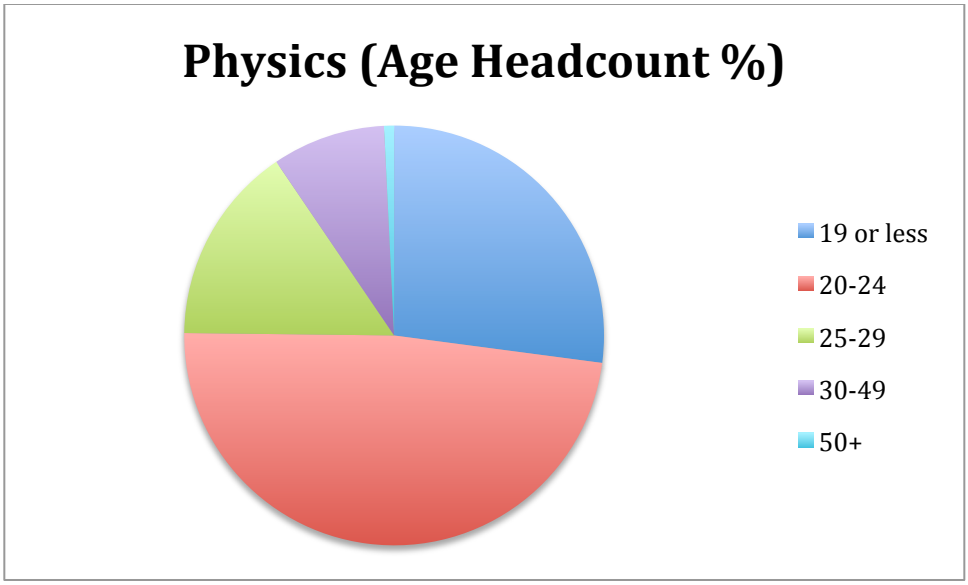

Astronomy (Age Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
No Success%
Success%

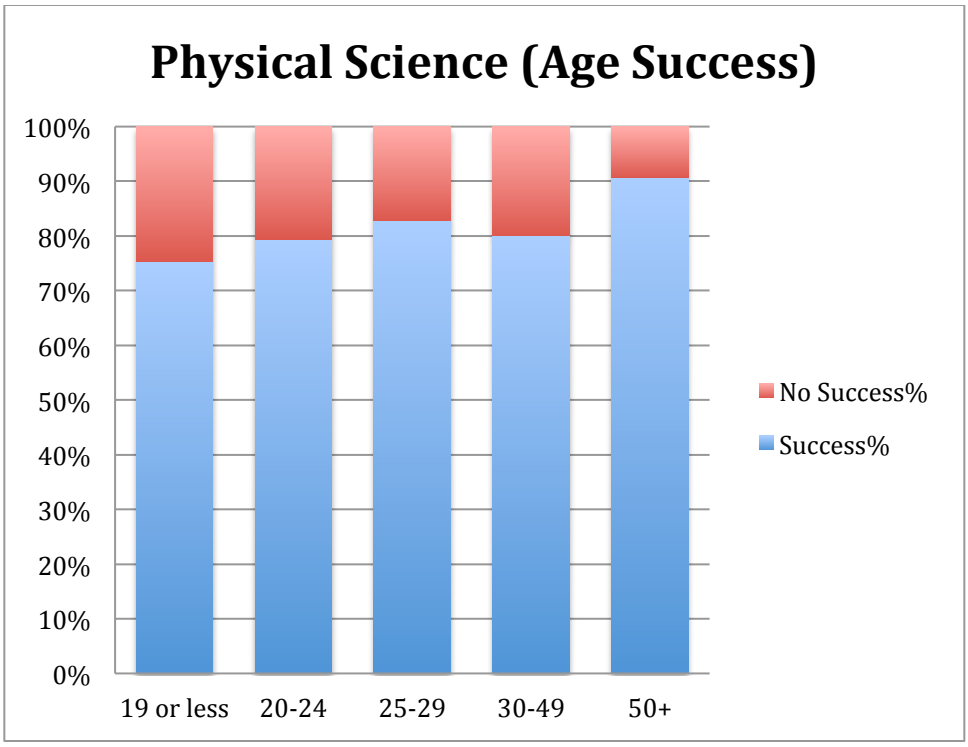

Astronomy (Age Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
Retention%
Withdrawal%

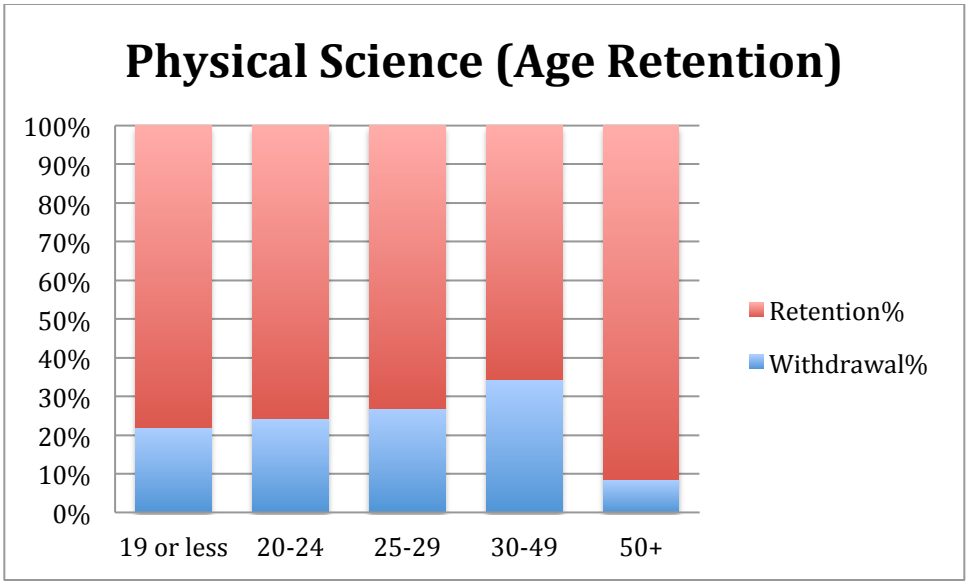

Astronomy (Age Headcount %)
19 or less
20-24
25-29
30-49
50+

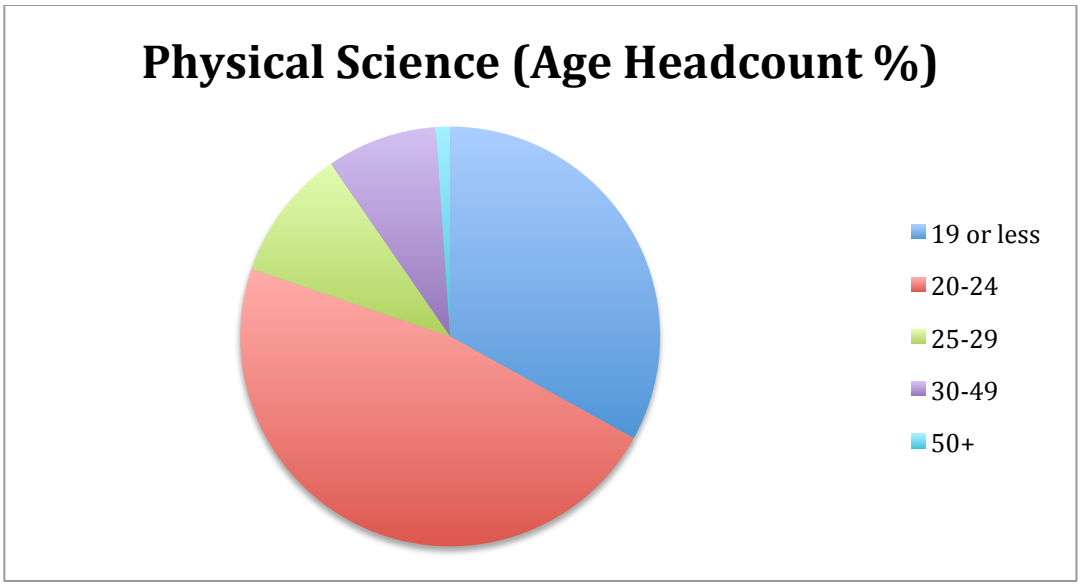

Physics (Age Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
No Success%
Success%

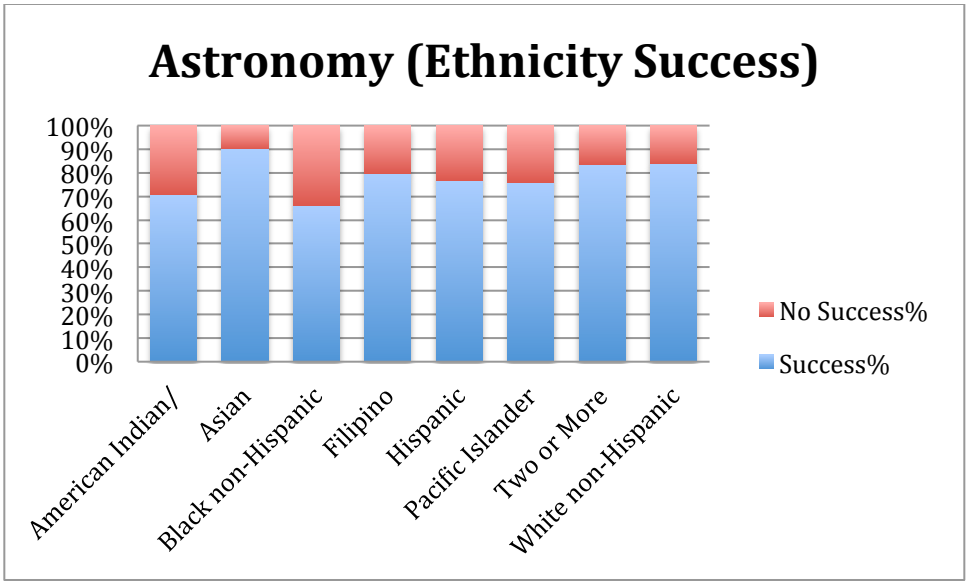

Physics (Age Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
Retention%
Withdrawal%

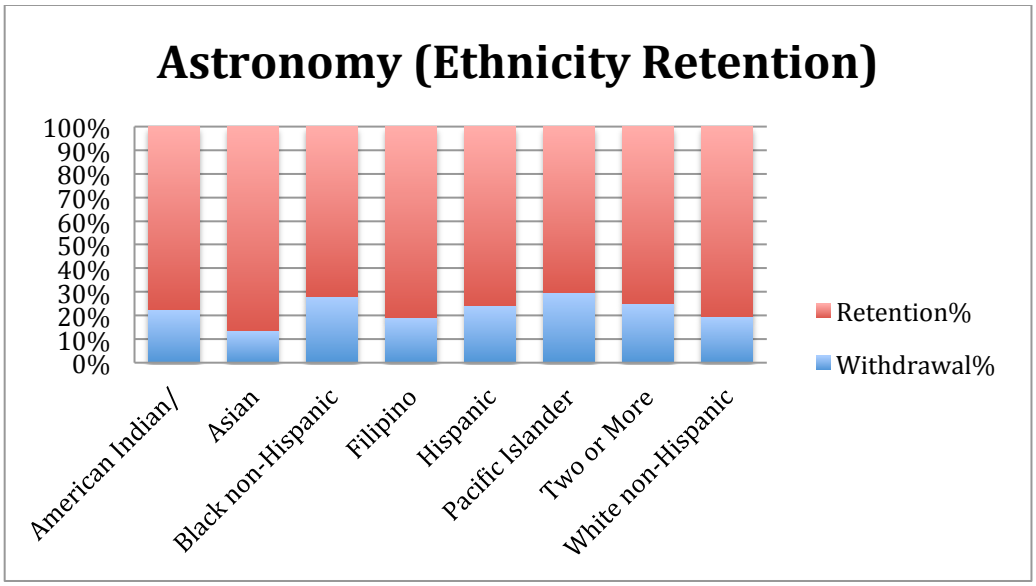

Physics (Age Headcount %)
19 or less
20-24
25-29
30-49
50+

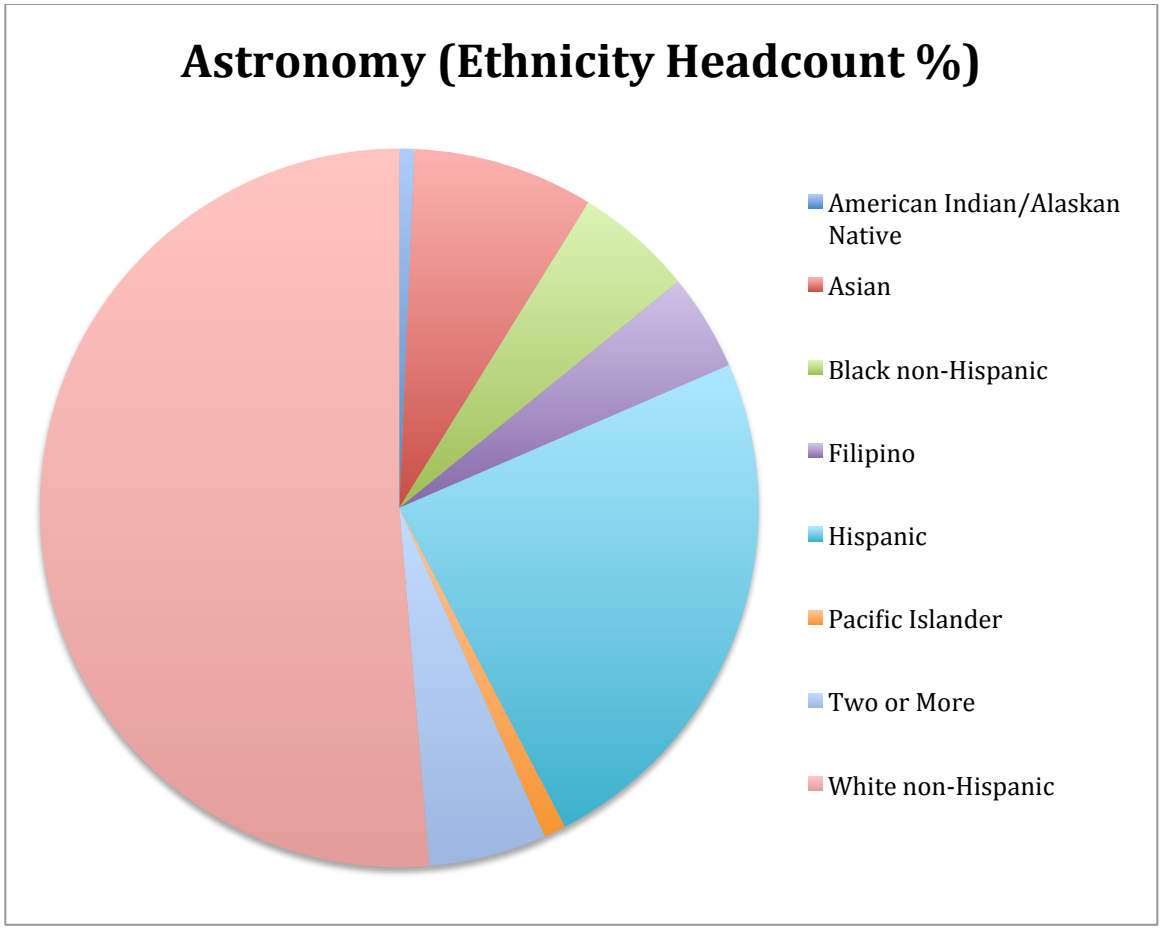

Physical Science (Age Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
No Success%
Success%

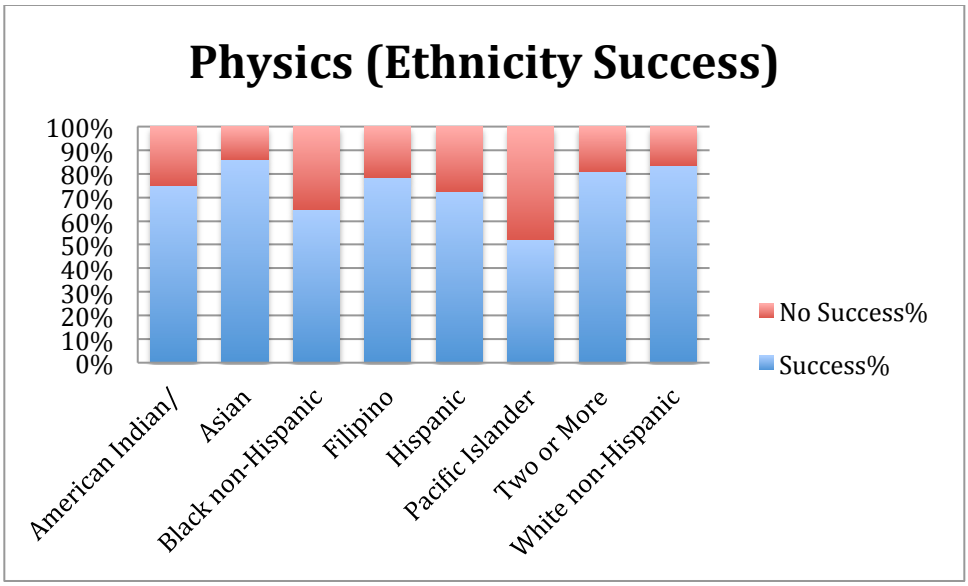

Physical Science (Age Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
19 or less
20-24
25-29
30-49
50+
Retention%
Withdrawal%

