Coastline Community College

Science Program

5-Year Review

Science Program Review Committee

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Science Program Review

ABSTRACT

Since the completion of the science laboratory at the Coastline Garden Grove Center, the Coastline Community College Science Department has developed and begun to flourish. The past five years have seen significant growth and expansion. Through the efforts of department faculty, and with the critical assistance of the Vice-President of Instruction and a succession of Deans, the lab has been amply stocked. The department is poised to continue its expansion and service to the community.

Student satisfaction with the Science Department has grown along with the program and availability of materials. Students feel that instructors provide the expected assistance and meet their needs. Those from culturally diverse populations are also satisfied with instruction. Many would like to see the program provide additional services such as tutoring, which has just recently become available through the C-Tools program.

There are three critical areas for future program development: First is adding another full-time faculty member in the physical sciences. Another is to develop a certificate program (or several related programs) in laboratory technology, pharmacy techniques, or environmental management. Several faculty members are interested in developing these programs, but the lack of full-time leadership has been a serious hindrance to action in these areas. The Department does not participate as fully as it might in programs such as TEACh3 and STAR due to the large number of requests for participation compared with the small number of full-time faculty who can take additional responsibility. Finally, the department believes it has several opportunities to add more courses and better serve students' needs.

NEED FOR THE PROGRAM

The Coastline Community College Science Program serves the needs of a diverse group of students at several levels. Though most courses the college offers are mainly at the introductory level, the Science Department has had marked success introducing and promoting four advanced courses. Transfer students, teachers, health care workers, environmental technicians, students with general education requirements, high school students, home schoolers, and even those with nothing more than an interest in the world they live in, find their needs met through the science program.

Recent changes in state requirements for teaching credentials have resulted in a significant enrollment among those needing to update or complete their credentials. It appears that a critical shortage of science teachers and teachers with qualifications in science is looming in California. Many science teachers are reaching retirement age. As a result, we expect an increase in the number of teachers requiring Coastline's services. Health care continues to be an expanding field. The science department helps meet these needs through several levels of biology and chemistry classes and the ecology, geology, and marine science classes. These fields and others requiring basic science are all expected to expand in the coming decade. Students are also discovering the effectiveness and economy of completing general education courses at a community college, and the state of California actively encourages community college transfers.

The chemistry, biology, and astronomy courses offered at Coastline have long been popular with high school students as a way either to gain advanced standing at their school, or to make up courses in which they did not do well the first time. Home schoolers have also discovered Coastline's science classes as an effective way to complete their science requirements.

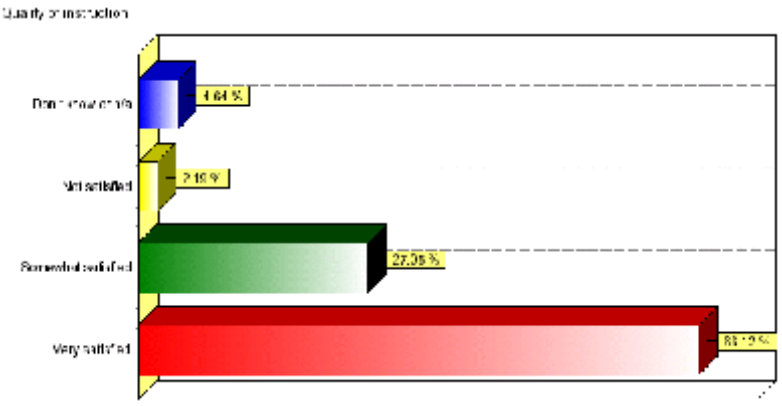
Coastline has been a leader in distance learning laboratory classes. Beginning with the "armchair field trips," introduced in geology five years ago, and the addition of a regular laboratory component to the Coastline Telecourse "Biology: Cycles of Life," members of the science faculty are now serving a global audience that exceeds 2,500 students. Increasingly larger numbers of distance learning students enroll in these lab classes.

To analyze the Science Department, approximately 360 students were surveyed during the fall 2001 term between the midterm and final exams. A sample of students in all science classes participated in the survey. The Office of Grants and Research compiled and analyzed results. Rankings in the survey were assigned points, with "very satisfied" assigned 1 point, "somewhat satisfied" 2 points, "not satisfied" 3 points, and "don't know" 4 points. Thus, the lower the score, the more satisfaction the students express.

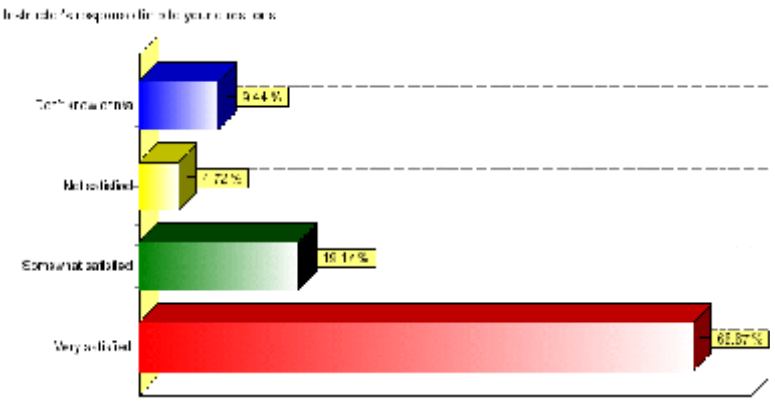
STUDENT SATISFACTION AND SUCCESS

Overall, students are well satisfied with the Coastline Science program, more so than five years ago. The following sections from the Science Student Survey show that students appreciate the efforts instructors make, and the quality of their work. Nearly two-thirds of the responding students are very satisfied with the quality of instruction and their instructor's responses, while the unsatisfied respondents declined by 1%.

Quality of instruction	
Very satisfied	66.12%
Somewhat satisfied	27.05%
Not satisfied	2.19%
Don't know or n/a	4.64%
Average 2002	1.45
Average 1997	1.64



Instructor's response time to your questions	
Very satisfied	66.67%
Somewhat satisfied	19.17%
Not satisfied	4.72%
Don't know or n/a	9.44%
Average 2002	1.57
Average 1997	1.72

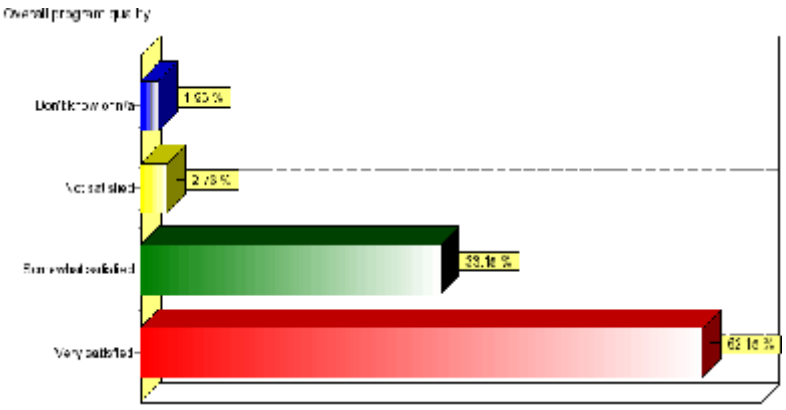


Students' positive responses to their science class are reflected in their similar response to their instructor. Dissatisfaction declined nearly 1%, while overall satisfaction increased. Overall program quality also showed a marked increase, possibly attributable to the significant increase in courses offered, and course options. The percent of students answering "very satisfied" compared with "somewhat satisfied" was reverse of the result five years ago. Students are less well satisfied with their own performance in their science class, but again are more satisfied than five years ago. The number of "very satisfied"

compared with “somewhat satisfied” students is the reverse of the 1996 survey. Note the responses to the following two questions.

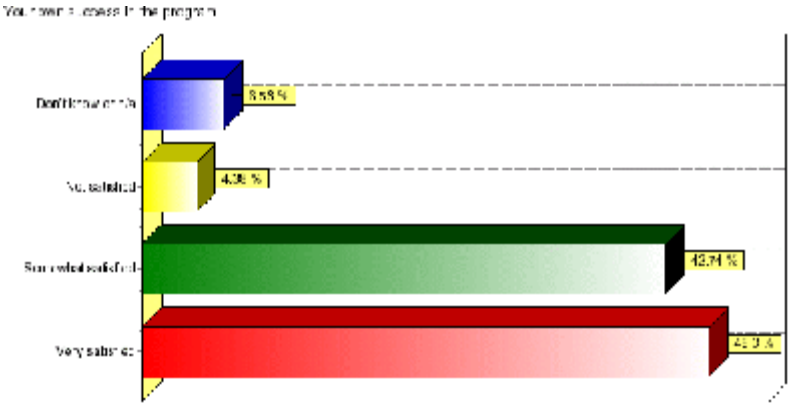
Overall program quality

Very satisfied	62.15%
Somewhat satisfied	33.15%
Not satisfied	2.76%
Don't know or n/a	1.93%
Average 2002	1.44
Average 1997	1.70



Your own success in the program

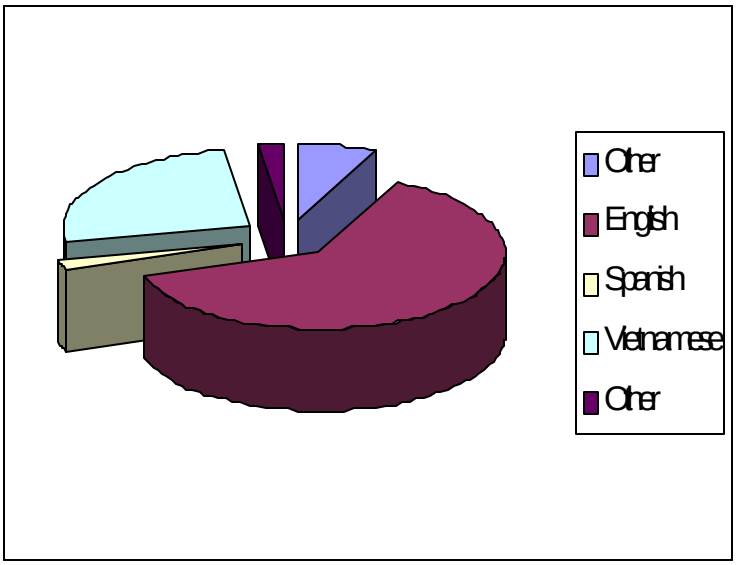
Very satisfied	46.30%
Somewhat satisfied	42.74%
Not satisfied	4.38%
Don't know or n/a	6.58%
Average 2002	1.71
Average 1997	1.94



Just less then two-thirds of the students in science claim English as their primary language. This is a decrease of nearly 20% from five years ago. One-half of the students were “very satisfied” that the faculty is meeting the needs of culturally diverse students. This is nearly twice the number of two years ago. Thus, although the department is serving many more non-native speakers, the faculty is apparently making excellent progress in meeting the needs of these students. The average satisfaction rating for meeting non-native speakers’ needs was a 1.37, significantly improved from the 1.58 of five years ago (“Don’t know” responses omitted from average).