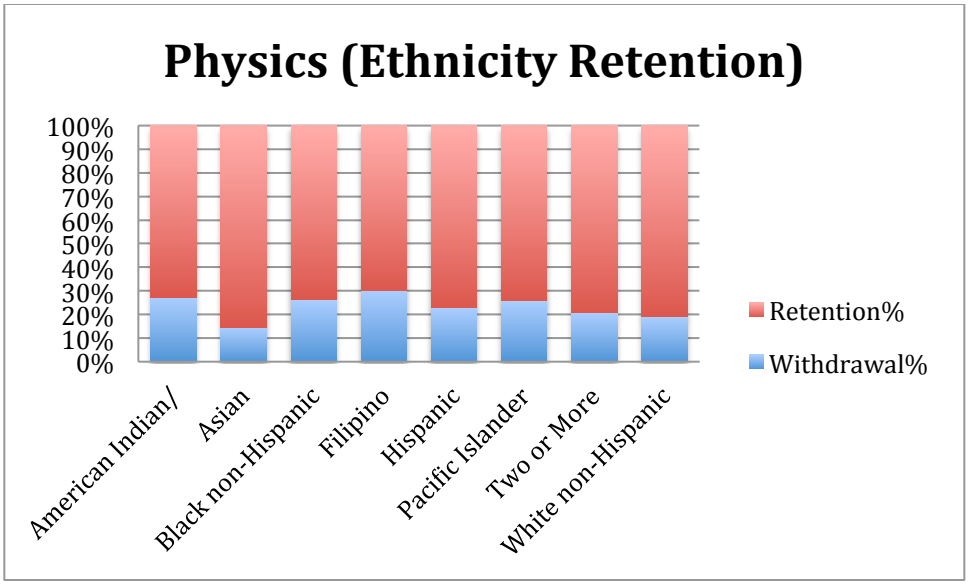

Physical Science (Age Headcount %)
19 or less
20-24
25-29
30-49
50+

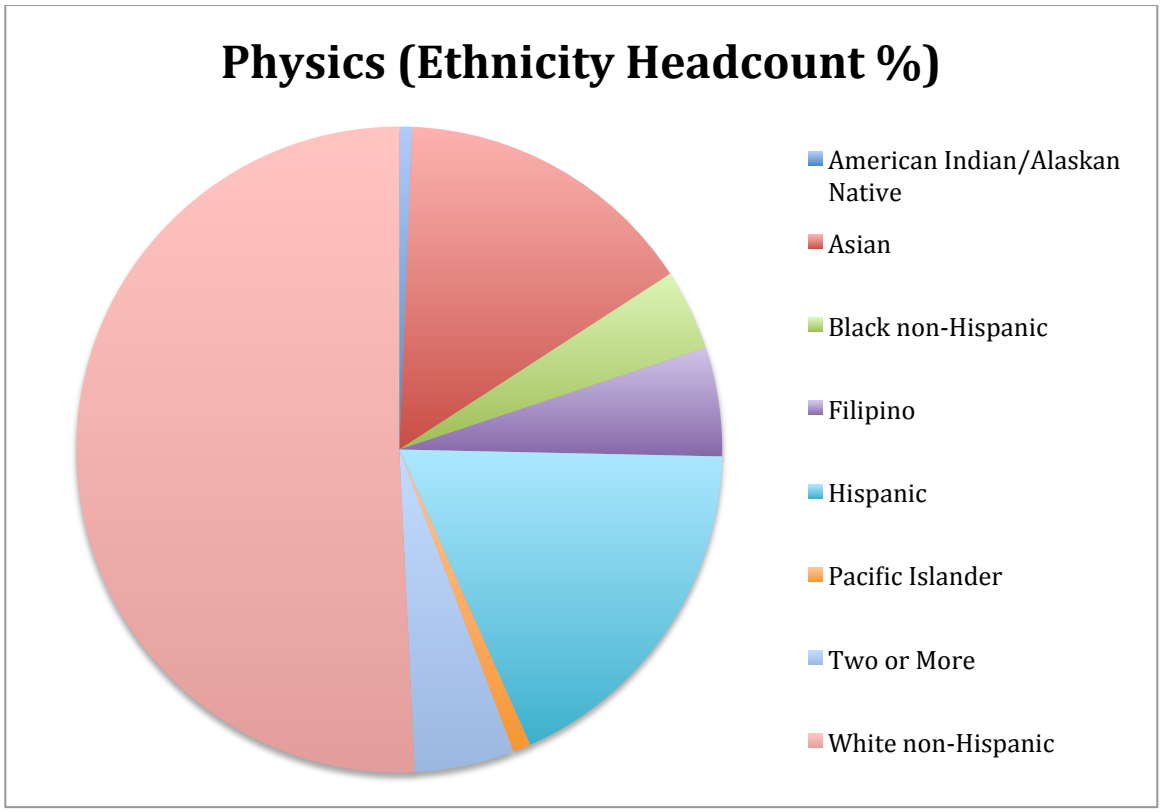

Astronomy (Ethnicity Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
No Success%
Success%

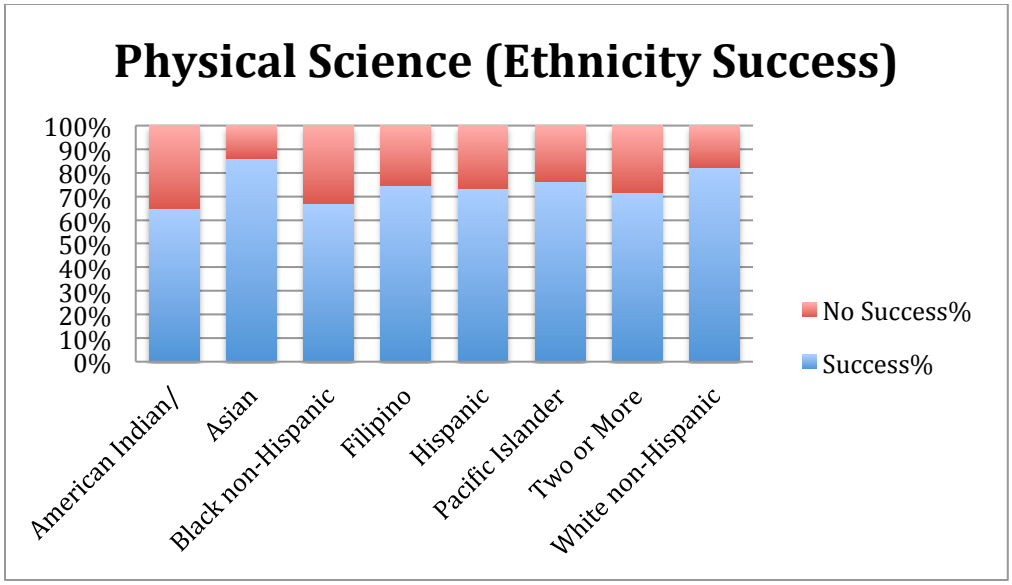

Astronomy (Ethnicity Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
Retention%
Withdrawal%

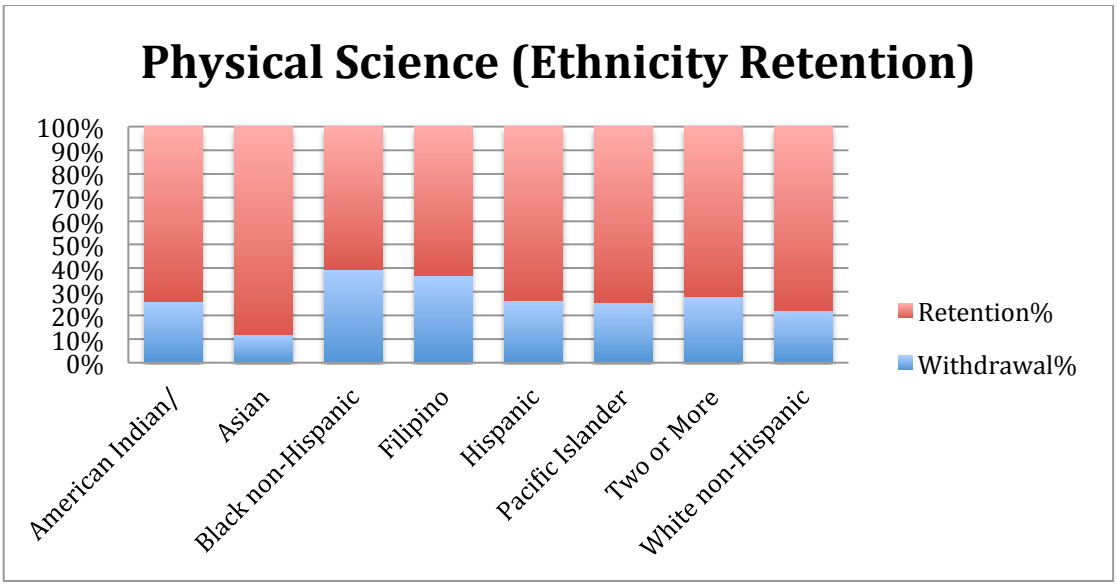

Astronomy (Ethnicity Headcount %)
American Indian/Alaskan Native
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic

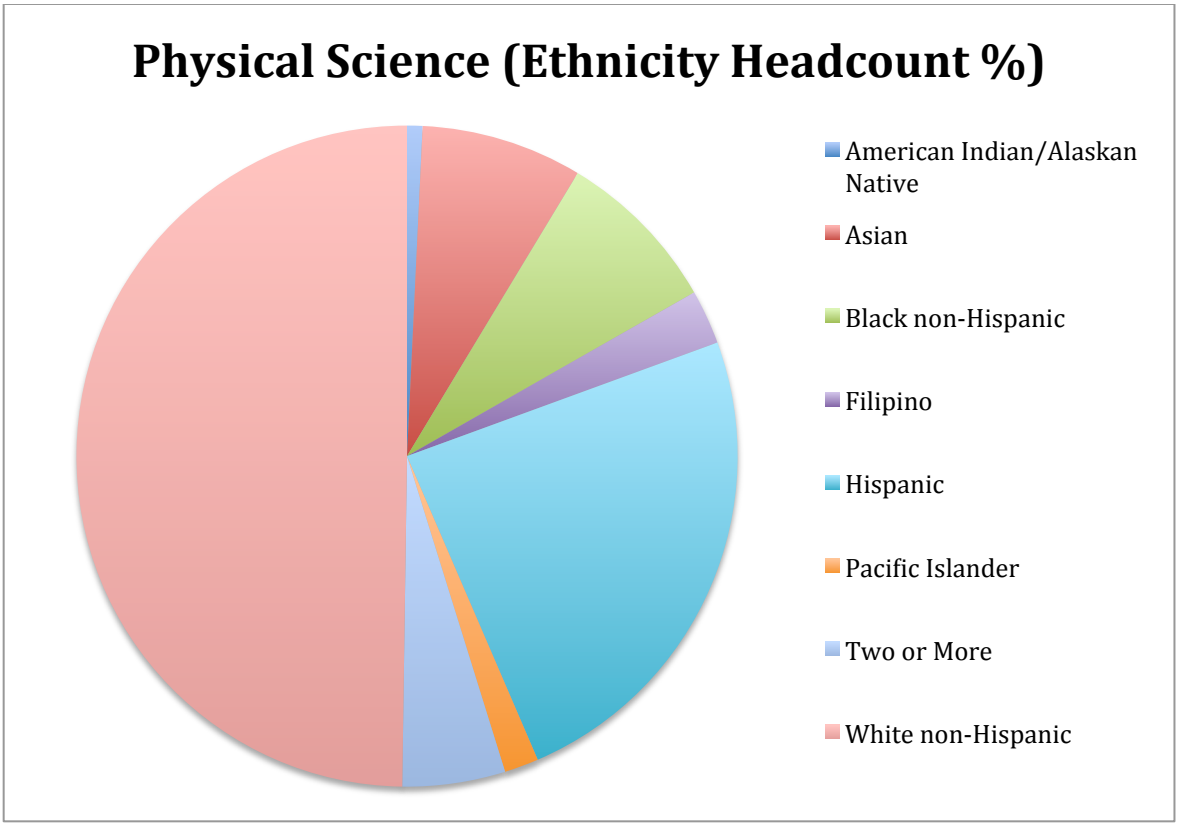

Physics (Ethnicity Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
No Success%
Success%

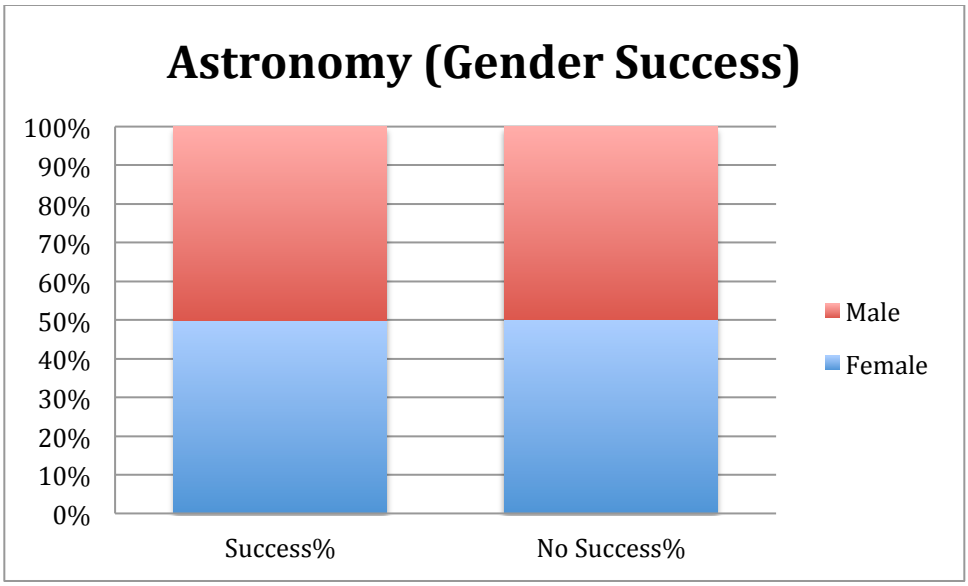

Physics (Ethnicity Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
Retention%
Withdrawal%

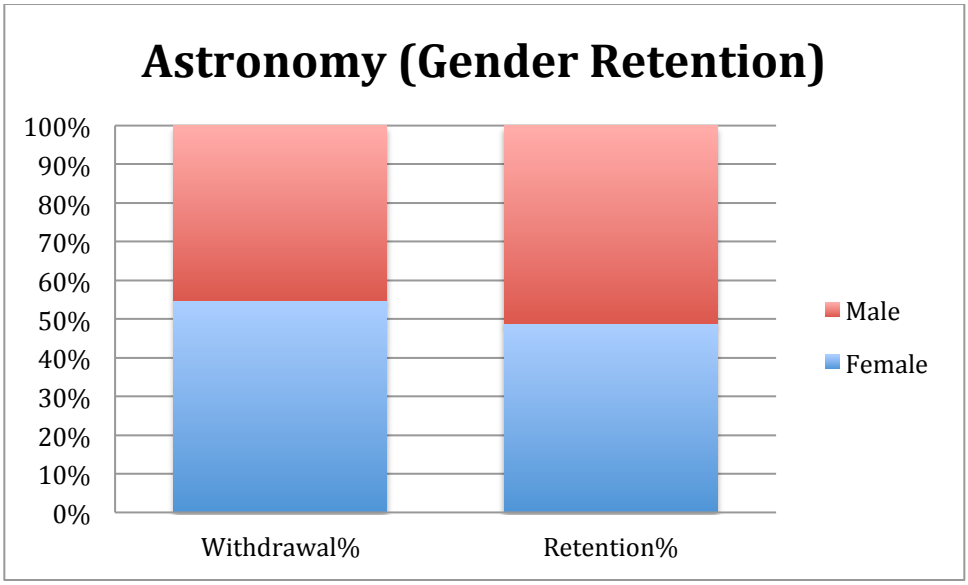

Physics (Ethnicity Headcount %)
American Indian/Alaskan Native
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic

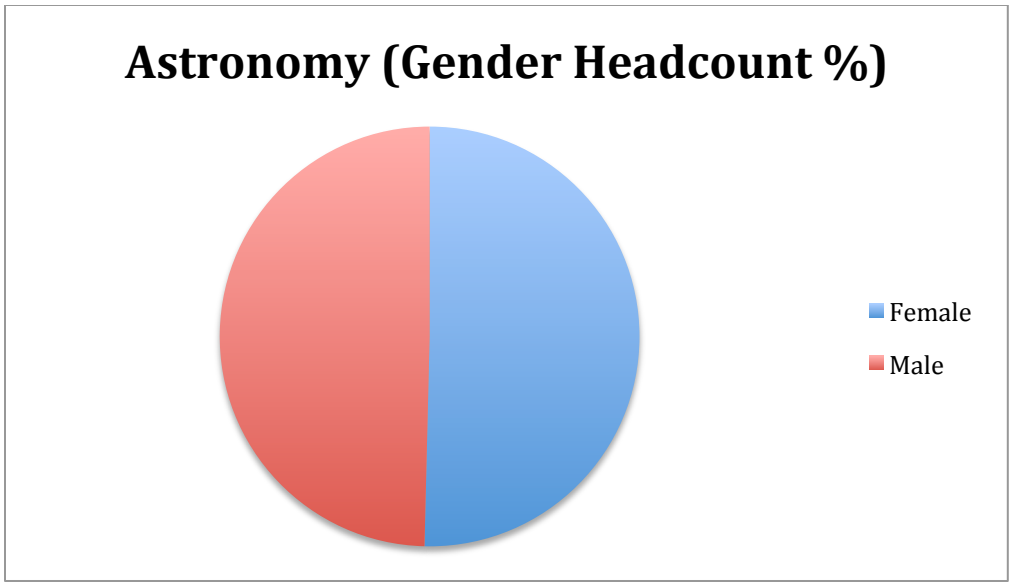

Physical Science (Ethnicity Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
No Success%
Success%

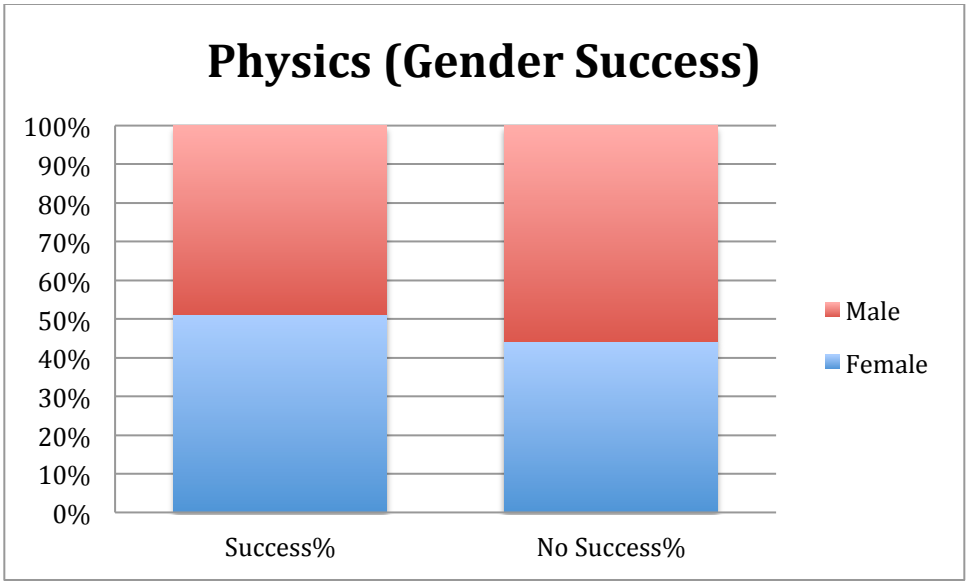

Physical Science (Ethnicity Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
American Indian/
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic
Retention%
Withdrawal%

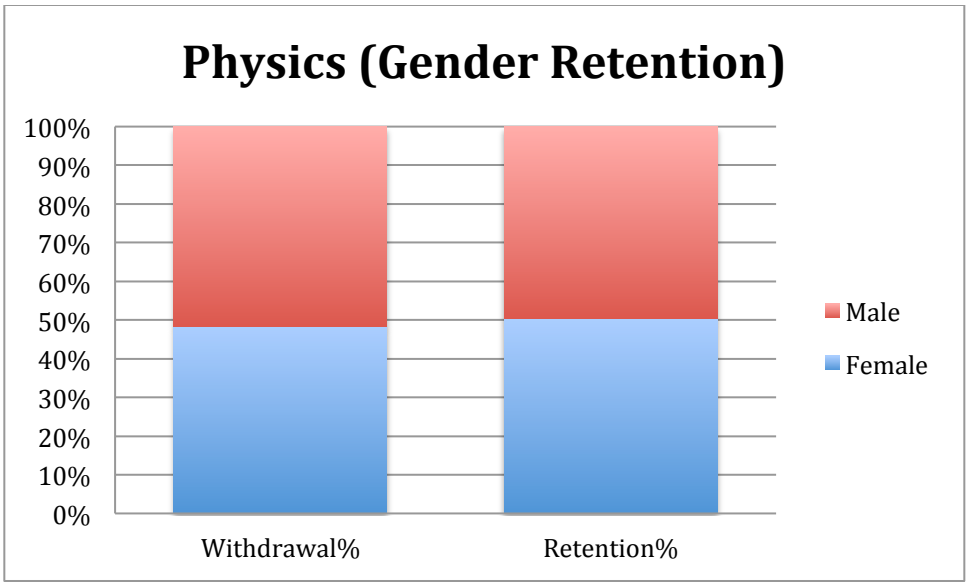

Physical Science (Ethnicity Headcount %)
American Indian/Alaskan Native
Asian
Black non-Hispanic
Filipino
Hispanic
Pacific Islander
Two or More
White non-Hispanic

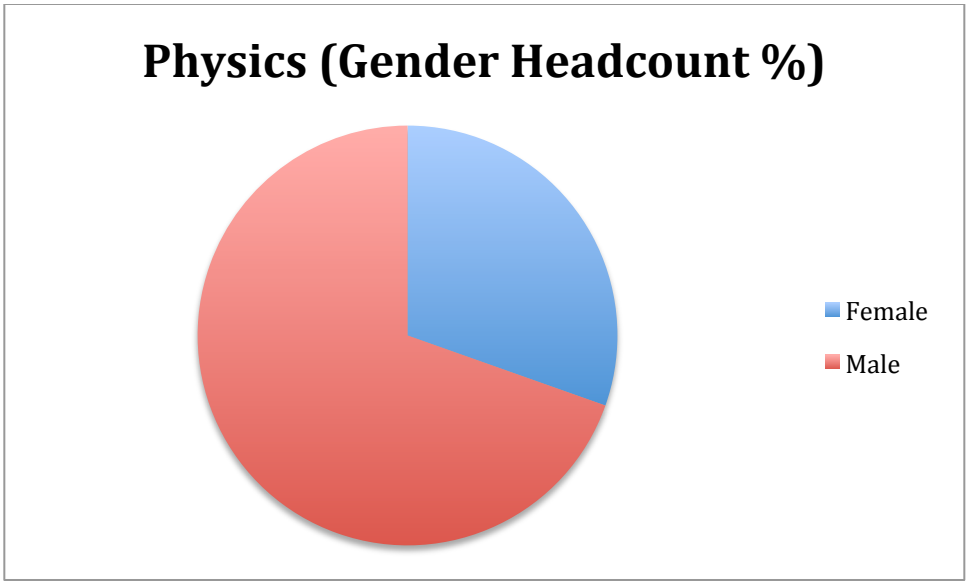

Astronomy (Gender Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Success%
No Success%
Male
Female

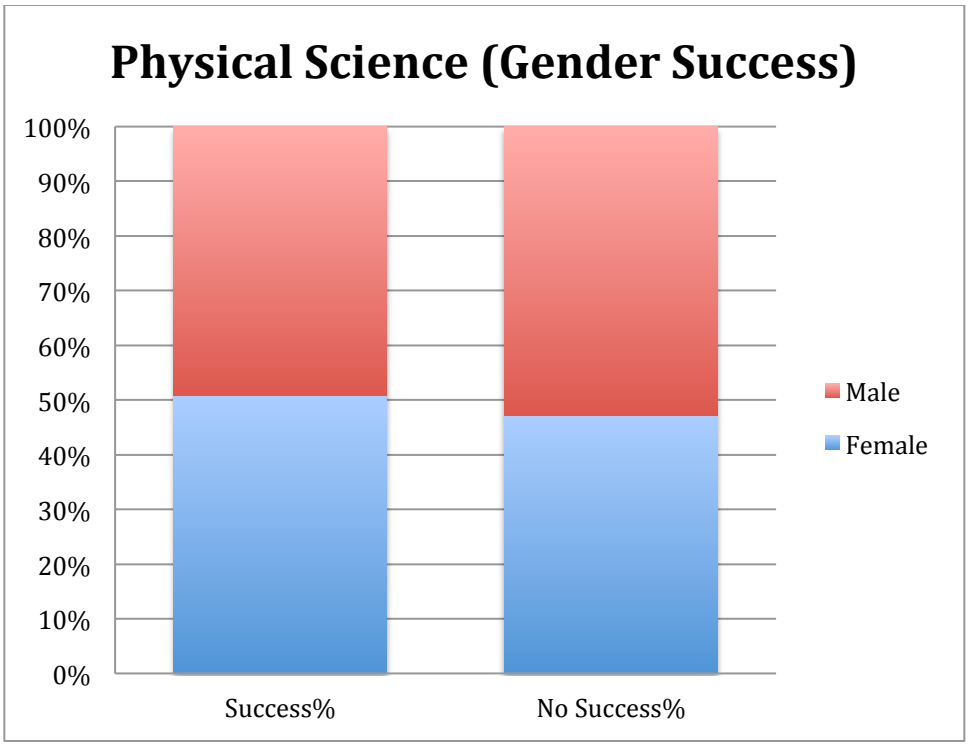

Astronomy (Gender Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Withdrawal%
Retention%
Male
Female

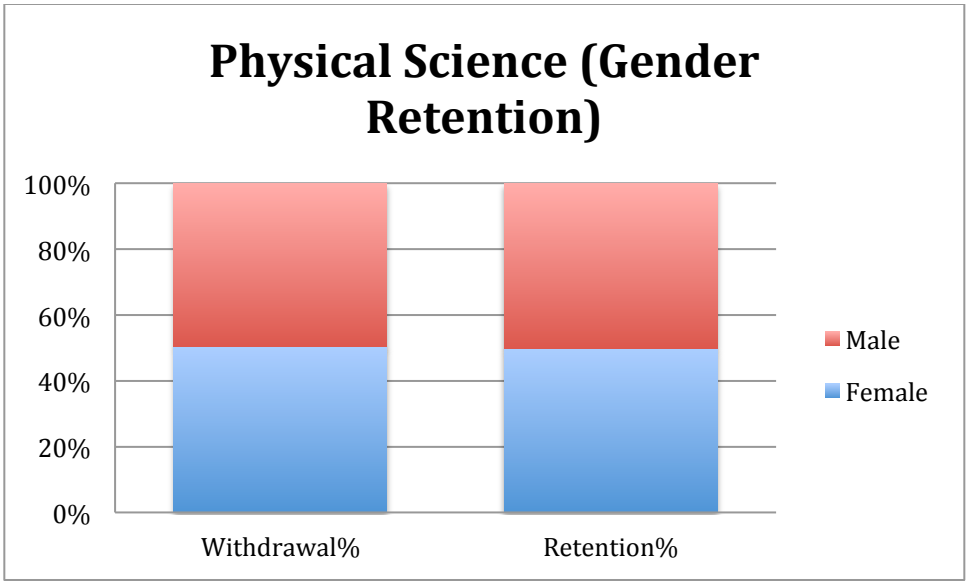

Astronomy (Gender Headcount %)
Female
Male

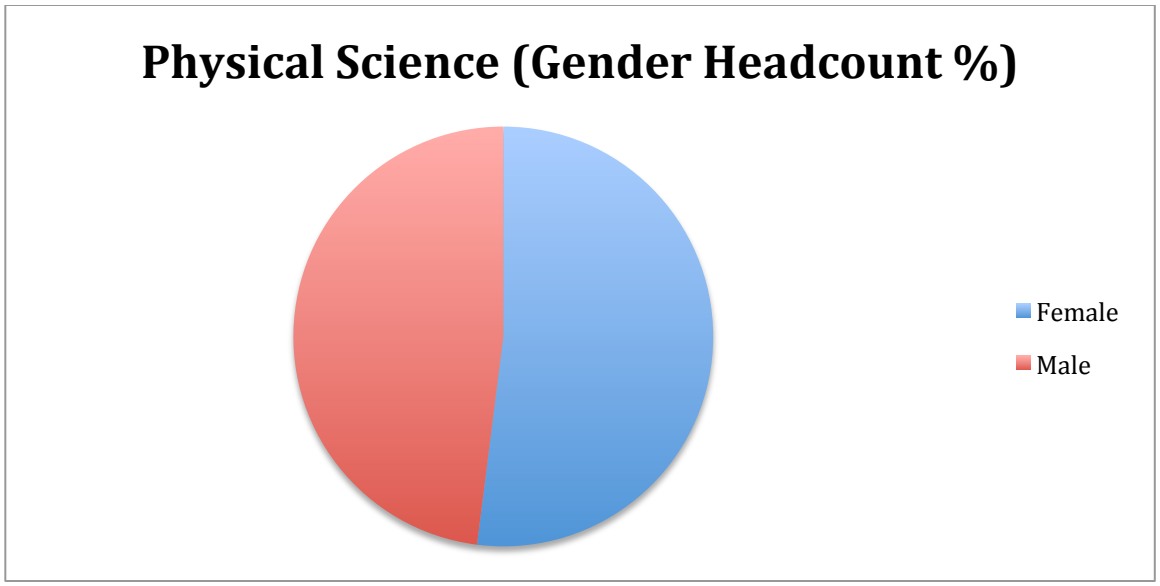

Physics (Gender Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Success%
No Success%
Male
Female


Physics (Gender Retention)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Withdrawal%
Retention%
Male
Female


Physics (Gender Headcount %)
Female
Male


Physical Science (Gender Success)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Success%
No Success%
Male
Female


Physical Science (Gender Retention)
100%
80%
60%
40%
20%
0%
Withdrawal%
Retention%
Male
Female


Physical Science (Gender Headcount %)
Female
Male

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006SP		N	%	N	%	N	%	N	%	
	19 or less	81	57.9%	30	21.4%	29	20.7%	111	79.3%	140
	20-24	106	59.9%	24	13.6%	47	26.6%	130	73.4%	177
	25-29	19	46.3%	2	4.9%	20	48.8%	21	51.2%	41
	30-49	11	47.8%	3	13.0%	9	39.1%	14	60.9%	23
	50+	0	0.0%	1	25.0%	3	75.0%	1	25.0%	4
	Total	**217**	**56.4%**	**60**	**15.6%**	**108**	**28.1%**	**277**	**71.9%**	**385**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006SU		N	%	N	%	N	%	N	%	
	19 or less	8	72.7%	2	18.2%	1	9.1%	10	90.9%	11
	20-24	10	83.3%	2	16.7%	0	0.0%	12	100.0%	12
	25-29	4	66.7%	0	0.0%	2	33.3%	4	66.7%	6
	30-49	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Total	**23**	**74.2%**	**5**	**16.1%**	**3**	**9.7%**	**28**	**90.3%**	**31**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006FA		N	%	N	%	N	%	N	%	
	19 or less	106	60.6%	21	12.0%	48	27.4%	127	72.6%	175
	20-24	80	53.0%	17	11.3%	54	35.8%	97	64.2%	151
	25-29	21	47.7%	6	13.6%	17	38.6%	27	61.4%	44
	30-49	22	64.7%	3	8.8%	9	26.5%	25	73.5%	34
	50+	7	63.6%	0	0.0%	4	36.4%	7	63.6%	11
	Total	**236**	**56.9%**	**47**	**11.3%**	**132**	**31.8%**	**283**	**68.2%**	**415**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007SP		N	%	N	%	N	%	N	%	
	19 or less	85	53.8%	38	24.1%	35	22.2%	123	77.8%	158
	20-24	118	62.4%	29	15.3%	42	22.2%	147	77.8%	189
	25-29	23	59.0%	3	7.7%	13	33.3%	26	66.7%	39
	30-49	23	59.0%	5	12.8%	11	28.2%	28	71.8%	39
	50+	4	50.0%	2	25.0%	2	25.0%	6	75.0%	8
	Total	**253**	**58.4%**	**77**	**17.8%**	**103**	**23.8%**	**330**	**76.2%**	**433**

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007SU		N	%	N	%	N	%	N	%	
	19 or less	14	82.4%	1	5.9%	2	11.8%	15	88.2%	17
	20-24	16	66.7%	1	4.2%	7	29.2%	17	70.8%	24
	25-29	9	90.0%	0	0.0%	1	10.0%	9	90.0%	10
	30-49	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	50+	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Total	**47**	**79.7%**	**2**	**3.4%**	**10**	**16.9%**	**49**	**83.1%**	**59**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007FA		N	%	N	%	N	%	N	%	
	19 or less	100	58.1%	44	25.6%	28	16.3%	144	83.7%	172
	20-24	113	67.3%	23	13.7%	32	19.0%	136	81.0%	168
	25-29	23	69.7%	5	15.2%	5	15.2%	28	84.8%	33
	30-49	20	54.1%	3	8.1%	14	37.8%	23	62.2%	37
	50+	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Total	**258**	**62.5%**	**75**	**18.2%**	**80**	**19.4%**	**333**	**80.6%**	**413**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008SP		N	%	N	%	N	%	N	%	
	19 or less	115	61.5%	27	14.4%	45	24.1%	142	75.9%	187
	20-24	134	61.2%	35	16.0%	50	22.8%	169	77.2%	219
	25-29	28	70.0%	8	20.0%	4	10.0%	36	90.0%	40
	30-49	21	67.7%	2	6.5%	8	25.8%	23	74.2%	31
	50+	5	62.5%	2	25.0%	1	12.5%	7	87.5%	8
	Total	**303**	**62.5%**	**74**	**15.3%**	**108**	**22.3%**	**377**	**77.7%**	**485**

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008SU		N	%	N	%	N	%	N	%	
	19 or less	21	87.5%	2	8.3%	1	4.2%	23	95.8%	24
	20-24	28	90.3%	1	3.2%	2	6.5%	29	93.5%	31
	25-29	7	87.5%	0	0.0%	1	12.5%	7	87.5%	8
	30-49	6	100.0%	0	0.0%	0	0.0%	6	100.0%	6
	Total	**62**	**89.9%**	**3**	**4.3%**	**4**	**5.8%**	**65**	**94.2%**	**69**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008FA		N	%	N	%	N	%	N	%	
	19 or less	108	59.3%	36	19.8%	38	20.9%	144	79.1%	182
	20-24	131	63.3%	27	13.0%	49	23.7%	158	76.3%	207
	25-29	30	61.2%	6	12.2%	13	26.5%	36	73.5%	49
	30-49	19	65.5%	4	13.8%	6	20.7%	23	79.3%	29
	50+	3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	Total	**291**	**61.8%**	**73**	**15.5%**	**107**	**22.7%**	**364**	**77.3%**	**471**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009SP		N	%	N	%	N	%	N	%	
	19 or less	132	59.5%	45	20.3%	45	20.3%	177	79.7%	222
	20-24	145	63.3%	42	18.3%	42	18.3%	187	81.7%	229
	25-29	36	64.3%	12	21.4%	8	14.3%	48	85.7%	56
	30-49	18	52.9%	4	11.8%	12	35.3%	22	64.7%	34
	50+	7	63.6%	1	9.1%	3	27.3%	8	72.7%	11
	Total	**338**	**61.2%**	**104**	**18.8%**	**110**	**19.9%**	**442**	**80.1%**	**552**

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009SU		N	%	N	%	N	%	N	%	
	19 or less	34	79.1%	3	7.0%	6	14.0%	37	86.0%	43
	20-24	52	69.3%	10	13.3%	13	17.3%	62	82.7%	75
	25-29	10	58.8%	2	11.8%	5	29.4%	12	70.6%	17
	30-49	10	58.8%	2	11.8%	5	29.4%	12	70.6%	17
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**108**	**70.1%**	**17**	**11.0%**	**29**	**18.8%**	**125**	**81.2%**	**154**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009FA		N	%	N	%	N	%	N	%	
	19 or less	142	62.8%	40	17.7%	44	19.5%	182	80.5%	226
	20-24	145	57.3%	47	18.6%	61	24.1%	192	75.9%	253
	25-29	36	65.5%	7	12.7%	12	21.8%	43	78.2%	55
	30-49	37	67.3%	6	10.9%	12	21.8%	43	78.2%	55
	50+	7	70.0%	0	0.0%	3	30.0%	7	70.0%	10
	Total	**367**	**61.3%**	**100**	**16.7%**	**132**	**22.0%**	**467**	**78.0%**	**599**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010SP		N	%	N	%	N	%	N	%	
	19 or less	119	60.4%	41	20.8%	37	18.8%	160	81.2%	197
	20-24	177	63.2%	49	17.5%	54	19.3%	226	80.7%	280
	25-29	52	67.5%	14	18.2%	11	14.3%	66	85.7%	77
	30-49	26	61.9%	5	11.9%	11	26.2%	31	73.8%	42
	50+	8	100.0%	0	0.0%	0	0.0%	8	100.0%	8
	Total	**382**	**63.2%**	**109**	**18.0%**	**113**	**18.7%**	**491**	**81.3%**	**604**

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010SU		N	%	N	%	N	%	N	%	
	19 or less	20	80.0%	3	12.0%	2	8.0%	23	92.0%	25
	20-24	17	77.3%	0	0.0%	5	22.7%	17	77.3%	22
	25-29	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	30-49	5	55.6%	2	22.2%	2	22.2%	7	77.8%	9
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**49**	**77.8%**	**5**	**7.9%**	**9**	**14.3%**	**54**	**85.7%**	**63**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010FA		N	%	N	%	N	%	N	%	
	19 or less	172	68.0%	38	15.0%	43	17.0%	210	83.0%	253
	20-24	161	57.9%	45	16.2%	72	25.9%	206	74.1%	278
	25-29	25	59.5%	3	7.1%	14	33.3%	28	66.7%	42
	30-49	26	65.0%	4	10.0%	10	25.0%	30	75.0%	40
	50+	5	55.6%	1	11.1%	3	33.3%	6	66.7%	9
	Total	**389**	**62.5%**	**91**	**14.6%**	**142**	**22.8%**	**480**	**77.2%**	**622**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011SP		N	%	N	%	N	%	N	%	
	19 or less	142	67.9%	29	13.9%	38	18.2%	171	81.8%	209
	20-24	177	61.0%	41	14.1%	72	24.8%	218	75.2%	290
	25-29	60	77.9%	5	6.5%	12	15.6%	65	84.4%	77
	30-49	40	80.0%	4	8.0%	6	12.0%	44	88.0%	50
	50+	3	37.5%	2	25.0%	3	37.5%	5	62.5%	8
	Total	**422**	**66.6%**	**81**	**12.8%**	**131**	**20.7%**	**503**	**79.3%**	**634**