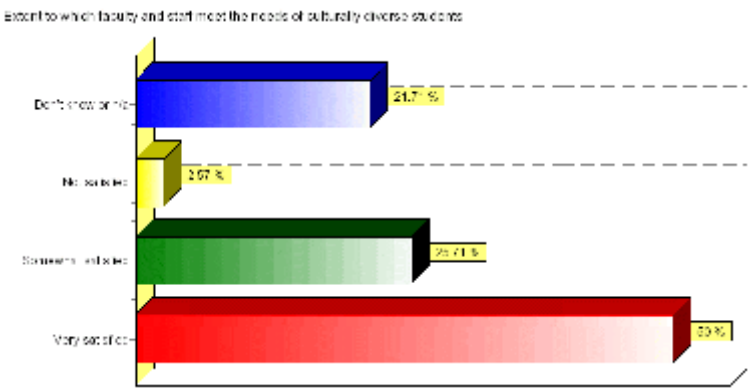
What is your primary language (the language you are most comfortable speaking, reading, or writing)?

Other	7.05 %
English	62.62 %
Spanish	2.71 %
Vietnamese	25.47 %
Decline to state	2.21 %



Extent to which faculty and staff meet the needs of culturally diverse students

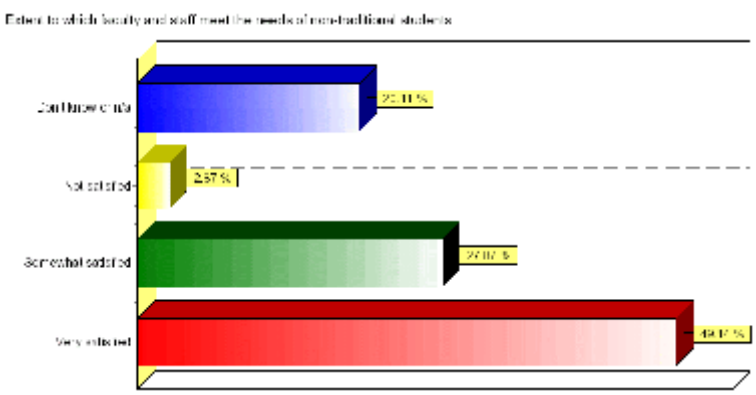
Very satisfied	50.00 %
Somewhat satisfied	25.71 %
Not satisfied	2.57 %
Don't know or n/a	21.71 %
Average 2002	1.37
Average 1997	1.58



Non-traditional students, long the mainstay of Coastline's student population, also were more satisfied with faculty performance than five years ago. The satisfaction and degree of improvement were similar.

Extent to which faculty and staff meet the needs of non-traditional students

Very satisfied	49.14 %
Somewhat satisfied	27.87 %
Not satisfied	2.87 %
Don't know or n/a	20.11 %
Average 2002	1.32
Average 1997	1.58

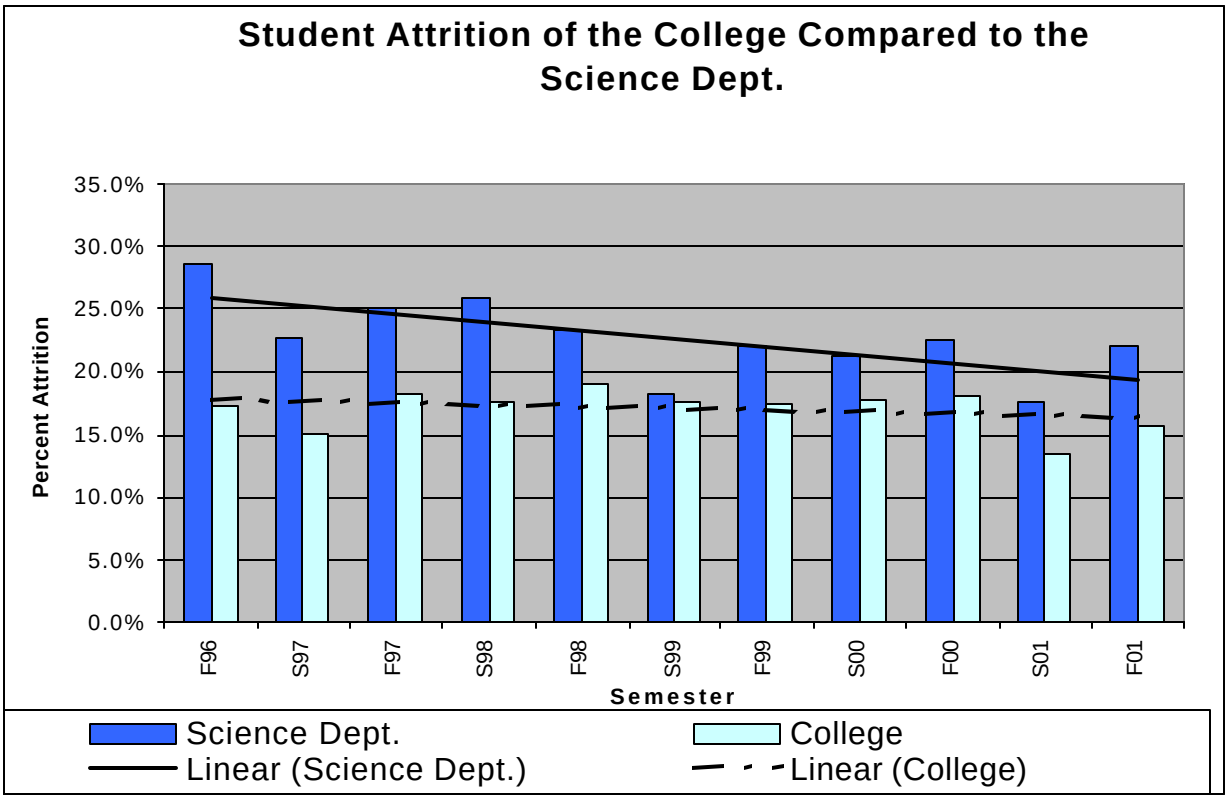


Many students were interested in additional support, but the Science Department has been unable to provide it. However, the recently instituted C-Tools program, combined with services offered through the One-Stop Center and expanded efforts of the counseling staff have made many of these services available. Science staff should be diligent to advertise these resources, particularly C-Tools. Nearly three-quarters of the students requested tutoring, apparently unaware of the newly-operating program. This was the most highly requested service, and we expect C-Tools to become very popular. Academic and vocational and career counseling were also strongly desired by students. Nearly half the students wanted job placement services and study skills help. Less than one-third of the students in science were interested in vocational ESL skills, however. While the college has identified recruitment to ESL classes a major development goal, it appears this will have only minimal effect on science enrollment.

Increasing the number of transferable classes will be crucial to increasing science enrollment. This is a critical consideration particularly for students in advanced classes such as pharmacology, anatomy, and general chemistry. The department has had many discussions with the other colleges in the Coast Community College District and with local universities to assure that as many classes as possible will transfer. Nancy Soto-Jenkins, the Articulation Officer, David Licata, Department Chair, and Shannon Christiansen, Dean, were all involved during the past few years in assuring that advanced classes were transferable to at least some local institutions. It is critical that this effort continues, and is expanded. One hindrance is the lack of a full-time individual in the department who will manage and oversee this process.

Another measure of student success is the attrition rate. During the previous 5-year period, attrition in science classes dropped from around 33% to 25%. That trend has continued with attrition falling to less than 20%. As shown in the graph below, the rate of attrition in science classes, is still about 4% greater than that of the college as a whole.

Simultaneously, the attrition rate is decreasing about three times more rapidly than in the rest of the college. Much of the decrease of the college attrition rate must be attributed to the success of the Science Department in retaining students. Also of note is that the science attrition rate is decreasing just when the department added majors-level courses in chemistry and biology, and expanded the anatomy classes. Many chemistry departments pride themselves on the large attrition, seeing general chemistry as a gateway class, barring entry to advanced science classes for all but the brightest students. Coastline has received similar reports regarding pharmacology from nursing students at other colleges. In contrast, the Coastline Science Department added these often difficult classes and continued to support student achievement and success by reducing its overall attrition rate. Many students have commented on how they appreciate the support and caring of Coastline faculty, in contrast to faculty at their "home" institutions. They prefer taking classes at Coastline because they know science instructors will be supportive and considerate of their needs and interests.



A review of the comments from the students surveys reveals that fewer than 10% of the students had a negative comment, compared with about 12% with positive comments. Among the comments classified as "negative" were requests for an on-campus library with physical books and a cafeteria. Only three types of responses were given by at least 1 percent of the students: Instructors or staff do not respond promptly enough to inquiries. The biology labs do not correlate well with the biology lecture textbook. Some students felt

a distance learning course did not meet their needs. Frequently, of course, a classroom version of the course is also offered.

Positive comments were more uniform. Four percent of students commended the department for the convenience and flexibility of courses. Three percent gave a commendation to the instructors and three to the course itself. About two and one-half percent commended the department on the quality of its distance education classes and requested that these offerings be expanded.

PARTNERSHIPS

The Science Department's recent effort to work with local colleges and universities to assure the transferability of pharmacology and chemistry classes has paid handsome dividends to the department and many of its staff. David Licata and Ken Ostrowski were both invited to be participants in the California State University Fullerton (CSUF) Fund for the Improvement of Post-Secondary Education (FIPSE) grant. This grant, to support the "Mastering Chemistry" online program provides online homework, "ChemHelp" with instant assistance for students, many cooperative-learning activities, and a large collection of animations to help students visualize different aspects of chemistry. Professors Licata and Ostrowski will write some cooperative-learning activities. Professor Licata has been asked to speak at a symposium on Mastering Chemistry at the 19th Biennial Conference on Chemical Education to be held at Western Washington University this summer.

Professor Licata is also participating in the Molecular Science Project (MolSci). The University of California Los Angeles (UCLA) Chemistry Department created this project with support from the National Science Foundation (NSF). The Calibrated Peer Review essay assignments completed by Coastline General Chemistry students were produced by MolSci. As an avid user of the essays in a distance learning situation, Mr. Licata was a featured speaker and assisted in a training workshop at the NSF's fall Multi-Initiative Dissemination Workshop near New York City.

Professor James Ruhle has worked for many years with the Chevron Petroleum Technology Company and CSUF on geology research. He has been involved particularly with investigations of the proposed nuclear waste facility in Nevada. Professor Kim Gordon continues to work with the astronomy faculty at California State University, Long Beach on development of web-based astronomy exercises.

The science program uses local high school laboratories to good advantage. The working relationship with Fountain Valley High School, in particular, has been excellent. Coastline has helped the high school to secure consumable supplies while making capital equipment available to Coastline students. This cooperative effort was critical to the early success of Coastline's program before the Garden Grove Center was completed and stocked.

Selected members of the Science Department also meet regularly with faculty from all levels of higher education in the state IMPAC Project, an initiative of the Intersegmental Committee of Academic Senates. In this way the department remains current on the most important issues in articulation and development of course outlines.

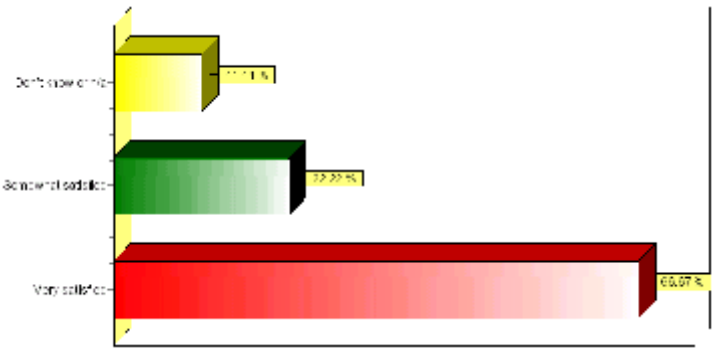
FACULTY and STUDENT EVALUATION OF INSTRUCTIONAL RESOURCES

The college has supported the Science Department to obtain an exemplary collection of capital equipment in conjunction with the opening of the Garden Grove Center. While a consistent capital budget has not yet been established, the department's needs have been provided by block grant funds and discretionary funds provided by the dean. Student lab fees pay for all other science materials. As the data below shows, both science faculty and science students recognize and appreciate the quality and availability of materials and equipment. Certainly, the staff would like to continue to increase and improve the materials Coastline has. The excellent progress of the past few years, however, has made the department very optimistic for a bright future.

Science faculty is generally satisfied with the materials and facilities that are available to conduct the program. Two-thirds of the faculty is "very satisfied" with the facilities the Science Department uses. The quality of equipment the department uses is generally satisfactory, though the faculty believes additional supplies should be acquired. Some faculty, however, was not aware of the full extent of materials available, particularly for physics classes (as revealed at the 2002 Spring Faculty Meeting). This may have contributed to the slightly lower rating. More than half the responding faculty found the availability and quality of general educational equipment very satisfactory. The funding provided to the department has greatly improved faculty perception of the materials available.

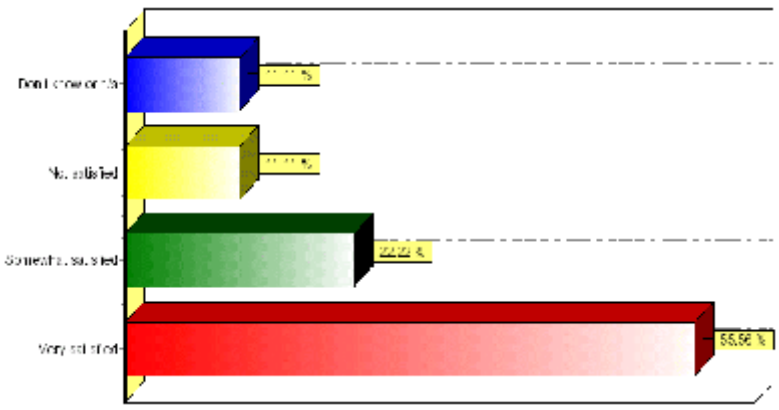
Adequacy of instructional facilities

Very satisfied	66.67%
Somewhat satisfied	22.22%
Not satisfied	0.00%
Don't know or n/a	11.11%
Average 2002	1.56
Average 1996	2.71



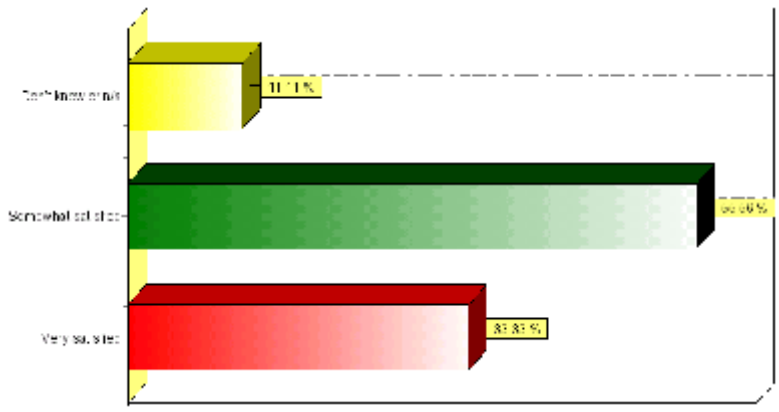
Quality of general instructional equipment

Very satisfied	55.56%
Somewhat satisfied	22.22%
Not satisfied	11.11%
Don't know or n/a	11.11%
Average 2002	1.78
Average 1996	2.29



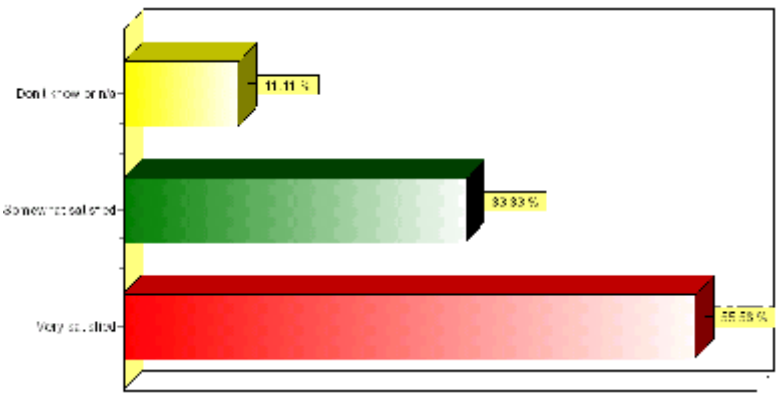
Quality of instructional equipment unique to science

Very satisfied	33.33%
Somewhat satisfied	55.56%
Not satisfied	0.00 %
Don't know or n/a	11.11%
Average 2002	1.89
Average 1996	3.15



Availability of general instructional equipment

Very satisfied	55.56%
Somewhat satisfied	33.33%
Not satisfied	0.00 %
Don't know or n/a	11.11%
Average 2002	1.56
Average 1996	2.29

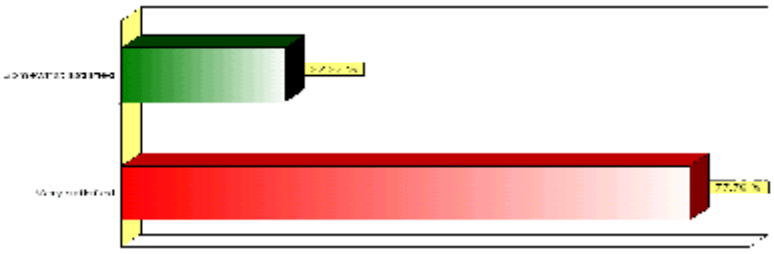


In stark contrast to the past, instructors are now very satisfied with the technology available for use and with the technology used for instruction. The Science Department has six computers and a smart-podium in the science lab. Instructional Services used staff development funds to provide notebook computers to department chairs last year, and

Distance Learning will make notebooks available to several staff members in that department. Additional computers, LCD projectors, and other technology-based equipment are also now available to help deliver quality instruction to students. Instructors have also received help preparing web sites for distance learning instruction, and the department has moved quickly to provide several classes via the Internet.