Grossmont Success and Retention by Age for Subject ASTR

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
	19 or less	179	66.8%	48	17.9%	41	15.3%	227	84.7%	268
	20-24	169	67.3%	37	14.7%	45	17.9%	206	82.1%	251
	25-29	48	69.6%	8	11.6%	13	18.8%	56	81.2%	69
	30-49	33	61.1%	11	20.4%	10	18.5%	44	81.5%	54
	50+	7	77.8%	0	0.0%	2	22.2%	7	77.8%	9
	Total	**436**	**67.0%**	**104**	**16.0%**	**111**	**17.1%**	**540**	**82.9%**	**651**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	19 or less	146	73.0%	23	11.5%	31	15.5%	169	84.5%	200
	20-24	175	75.4%	15	6.5%	42	18.1%	190	81.9%	232
	25-29	46	78.0%	8	13.6%	5	8.5%	54	91.5%	59
	30-49	21	65.6%	4	12.5%	7	21.9%	25	78.1%	32
	50+	2	50.0%	0	0.0%	2	50.0%	2	50.0%	4
	Total	**390**	**74.0%**	**50**	**9.5%**	**87**	**16.5%**	**440**	**83.5%**	**527**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012FA		N	%	N	%	N	%	N	%	
	19 or less	132	67.3%	35	17.9%	29	14.8%	167	85.2%	196
	20-24	126	64.6%	17	8.7%	52	26.7%	143	73.3%	195
	25-29	36	76.6%	5	10.6%	6	12.8%	41	87.2%	47
	30-49	23	79.3%	1	3.4%	5	17.2%	24	82.8%	29
	50+	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Total	**319**	**67.9%**	**58**	**12.3%**	**93**	**19.8%**	**377**	**80.2%**	**470**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SP	19 or less	42	66.7%	6	9.5%	15	23.8%	48	76.2%	63
	20-24	60	65.2%	8	8.7%	24	26.1%	68	73.9%	92
	25-29	18	56.3%	3	9.4%	11	34.4%	21	65.6%	32
	30-49	4	50.0%	0	0.0%	4	50.0%	4	50.0%	8
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**125**	**63.8%**	**17**	**8.7%**	**54**	**27.6%**	**142**	**72.4%**	**196**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SU	19 or less	9	81.8%	0	0.0%	2	18.2%	9	81.8%	11
	20-24	6	100.0%	0	0.0%	0	0.0%	6	100.0%	6
	25-29	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	30-49	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**21**	**91.3%**	**0**	**0.0%**	**2**	**8.7%**	**21**	**91.3%**	**23**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006FA	19 or less	34	65.4%	7	13.5%	11	21.2%	41	78.8%	52
	20-24	55	57.3%	15	15.6%	26	27.1%	70	72.9%	96
	25-29	20	66.7%	3	10.0%	7	23.3%	23	76.7%	30
	30-49	5	50.0%	0	0.0%	5	50.0%	5	50.0%	10
	Total	**114**	**60.6%**	**25**	**13.3%**	**49**	**26.1%**	**139**	**73.9%**	**188**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SP	19 or less	48	71.6%	4	6.0%	15	22.4%	52	77.6%	67
	20-24	74	70.5%	13	12.4%	18	17.1%	87	82.9%	105
	25-29	22	66.7%	3	9.1%	8	24.2%	25	75.8%	33
	30-49	11	55.0%	2	10.0%	7	35.0%	13	65.0%	20
	Total	**155**	**68.9%**	**22**	**9.8%**	**48**	**21.3%**	**177**	**78.7%**	**225**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SU	19 or less	8	80.0%	1	10.0%	1	10.0%	9	90.0%	10
	20-24	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	25-29	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	30-49	1	33.3%	0	0.0%	2	66.7%	1	33.3%	3
	Total	**13**	**72.2%**	**1**	**5.6%**	**4**	**22.2%**	**14**	**77.8%**	**18**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007FA	19 or less	37	51.4%	15	20.8%	20	27.8%	52	72.2%	72
	20-24	46	46.5%	14	14.1%	39	39.4%	60	60.6%	99
	25-29	15	48.4%	8	25.8%	8	25.8%	23	74.2%	31
	30-49	12	75.0%	0	0.0%	4	25.0%	12	75.0%	16
	Total	**110**	**50.5%**	**37**	**17.0%**	**71**	**32.6%**	**147**	**67.4%**	**218**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SP	19 or less	31	59.6%	9	17.3%	12	23.1%	40	76.9%	52
	20-24	62	53.9%	16	13.9%	37	32.2%	78	67.8%	115
	25-29	29	69.0%	6	14.3%	7	16.7%	35	83.3%	42
	30-49	11	73.3%	1	6.7%	3	20.0%	12	80.0%	15
	50+	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Total	**135**	**59.5%**	**32**	**14.1%**	**60**	**26.4%**	**167**	**73.6%**	**227**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SU	19 or less	30	88.2%	3	8.8%	1	2.9%	33	97.1%	34
	20-24	3	30.0%	2	20.0%	5	50.0%	5	50.0%	10
	25-29	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	30-49	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**36**	**75.0%**	**5**	**10.4%**	**7**	**14.6%**	**41**	**85.4%**	**48**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008FA	19 or less	45	67.2%	10	14.9%	12	17.9%	55	82.1%	67
	20-24	52	52.0%	24	24.0%	24	24.0%	76	76.0%	100
	25-29	16	55.2%	8	27.6%	5	17.2%	24	82.8%	29
	30-49	13	76.5%	0	0.0%	4	23.5%	13	76.5%	17
	50+	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Total	**126**	**58.9%**	**42**	**19.6%**	**46**	**21.5%**	**168**	**78.5%**	**214**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SP	19 or less	45	63.4%	14	19.7%	12	16.9%	59	83.1%	71
	20-24	83	64.3%	27	20.9%	19	14.7%	110	85.3%	129
	25-29	21	60.0%	8	22.9%	6	17.1%	29	82.9%	35
	30-49	11	64.7%	2	11.8%	4	23.5%	13	76.5%	17
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**162**	**63.8%**	**51**	**20.1%**	**41**	**16.1%**	**213**	**83.9%**	**254**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009SU		N	%	N	%	N	%	N	%	
	19 or less	39	92.9%	2	4.8%	1	2.4%	41	97.6%	42
	20-24	6	66.7%	1	11.1%	2	22.2%	7	77.8%	9
	25-29	4	80.0%	0	0.0%	1	20.0%	4	80.0%	5
	30-49	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**51**	**87.9%**	**3**	**5.2%**	**4**	**6.9%**	**54**	**93.1%**	**58**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009FA		N	%	N	%	N	%	N	%	
	19 or less	56	65.9%	19	22.4%	10	11.8%	75	88.2%	85
	20-24	75	57.3%	22	16.8%	34	26.0%	97	74.0%	131
	25-29	25	56.8%	8	18.2%	11	25.0%	33	75.0%	44
	30-49	15	62.5%	4	16.7%	5	20.8%	19	79.2%	24
	50+	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Total	**175**	**60.8%**	**53**	**18.4%**	**60**	**20.8%**	**228**	**79.2%**	**288**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010SP		N	%	N	%	N	%	N	%	
	19 or less	60	70.6%	12	14.1%	13	15.3%	72	84.7%	85
	20-24	83	60.6%	23	16.8%	31	22.6%	106	77.4%	137
	25-29	33	66.0%	6	12.0%	11	22.0%	39	78.0%	50
	30-49	22	64.7%	3	8.8%	9	26.5%	25	73.5%	34
	50+	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Total	**201**	**64.8%**	**45**	**14.5%**	**64**	**20.6%**	**246**	**79.4%**	**310**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010SU		N	%	N	%	N	%	N	%	
	19 or less	10	90.9%	1	9.1%	0	0.0%	11	100.0%	11
	20-24	11	100.0%	0	0.0%	0	0.0%	11	100.0%	11
	25-29	1	33.3%	2	66.7%	0	0.0%	3	100.0%	3
	30-49	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Total	**25**	**89.3%**	**3**	**10.7%**	**0**	**0.0%**	**28**	**100.0%**	**28**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2010FA		N	%	N	%	N	%	N	%	
	19 or less	35	54.7%	14	21.9%	15	23.4%	49	76.6%	64
	20-24	84	58.7%	25	17.5%	34	23.8%	109	76.2%	143
	25-29	31	64.6%	8	16.7%	9	18.8%	39	81.3%	48
	30-49	20	71.4%	4	14.3%	4	14.3%	24	85.7%	28
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**171**	**60.2%**	**51**	**18.0%**	**62**	**21.8%**	**222**	**78.2%**	**284**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011SP		N	%	N	%	N	%	N	%	
	19 or less	50	69.4%	13	18.1%	9	12.5%	63	87.5%	72
	20-24	76	59.8%	26	20.5%	25	19.7%	102	80.3%	127
	25-29	32	72.7%	6	13.6%	6	13.6%	38	86.4%	44
	30-49	19	70.4%	2	7.4%	6	22.2%	21	77.8%	27
	50+	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Total	**179**	**65.6%**	**47**	**17.2%**	**47**	**17.2%**	**226**	**82.8%**	**273**

Grossmont Success and Retention by Age for Subject PHYC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011SU		N	%	N	%	N	%	N	%	
	19 or less	5	83.3%	1	16.7%	0	0.0%	6	100.0%	6
	20-24	13	100.0%	0	0.0%	0	0.0%	13	100.0%	13
	25-29	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	30-49	4	66.7%	2	33.3%	0	0.0%	6	100.0%	6
	50+	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Total	**26**	**86.7%**	**4**	**13.3%**	**0**	**0.0%**	**30**	**100.0%**	**30**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
	19 or less	49	68.1%	10	13.9%	13	18.1%	59	81.9%	72
	20-24	95	67.9%	21	15.0%	24	17.1%	116	82.9%	140
	25-29	31	68.9%	3	6.7%	11	24.4%	34	75.6%	45
	30-49	15	55.6%	2	7.4%	10	37.0%	17	63.0%	27
	50+	1	33.3%	0	0.0%	2	66.7%	1	33.3%	3
	Total	**191**	**66.6%**	**36**	**12.5%**	**60**	**20.9%**	**227**	**79.1%**	**287**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	19 or less	39	57.4%	18	26.5%	11	16.2%	57	83.8%	68
	20-24	90	67.7%	15	11.3%	28	21.1%	105	78.9%	133
	25-29	26	70.3%	4	10.8%	7	18.9%	30	81.1%	37
	30-49	20	76.9%	4	15.4%	2	7.7%	24	92.3%	26
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**177**	**66.5%**	**41**	**15.4%**	**48**	**18.0%**	**218**	**82.0%**	**266**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012FA		N	%	N	%	N	%	N	%	
	19 or less	31	66.0%	11	23.4%	5	10.6%	42	89.4%	47
	20-24	119	76.3%	26	16.7%	11	7.1%	145	92.9%	156
	25-29	27	71.1%	7	18.4%	4	10.5%	34	89.5%	38
	30-49	19	57.6%	2	6.1%	12	36.4%	21	63.6%	33
	50+	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Total	**196**	**71.3%**	**46**	**16.7%**	**33**	**12.0%**	**242**	**88.0%**	**275**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006SP		N	%	N	%	N	%	N	%	
	19 or less	31	67.4%	5	10.9%	10	21.7%	36	78.3%	46
	20-24	48	72.7%	5	7.6%	13	19.7%	53	80.3%	66
	25-29	5	62.5%	1	12.5%	2	25.0%	6	75.0%	8
	30-49	8	72.7%	0	0.0%	3	27.3%	8	72.7%	11
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**93**	**70.5%**	**11**	**8.3%**	**28**	**21.2%**	**104**	**78.8%**	**132**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006SU		N	%	N	%	N	%	N	%	
	19 or less	0	0.0%	1	33.3%	2	66.7%	1	33.3%	3
	20-24	8	72.7%	0	0.0%	3	27.3%	8	72.7%	11
	25-29	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	30-49	2	33.3%	0	0.0%	4	66.7%	2	33.3%	6
	Total	**12**	**54.5%**	**1**	**4.5%**	**9**	**40.9%**	**13**	**59.1%**	**22**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2006FA		N	%	N	%	N	%	N	%	
	19 or less	35	70.0%	9	18.0%	6	12.0%	44	88.0%	50
	20-24	42	61.8%	9	13.2%	17	25.0%	51	75.0%	68
	25-29	10	76.9%	0	0.0%	3	23.1%	10	76.9%	13
	30-49	7	53.8%	2	15.4%	4	30.8%	9	69.2%	13
	50+	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Total	**98**	**66.2%**	**20**	**13.5%**	**30**	**20.3%**	**118**	**79.7%**	**148**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007SP		N	%	N	%	N	%	N	%	
	19 or less	27	51.9%	7	13.5%	18	34.6%	34	65.4%	52
	20-24	39	61.9%	14	22.2%	10	15.9%	53	84.1%	63
	25-29	4	50.0%	1	12.5%	3	37.5%	5	62.5%	8
	30-49	9	81.8%	1	9.1%	1	9.1%	10	90.9%	11
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**80**	**59.3%**	**23**	**17.0%**	**32**	**23.7%**	**103**	**76.3%**	**135**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007SU		N	%	N	%	N	%	N	%	
	19 or less	2	50.0%	0	0.0%	2	50.0%	2	50.0%	4
	20-24	3	50.0%	0	0.0%	3	50.0%	3	50.0%	6
	25-29	3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	30-49	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**10**	**58.8%**	**0**	**0.0%**	**7**	**41.2%**	**10**	**58.8%**	**17**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2007FA		N	%	N	%	N	%	N	%	
	19 or less	39	69.6%	9	16.1%	8	14.3%	48	85.7%	56
	20-24	64	66.0%	8	8.2%	25	25.8%	72	74.2%	97
	25-29	9	69.2%	3	23.1%	1	7.7%	12	92.3%	13
	30-49	8	80.0%	1	10.0%	1	10.0%	9	90.0%	10
	50+	3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	Total	**123**	**68.3%**	**21**	**11.7%**	**36**	**20.0%**	**144**	**80.0%**	**180**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008SP		N	%	N	%	N	%	N	%	
	19 or less	46	68.7%	8	11.9%	13	19.4%	54	80.6%	67
	20-24	69	68.3%	11	10.9%	21	20.8%	80	79.2%	101
	25-29	13	68.4%	6	31.6%	0	0.0%	19	100.0%	19
	30-49	8	57.1%	2	14.3%	4	28.6%	10	71.4%	14
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**138**	**68.0%**	**27**	**13.3%**	**38**	**18.7%**	**165**	**81.3%**	**203**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008SU		N	%	N	%	N	%	N	%	
	19 or less	2	50.0%	1	25.0%	1	25.0%	3	75.0%	4
	20-24	4	50.0%	0	0.0%	4	50.0%	4	50.0%	8
	25-29	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	30-49	6	75.0%	1	12.5%	1	12.5%	7	87.5%	8
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**14**	**58.3%**	**3**	**12.5%**	**7**	**29.2%**	**17**	**70.8%**	**24**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2008FA		N	%	N	%	N	%	N	%	
	19 or less	40	55.6%	14	19.4%	18	25.0%	54	75.0%	72
	20-24	53	59.6%	15	16.9%	21	23.6%	68	76.4%	89
	25-29	12	75.0%	0	0.0%	4	25.0%	12	75.0%	16
	30-49	4	44.4%	2	22.2%	3	33.3%	6	66.7%	9
	Total	**109**	**58.6%**	**31**	**16.7%**	**46**	**24.7%**	**140**	**75.3%**	**186**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2009SP		N	%	N	%	N	%	N	%	
	19 or less	38	48.7%	21	26.9%	19	24.4%	59	75.6%	78
	20-24	65	59.6%	21	19.3%	23	21.1%	86	78.9%	109
	25-29	16	72.7%	1	4.5%	5	22.7%	17	77.3%	22
	30-49	12	57.1%	2	9.5%	7	33.3%	14	66.7%	21
	50+	1	33.3%	2	66.7%	0	0.0%	3	100.0%	3
	Total	**132**	**56.7%**	**47**	**20.2%**	**54**	**23.2%**	**179**	**76.8%**	**233**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SU	19 or less	6	75.0%	0	0.0%	2	25.0%	6	75.0%	8
	20-24	4	40.0%	2	20.0%	4	40.0%	6	60.0%	10
	25-29	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Total	**13**	**59.1%**	**3**	**13.6%**	**6**	**27.3%**	**16**	**72.7%**	**22**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009FA	19 or less	44	58.7%	15	20.0%	16	21.3%	59	78.7%	75
	20-24	52	62.7%	12	14.5%	19	22.9%	64	77.1%	83
	25-29	17	58.6%	3	10.3%	9	31.0%	20	69.0%	29
	30-49	5	35.7%	1	7.1%	8	57.1%	6	42.9%	14
	50+	4	66.7%	0	0.0%	2	33.3%	4	66.7%	6
	Total	**122**	**58.9%**	**31**	**15.0%**	**54**	**26.1%**	**153**	**73.9%**	**207**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SP	19 or less	43	45.7%	23	24.5%	28	29.8%	66	70.2%	94
	20-24	104	64.2%	22	13.6%	36	22.2%	126	77.8%	162
	25-29	12	66.7%	1	5.6%	5	27.8%	13	72.2%	18
	30-49	6	33.3%	0	0.0%	12	66.7%	6	33.3%	18
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**166**	**56.7%**	**46**	**15.7%**	**81**	**27.6%**	**212**	**72.4%**	**293**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SU	19 or less	3	30.0%	4	40.0%	3	30.0%	7	70.0%	10
	20-24	9	69.2%	4	30.8%	0	0.0%	13	100.0%	13
	25-29	6	75.0%	0	0.0%	2	25.0%	6	75.0%	8
	30-49	2	50.0%	0	0.0%	2	50.0%	2	50.0%	4
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**21**	**58.3%**	**8**	**22.2%**	**7**	**19.4%**	**29**	**80.6%**	**36**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010FA	19 or less	52	65.0%	13	16.3%	15	18.8%	65	81.3%	80
	20-24	68	61.3%	15	13.5%	28	25.2%	83	74.8%	111
	25-29	16	50.0%	3	9.4%	13	40.6%	19	59.4%	32
	30-49	12	46.2%	6	23.1%	8	30.8%	18	69.2%	26
	50+	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Total	**149**	**59.4%**	**38**	**15.1%**	**64**	**25.5%**	**187**	**74.5%**	**251**

Term	Age	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SP	19 or less	62	58.5%	22	20.8%	22	20.8%	84	79.2%	106
	20-24	69	51.1%	38	28.1%	28	20.7%	107	79.3%	135
	25-29	7	31.8%	6	27.3%	9	40.9%	13	59.1%	22
	30-49	12	44.4%	8	29.6%	7	25.9%	20	74.1%	27
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**152**	**52.1%**	**74**	**25.3%**	**66**	**22.6%**	**226**	**77.4%**	**292**

Grossmont Success and Retention by Age for Subject PSC

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011SU		N	%	N	%	N	%	N	%	
	19 or less	4	66.7%	2	33.3%	0	0.0%	6	100.0%	6
	20-24	6	27.3%	12	54.5%	4	18.2%	18	81.8%	22
	25-29	6	66.7%	1	11.1%	2	22.2%	7	77.8%	9
	30-49	4	57.1%	3	42.9%	0	0.0%	7	100.0%	7
	50+	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Total	**23**	**48.9%**	**18**	**38.3%**	**6**	**12.8%**	**41**	**87.2%**	**47**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
	19 or less	61	57.0%	25	23.4%	21	19.6%	86	80.4%	107
	20-24	62	56.4%	14	12.7%	34	30.9%	76	69.1%	110
	25-29	19	61.3%	1	3.2%	11	35.5%	20	64.5%	31
	30-49	20	74.1%	1	3.7%	6	22.2%	21	77.8%	27
	50+	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**163**	**59.1%**	**41**	**14.9%**	**72**	**26.1%**	**204**	**73.9%**	**276**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	19 or less	51	68.9%	9	12.2%	14	18.9%	60	81.1%	74
	20-24	61	57.5%	12	11.3%	33	31.1%	73	68.9%	106
	25-29	10	40.0%	4	16.0%	11	44.0%	14	56.0%	25
	30-49	4	21.1%	3	15.8%	12	63.2%	7	36.8%	19
	Total	**126**	**56.3%**	**28**	**12.5%**	**70**	**31.3%**	**154**	**68.8%**	**224**

Term	Age	Success		No Success		Withdrawal		Retention		Total
2012FA		N	%	N	%	N	%	N	%	
	19 or less	54	58.7%	17	18.5%	21	22.8%	71	77.2%	92
	20-24	62	55.9%	17	15.3%	32	28.8%	79	71.2%	111
	25-29	22	66.7%	7	21.2%	4	12.1%	29	87.9%	33
	30-49	10	50.0%	2	10.0%	8	40.0%	12	60.0%	20
	50+	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**150**	**58.1%**	**43**	**16.7%**	**65**	**25.2%**	**193**	**74.8%**	**258**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SP	Male	116	57.1%	33	16.3%	54	26.6%	149	73.4%	203
	Female	101	55.8%	27	14.9%	53	29.3%	128	70.7%	181
	Not Reported	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Total	**217**	**56.4%**	**60**	**15.6%**	**108**	**28.1%**	**277**	**71.9%**	**385**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SU	Male	10	83.3%	2	16.7%	0	0.0%	12	100.0%	12
	Female	12	66.7%	3	16.7%	3	16.7%	15	83.3%	18
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**23**	**74.2%**	**5**	**16.1%**	**3**	**9.7%**	**28**	**90.3%**	**31**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006FA	Male	105	56.8%	20	10.8%	60	32.4%	125	67.6%	185
	Female	126	56.0%	27	12.0%	72	32.0%	153	68.0%	225
	Not Reported	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Total	**236**	**56.9%**	**47**	**11.3%**	**132**	**31.8%**	**283**	**68.2%**	**415**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SP	Male	127	60.2%	33	15.6%	51	24.2%	160	75.8%	211
	Female	124	56.6%	44	20.1%	51	23.3%	168	76.7%	219
	Not Reported	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Total	**253**	**58.4%**	**77**	**17.8%**	**103**	**23.8%**	**330**	**76.2%**	**433**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007SU		N	%	N	%	N	%	N	%	
	Male	19	79.2%	2	8.3%	3	12.5%	21	87.5%	24
	Female	28	80.0%	0	0.0%	7	20.0%	28	80.0%	35
	Total	**47**	**79.7%**	**2**	**3.4%**	**10**	**16.9%**	**49**	**83.1%**	**59**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007FA		N	%	N	%	N	%	N	%	
	Male	130	65.0%	37	18.5%	33	16.5%	167	83.5%	200
	Female	126	59.7%	38	18.0%	47	22.3%	164	77.7%	211
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**258**	**62.5%**	**75**	**18.2%**	**80**	**19.4%**	**333**	**80.6%**	**413**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SP		N	%	N	%	N	%	N	%	
	Male	153	0.632	44	0.182	45	0.186	197	0.814	242
	Female	149	0.616	30	0.124	63	0.26	179	0.74	242
	Not Reported	1	1	0	0	0	0	1	1	1
	Total	**303**	**0.625**	**74**	**0.153**	**108**	**0.223**	**377**	**0.777**	**485**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SU		N	%	N	%	N	%	N	%	
	Male	20	0.833	2	0.083	2	0.083	22	0.917	24
	Female	42	0.933	1	0.022	2	0.044	43	0.956	45
	Total	**62**	**0.899**	**3**	**0.043**	**4**	**0.058**	**65**	**0.942**	**69**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008FA		N	%	N	%	N	%	N	%	
	Male	149	0.645	35	0.152	47	0.203	184	0.797	231
	Female	142	0.592	38	0.158	60	0.25	180	0.75	240
	Total	**291**	**0.618**	**73**	**0.155**	**107**	**0.227**	**364**	**0.773**	**471**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009SP		N	%	N	%	N	%	N	%	
	Male	151	0.594	56	0.22	47	0.185	207	0.815	254
	Female	186	0.628	48	0.162	62	0.209	234	0.791	296
	Not Reported	1	0.5	0	0	1	0.5	1	0.5	2
	Total	**338**	**0.612**	**104**	**0.188**	**110**	**0.199**	**442**	**0.801**	**552**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SU	Male	50	0.833	3	0.05	7	0.117	53	0.883	60
	Female	58	0.617	14	0.149	22	0.234	72	0.766	94
	Total	**108**	**0.701**	**17**	**0.11**	**29**	**0.188**	**125**	**0.812**	**154**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009FA	Male	173	65.3%	42	15.8%	50	18.9%	215	81.1%	265
	Female	191	58.6%	56	17.2%	79	24.2%	247	75.8%	326
	Not Reported	3	37.5%	2	25.0%	3	37.5%	5	62.5%	8
	Total	**367**	**61.3%**	**100**	**16.7%**	**132**	**22.0%**	**467**	**78.0%**	**599**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SP	Male	197	63.3%	56	18.0%	58	18.6%	253	81.4%	311
	Female	183	62.9%	53	18.2%	55	18.9%	236	81.1%	291
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**382**	**63.2%**	**109**	**18.0%**	**113**	**18.7%**	**491**	**81.3%**	**604**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SU	Male	22	75.9%	3	10.3%	4	13.8%	25	86.2%	29
	Female	27	79.4%	2	5.9%	5	14.7%	29	85.3%	34
	Total	**49**	**77.8%**	**5**	**7.9%**	**9**	**14.3%**	**54**	**85.7%**	**63**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010FA	Male	198	62.9%	47	14.9%	70	22.2%	245	77.8%	315
	Female	191	62.4%	43	14.1%	72	23.5%	234	76.5%	306
	Not Reported	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Total	**389**	**62.5%**	**91**	**14.6%**	**142**	**22.8%**	**480**	**77.2%**	**622**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SP	Male	234	69.0%	45	13.3%	60	17.7%	279	82.3%	339
	Female	188	63.7%	36	12.2%	71	24.1%	224	75.9%	295
	Total	**422**	**66.6%**	**81**	**12.8%**	**131**	**20.7%**	**503**	**79.3%**	**634**

Grossmont Success and Retention by Gender for Subject ASTR

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011SU	NONE	N	%	N	%	N	%	N	%	

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
	Male	237	69.1%	50	14.6%	56	16.3%	287	83.7%	343
	Female	194	64.0%	54	17.8%	55	18.2%	248	81.8%	303
	Not Reported	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Total	**436**	**67.0%**	**104**	**16.0%**	**111**	**17.1%**	**540**	**82.9%**	**651**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	Male	207	77.8%	29	10.9%	30	11.3%	236	88.7%	266
	Female	182	70.5%	20	7.8%	56	21.7%	202	78.3%	258
	Not Reported	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Total	**390**	**74.0%**	**50**	**9.5%**	**87**	**16.5%**	**440**	**83.5%**	**527**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2012FA		N	%	N	%	N	%	N	%	
	Male	178	69.8%	34	13.3%	43	16.9%	212	83.1%	255
	Female	137	65.6%	24	11.5%	48	23.0%	161	77.0%	209
	Not Reported	4	66.7%	0	0.0%	2	33.3%	4	66.7%	6
	Total	**319**	**67.9%**	**58**	**12.3%**	**93**	**19.8%**	**377**	**80.2%**	**470**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2006SP		N	%	N	%	N	%	N	%	
	Male	86	60.6%	14	9.9%	42	29.6%	100	70.4%	142
	Female	39	72.2%	3	5.6%	12	22.2%	42	77.8%	54
	Total	**125**	**63.8%**	**17**	**8.7%**	**54**	**27.6%**	**142**	**72.4%**	**196**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2006SU		N	%	N	%	N	%	N	%	
	Male	7	100.0%	0	0.0%	0	0.0%	7	100.0%	7
	Female	14	87.5%	0	0.0%	2	12.5%	14	87.5%	16
	Total	**21**	**91.3%**	**0**	**0.0%**	**2**	**8.7%**	**21**	**91.3%**	**23**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2006FA		N	%	N	%	N	%	N	%	
	Male	77	63.6%	16	13.2%	28	23.1%	93	76.9%	121
	Female	37	55.2%	9	13.4%	21	31.3%	46	68.7%	67
	Total	**114**	**60.6%**	**25**	**13.3%**	**49**	**26.1%**	**139**	**73.9%**	**188**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007SP		N	%	N	%	N	%	N	%	
	Male	106	69.3%	17	11.1%	30	19.6%	123	80.4%	153
	Female	49	69.0%	5	7.0%	17	23.9%	54	76.1%	71
	Not Reported	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Total	**155**	**68.9%**	**22**	**9.8%**	**48**	**21.3%**	**177**	**78.7%**	**225**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007SU		N	%	N	%	N	%	N	%	
	Male	7	77.8%	1	11.1%	1	11.1%	8	88.9%	9
	Female	6	66.7%	0	0.0%	3	33.3%	6	66.7%	9
	Total	**13**	**72.2%**	**1**	**5.6%**	**4**	**22.2%**	**14**	**77.8%**	**18**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007FA		N	%	N	%	N	%	N	%	
	Male	78	51.3%	23	15.1%	51	33.6%	101	66.4%	152
	Female	32	48.5%	14	21.2%	20	30.3%	46	69.7%	66
	Total	**110**	**50.5%**	**37**	**17.0%**	**71**	**32.6%**	**147**	**67.4%**	**218**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SP		N	%	N	%	N	%	N	%	
	Male	92	58.6%	25	15.9%	40	25.5%	117	74.5%	157
	Female	43	61.4%	7	10.0%	20	28.6%	50	71.4%	70
	Total	**135**	**59.5%**	**32**	**14.1%**	**60**	**26.4%**	**167**	**73.6%**	**227**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SU		N	%	N	%	N	%	N	%	
	Male	9	56.3%	4	25.0%	3	18.8%	13	81.3%	16
	Female	27	84.4%	1	3.1%	4	12.5%	28	87.5%	32
	Total	**36**	**75.0%**	**5**	**10.4%**	**7**	**14.6%**	**41**	**85.4%**	**48**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008FA		N	%	N	%	N	%	N	%	
	Male	84	54.5%	33	21.4%	37	24.0%	117	76.0%	154
	Female	40	69.0%	9	15.5%	9	15.5%	49	84.5%	58
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**126**	**58.9%**	**42**	**19.6%**	**46**	**21.5%**	**168**	**78.5%**	**214**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009SP		N	%	N	%	N	%	N	%	
	Male	110	61.1%	36	20.0%	34	18.9%	146	81.1%	180
	Female	51	69.9%	15	20.5%	7	9.6%	66	90.4%	73
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**162**	**63.8%**	**51**	**20.1%**	**41**	**16.1%**	**213**	**83.9%**	**254**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009SU		N	%	N	%	N	%	N	%	
	Male	22	91.7%	2	8.3%	0	0.0%	24	100.0%	24
	Female	29	85.3%	1	2.9%	4	11.8%	30	88.2%	34
	Total	**51**	**87.9%**	**3**	**5.2%**	**4**	**6.9%**	**54**	**93.1%**	**58**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009FA		N	%	N	%	N	%	N	%	
	Male	128	60.4%	41	19.3%	43	20.3%	169	79.7%	212
	Female	47	61.8%	12	15.8%	17	22.4%	59	77.6%	76
	Total	**175**	**60.8%**	**53**	**18.4%**	**60**	**20.8%**	**228**	**79.2%**	**288**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010SP		N	%	N	%	N	%	N	%	
	Male	139	64.4%	33	15.3%	44	20.4%	172	79.6%	216
	Female	59	66.3%	11	12.4%	19	21.3%	70	78.7%	89
	Not Reported	3	60.0%	1	20.0%	1	20.0%	4	80.0%	5
	Total	**201**	**64.8%**	**45**	**14.5%**	**64**	**20.6%**	**246**	**79.4%**	**310**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010SU		N	%	N	%	N	%	N	%	
	Male	13	86.7%	2	13.3%	0	0.0%	15	100.0%	15
	Female	12	92.3%	1	7.7%	0	0.0%	13	100.0%	13
	Total	**25**	**89.3%**	**3**	**10.7%**	**0**	**0.0%**	**28**	**100.0%**	**28**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010FA		N	%	N	%	N	%	N	%	
	Male	120	60.3%	38	19.1%	41	20.6%	158	79.4%	199
	Female	49	60.5%	13	16.0%	19	23.5%	62	76.5%	81
	Not Reported	2	50.0%	0	0.0%	2	50.0%	2	50.0%	4
	Total	**171**	**60.2%**	**51**	**18.0%**	**62**	**21.8%**	**222**	**78.2%**	**284**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011SP		N	%	N	%	N	%	N	%	
	Male	123	64.1%	31	16.1%	38	19.8%	154	80.2%	192
	Female	53	68.8%	15	19.5%	9	11.7%	68	88.3%	77
	Not Reported	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Total	**179**	**65.6%**	**47**	**17.2%**	**47**	**17.2%**	**226**	**82.8%**	**273**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011SU		N	%	N	%	N	%	N	%	
	Male	12	85.7%	2	14.3%	0	0.0%	14	100.0%	14
	Female	14	87.5%	2	12.5%	0	0.0%	16	100.0%	16
	Total	**26**	**86.7%**	**4**	**13.3%**	**0**	**0.0%**	**30**	**100.0%**	**30**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
	Male	137	69.2%	20	10.1%	41	20.7%	157	79.3%	198
	Female	51	60.7%	15	17.9%	18	21.4%	66	78.6%	84
	Not Reported	3	60.0%	1	20.0%	1	20.0%	4	80.0%	5
	Total	**191**	**66.6%**	**36**	**12.5%**	**60**	**20.9%**	**227**	**79.1%**	**287**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	Male	111	63.4%	33	18.9%	31	17.7%	144	82.3%	175
	Female	63	72.4%	7	8.0%	17	19.5%	70	80.5%	87
	Not Reported	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Total	**177**	**66.5%**	**41**	**15.4%**	**48**	**18.0%**	**218**	**82.0%**	**266**

Grossmont Success and Retention by Gender for Subject PHYC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2012FA		N	%	N	%	N	%	N	%	
	Male	126	68.1%	37	20.0%	22	11.9%	163	88.1%	185
	Female	66	79.5%	7	8.4%	10	12.0%	73	88.0%	83
	Not Reported	4	57.1%	2	28.6%	1	14.3%	6	85.7%	7
	Total	**196**	**71.3%**	**46**	**16.7%**	**33**	**12.0%**	**242**	**88.0%**	**275**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SP	Male	44	72.1%	4	6.6%	13	21.3%	48	78.7%	61
	Female	49	69.0%	7	9.9%	15	21.1%	56	78.9%	71
	Total	**93**	**70.5%**	**11**	**8.3%**	**28**	**21.2%**	**104**	**78.8%**	**132**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SU	Male	5	71.4%	0	0.0%	2	28.6%	5	71.4%	7
	Female	7	46.7%	1	6.7%	7	46.7%	8	53.3%	15
	Total	**12**	**54.5%**	**1**	**4.5%**	**9**	**40.9%**	**13**	**59.1%**	**22**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006FA	Male	41	62.1%	9	13.6%	16	24.2%	50	75.8%	66
	Female	57	70.4%	10	12.3%	14	17.3%	67	82.7%	81
	Not Reported	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Total	**98**	**66.2%**	**20**	**13.5%**	**30**	**20.3%**	**118**	**79.7%**	**148**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SP	Male	42	53.8%	14	17.9%	22	28.2%	56	71.8%	78
	Female	38	66.7%	9	15.8%	10	17.5%	47	82.5%	57
	Total	**80**	**59.3%**	**23**	**17.0%**	**32**	**23.7%**	**103**	**76.3%**	**135**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007SU		N	%	N	%	N	%	N	%	
	Male	5	62.5%	0	0.0%	3	37.5%	5	62.5%	8
	Female	5	55.6%	0	0.0%	4	44.4%	5	55.6%	9
	Total	**10**	**58.8%**	**0**	**0.0%**	**7**	**41.2%**	**10**	**58.8%**	**17**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2007FA		N	%	N	%	N	%	N	%	
	Male	59	60.8%	14	14.4%	24	24.7%	73	75.3%	97
	Female	62	76.5%	7	8.6%	12	14.8%	69	85.2%	81
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**123**	**68.3%**	**21**	**11.7%**	**36**	**20.0%**	**144**	**80.0%**	**180**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SP		N	%	N	%	N	%	N	%	
	Male	61	62.2%	14	14.3%	23	23.5%	75	76.5%	98
	Female	77	73.3%	13	12.4%	15	14.3%	90	85.7%	105
	Total	**138**	**68.0%**	**27**	**13.3%**	**38**	**18.7%**	**165**	**81.3%**	**203**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008SU		N	%	N	%	N	%	N	%	
	Male	3	42.9%	1	14.3%	3	42.9%	4	57.1%	7
	Female	11	64.7%	2	11.8%	4	23.5%	13	76.5%	17
	Total	**14**	**58.3%**	**3**	**12.5%**	**7**	**29.2%**	**17**	**70.8%**	**24**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2008FA		N	%	N	%	N	%	N	%	
	Male	56	52.8%	21	19.8%	29	27.4%	77	72.6%	106
	Female	51	65.4%	10	12.8%	17	21.8%	61	78.2%	78
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**109**	**58.6%**	**31**	**16.7%**	**46**	**24.7%**	**140**	**75.3%**	**186**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009SP		N	%	N	%	N	%	N	%	
	Male	72	58.5%	24	19.5%	27	22.0%	96	78.0%	123
	Female	60	55.0%	23	21.1%	26	23.9%	83	76.1%	109
	Not Reported	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Total	**132**	**56.7%**	**47**	**20.2%**	**54**	**23.2%**	**179**	**76.8%**	**233**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009SU		N	%	N	%	N	%	N	%	
	Male	7	50.0%	2	14.3%	5	35.7%	9	64.3%	14
	Female	6	75.0%	1	12.5%	1	12.5%	7	87.5%	8
	Total	**13**	**59.1%**	**3**	**13.6%**	**6**	**27.3%**	**16**	**72.7%**	**22**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2009FA		N	%	N	%	N	%	N	%	
	Male	56	59.6%	18	19.1%	20	21.3%	74	78.7%	94
	Female	66	58.4%	13	11.5%	34	30.1%	79	69.9%	113
	Total	**122**	**58.9%**	**31**	**15.0%**	**54**	**26.1%**	**153**	**73.9%**	**207**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010SP		N	%	N	%	N	%	N	%	
	Male	64	53.3%	22	18.3%	34	28.3%	86	71.7%	120
	Female	102	59.0%	24	13.9%	47	27.2%	126	72.8%	173
	Total	**166**	**56.7%**	**46**	**15.7%**	**81**	**27.6%**	**212**	**72.4%**	**293**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010SU		N	%	N	%	N	%	N	%	
	Male	10	62.5%	4	25.0%	2	12.5%	14	87.5%	16
	Female	11	55.0%	4	20.0%	5	25.0%	15	75.0%	20
	Total	**21**	**58.3%**	**8**	**22.2%**	**7**	**19.4%**	**29**	**80.6%**	**36**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2010FA		N	%	N	%	N	%	N	%	
	Male	58	55.2%	21	20.0%	26	24.8%	79	75.2%	105
	Female	88	62.0%	17	12.0%	37	26.1%	105	73.9%	142
	Not Reported	3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	Total	**149**	**59.4%**	**38**	**15.1%**	**64**	**25.5%**	**187**	**74.5%**	**251**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
2011SP		N	%	N	%	N	%	N	%	
	Male	63	56.8%	28	25.2%	20	18.0%	91	82.0%	111
	Female	89	49.2%	46	25.4%	46	25.4%	135	74.6%	181
	Total	**152**	**52.1%**	**74**	**25.3%**	**66**	**22.6%**	**226**	**77.4%**	**292**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SU	Male	13	52.0%	9	36.0%	3	12.0%	22	88.0%	25
	Female	10	45.5%	9	40.9%	3	13.6%	19	86.4%	22
	Total	**23**	**48.9%**	**18**	**38.3%**	**6**	**12.8%**	**41**	**87.2%**	**47**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011FA	Male	72	59.5%	19	15.7%	30	24.8%	91	75.2%	121
	Female	89	58.2%	22	14.4%	42	27.5%	111	72.5%	153
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**163**	**59.1%**	**41**	**14.9%**	**72**	**26.1%**	**204**	**73.9%**	**276**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SP	Male	60	57.7%	15	14.4%	29	27.9%	75	72.1%	104
	Female	65	54.6%	13	10.9%	41	34.5%	78	65.5%	119
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**126**	**56.3%**	**28**	**12.5%**	**70**	**31.3%**	**154**	**68.8%**	**224**