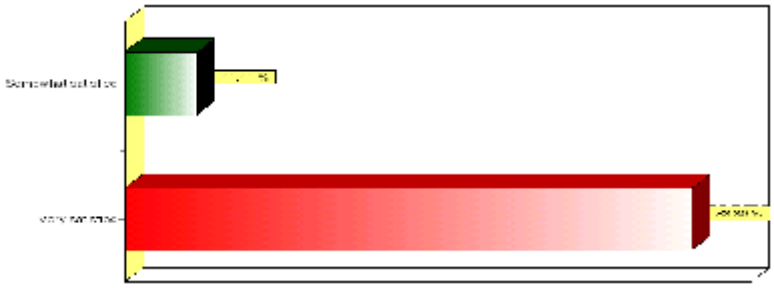
Extent to which the program uses technology to enhance teaching and learning

Very satisfied	77.78%
Somewhat satisfied	22.22%
Not satisfied	0.00%
Don't know or n/a	0.00%
Average 2002	1.22
Average 1996	2.29



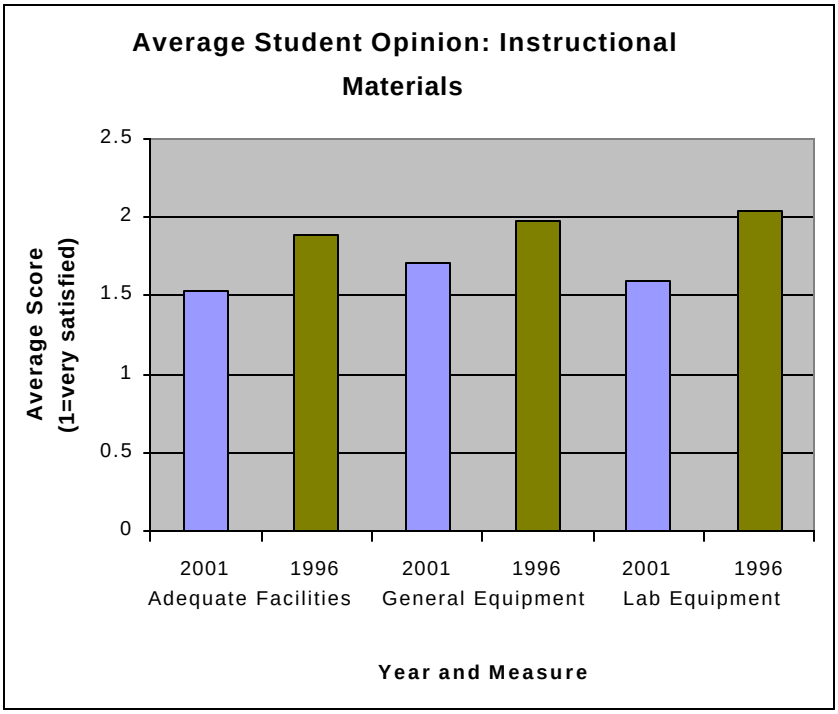
Extent to which media development or other computer are available to instructors

Very satisfied	88.89%
Somewhat satisfied	11.11%
Not satisfied	0.00%
Don't know or n/a	0.00%
Average 2002	1.11
Average 1996	3.59



Instructors continue to be gratified with their opportunities to participate in curriculum and program development, and the support that they receive from other staff. The independence faculty enjoys in curriculum and program work is clear from their evaluation of the “opportunities [for you] to participate in curriculum and program development.” Two-thirds were very satisfied, and the remainder satisfied in this category (average response 1.23). Five years ago just over one-quarter gave each of the two positive responses with nearly one-half unaware of any such opportunities (average 2.57). Faculty was completely satisfied with their support from other college staff with 100% checking the “very satisfied” option. While they also approved of the help they received at the last review, not quite

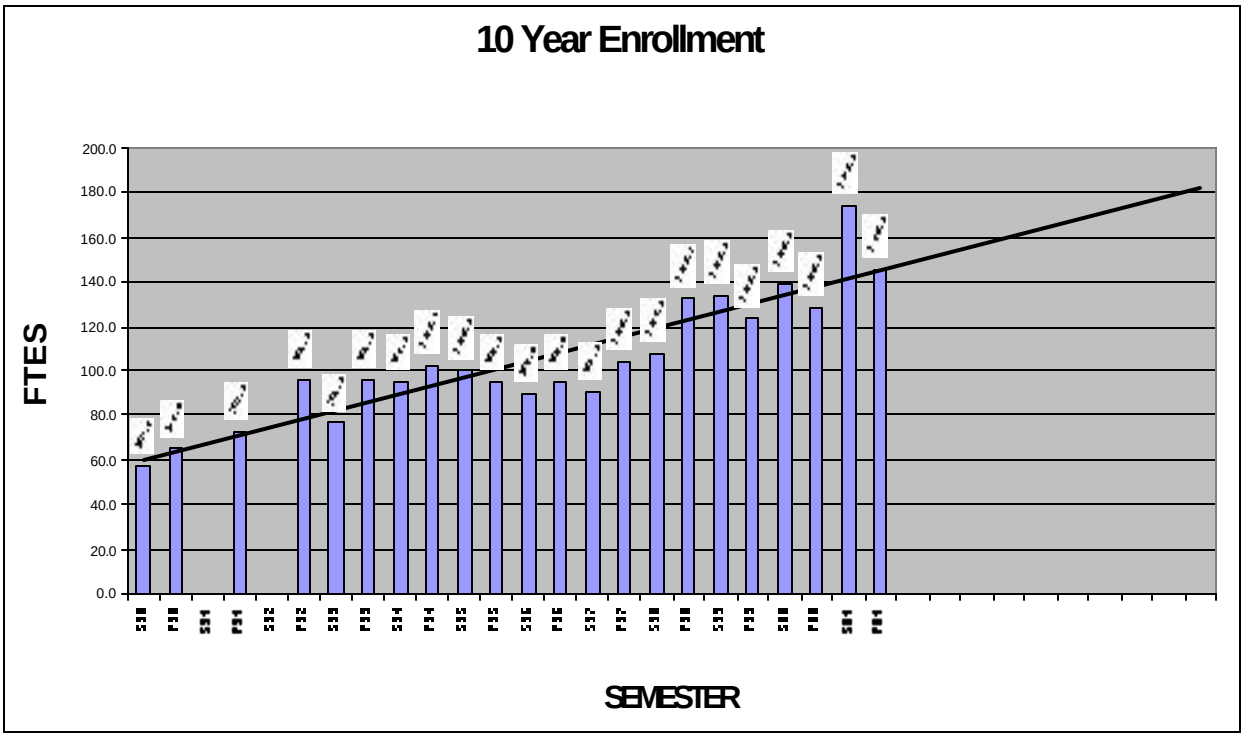
three-quarters gave support staff a “very satisfied” rating. The Science Department wishes to commend particularly the Area 4 staff for their strong support and assistance, and the Distance Learning office for their work. Under the direction of Vince Rodriguez the many staffers in Distance Learning have developed regular and sensible procedures to facilitate instruction. Tho Vinh, and the recently hired Shawn Mann have also been notable for the support provided in website development and management.



Students also recognize the success of the Science Department in stocking the laboratory with effective laboratory and instructional equipment. The comparison graphs below show how much the perception of available materials has improved. Three questions measured the instructional materials: Adequacy of instructional facilities, quality of general equipment, and adequacy of laboratory equipment. In all three cases more than half the students were “very satisfied.” Fewer than 9 percent were unsatisfied. In contrast, five years ago the number of “unsatisfied“ students was 25% of those with an opinion, and fewer than one-third were “very satisfied.” Students noted the adequacy of laboratory equipment in particular. The average ranking score improved from a 2.04 (excluding N/A answers) to 1.60.