Grossmont Success and Retention by Gender for Subject PSC

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012FA	Male	77	60.2%	19	14.8%	32	25.0%	96	75.0%	128
	Female	73	56.2%	24	18.5%	33	25.4%	97	74.6%	130
	Total	**150**	**58.1%**	**43**	**16.7%**	**65**	**25.2%**	**193**	**74.8%**	**258**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2013SP	Male	50	57.5%	15	17.2%	22	25.3%	65	74.7%	87
	Female	58	54.2%	17	15.9%	32	29.9%	75	70.1%	107
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Total	**109**	**55.9%**	**32**	**16.4%**	**54**	**27.7%**	**141**	**72.3%**	**195**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2013SU	Male	13	56.5%	6	26.1%	4	17.4%	19	82.6%	23
	Female	12	48.0%	6	24.0%	7	28.0%	18	72.0%	25
	Total	**25**	**52.1%**	**12**	**25.0%**	**11**	**22.9%**	**37**	**77.1%**	**48**

Term	Gender	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2013FA	Male	55	61.8%	15	16.9%	19	21.3%	70	78.7%	89
	Female	76	61.3%	18	14.5%	30	24.2%	94	75.8%	124
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Total	**133**	**61.9%**	**33**	**15.3%**	**49**	**22.8%**	**166**	**77.2%**	**215**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SU	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Black non-Hispanic	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Filipino	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Hispanic	7	63.6%	2	18.2%	2	18.2%	9	81.8%	11
	Not Reported	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Two or More	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	White non-Hispanic	30	83.3%	0	0.0%	6	16.7%	30	83.3%	36
	Total	**47**	**79.7%**	**2**	**3.4%**	**10**	**16.9%**	**49**	**83.1%**	**59**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007FA	American Indian/Alaskan Native	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Asian	20	76.9%	3	11.5%	3	11.5%	23	88.5%	26
	Black non-Hispanic	3	23.1%	8	61.5%	2	15.4%	11	84.6%	13
	Filipino	17	77.3%	3	13.6%	2	9.1%	20	90.9%	22
	Hispanic	55	60.4%	17	18.7%	19	20.9%	72	79.1%	91
	Not Reported	16	53.3%	6	20.0%	8	26.7%	22	73.3%	30
	Pacific Islander	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Two or More	6	60.0%	3	30.0%	1	10.0%	9	90.0%	10
	White non-Hispanic	140	64.5%	34	15.7%	43	19.8%	174	80.2%	217
	Total	**258**	**62.5%**	**75**	**18.2%**	**80**	**19.4%**	**333**	**80.6%**	**413**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SP	American Indian/Alaskan Native	2	50.0%	1	25.0%	1	25.0%	3	75.0%	4
	Asian	30	73.2%	4	9.8%	7	17.1%	34	82.9%	41
	Black non-Hispanic	9	40.9%	4	18.2%	9	40.9%	13	59.1%	22
	Filipino	8	50.0%	5	31.3%	3	18.8%	13	81.3%	16
	Hispanic	60	55.6%	19	17.6%	29	26.9%	79	73.1%	108
	Not Reported	21	67.7%	4	12.9%	6	19.4%	25	80.6%	31
	Pacific Islander	1	25.0%	1	25.0%	2	50.0%	2	50.0%	4
	Two or More	2	22.2%	3	33.3%	4	44.4%	5	55.6%	9
	White non-Hispanic	170	68.0%	33	13.2%	47	18.8%	203	81.2%	250
	Total	**303**	**62.5%**	**74**	**15.3%**	**108**	**22.3%**	**377**	**77.7%**	**485**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006SP		N	%	N	%	N	%	N	%	
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	12	85.7%	0	0.0%	2	14.3%	12	85.7%	14
	Black non-Hispanic	11	55.0%	5	25.0%	4	20.0%	16	80.0%	20
	Filipino	5	31.3%	5	31.3%	6	37.5%	10	62.5%	16
	Hispanic	35	47.9%	11	15.1%	27	37.0%	46	63.0%	73
	Not Reported	17	70.8%	0	0.0%	7	29.2%	17	70.8%	24
	Pacific Islander	3	42.9%	1	14.3%	3	42.9%	4	57.1%	7
	Two or More	9	56.3%	1	6.3%	6	37.5%	10	62.5%	16
	White non-Hispanic	123	57.7%	37	17.4%	53	24.9%	160	75.1%	213
	Total	**216**	**56.3%**	**60**	**15.6%**	**108**	**28.1%**	**276**	**71.9%**	**384**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006SU		N	%	N	%	N	%	N	%	
	Asian	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Black non-Hispanic	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Hispanic	2	28.6%	3	42.9%	2	28.6%	5	71.4%	7
	Not Reported	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	White non-Hispanic	12	85.7%	2	14.3%	0	0.0%	14	100.0%	14
	Total	**23**	**74.2%**	**5**	**16.1%**	**3**	**9.7%**	**28**	**90.3%**	**31**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006FA		N	%	N	%	N	%	N	%	
	American Indian/Alaskan Native	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Asian	15	68.2%	0	0.0%	7	31.8%	15	68.2%	22
	Black non-Hispanic	7	31.8%	5	22.7%	10	45.5%	12	54.5%	22
	Filipino	3	30.0%	0	0.0%	7	70.0%	3	30.0%	10
	Hispanic	27	51.9%	5	9.6%	20	38.5%	32	61.5%	52
	Not Reported	20	62.5%	2	6.3%	10	31.3%	22	68.8%	32
	Pacific Islander	2	50.0%	1	25.0%	1	25.0%	3	75.0%	4
	Two or More	8	47.1%	5	29.4%	4	23.5%	13	76.5%	17
	White non-Hispanic	150	59.8%	28	11.2%	73	29.1%	178	70.9%	251
	Total	**235**	**56.8%**	**47**	**11.4%**	**132**	**31.9%**	**282**	**68.1%**	**414**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2007SP		N	%	N	%	N	%	N	%	
	American Indian/Alaskan Native	1	14.3%	3	42.9%	3	42.9%	4	57.1%	7
	Asian	30	75.0%	2	5.0%	8	20.0%	32	80.0%	40
	Black non-Hispanic	9	50.0%	4	22.2%	5	27.8%	13	72.2%	18
	Filipino	12	85.7%	1	7.1%	1	7.1%	13	92.9%	14
	Hispanic	42	59.2%	15	21.1%	14	19.7%	57	80.3%	71
	Not Reported	25	71.4%	6	17.1%	4	11.4%	31	88.6%	35
	Two or More	9	47.4%	5	26.3%	5	26.3%	14	73.7%	19
	White non-Hispanic	125	54.6%	41	17.9%	63	27.5%	166	72.5%	229
	Total	**253**	**58.4%**	**77**	**17.8%**	**103**	**23.8%**	**330**	**76.2%**	**433**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SU	American Indian/Alaskan Native	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Asian	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Black non-Hispanic	2	50.0%	2	50.0%	0	0.0%	4	100.0%	4
	Filipino	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Hispanic	15	93.8%	0	0.0%	1	6.3%	15	93.8%	16
	Not Reported	6	85.7%	0	0.0%	1	14.3%	6	85.7%	7
	Two or More	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	White non-Hispanic	29	93.5%	1	3.2%	1	3.2%	30	96.8%	31
	Total	**62**	**89.9%**	**3**	**4.3%**	**4**	**5.8%**	**65**	**94.2%**	**69**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008FA	American Indian/Alaskan Native	4	80.0%	1	20.0%	0	0.0%	5	100.0%	5
	Asian	46	80.7%	4	7.0%	7	12.3%	50	87.7%	57
	Black non-Hispanic	5	20.8%	10	41.7%	9	37.5%	15	62.5%	24
	Filipino	10	90.9%	0	0.0%	1	9.1%	10	90.9%	11
	Hispanic	45	54.2%	18	21.7%	20	24.1%	63	75.9%	83
	Not Reported	19	55.9%	8	23.5%	7	20.6%	27	79.4%	34
	Pacific Islander	4	66.7%	1	16.7%	1	16.7%	5	83.3%	6
	Two or More	11	64.7%	2	11.8%	4	23.5%	13	76.5%	17
	White non-Hispanic	147	62.8%	29	12.4%	58	24.8%	176	75.2%	234
	Total	**291**	**61.8%**	**73**	**15.5%**	**107**	**22.7%**	**364**	**77.3%**	**471**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SP	American Indian/Alaskan Native	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Asian	29	72.5%	8	20.0%	3	7.5%	37	92.5%	40
	Black non-Hispanic	10	43.5%	6	26.1%	7	30.4%	16	69.6%	23
	Filipino	8	44.4%	6	33.3%	4	22.2%	14	77.8%	18
	Hispanic	60	54.1%	24	21.6%	27	24.3%	84	75.7%	111
	Not Reported	27	69.2%	4	10.3%	8	20.5%	31	79.5%	39
	Pacific Islander	4	57.1%	0	0.0%	3	42.9%	4	57.1%	7
	Two or More	13	65.0%	1	5.0%	6	30.0%	14	70.0%	20
	White non-Hispanic	186	63.9%	54	18.6%	51	17.5%	240	82.5%	291
	Total	**338**	**61.2%**	**104**	**18.8%**	**110**	**19.9%**	**442**	**80.1%**	**552**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2009SU		N	%	N	%	N	%	N	%	
		0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	7	77.8%	2	22.2%	0	0.0%	9	100.0%	9
	Black non-Hispanic	3	25.0%	4	33.3%	5	41.7%	7	58.3%	12
	Filipino	3	50.0%	0	0.0%	3	50.0%	3	50.0%	6
	Hispanic	20	69.0%	5	17.2%	4	13.8%	25	86.2%	29
	Not Reported	5	55.6%	3	33.3%	1	11.1%	8	88.9%	9
	Pacific Islander	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Two or More	5	62.5%	0	0.0%	3	37.5%	5	62.5%	8
	White non-Hispanic	63	81.8%	3	3.9%	11	14.3%	66	85.7%	77
	Total	**108**	**70.1%**	**17**	**11.0%**	**29**	**18.8%**	**125**	**81.2%**	**154**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2009FA		N	%	N	%	N	%	N	%	
		6	66.7%	3	33.3%	0	0.0%	9	100.0%	9
	American Indian/Alaskan Native	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Asian	31	70.5%	9	20.5%	4	9.1%	40	90.9%	44
	Black non-Hispanic	23	53.5%	9	20.9%	11	25.6%	32	74.4%	43
	Filipino	19	73.1%	2	7.7%	5	19.2%	21	80.8%	26
	Hispanic	70	54.7%	22	17.2%	36	28.1%	92	71.9%	128
	Not Reported	15	48.4%	7	22.6%	9	29.0%	22	71.0%	31
	Pacific Islander	2	28.6%	1	14.3%	4	57.1%	3	42.9%	7
	Two or More	15	46.9%	4	12.5%	13	40.6%	19	59.4%	32
	White non-Hispanic	185	66.8%	42	15.2%	50	18.1%	227	81.9%	277
	Total	**367**	**61.3%**	**100**	**16.7%**	**132**	**22.0%**	**467**	**78.0%**	**599**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2010SP		N	%	N	%	N	%	N	%	
		3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	78	85.7%	3	3.3%	10	11.0%	81	89.0%	91
	Black non-Hispanic	12	40.0%	10	33.3%	8	26.7%	22	73.3%	30
	Filipino	14	58.3%	7	29.2%	3	12.5%	21	87.5%	24
	Hispanic	57	47.5%	32	26.7%	31	25.8%	89	74.2%	120
	Not Reported	22	68.8%	2	6.3%	8	25.0%	24	75.0%	32
	Pacific Islander	5	41.7%	5	41.7%	2	16.7%	10	83.3%	12
	Two or More	14	42.4%	5	15.2%	14	42.4%	19	57.6%	33
	White non-Hispanic	176	68.2%	45	17.4%	37	14.3%	221	85.7%	258
	Total	**382**	**63.2%**	**109**	**18.0%**	**113**	**18.7%**	**491**	**81.3%**	**604**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2010SU		N	%	N	%	N	%	N	%	
	Asian	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Black non-Hispanic	3	42.9%	3	42.9%	1	14.3%	6	85.7%	7
	Filipino	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Hispanic	15	83.3%	0	0.0%	3	16.7%	15	83.3%	18
	Two or More	4	80.0%	1	20.0%	0	0.0%	5	100.0%	5
	White non-Hispanic	20	80.0%	1	4.0%	4	16.0%	21	84.0%	25
	Total	**49**	**77.8%**	**5**	**7.9%**	**9**	**14.3%**	**54**	**85.7%**	**63**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2010FA		N	%	N	%	N	%	N	%	
		7	58.3%	3	25.0%	2	16.7%	10	83.3%	12
	American Indian/Alaskan Native	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Asian	28	56.0%	9	18.0%	13	26.0%	37	74.0%	50
	Black non-Hispanic	19	61.3%	6	19.4%	6	19.4%	25	80.6%	31
	Filipino	31	67.4%	4	8.7%	11	23.9%	35	76.1%	46
	Hispanic	68	54.0%	24	19.0%	34	27.0%	92	73.0%	126
	Not Reported	8	42.1%	5	26.3%	6	31.6%	13	68.4%	19
	Pacific Islander	3	60.0%	0	0.0%	2	40.0%	3	60.0%	5
	Two or More	23	76.7%	3	10.0%	4	13.3%	26	86.7%	30
	White non-Hispanic	201	66.8%	37	12.3%	63	20.9%	238	79.1%	301
	Total	**389**	**62.5%**	**91**	**14.6%**	**142**	**22.8%**	**480**	**77.2%**	**622**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2011SP		N	%	N	%	N	%	N	%	
		8	100.0%	0	0.0%	0	0.0%	8	100.0%	8
	American Indian/Alaskan Native	2	40.0%	1	20.0%	2	40.0%	3	60.0%	5
	Asian	60	89.6%	1	1.5%	6	9.0%	61	91.0%	67
	Black non-Hispanic	12	41.4%	7	24.1%	10	34.5%	19	65.5%	29
	Filipino	18	69.2%	2	7.7%	6	23.1%	20	76.9%	26
	Hispanic	87	56.5%	31	20.1%	36	23.4%	118	76.6%	154
	Not Reported	12	50.0%	4	16.7%	8	33.3%	16	66.7%	24
	Pacific Islander	3	50.0%	1	16.7%	2	33.3%	4	66.7%	6
	Two or More	24	58.5%	4	9.8%	13	31.7%	28	68.3%	41
	White non-Hispanic	196	71.5%	30	10.9%	48	17.5%	226	82.5%	274
	Total	**422**	**66.6%**	**81**	**12.8%**	**131**	**20.7%**	**503**	**79.3%**	**634**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SU	None									

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011FA		7	77.8%	1	11.1%	1	11.1%	8	88.9%	9
	American Indian/Alaskan Native	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Asian	25	80.6%	2	6.5%	4	12.9%	27	87.1%	31
	Black non-Hispanic	19	54.3%	7	20.0%	9	25.7%	26	74.3%	35
	Filipino	22	81.5%	4	14.8%	1	3.7%	26	96.3%	27
	Hispanic	110	60.4%	38	20.9%	34	18.7%	148	81.3%	182
	Not Reported	6	75.0%	1	12.5%	1	12.5%	7	87.5%	8
	Pacific Islander	1	25.0%	2	50.0%	1	25.0%	3	75.0%	4
	Two or More	25	59.5%	8	19.0%	9	21.4%	33	78.6%	42
	White non-Hispanic	216	70.1%	41	13.3%	51	16.6%	257	83.4%	308
	Total	**436**	**67.0%**	**104**	**16.0%**	**111**	**17.1%**	**540**	**82.9%**	**651**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SP		10	100.0%	0	0.0%	0	0.0%	10	100.0%	10
	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	30	83.3%	3	8.3%	3	8.3%	33	91.7%	36
	Black non-Hispanic	16	64.0%	2	8.0%	7	28.0%	18	72.0%	25
	Filipino	14	63.6%	3	13.6%	5	22.7%	17	77.3%	22
	Hispanic	100	69.9%	18	12.6%	25	17.5%	118	82.5%	143
	Not Reported	8	72.7%	1	9.1%	2	18.2%	9	81.8%	11
	Pacific Islander	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Two or More	28	75.7%	4	10.8%	5	13.5%	32	86.5%	37
	White non-Hispanic	180	75.6%	19	8.0%	39	16.4%	199	83.6%	238
	Total	**390**	**74.0%**	**50**	**9.5%**	**87**	**16.5%**	**440**	**83.5%**	**527**

Grossmont Success and Retention by Ethnicity for Subject ASTR

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SU	CANCELLED									

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012FA		3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	American Indian/Alaskan Native	0	0.0%	2	50.0%	2	50.0%	2	50.0%	4
	Asian	21	77.8%	3	11.1%	3	11.1%	24	88.9%	27
	Black non-Hispanic	15	68.2%	4	18.2%	3	13.6%	19	86.4%	22
	Filipino	12	50.0%	9	37.5%	3	12.5%	21	87.5%	24
	Hispanic	94	63.1%	20	13.4%	35	23.5%	114	76.5%	149
	Not Reported	2	33.3%	0	0.0%	4	66.7%	2	33.3%	6
	Pacific Islander	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Two or More	18	75.0%	0	0.0%	6	25.0%	18	75.0%	24
	White non-Hispanic	149	72.7%	20	9.8%	36	17.6%	169	82.4%	205
	Total	**319**	**67.9%**	**58**	**12.3%**	**93**	**19.8%**	**377**	**80.2%**	**470**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SP	American Indian/Alaskan Native	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Asian	17	70.8%	2	8.3%	5	20.8%	19	79.2%	24
	Black non-Hispanic	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Filipino	3	50.0%	0	0.0%	3	50.0%	3	50.0%	6
	Hispanic	13	41.9%	6	19.4%	12	38.7%	19	61.3%	31
	Not Reported	14	77.8%	0	0.0%	4	22.2%	14	77.8%	18
	Pacific Islander	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Two or More	4	66.7%	1	16.7%	1	16.7%	5	83.3%	6
	White non-Hispanic	72	69.2%	5	4.8%	27	26.0%	77	74.0%	104
	Total	**125**	**63.8%**	**17**	**8.7%**	**54**	**27.6%**	**142**	**72.4%**	**196**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006SU	Asian	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Black non-Hispanic	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Hispanic	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Not Reported	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	White non-Hispanic	10	100.0%	0	0.0%	0	0.0%	10	100.0%	10
	Total	**21**	**91.3%**	**0**	**0.0%**	**2**	**8.7%**	**21**	**91.3%**	**23**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2006FA	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	22	75.9%	1	3.4%	6	20.7%	23	79.3%	29
	Black non-Hispanic	1	20.0%	1	20.0%	3	60.0%	2	40.0%	5
	Filipino	1	20.0%	1	20.0%	3	60.0%	2	40.0%	5
	Hispanic	19	59.4%	5	15.6%	8	25.0%	24	75.0%	32
	Not Reported	8	47.1%	3	17.6%	6	35.3%	11	64.7%	17
	Pacific Islander	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Two or More	7	100.0%	0	0.0%	0	0.0%	7	100.0%	7
	White non-Hispanic	56	62.2%	13	14.4%	21	23.3%	69	76.7%	90
	Total	**114**	**60.6%**	**25**	**13.3%**	**49**	**26.1%**	**139**	**73.9%**	**188**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SP	Asian	18	75.0%	3	12.5%	3	12.5%	21	87.5%	24
	Black non-Hispanic	2	33.3%	1	16.7%	3	50.0%	3	50.0%	6
	Filipino	6	50.0%	3	25.0%	3	25.0%	9	75.0%	12
	Hispanic	23	79.3%	2	6.9%	4	13.8%	25	86.2%	29
	Not Reported	13	65.0%	2	10.0%	5	25.0%	15	75.0%	20
	Pacific Islander	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Two or More	8	80.0%	0	0.0%	2	20.0%	8	80.0%	10
	White non-Hispanic	84	69.4%	10	8.3%	27	22.3%	94	77.7%	121
	Total	**155**	**68.9%**	**22**	**9.8%**	**48**	**21.3%**	**177**	**78.7%**	**225**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SU	Asian	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Black non-Hispanic	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Hispanic	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Two or More	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	White non-Hispanic	6	75.0%	0	0.0%	2	25.0%	6	75.0%	8
	Total	**13**	**72.2%**	**1**	**5.6%**	**4**	**22.2%**	**14**	**77.8%**	**18**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007FA	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	12	50.0%	4	16.7%	8	33.3%	16	66.7%	24
	Black non-Hispanic	1	16.7%	2	33.3%	3	50.0%	3	50.0%	6
	Filipino	3	33.3%	2	22.2%	4	44.4%	5	55.6%	9
	Hispanic	16	45.7%	3	8.6%	16	45.7%	19	54.3%	35
	Not Reported	10	52.6%	6	31.6%	3	15.8%	16	84.2%	19
	Two or More	2	40.0%	0	0.0%	3	60.0%	2	40.0%	5
	White non-Hispanic	66	55.5%	20	16.8%	33	27.7%	86	72.3%	119
	Total	**110**	**50.5%**	**37**	**17.0%**	**71**	**32.6%**	**147**	**67.4%**	**218**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SP	Asian	17	53.1%	4	12.5%	11	34.4%	21	65.6%	32
	Black non-Hispanic	5	62.5%	2	25.0%	1	12.5%	7	87.5%	8
	Filipino	5	50.0%	2	20.0%	3	30.0%	7	70.0%	10
	Hispanic	20	58.8%	6	17.6%	8	23.5%	26	76.5%	34
	Not Reported	13	76.5%	1	5.9%	3	17.6%	14	82.4%	17
	Pacific Islander	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Two or More	4	57.1%	1	14.3%	2	28.6%	5	71.4%	7
	White non-Hispanic	71	60.2%	16	13.6%	31	26.3%	87	73.7%	118
	Total	**135**	**59.5%**	**32**	**14.1%**	**60**	**26.4%**	**167**	**73.6%**	**227**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SU	Asian	3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	Black non-Hispanic	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Filipino	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Hispanic	5	71.4%	1	14.3%	1	14.3%	6	85.7%	7
	Not Reported	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Two or More	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	White non-Hispanic	20	76.9%	3	11.5%	3	11.5%	23	88.5%	26
	Total	**36**	**75.0%**	**5**	**10.4%**	**7**	**14.6%**	**41**	**85.4%**	**48**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008FA	American Indian/Alaskan Native	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Asian	17	60.7%	5	17.9%	6	21.4%	22	78.6%	28
	Black non-Hispanic	2	28.6%	2	28.6%	3	42.9%	4	57.1%	7
	Filipino	7	41.2%	4	23.5%	6	35.3%	11	64.7%	17
	Hispanic	13	44.8%	9	31.0%	7	24.1%	22	75.9%	29
	Not Reported	10	55.6%	2	11.1%	6	33.3%	12	66.7%	18
	Pacific Islander	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Two or More	4	57.1%	2	28.6%	1	14.3%	6	85.7%	7
	White non-Hispanic	73	68.9%	17	16.0%	16	15.1%	90	84.9%	106
	Total	**126**	**58.9%**	**42**	**19.6%**	**46**	**21.5%**	**168**	**78.5%**	**214**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SP	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	34	75.6%	6	13.3%	5	11.1%	40	88.9%	45
	Black non-Hispanic	3	33.3%	4	44.4%	2	22.2%	7	77.8%	9
	Filipino	5	50.0%	3	30.0%	2	20.0%	8	80.0%	10
	Hispanic	16	44.4%	15	41.7%	5	13.9%	31	86.1%	36
	Not Reported	10	52.6%	2	10.5%	7	36.8%	12	63.2%	19
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	1	20.0%	0	0.0%	4	80.0%	1	20.0%	5
	White non-Hispanic	92	71.9%	21	16.4%	15	11.7%	113	88.3%	128
	Total	**162**	**63.8%**	**51**	**20.1%**	**41**	**16.1%**	**213**	**83.9%**	**254**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SU		1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Filipino	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Hispanic	11	78.6%	2	14.3%	1	7.1%	13	92.9%	14
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	8	88.9%	0	0.0%	1	11.1%	8	88.9%	9
	White non-Hispanic	21	87.5%	1	4.2%	2	8.3%	22	91.7%	24
	Total	**51**	**87.9%**	**3**	**5.2%**	**4**	**6.9%**	**54**	**93.1%**	**58**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009FA		1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	36	83.7%	4	9.3%	3	7.0%	40	93.0%	43
	Black non-Hispanic	2	18.2%	4	36.4%	5	45.5%	6	54.5%	11
	Filipino	5	41.7%	2	16.7%	5	41.7%	7	58.3%	12
	Hispanic	22	46.8%	14	29.8%	11	23.4%	36	76.6%	47
	Not Reported	7	58.3%	1	8.3%	4	33.3%	8	66.7%	12
	Pacific Islander	2	50.0%	2	50.0%	0	0.0%	4	100.0%	4
	Two or More	8	50.0%	4	25.0%	4	25.0%	12	75.0%	16
	White non-Hispanic	91	65.0%	22	15.7%	27	19.3%	113	80.7%	140
	Total	**175**	**60.8%**	**53**	**18.4%**	**60**	**20.8%**	**228**	**79.2%**	**288**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SP		3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	36	76.6%	6	12.8%	5	10.6%	42	89.4%	47
	Black non-Hispanic	6	42.9%	2	14.3%	6	42.9%	8	57.1%	14
	Filipino	14	56.0%	3	12.0%	8	32.0%	17	68.0%	25
	Hispanic	23	56.1%	8	19.5%	10	24.4%	31	75.6%	41
	Not Reported	15	71.4%	2	9.5%	4	19.0%	17	81.0%	21
	Pacific Islander	1	25.0%	2	50.0%	1	25.0%	3	75.0%	4
	Two or More	9	69.2%	4	30.8%	0	0.0%	13	100.0%	13
	White non-Hispanic	93	66.4%	17	12.1%	30	21.4%	110	78.6%	140
	Total	**201**	**64.8%**	**45**	**14.5%**	**64**	**20.6%**	**246**	**79.4%**	**310**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SU	Asian	1	33.3%	2	66.7%	0	0.0%	3	100.0%	3
	Black non-Hispanic	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Filipino	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Hispanic	7	87.5%	1	12.5%	0	0.0%	8	100.0%	8
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	White non-Hispanic	7	100.0%	0	0.0%	0	0.0%	7	100.0%	7
	Total	**25**	**89.3%**	**3**	**10.7%**	**0**	**0.0%**	**28**	**100.0%**	**28**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010FA		3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	American Indian/Alaskan Native	2	66.7%	1	33.3%	0	0.0%	3	100.0%	3
	Asian	30	68.2%	9	20.5%	5	11.4%	39	88.6%	44
	Black non-Hispanic	5	45.5%	4	36.4%	2	18.2%	9	81.8%	11
	Filipino	9	60.0%	2	13.3%	4	26.7%	11	73.3%	15
	Hispanic	23	47.9%	10	20.8%	15	31.3%	33	68.8%	48
	Not Reported	9	50.0%	3	16.7%	6	33.3%	12	66.7%	18
	Pacific Islander	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Two or More	6	50.0%	3	25.0%	3	25.0%	9	75.0%	12
	White non-Hispanic	83	65.9%	18	14.3%	25	19.8%	101	80.2%	126
	Total	**171**	**60.2%**	**51**	**18.0%**	**62**	**21.8%**	**222**	**78.2%**	**284**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SP		3	75.0%	0	0.0%	1	25.0%	3	75.0%	4
	American Indian/Alaskan Native	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Asian	37	84.1%	3	6.8%	4	9.1%	40	90.9%	44
	Black non-Hispanic	12	75.0%	4	25.0%	0	0.0%	16	100.0%	16
	Filipino	7	70.0%	1	10.0%	2	20.0%	8	80.0%	10
	Hispanic	25	58.1%	11	25.6%	7	16.3%	36	83.7%	43
	Not Reported	12	70.6%	4	23.5%	1	5.9%	16	94.1%	17
	Pacific Islander	1	33.3%	2	66.7%	0	0.0%	3	100.0%	3
	Two or More	7	53.8%	2	15.4%	4	30.8%	9	69.2%	13
	White non-Hispanic	74	61.7%	19	15.8%	27	22.5%	93	77.5%	120
	Total	**179**	**65.6%**	**47**	**17.2%**	**47**	**17.2%**	**226**	**82.8%**	**273**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SU		1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	American Indian/Alaskan Native	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Black non-Hispanic	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Filipino	8	100.0%	0	0.0%	0	0.0%	8	100.0%	8
	Hispanic	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Not Reported	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Two or More	9	81.8%	2	18.2%	0	0.0%	11	100.0%	11
	White non-Hispanic	**26**	**86.7%**	**4**	**13.3%**	**0**	**0.0%**	**30**	**100.0%**	**30**
	Total									

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011FA		5	83.3%	0	0.0%	1	16.7%	5	83.3%	6
	American Indian/Alaskan Native	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Asian	34	72.3%	7	14.9%	6	12.8%	41	87.2%	47
	Black non-Hispanic	7	46.7%	3	20.0%	5	33.3%	10	66.7%	15
	Filipino	12	60.0%	0	0.0%	8	40.0%	12	60.0%	20
	Hispanic	31	59.6%	8	15.4%	13	25.0%	39	75.0%	52
	Not Reported	8	66.7%	1	8.3%	3	25.0%	9	75.0%	12
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	6	54.5%	3	27.3%	2	18.2%	9	81.8%	11
	White non-Hispanic	85	70.8%	14	11.7%	21	17.5%	99	82.5%	120
	Total	**191**	**66.6%**	**36**	**12.5%**	**60**	**20.9%**	**227**	**79.1%**	**287**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SP		3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	American Indian/Alaskan Native	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Asian	29	76.3%	2	5.3%	7	18.4%	31	81.6%	38
	Black non-Hispanic	6	66.7%	2	22.2%	1	11.1%	8	88.9%	9
	Filipino	7	63.6%	1	9.1%	3	27.3%	8	72.7%	11
	Hispanic	35	56.5%	16	25.8%	11	17.7%	51	82.3%	62
	Not Reported	4	80.0%	0	0.0%	1	20.0%	4	80.0%	5
	Pacific Islander	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Two or More	12	70.6%	2	11.8%	3	17.6%	14	82.4%	17
	White non-Hispanic	79	66.9%	18	15.3%	21	17.8%	97	82.2%	118
	Total	**177**	**66.5%**	**41**	**15.4%**	**48**	**18.0%**	**218**	**82.0%**	**266**

Grossmont Success and Retention by Ethnicity for Subject PHYC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SU	CANCELLED									

Term	Ethnic	Succes		No		Withdra		Retenti		T	
		N	%	N	%	N	%	N	%		
2012FA		7	77.8%	1	11.1%	1	11.1%	8	88.9%		9
	American Indian/Alaskan Native	1	50.0%	0	0.0%	1	50.0%	1	50.0%		2
	Asian	36	83.7%	5	11.6%	2	4.7%	41	95.3%		43
	Black non-Hispanic	6	66.7%	3	33.3%	0	0.0%	9	100.0%		9
	Filipino	9	64.3%	3	21.4%	2	14.3%	12	85.7%		14
	Hispanic	30	51.7%	14	24.1%	14	24.1%	44	75.9%		58
	Not Reported	4	80.0%	0	0.0%	1	20.0%	4	80.0%		5
	Pacific Islander	0	0.0%	1	100.0%	0	0.0%	1	100.0%		1
	Two or More	10	58.8%	3	17.6%	4	23.5%	13	76.5%		17
	White non-Hispanic	93	79.5%	16	13.7%	8	6.8%	109	93.2%		117
	Total	**196**	**71.3%**	**46**	**16.7%**	**33**	**12.0%**	**242**	**88.0%**		**275**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006SP		N	%	N	%	N	%	N	%	
	Asian	9	81.8%	1	9.1%	1	9.1%	10	90.9%	11
	Black non-Hispanic	3	37.5%	1	12.5%	4	50.0%	4	50.0%	8
	Filipino	1	25.0%	2	50.0%	1	25.0%	3	75.0%	4
	Hispanic	13	68.4%	1	5.3%	5	26.3%	14	73.7%	19
	Not Reported	6	100.0%	0	0.0%	0	0.0%	6	100.0%	6
	Pacific Islander	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Two or More	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	White non-Hispanic	56	72.7%	5	6.5%	16	20.8%	61	79.2%	77
	Total	**93**	**70.5%**	**11**	**8.3%**	**28**	**21.2%**	**104**	**78.8%**	**132**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006SU		N	%	N	%	N	%	N	%	
	Black non-Hispanic	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Hispanic	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Two or More	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	White non-Hispanic	7	46.7%	0	0.0%	8	53.3%	7	46.7%	15
	Total	**12**	**54.5%**	**1**	**4.5%**	**9**	**40.9%**	**13**	**59.1%**	**22**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2006FA		N	%	N	%	N	%	N	%	
	Asian	7	63.6%	1	9.1%	3	27.3%	8	72.7%	11
	Black non-Hispanic	8	72.7%	0	0.0%	3	27.3%	8	72.7%	11
	Filipino	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Hispanic	31	81.6%	4	10.5%	3	7.9%	35	92.1%	38
	Not Reported	6	66.7%	2	22.2%	1	11.1%	8	88.9%	9
	Pacific Islander	1	25.0%	0	0.0%	3	75.0%	1	25.0%	4
	Two or More	4	66.7%	1	16.7%	1	16.7%	5	83.3%	6
	White non-Hispanic	40	59.7%	11	16.4%	16	23.9%	51	76.1%	67
	Total	**98**	**66.2%**	**20**	**13.5%**	**30**	**20.3%**	**118**	**79.7%**	**148**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2007SP		N	%	N	%	N	%	N	%	
	American Indian/Alaskan Native	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Asian	15	78.9%	2	10.5%	2	10.5%	17	89.5%	19
	Black non-Hispanic	6	60.0%	1	10.0%	3	30.0%	7	70.0%	10
	Filipino	0	0.0%	1	25.0%	3	75.0%	1	25.0%	4
	Hispanic	14	51.9%	3	11.1%	10	37.0%	17	63.0%	27
	Not Reported	7	63.6%	1	9.1%	3	27.3%	8	72.7%	11
	Pacific Islander	1	50.0%	0	0.0%	1	50.0%	1	50.0%	2
	Two or More	4	66.7%	0	0.0%	2	33.3%	4	66.7%	6
	White non-Hispanic	33	61.1%	14	25.9%	7	13.0%	47	87.0%	54
	Total	**80**	**59.3%**	**23**	**17.0%**	**32**	**23.7%**	**103**	**76.3%**	**135**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2007SU	Asian	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Black non-Hispanic	1	33.3%	0	0.0%	2	66.7%	1	33.3%	3
	Hispanic	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Not Reported	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Two or More	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	White non-Hispanic	3	50.0%	0	0.0%	3	50.0%	3	50.0%	6
	Total	**10**	**58.8%**	**0**	**0.0%**	**7**	**41.2%**	**10**	**58.8%**	**17**
Term	**Ethnic**	**Success**		**No Success**		**Withdrawal**		**Retention**		**Total**
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	
2007FA	Asian	10	83.3%	2	16.7%	0	0.0%	12	100.0%	12
	Black non-Hispanic	4	44.4%	1	11.1%	4	44.4%	5	55.6%	9
	Filipino	2	50.0%	1	25.0%	1	25.0%	3	75.0%	4
	Hispanic	23	67.6%	4	11.8%	7	20.6%	27	79.4%	34
	Not Reported	8	80.0%	0	0.0%	2	20.0%	8	80.0%	10
	Pacific Islander	3	100.0%	0	0.0%	0	0.0%	3	100.0%	3
	Two or More	10	90.9%	0	0.0%	1	9.1%	10	90.9%	11
	White non-Hispanic	63	64.9%	13	13.4%	21	21.6%	76	78.4%	97
	Total	**123**	**68.3%**	**21**	**11.7%**	**36**	**20.0%**	**144**	**80.0%**	**180**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SP	American Indian/Alaskan Native	4	100.0%	0	0.0%	0	0.0%	4	100.0%	4
	Asian	9	69.2%	3	23.1%	1	7.7%	12	92.3%	13
	Black non-Hispanic	12	66.7%	4	22.2%	2	11.1%	16	88.9%	18
	Filipino	6	60.0%	2	20.0%	2	20.0%	8	80.0%	10
	Hispanic	29	63.0%	7	15.2%	10	21.7%	36	78.3%	46
	Not Reported	7	63.6%	1	9.1%	3	27.3%	8	72.7%	11
	Pacific Islander	2	50.0%	2	50.0%	0	0.0%	4	100.0%	4
	Two or More	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	White non-Hispanic	69	71.9%	8	8.3%	19	19.8%	77	80.2%	96
	Total	**138**	**68.0%**	**27**	**13.3%**	**38**	**18.7%**	**165**	**81.3%**	**203**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008SU	American Indian/Alaskan Native	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	Asian	0	0.0%	0	0.0%	2	100.0%	0	0.0%	2
	Black non-Hispanic	2	40.0%	1	20.0%	2	40.0%	3	60.0%	5
	Hispanic	1	33.3%	0	0.0%	2	66.7%	1	33.3%	3
	Two or More	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	White non-Hispanic	10	83.3%	1	8.3%	1	8.3%	11	91.7%	12
	Total	**14**	**58.3%**	**3**	**12.5%**	**7**	**29.2%**	**17**	**70.8%**	**24**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2008FA	American Indian/Alaskan Native	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Asian	18	85.7%	1	4.8%	2	9.5%	19	90.5%	21
	Black non-Hispanic	2	40.0%	2	40.0%	1	20.0%	4	80.0%	5
	Filipino	4	40.0%	0	0.0%	6	60.0%	4	40.0%	10
	Hispanic	20	64.5%	7	22.6%	4	12.9%	27	87.1%	31
	Not Reported	3	30.0%	3	30.0%	4	40.0%	6	60.0%	10
	Pacific Islander	2	50.0%	2	50.0%	0	0.0%	4	100.0%	4
	Two or More	0	0.0%	3	50.0%	3	50.0%	3	50.0%	6
	White non-Hispanic	58	59.8%	13	13.4%	26	26.8%	71	73.2%	97
	Total	**109**	**58.6%**	**31**	**16.7%**	**46**	**24.7%**	**140**	**75.3%**	**186**
Term	**Ethnic**	**Success**		**No Success**		**Withdrawal**		**Retention**		**Total**
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	
2009SP	American Indian/Alaskan Native	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Asian	17	77.3%	4	18.2%	1	4.5%	21	95.5%	22
	Black non-Hispanic	8	40.0%	5	25.0%	7	35.0%	13	65.0%	20
	Filipino	1	33.3%	1	33.3%	1	33.3%	2	66.7%	3
	Hispanic	29	53.7%	10	18.5%	15	27.8%	39	72.2%	54
	Not Reported	8	53.3%	3	20.0%	4	26.7%	11	73.3%	15
	Pacific Islander	6	85.7%	0	0.0%	1	14.3%	6	85.7%	7
	Two or More	4	44.4%	1	11.1%	4	44.4%	5	55.6%	9
	White non-Hispanic	59	58.4%	22	21.8%	20	19.8%	81	80.2%	101
	Total	**132**	**56.7%**	**47**	**20.2%**	**54**	**23.2%**	**179**	**76.8%**	**233**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009SU	Asian	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Black non-Hispanic	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Hispanic	2	40.0%	2	40.0%	1	20.0%	4	80.0%	5
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	White non-Hispanic	8	72.7%	0	0.0%	3	27.3%	8	72.7%	11
	Total	**13**	**59.1%**	**3**	**13.6%**	**6**	**27.3%**	**16**	**72.7%**	**22**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2009FA		1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	American Indian/Alaskan Native	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Asian	9	69.2%	2	15.4%	2	15.4%	11	84.6%	13
	Black non-Hispanic	7	41.2%	3	17.6%	7	41.2%	10	58.8%	17
	Filipino	3	60.0%	0	0.0%	2	40.0%	3	60.0%	5
	Hispanic	20	51.3%	8	20.5%	11	28.2%	28	71.8%	39
	Not Reported	6	60.0%	1	10.0%	3	30.0%	7	70.0%	10
	Pacific Islander	2	50.0%	0	0.0%	2	50.0%	2	50.0%	4
	Two or More	8	66.7%	2	16.7%	2	16.7%	10	83.3%	12
	White non-Hispanic	65	63.1%	13	12.6%	25	24.3%	78	75.7%	103
	Total	**122**	**58.9%**	**31**	**15.0%**	**54**	**26.1%**	**153**	**73.9%**	**207**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SP		1	33.3%	2	66.7%	0	0.0%	3	100.0%	3
	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	23	76.7%	2	6.7%	5	16.7%	25	83.3%	30
	Black non-Hispanic	11	44.0%	6	24.0%	8	32.0%	17	68.0%	25
	Filipino	0	0.0%	1	25.0%	3	75.0%	1	25.0%	4
	Hispanic	28	41.2%	19	27.9%	21	30.9%	47	69.1%	68
	Not Reported	10	76.9%	1	7.7%	2	15.4%	11	84.6%	13
	Pacific Islander	1	25.0%	2	50.0%	1	25.0%	3	75.0%	4
	Two or More	2	18.2%	4	36.4%	5	45.5%	6	54.5%	11
	White non-Hispanic	90	67.2%	9	6.7%	35	26.1%	99	73.9%	134
	Total	**166**	**56.7%**	**46**	**15.7%**	**81**	**27.6%**	**212**	**72.4%**	**293**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010SU	Asian	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Black non-Hispanic	0	0.0%	2	50.0%	2	50.0%	2	50.0%	4
	Filipino	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Hispanic	8	80.0%	2	20.0%	0	0.0%	10	100.0%	10
	Two or More	3	50.0%	1	16.7%	2	33.3%	4	66.7%	6
	White non-Hispanic	9	64.3%	3	21.4%	2	14.3%	12	85.7%	14
	Total	**21**	**58.3%**	**8**	**22.2%**	**7**	**19.4%**	**29**	**80.6%**	**36**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2010FA		1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	American Indian/Alaskan Native	3	60.0%	1	20.0%	1	20.0%	4	80.0%	5
	Asian	10	83.3%	1	8.3%	1	8.3%	11	91.7%	12
	Black non-Hispanic	10	52.6%	2	10.5%	7	36.8%	12	63.2%	19
	Filipino	4	66.7%	0	0.0%	2	33.3%	4	66.7%	6
	Hispanic	26	47.3%	9	16.4%	20	36.4%	35	63.6%	55
	Not Reported	3	50.0%	1	16.7%	2	33.3%	4	66.7%	6
	Pacific Islander	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Two or More	8	42.1%	5	26.3%	6	31.6%	13	68.4%	19
	White non-Hispanic	83	66.4%	17	13.6%	25	20.0%	100	80.0%	125
	Total	**149**	**59.4%**	**38**	**15.1%**	**64**	**25.5%**	**187**	**74.5%**	**251**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2011SP		2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	American Indian/Alaskan Native	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	12	85.7%	0	0.0%	2	14.3%	12	85.7%	14
	Black non-Hispanic	4	18.2%	11	50.0%	7	31.8%	15	68.2%	22
	Filipino	2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Hispanic	37	44.0%	29	34.5%	18	21.4%	66	78.6%	84
	Not Reported	6	40.0%	6	40.0%	3	20.0%	12	80.0%	15
	Pacific Islander	2	50.0%	1	25.0%	1	25.0%	3	75.0%	4
	Two or More	5	41.7%	4	33.3%	3	25.0%	9	75.0%	12
	White non-Hispanic	81	60.0%	23	17.0%	31	23.0%	104	77.0%	135
	Total	**152**	**52.1%**	**74**	**25.3%**	**66**	**22.6%**	**226**	**77.4%**	**292**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2011SU		N	%	N	%	N	%	N	%	
		1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Asian	3	75.0%	1	25.0%	0	0.0%	4	100.0%	4
	Black non-Hispanic	1	16.7%	4	66.7%	1	16.7%	5	83.3%	6
	Hispanic	4	36.4%	5	45.5%	2	18.2%	9	81.8%	11
	Not Reported	1	50.0%	1	50.0%	0	0.0%	2	100.0%	2
	Pacific Islander	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Two or More	0	0.0%	1	100.0%	0	0.0%	1	100.0%	1
	White non-Hispanic	13	61.9%	6	28.6%	2	9.5%	19	90.5%	21
	Total	**23**	**48.9%**	**18**	**38.3%**	**6**	**12.8%**	**41**	**87.2%**	**47**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2011FA		N	%	N	%	N	%	N	%	
		2	100.0%	0	0.0%	0	0.0%	2	100.0%	2
	Asian	13	72.2%	3	16.7%	2	11.1%	16	88.9%	18
	Black non-Hispanic	11	50.0%	1	4.5%	10	45.5%	12	54.5%	22
	Filipino	3	37.5%	3	37.5%	2	25.0%	6	75.0%	8
	Hispanic	37	56.9%	9	13.8%	19	29.2%	46	70.8%	65
	Not Reported	5	100.0%	0	0.0%	0	0.0%	5	100.0%	5
	Pacific Islander	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Two or More	7	46.7%	3	20.0%	5	33.3%	10	66.7%	15
	White non-Hispanic	84	60.0%	22	15.7%	34	24.3%	106	75.7%	140
	Total	**163**	**59.1%**	**41**	**14.9%**	**72**	**26.1%**	**204**	**73.9%**	**276**