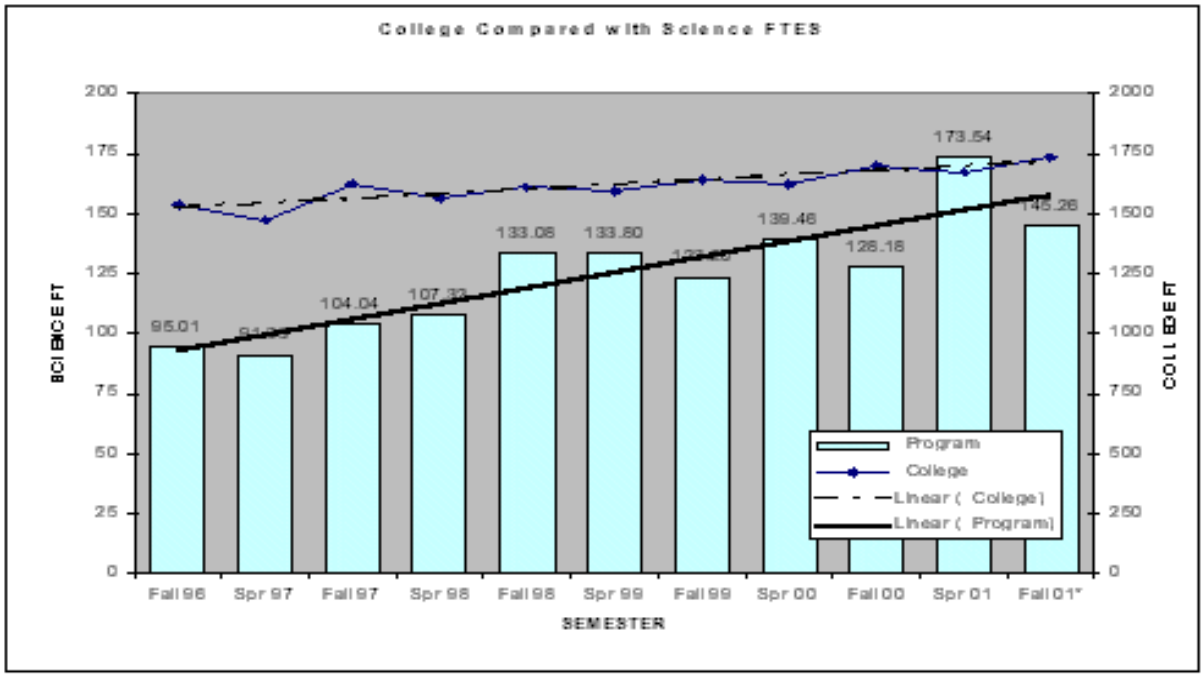
DEPARTMENT GROWTH and CLASS SELECTION

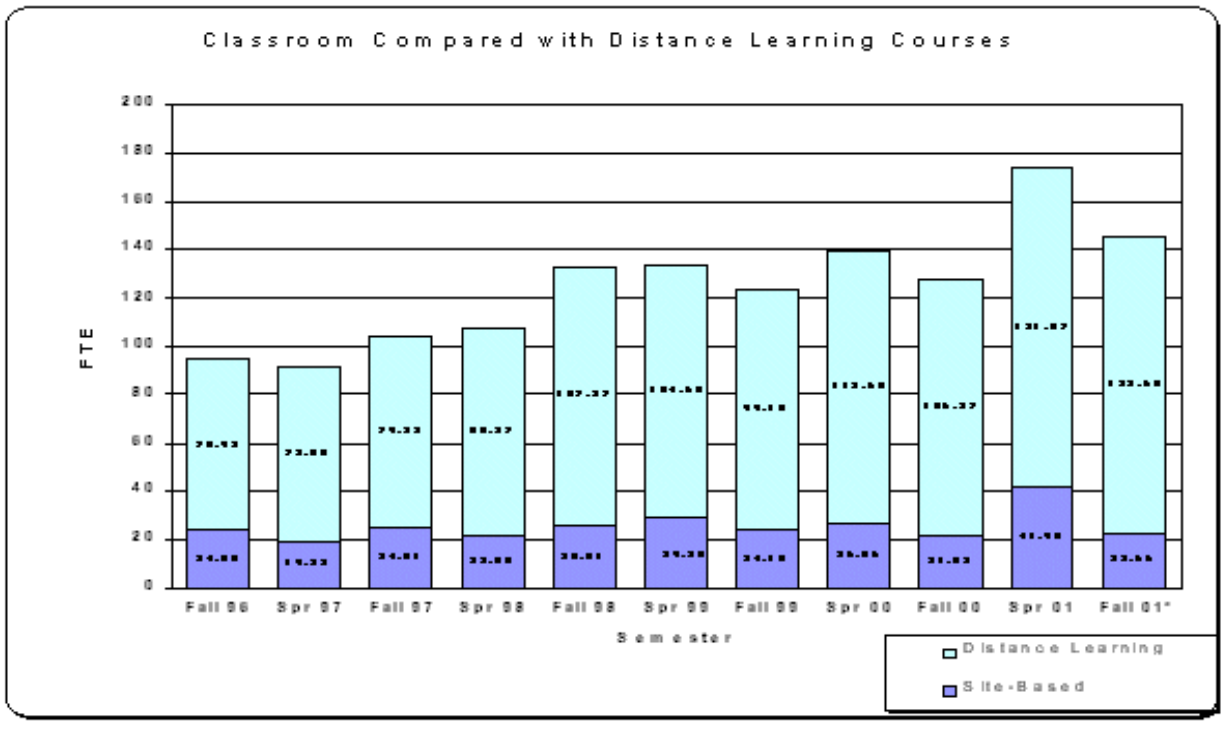
Science Department enrollment is continuing its 10-year trend of increases. It continues to outstrip the college in this area. The graph on the next page shows the increases in enrollment and the projections for the next five years. The department expects to enroll 2,000 students (about 180 FTES) in about five years. Science enrollment is increasing about three times faster than that of the college. Over the past five years, the Science Department has contributed one-fourth of the total increase in FTES. Several factors account for this: First, the department has been more successful in meeting the needs of students (as identified above). This led to greater retention, and larger enrollments as students learned that Coastline is committed to meeting their needs. Second, the



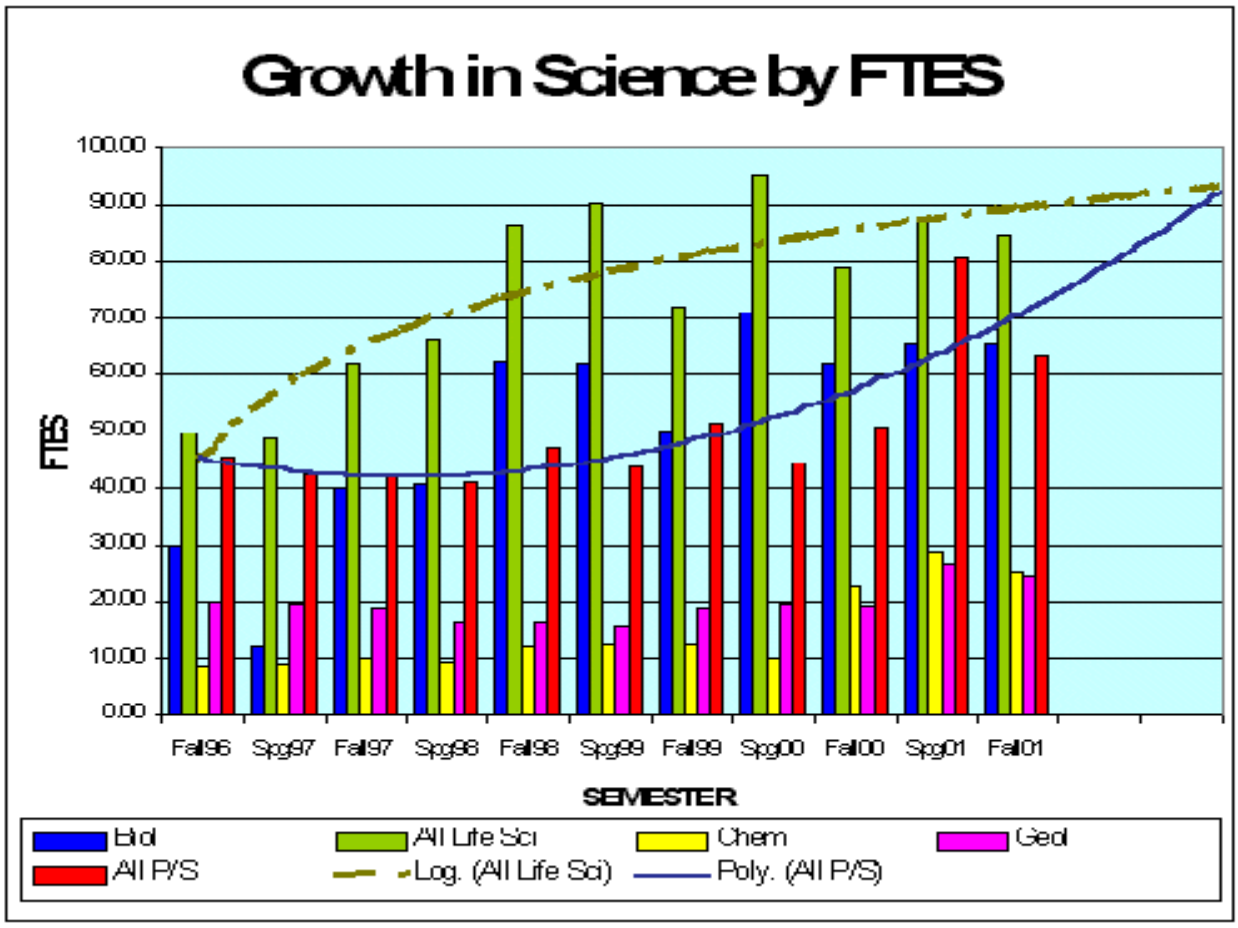
department expanded the number of classes it offers. Finally, the department has participated in many new programs offered by the college such as Access, STAR, and TEACh3. Through these programs, the department has made classes available at times, and in modes that better serve students' needs. Since C-Tools has been available only one semester, it has probably not contributed to the decrease in attrition, but should be a major factor in the department continue its record of improving retention.

Distance Learning classes make up most of the Science Department enrollment. Classroom enrollment has been stable at about 24 FTES per semester, while Distance Learning classes have increased significantly in enrollment. Spring 2001 had a large increase in classroom enrollment due to the initial Dual Enrollment Program at Pacifica High School. Dr. Christiansen has been instrumental in promoting this program, in conjunction with Science Chair David Licata. Though there has been a temporary setback in expanding the program to include more classes and high schools in the Garden Grove Unified School District, both the Science Department and the Dean have high hopes that this significant and beneficial program will gain wide acceptance and contribute to increased FTES throughout the college.



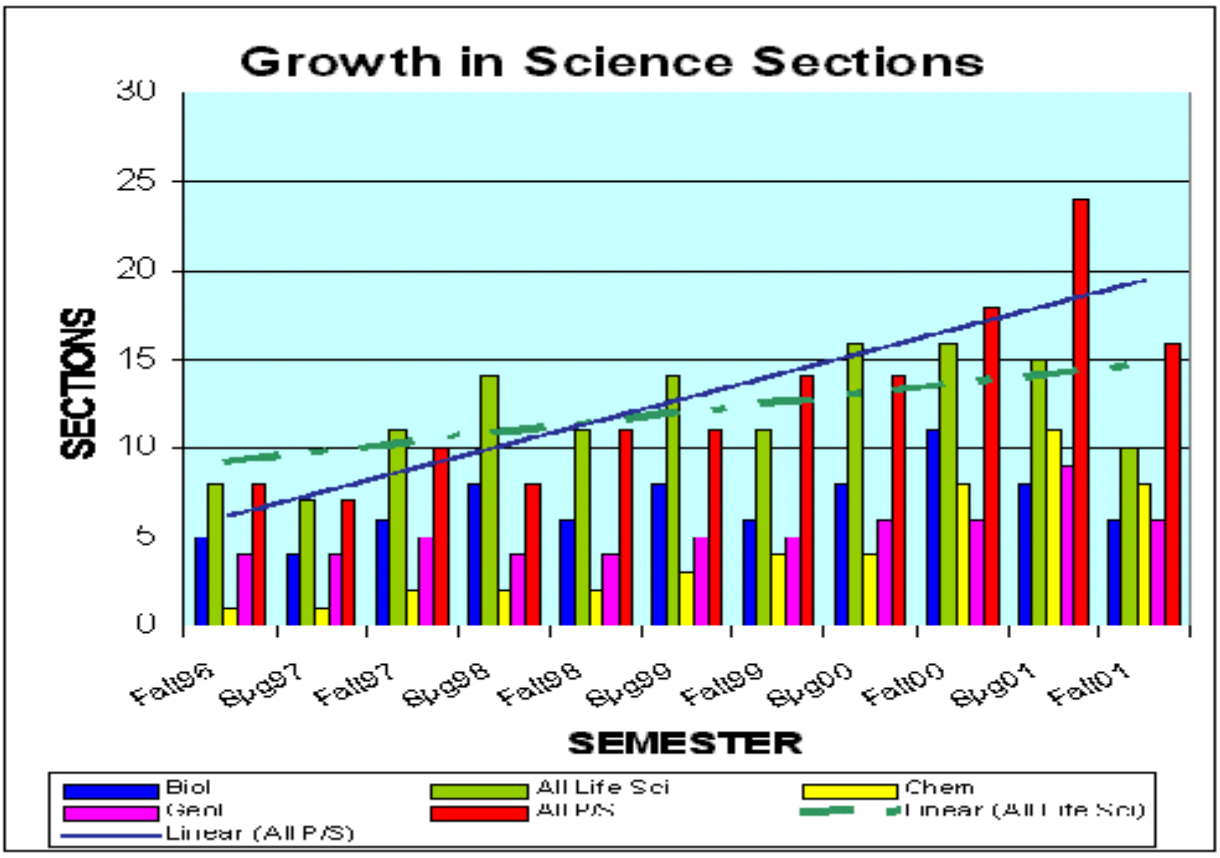


Approximately half the FTES growth has resulted from increasing enrollment in a single class, the Biology 100 telecourse. The remaining growth is evenly divided between increases due to new programs such as Access, STAR, and TEACh3 and the five new physical science sections (four in general chemistry lecture and lab, semesters one and two, and California Geology during intersession). While predictions of

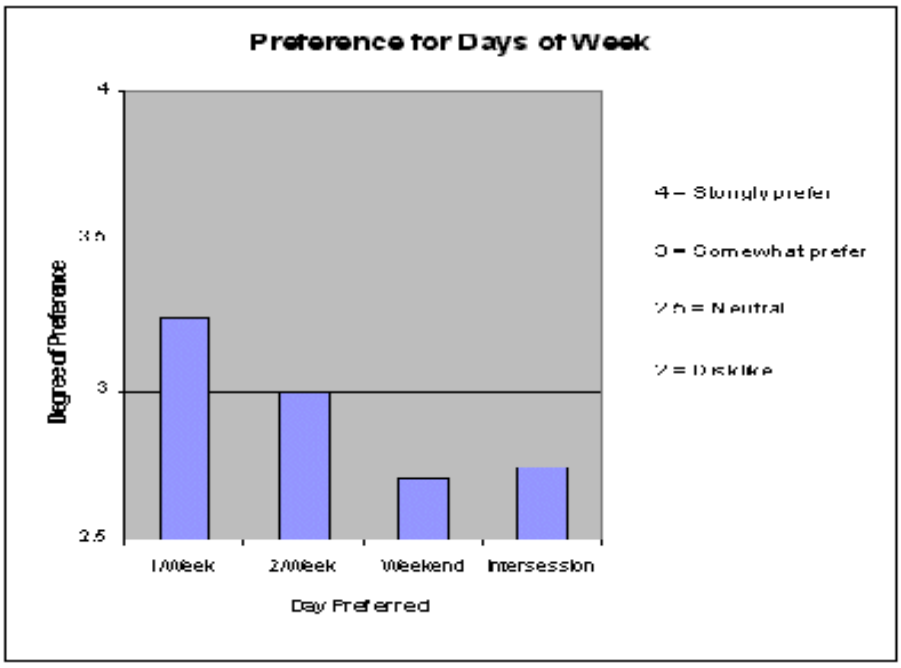


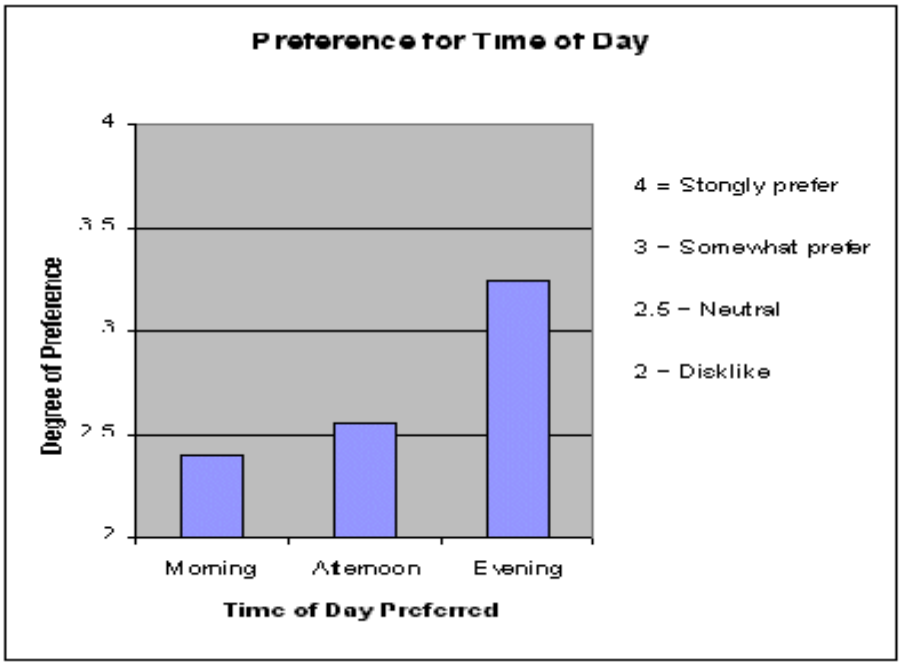
future growth are mainly speculative, without further development of new classes in biology, it appears likely that biology growth is near a plateau. Physical science growth, in contrast, appears likely to continue expansion over the next five years as the newly added classes find a broader audience and greater acceptance. The addition of the intersession geology course, rather than taking enrollment from the regular semester classes, has appeared to continue the expansion of that program. The recently added general chemistry classes, after an initial challenge, have also found a ready audience with reliable enrollment. In addition, a new chemistry class geared for teachers is now planned for the TEACh3 program, continuing the growth in of that segment. A critical need is for a Coastline instructor to develop and teach that class, which requires daytime meetings.

As the graph below displays, the total sections in physical science surpassed the assigned sections of life science classes in the fall of 1998. While the physical science faculty is larger and more diverse than the life science faculty (in terms of teaching qualifications and types of sections taught), the lack of a full-time physical science instructor leaves the department to depend on adjunct staff to meet the many development requests such as those from STAR, TEACh3, and other college programs. This has hampered the growth of both the Science Department, and the entire college.

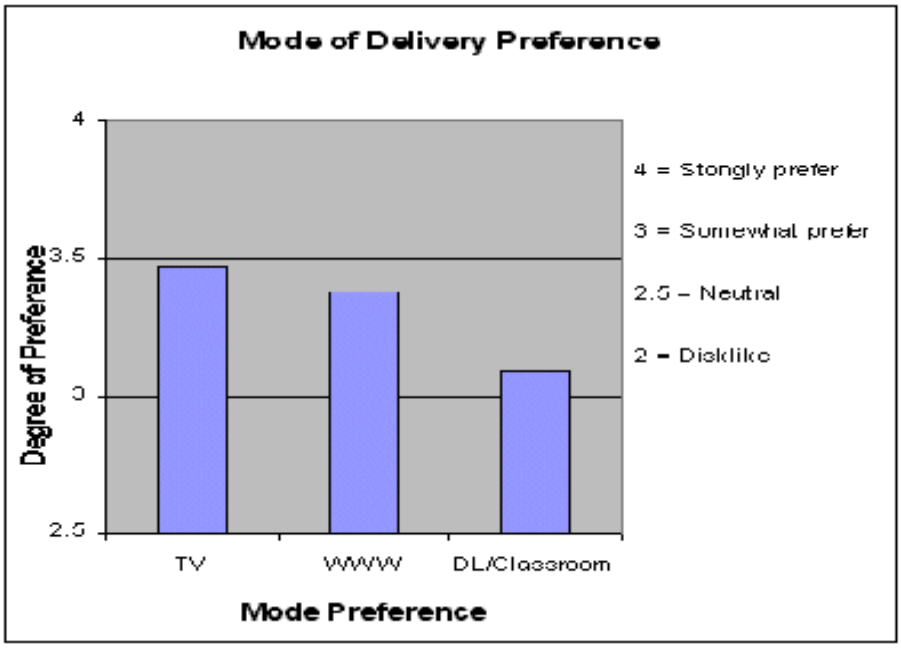


Students are generally satisfied with the selection and scheduling of classes in the Science Department. Nearly half the students are "very satisfied" with the selection, and much more than half with the schedule. The average score for scheduling is 1.51 (compared with 1.65 at the last review). The average for selection of classes offered is 1.71 (compared with 1.90 last time). The faculty was nearly unanimous in their high satisfaction with class schedules.