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
2012SP		N	%	N	%	N	%	N	%	
	American Indian/Alaskan Native	0	0.0%	0	0.0%	1	100.0%	0	0.0%	1
	Asian	12	66.7%	3	16.7%	3	16.7%	15	83.3%	18
	Black non-Hispanic	2	12.5%	2	12.5%	12	75.0%	4	25.0%	16
	Filipino	3	37.5%	0	0.0%	5	62.5%	3	37.5%	8
	Hispanic	32	53.3%	7	11.7%	21	35.0%	39	65.0%	60
	Not Reported	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Pacific Islander	3	60.0%	1	20.0%	1	20.0%	4	80.0%	5
	Two or More	2	25.0%	3	37.5%	3	37.5%	5	62.5%	8
	White non-Hispanic	70	66.7%	12	11.4%	23	21.9%	82	78.1%	105
	Total	**126**	**56.3%**	**28**	**12.5%**	**70**	**31.3%**	**154**	**68.8%**	**224**

Grossmont Success and Retention by Ethnicity for Subject PSC

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012SU	CANCELLED									

Term	Ethnic	Success		No Success		Withdrawal		Retention		Total
		N	%	N	%	N	%	N	%	
2012FA	American Indian/Alaskan Native	0	0.0%	1	50.0%	1	50.0%	1	50.0%	2
	Asian	12	80.0%	2	13.3%	1	6.7%	14	93.3%	15
	Black non-Hispanic	5	22.7%	3	13.6%	14	63.6%	8	36.4%	22
	Filipino	8	80.0%	1	10.0%	1	10.0%	9	90.0%	10
	Hispanic	37	48.1%	16	20.8%	24	31.2%	53	68.8%	77
	Not Reported	1	100.0%	0	0.0%	0	0.0%	1	100.0%	1
	Pacific Islander	2	66.7%	0	0.0%	1	33.3%	2	66.7%	3
	Two or More	17	73.9%	2	8.7%	4	17.4%	19	82.6%	23
	White non-Hispanic	68	64.8%	18	17.1%	19	18.1%	86	81.9%	105
	Total	**150**	**58.1%**	**43**	**16.7%**	**65**	**25.2%**	**193**	**74.8%**	**258**

APPENDIX 11

Grossmont College Program Review

Program Review Data Elements

GCCCD
Grossmont College Program Review
Program Data Elements

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Astronomy (191100)								
Course #								
ASTR 110								
ASTR 112								
WSCH/FTES								
Summer- WSCH	207.00	129.00	126.00	90.00	168.00	210.00	444.00	0.00
Fall- WSCH	1,203.00	1,308.00	1,233.00	1,248.00	1,236.00	1,413.00	1,782.00	1,842.00
Spring- WSCH	1,242.00	1,209.00	1,149.00	1,263.00	1,437.00	492.00	513.00	519.00
Total WSCH	2,652.00	2,646.00	2,508.00	2,601.00	2,841.00	2,115.00	2,739.00	2,361.00
Total FTES	88.40	88.20	83.60	86.70	94.70	70.50	91.30	78.70
Unrestricted General Fund Cost	180,732	178,166	139,356	126,999	164,302	185,032	200,407	159,451
Costs per FTES	2,044.48	2,020.02	1,666.94	1,464.81	1,734.97	2,624.57	2,195.04	2,026.06
Restricted General Fund Cost (Grants, Categorical funds)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GCCCD
Grossmont College Program Review
Program Data Elements

Physics (190200)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Course #								
PHYC 110								
PHYC 130								
PHYC 131								
PHYC 140								
PHYC 240								
PHYC 241								
WSCH/FTES								
Summer- WSCH	174.00	174.00	282.00	126.00	102.00	282.00	330.00	0.00
Fall- WSCH	1,242.00	1,266.00	1,284.00	1,128.00	1,302.00	1,284.00	1,722.00	1,710.00
Spring- WSCH	1,266.00	1,218.00	1,401.00	1,350.00	1,368.00	1,401.00	1,833.00	1,605.00
Total WSCH	2,682.00	2,658.00	2,967.00	2,604.00	2,772.00	2,967.00	3,885.00	3,315.00
Total FTES	89.40	88.60	98.90	86.80	92.40	98.90	129.50	110.50
Unrestricted General Fund Cost	309,943	308,898	312,130	316,663	363,477	353,945	353,557	361,039
Costs per FTES	3,466.92	3,486.43	3,156.02	3,648.19	3,933.73	3,578.82	2,730.17	3,267.32
Restricted General Fund Cost (Grants, Categorical funds)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GCCCD
Grossmont College Program Review
Program Data Elements

Physical Science (190100)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Course #								
PSC 100								
PSC 110								
PSC 111								
WSCH/FTES								
Summer- WSCH	69.00	75.00	48.00	60.00	42.00	69.00	66.00	0.00
Fall- WSCH	543.00	570.00	486.00	444.00	534.00	561.00	606.00	747.00
Spring- WSCH	486.00	540.00	393.00	399.00	609.00	678.00	870.00	864.00
Total WSCH	1,098.00	1,185.00	927.00	903.00	1,185.00	1,308.00	1,542.00	1,611.00
Total FTES	36.60	39.50	30.90	30.10	39.50	43.60	51.40	53.70
Unrestricted General Fund Cost	52,248	58,825	54,020	49,602	77,429	83,046	73,362	93,546
Costs per FTES	1,427.54	1,489.24	1,748.22	1,647.91	1,960.23	1,904.72	1,427.28	1,742.01
Restricted General Fund Cost (Grants, Categorical funds)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Astronomy (191100)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Summer- WSCH	207.00	129.00	126.00	90.00	168.00	210.00	444.00	0.00
Fall- WSCH	1,203.00	1,308.00	1,233.00	1,248.00	1,236.00	1,413.00	1,782.00	1,842.00
Spring- WSCH	1,242.00	1,209.00	1,149.00	1,263.00	1,437.00	492.00	513.00	519.00
Total WSCH	2,652.00	2,646.00	2,508.00	2,601.00	2,841.00	2,115.00	2,739.00	2,361.00
Total FTES	88.40	88.20	83.60	86.70	94.70	70.50	91.30	78.70
Unrestricted General Fund Cost	180,732	178,166	139,356	126,999	164,302	185,032	200,407	159,451
Costs per FTES	2,044.48	2,020.02	1,666.94	1,464.81	1,734.97	2,624.57	2,195.04	2,026.06
Restricted General Fund Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Physics (190200)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Summer- WSCH	174.00	174.00	282.00	126.00	102.00	282.00	330.00	0.00
Fall- WSCH	1,242.00	1,266.00	1,284.00	1,128.00	1,302.00	1,284.00	1,722.00	1,710.00
Spring- WSCH	1,266.00	1,218.00	1,401.00	1,350.00	1,368.00	1,401.00	1,833.00	1,605.00
Total WSCH	2,682.00	2,658.00	2,967.00	2,604.00	2,772.00	2,967.00	3,885.00	3,315.00
Total FTES	89.40	88.60	98.90	86.80	92.40	98.90	129.50	110.50
Unrestricted General Fund Cost	309,943	308,898	312,130	316,663	363,477	353,945	353,557	361,039
Costs per FTES	3,466.92	3,486.43	3,156.02	3,648.19	3,933.73	3,578.82	2,730.17	3,267.32
Restricted General Fund Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Physical Science (190100)	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11
Summer- WSCH	69.00	75.00	48.00	60.00	42.00	69.00	66.00	0.00
Fall- WSCH	543.00	570.00	486.00	444.00	534.00	561.00	606.00	747.00
Spring- WSCH	486.00	540.00	393.00	399.00	609.00	678.00	870.00	864.00
Total WSCH	1,098.00	1,185.00	927.00	903.00	1,185.00	1,308.00	1,542.00	1,611.00
Total FTES	36.60	39.50	30.90	30.10	39.50	43.60	51.40	53.70
Unrestricted General Fund Cost	52,248	58,825	54,020	49,602	77,429	83,046	73,362	93,546
Costs per FTES	1,427.54	1,489.24	1,748.22	1,647.91	1,960.23	1,904.72	1,427.28	1,742.01
Restricted General Fund Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX 12

Fiscal Data: Outcomes Profile

Outocmes Profile Astronomy (191100)

1. Semester/Year	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008
2. Enrollment		385	415	433	413	485
3. Earned WSCH/FTEF		466.25	520	516.25	515	598.75
4. Total FTES	83.60		86.70		94.70	
5. Cost/FTES	$1,666.94		$1,464.81		$1,734.97	
6. Total Cost/Fiscal Year	$139,356.00		$126,999.00		$164,302.00	
7. Total Revenue	$375,698.40		$357,464.10		$432,289.40	
8. Other Revenue	$0.00		$0.00		$0.00	

Outocmes Profile Astronomy (191100)

1. Semester/Year	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011
2. Enrollment	471	550	594	604	614	625
3. Earned WSCH/FTEF	588.75	589.29	685.38	696.92	708.46	721.15
4. Total FTES	70.50		91.30		78.70	
5. Cost/FTES	$2,624.57		$2,195.04		$2,026.06	
6. Total Cost/Fiscal Year	$185,032.00		$200,407.00		$159,451.00	
7. Total Revenue	$321,820.52		$416,768.98		$359,252.12	
8. Other Revenue	$0.00		$0.00		$0.00	

Outcomes Profile Physics (190200)

1. Semester/Year	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008
2. Enrollment		142	139	177	147	167
3. Earned WSCH/FTEF		371.43	402.86	428.57	491.32	434.29
4. Total FTES	98.90		86.80		92.40	
5. Cost/FTES	$3,156.02		$3,648.19		$3,933.73	
6. Total Cost/Fiscal Year	$312,130.00		$316,663.00		$363,477.00	
7. Total Revenue	$444,456.60		$357,876.40		$421,790.29	
8. Other Revenue	$0.00		$0.00		$0.00	

Outcomes Profile Physics (190200)

1. Semester/Year	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011
2. Enrollment	214	254	287	311	285	274
3. Earned WSCH/FTEF	407.62	400.29	546.67	581.9	542.86	458.57
4. Total FTES	98.90		129.50		110.50	
5. Cost/FTES	$3,578.82		$2,730.17		$3,267.32	
6. Total Cost/Fiscal Year	$353,945.00		$353,557.00		$361,039.00	
7. Total Revenue	$451,461.69		$591,145.49		$504,413.72	
8. Other Revenue	$0.00		$0.00		$0.00	

Outcomes Profile Physical Science (190100)

1. Semester/Year	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008
2. Enrollment		93	118	103	144	165
3. Earned WSCH/FTEF		413.68	467.37	420	485.45	566.67
4. Total FTES	30.90		30.10		39.50	
5. Cost/FTES	$1,748.22		$1,647.91		$1,960.23	
6. Total Cost/Fiscal Year	$54,020.00		$49,602.00		$77,429.00	
7. Total Revenue	$138,864.60		$124,102.30		$180,310.79	
8. Other Revenue	$0.00		$0.00		$0.00	

Outcomes Profile Physical Science (190100)

1. Semester/Year	Fall 2008	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011
2. Enrollment	187	226	202	290	249	288
3. Earned WSCH/FTEF	510	521.54	637.89	669.23	649.57	664.62
4. Total FTES	43.60		51.40		53.70	
5. Cost/FTES	$1,904.72		$1,427.28		$1,742.01	
6. Total Cost/Fiscal Year	$83,046.00		$73,362.00		$93,546.00	
7. Total Revenue	$199,026.59		$234,632.26		$245,131.37	
8. Other Revenue	$0.00		$0.00		$0.00	

APPENDIX 13

Department Equivalencies

Discipline (other areas included in the discipline)	**Minimum Qualifications**	**Master's degree Required**	**Statutory Law or Regulation apply**
Astronomy	See physics/astronomy	Yes	
Physical sciences	See interdisciplinary studies	Yes	
Interdisciplinary Studies	Master's degree in the interdisciplinary area **OR** master's degree in one of the disciplines included in the interdisciplinary area and upper division or graduate course work in at least one other constituent discipline. *Note: The interdisciplinary studies discipline is provided to allow for those cases where it is locally determined that a course must be taught by someone with qualifications that exceed a single discipline. The constituent disciplines can include any disciplines found in the Master's degree list.*	Yes	
Physics/Astronomy	Master's degree in physics, astronomy, or astrophysics **OR** bachelor's degree in physics or astronomy **AND** master's degree in engineering, mathematics, meteorology, or geophysics **OR** the equivalent.	Yes	