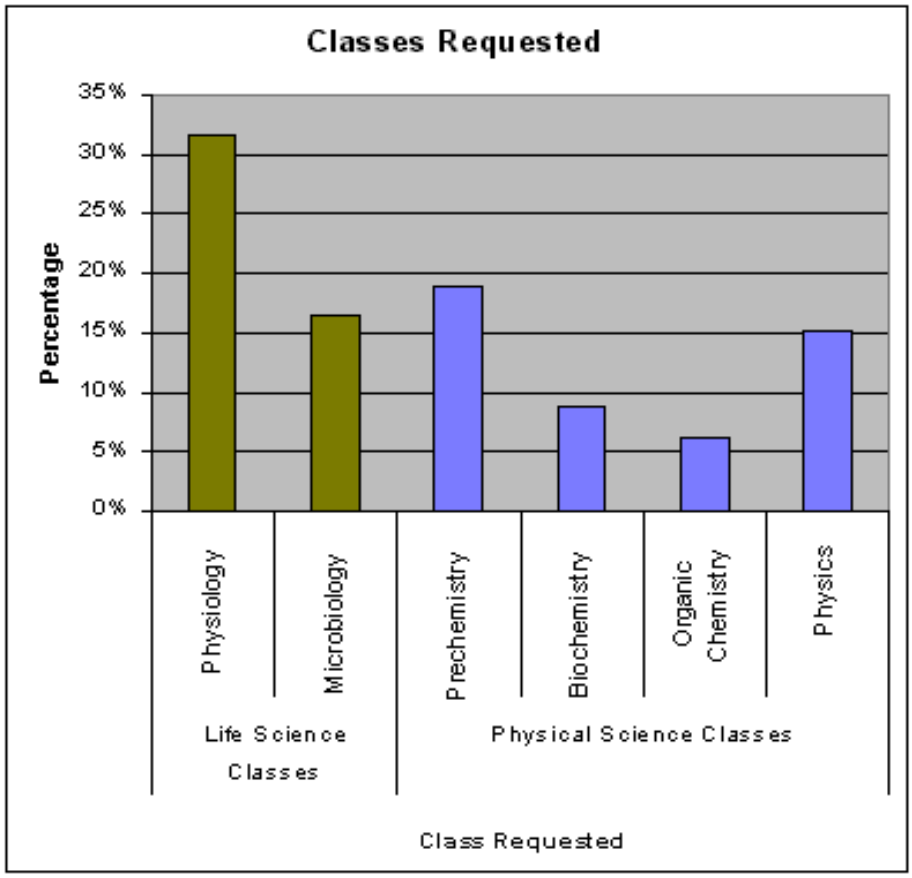


The survey also collected data on the preferred scheduling of future classes. This data was rated on a four-point scale with four meaning "strongly prefer" and one meaning "strongly dislike." The higher score suggests the largest preference. While students were not averse to weekend or four-week intersession classes, they expressed a clear prefer ence for classes meeting only one day each week. Two-day-per-week classes, such as those in the Access program also would be well-received according to the survey. However, the morning hours of the Access program do not fit as well with the preferences of most students. The later in the day a class is offered, the more students prefer it. The three modes of delivery studied by the survey are about equally appreciated. It is no surprise that most students request the distance learning modes, since the vast majority of science students take distance learning classes. Combination class, such as those in the STAR program, also received high marks.



Nearly one-fourth of the respondents requested that the department offer additional, mostly advanced level classes. Although more life science than physical science students

were surveyed, requests for additional classes were almost evenly divided between the two halves of the discipline. It is interesting that more than 2 percent of students requested classes already offered by the Science Department. This may suggest that the department, and the college as a whole could more effectively advertise the classes offered. As the tabulation of requests below shows, students were most interested in a physiology class as a companion to the existing anatomy offering. Requests for a preparatory chemistry (prechemistry), microbiology, and physics (at the majors' level) were nearly equal. Students also had significant interest in two other advanced chemistry classes: biochemistry and organic. A much larger investment in capital equipment for the laboratory would be needed to support those classes. Due to the volatile and often toxic chemicals used in organic chemistry, a completely new laboratory facility would be needed before the college could offer that course due to OSHA and RCRA regulations.



Faculty expressed interest in offering oceanography, physics, environmental science, and a prechemistry class. Additional, but nonspecific developments in biological sciences were also mentioned by faculty. Clearly, the faculty is largely in agreement with students regarding the additional classes the Science Department should develop. By inference, both groups recommended the physiology, prechemistry, and physics classes, and microbiology.

A final area for the Science Department and its Dean to investigate is the assignment of courses to the department. The new "CoastlineStudentGuide.com" website includes geography classes with its list of science courses. Both Barbara Holowell and Tom Snyder were asked about this as the geography classes have not previously been

included in the Science Department Chair's purview. Mr. Snyder replied that he investigated

> "the official District printout of Coastline faculty and their teaching disciplines as approved by the District . . . From the transfer perspective, Geography is listed as a science . . . and even as a laboratory science requirement . . . Tom Snyder "
>
> Email message to David Licata from Tom Snyder 11/06/01.

If the district includes geography classes with the Science Department, then it is appropriate for Coastline to bring its practices in line with the district. The geography classes and instructors should be invited to join the other science staff and cooperate with the Science Department.

PROFESSIONAL GROWTH

Science faculty regularly participates in professional growth activities, participates on college committees, and attends staff development courses. In the past three years, honors and grants earned by department instructors include: nominations for Disney's Teacher of the Year; a California Virtual College grant to develop courses with complex media; research grants from Chevron Petroleum Technology Company, Science Applications International, Ratheon Services, and TRW Environmental; and several instructors listed in *Who's Who Among Science Teachers*. Several faculty members are participants in grant projects sponsored by other institutions, including: "Mastering Chemistry," a CSUF project funded by the US Department of Education's FIPSE program, and the "Molecular Science Project," an NSF-funded project based at UCLA. The University of California, Irvine is also a major participant in both grants. Thus, Coastline chemistry instructors are regular participants with their colleagues at three major local universities to which our students transfer.

Science instructors also serve on several college committees, including the Program Review Committee for the Emeritus Institute and Adaptive PE, the Gerontology Advisory Committee, and hiring committees for several levels of college employees. The department recently took advantage of a district Board of Trustees policy to form discipline-based equivalency committees in Astronomy/Physics, Biological Sciences, Chemistry, and Geology. The department had proposed two such committees, one for biological sciences, and one for physical sciences, based on the California State Academic Senate's definition of Physical Sciences (which refers to the interdisciplinary major for explanation, rather than repeating the definition again). The Coastline Academic Senate, however, felt that since the college district does not have an "interdisciplinary studies" department that includes the physical sciences, the individual committees were required. With the discipline-based equivalency committees, the Science Department can assure that science instructors with direct experience in the discipline, relationships with colleagues at four-year institutions, and discipline-based work-experience will be making equivalency decisions when, and if, that ever becomes necessary.

This sample of professional development activities shows the extensive work done by Coastline science faculty. The members stay current in their disciplines and in the field of education. The variety of pursuits, and the up-to-date technology employed by the program members clearly proves that they will be prepared to take advantage of whatever advanced techniques for instruction delivery Coastline makes available.

USE OF TECHNOLOGY

Members of the Science Program are involved in using the most current methods and technology to enhance and deliver their courses. As examples, the Astronomy 100 class uses a website maintained by Kim Gordon, the instructor (as part of his duties at CSULB), to learn astronomy concepts, explore the solar system and the universe, and to complete selected class assignments. All of Coastline's chemistry classes are available with CD-ROM lectures. Other content is administered on the Internet. Professors Licata, Ruhle, and Gordon have all developed distance learning laboratory kits that permit students to work from home and complete standard laboratory exercises in astronomy, biology, chemistry, and geology. The chemistry laboratory directions are delivered on CD-ROM with laboratory report pages students can complete on their computers and return. Various experiments include computer simulation components to help students visualize what is happening. The General Chemistry classes also employ the Internet to explore specific topics in chemistry, write essays, learn to evaluate essays, and then do peer-grading of the essays all in an online format. Licata produced a CD-ROM converting the Introduction to Chemistry class lectures to that format. Professor Deborah Secord similarly prepared a CD-ROM version of the Introduction to Geology class.

The department planned the new science laboratory room at the Garden Grove Center with technology in mind. The five computer workstations connected to the main server in the Information Commons allow students to collect and analyze data. In this way, students are making better use of their laboratory time and learn, at Coastline, the same procedures they will be applying on the job. The computers also provide access to video demonstrations, review materials, laboratories, and other information and resources to enhance student learning.

Most classes have midterm and final exam review sessions available over the internet as streaming video for students who cannot attend live review sessions. These also work well for students who wish additional review of certain sections of a course since students can "skip ahead" in the streaming file. Professor Orme is regularly using PowerPoint presentations in his summer school Introduction to Chemistry class.

Five years ago nearly half the students had no Internet access at all. At this time nearly 95% of students have some sort of access and more than three-quarters have access at home. There has thus been a major shift in enrollment patterns favoring the new technology. While weekend college and telecourse enrollment has been stable, classroom attendance has dropped by nearly 16% while nearly 20% of the students are in an Internet class. Every distance learning class now has a web homepage

Based on these enrollment trends, students clearly appreciate the uses of technology to enhance their learning. Instructors are providing better teaching through technology. The science faculty is very satisfied with the technology support Coastline has provided. As science enrollment increases, it will be necessary to increase the number of available computers, and upgrade them to work with the latest programs.

SUPPORT OF CULTURAL DIVERSITY AND NON-TRADITIONAL STUDENTS

As noted above, both students and faculty are satisfied with the level of program support for the culturally diverse and non-traditional student. Science deals with natural laws rather than personalities and so does not lend itself specific activities promoting cultural diversity. Professors often, however, may emphasize the particular contributions of individuals and races or ethnic groups in discussing the historical origins of scientific

principles, laws, or equipment. Science classes are as diverse as any in the college. Providing a culturally diverse faculty is a more challenging task, however. The applicant pool for each science subject includes very few females or Spanish-surname candidates. While a few candidates of Asian origin have been contacted for vacant positions during the past few years, none were available to accept a position. The department did recently hire an African-American physician to teach Pharmacology for Spring 2002. In spite of the lack of gender or ethnic diversity, instructors in the Science Department work diligently to serve all groups of students, a fact which the data bear out (see STUDENT SATISFACTION AND SUCCESS above).

All students have requested some activities and support (such as tutorials, academic, and vocational guidance), but particularly by those with heritage principally in countries other than the United States. Science instructors do what is feasible and reasonable within the confines of their time, compensation, and program budget. The C-Tools program should prove very helpful in guiding these students and giving them more personal assistance.

FIVE-YEAR GOALS

The Science Program has three principal goals for the next five years: First, to increase the total number of courses offered. Second to secure the appointment of a second full-time faculty member in the physical sciences who can manage and oversee the Garden Grove laboratory facility (a district mandate) and lead in developing programs in the Science Department. Third to develop a certification or AA major sequence in laboratory technologies.

Students and faculty have identified similar needs for additional courses, particularly in advanced biology and preparatory chemistry. Instructors should review the existing materials and technology and begin development of those courses within the next year. In addition, both the Introduction to Chemistry and the preparatory chemistry courses are good candidates for an open-entry/open-exit independent study system like that now being used in select basic math classes. By giving students this extra choice, Coastline can expand services to students and meet the needs of an ever-larger population.

Coastline must have a second full-time science faculty member to assure that there is adequate staffing and oversight of the laboratory facility at the Garden Grove Center, help in managing the department, and work on the many development opportunities in new courses, grants, and outreach. The Two full-time faculty members teach in the department. One of those individuals serves as chair of two other Coastline departments, and understandably has only minial time to devote to Science Department development. The other “full-time” science instructor has as much as 30% of the assigned units in another department. Thus, the Science Department has no single individual who can devote themselves full-time to Science Department development and growth, to the success of students, and to the development of future scientist and science teachers.

The current full-time/adjunct ratio in the Science Department is approximately one to 14. There is one full-time faculty member for some 145 FTE in some 30 sections. This includes only the historic science staff, and does not include the geography staff, sections, or students which the district lists as science classes. In Spring 2001, the department moved from the fourth largest generator of FTES to second. If geography classes were regularly included, this ranking would surely be the department’s regular position. Yet, the

official human resources records credit science with less than one full-time FTE faculty member (0.98 for Spring 2001). Given the growth of the department both in number of students and courses, it is clearly fair to consider an additional full-time instructor in science at the next possible opportunity.

The district has recently begun a new program in the Environmental Health and Safety Office to monitor hazardous material storage, use, and disposal. As these materials are used mainly by the chemistry classes (26 class units each semester), a full-time instructor who can monitor the laboratory seems sensible. Depending on the specific district requirements (unknown at this time), it is possible that only a full-time person could effectively monitor compliance. Also, to balance the department and provide broader expertise and experience, the second faculty member should be a physical scientist since the one participating full-time science faculty member is trained in the life sciences. Coastline, and the Science Department in particular, misses multiple opportunities for participation in regional, state, and national science programs. For example, a full-time physical science faculty member was needed to attend development meetings for the TEACh3 program. But there is no such person. A Coastline instructor was invited to become an assistant director of two different national consortia developing and disseminating chemistry instruction materials. Unfortunately, the adjunct faulty members are committed to other jobs and cannot be released for the necessary training conferences, meetings, and development days. These missed opportunities hinders growth of the Science Department and of the college. It prevents the college from gaining the reputation it deserves as a leader in physical science curriculum development.

The Science Department has several members qualified to develop a certificate or AA program in laboratory technology, pharmacy technician, or environmental technology and waste management. An additional option would be an education laboratory technology program, training students to be high school or college laboratory assistants. With appropriate time and leadership, developing one or more of these certificates or degrees would entice more students to the Science Department and to the college. This would have the important benefit of maintaining long-term enrollment at the college. With more long-term enrollment in science the additional full-time faculty member will be more than justified. A second full-time faculty member will also enable the department to expand into other services such as assisting in the tutorial program.

The Science Program has bright prospects for the future. Faculty members expect that increasing the use of the laboratory will help the program enhance its current offerings and provide the basic resource to continue to expand the number of classes, the number of students served, and the number of partnerships in which the program can participate.

APPENDIX 1
LIST OF SCIENCE DEPARTMENT FACULTY
And Teaching Assignments

Shannon Christiansen . . . . . Dean

David Licata . . . . . Department Chair, Chemistry

James Beazell . . . . . Anatomy, Biology

Mike Curtis . . . . . Biology, Marine Science

Jennifer Giancarlo . . . . . Pharmacology

Kim Gordon . . . . . Astronomy

Vance Gritton . . . . . Chemistry

Jeff Johnson . . . . . Biology

John Maas . . . . . Geology

Dewey Mayes . . . . . Pharmacology

John McNamara . . . . . Ecology, Geology

Mark Orme . . . . . Chemistry

Ken Ostrowski . . . . . Astronomy, Chemistry, Geology

John Phillips . . . . . Biology, Ecology, Geology

William Rice . . . . . Geology, Ecology

James Ruhle . . . . . Geology

Deborah Secord . . . . . Geology

Randall Warwick . . . . . Anatomy, Biology

APPENDIX 2
STUDENT SURVEY AND RESULTS

	Count	Percent
Quality of instruction		
Very satisfied	242	66.12 %
Somewhat satisfied	99	27.05 %
Not satisfied	8	2.19 %
Don't know or n/a	17	4.64 %
Total Responses	**366**	**100%**

	Count	Percent
Variety of classes		
Very satisfied	179	48.77 %
Somewhat satisfied	139	37.87 %
Not satisfied	24	6.54 %
Don't know or n/a	25	6.81 %
Total Responses	**367**	**100%**

	Count	Percent
Scheduling of classes		
Very satisfied	214	59.44 %
Somewhat satisfied	125	34.72 %
Not satisfied	8	2.22 %
Don't know or n/a	13	3.61 %
Total Responses	**360**	**100%**

	Count	Percent
Relevancy of classes to your vocational, academic, or personal needs		
Very satisfied	202	55.80 %
Somewhat satisfied	130	35.91 %
Not satisfied	19	5.25 %
Don't know or n/a	11	3.04 %
Total Responses	**362**	**100%**

	Count	Percent
Adequacy of the instructional facilities		
Very satisfied	205	57.10 %
Somewhat satisfied	128	35.65 %
Not satisfied	15	4.18 %
Don't know or n/a	11	3.06 %
Total Responses	**359**	**100%**

	Count	Percent
Quality of general instructional equipment		
Very satisfied	185	51.39 %
Somewhat satisfied	124	34.44 %
Not satisfied	20	5.56 %
Don't know or n/a	31	8.61 %
Total Responses	**360**	**100%**

	Count	Percent
Appropriateness of textbooks		
Very satisfied	210	57.85 %
Somewhat satisfied	122	33.61 %
Not satisfied	22	6.06 %
Don't know or n/a	9	2.48 %
Total Responses	**363**	**100%**

	Count	Percent
Adequacy of available laboratory equipment in relationship to student needs and course objectives		
Very satisfied	136	39.19 %
Somewhat satisfied	106	30.55 %
Not satisfied	29	8.36 %
Don't know or n/a	76	21.90 %
Total Responses	**347**	**100%**

	Count	Percent
Availability of instructional equipment		
Very satisfied	139	40.64 %
Somewhat satisfied	128	37.43 %
Not satisfied	14	4.09 %
Don't know or n/a	61	17.84 %
Total Responses	**342**	**100%**

Staff (other than instructor's) support for the program and classes in terms of effective response to materials and facilities		
Very satisfied	185	51.10 %
Somewhat satisfied	110	30.39 %
Not satisfied	18	4.97 %
Don't know or n/a	49	13.54 %
Total Responses	**362**	**100%**

Extent to which faculty and staff meet the needs of culturally diverse students		
Very satisfied	175	50.00 %
Somewhat satisfied	90	25.71 %
Not satisfied	9	2.57 %
Don't know or n/a	76	21.71 %
Total Responses	**350**	**100%**

Extent to which faculty and staff meet the needs of non-traditional students		
Very satisfied	171	49.14 %
Somewhat satisfied	97	27.87 %
Not satisfied	10	2.87 %
Don't know or n/a	70	20.11 %
Total Responses	**348**	**100%**

Instructor's response time to your questions		
Very satisfied	240	66.67 %
Somewhat satisfied	69	19.17 %
Not satisfied	17	4.72 %
Don't know or n/a	34	9.44 %
Total Responses	**360**	**100%**

Overall program quality		
Very satisfied	225	62.15 %
Somewhat satisfied	120	33.15 %
Not satisfied	10	2.76 %
Don't know or n/a	7	1.93 %
Total Responses	**362**	**100%**

Your own success in the program		
Very satisfied	169	46.30 %
Somewhat satisfied	156	42.74 %
Not satisfied	16	4.38 %
Don't know or n/a	24	6.58 %
Total Responses	**365**	**100%**

Once a week		
Strongly prefer	131	47.29 %
Somewhat prefer	103	37.18 %
Dislike	22	7.94 %
Strongly dislike	21	7.58 %
Total Responses	**277**	**100%**

Twice a week		
Strongly prefer	87	31.75 %
Somewhat prefer	121	44.16 %
Dislike	44	16.06 %
Strongly dislike	22	8.03 %
Total Responses	**274**	**100%**

	Count	Percent
Mornings		
Strongly prefer	50	19.31 %
Somewhat prefer	61	23.55 %
Dislike	90	34.75 %
Strongly dislike	58	22.39 %
Total Responses	**259**	**100%**

	Count	Percent
Afternoons		
Strongly prefer	46	17.76 %
Somewhat prefer	91	35.14 %
Dislike	81	31.27 %
Strongly dislike	41	15.83 %
Total Responses	**259**	**100%**

	Count	Percent
Evenings		
Strongly prefer	137	49.28 %
Somewhat prefer	89	32.01 %
Dislike	34	12.23 %
Strongly dislike	18	6.47 %
Total Responses	**278**	**100%**

	Count	Percent
Weekends		
Strongly prefer	72	27.27 %
Somewhat prefer	87	32.95 %
Dislike	59	22.35 %
Strongly dislike	46	17.42 %
Total Responses	**264**	**100%**

	Count	Percent
Four-week Intersession class		
Strongly prefer	66	25.78 %
Somewhat prefer	95	37.11 %
Dislike	57	22.27 %
Strongly dislike	38	14.84 %
Total Responses	**256**	**100%**

	Count	Percent
Telecourse		
Strongly prefer	192	60.00 %
Somewhat prefer	96	30.00 %
Dislike	23	7.19 %
Strongly dislike	9	2.81 %
Total Responses	**320**	**100%**

	Count	Percent
WWW/Internet class		
Strongly prefer	169	58.68 %
Somewhat prefer	74	25.69 %
Dislike	31	10.76 %
Strongly dislike	14	4.86 %
Total Responses	**288**	**100%**

	Count	Percent
Combination Internet and classroom		
Strongly prefer	99	36.80 %
Somewhat prefer	111	41.26 %
Dislike	43	15.99 %
Strongly dislike	16	5.95 %
Total Responses	**269**	**100%**

	Count	Percent
Vocational/career counseling		
Very interested	97	32.23 %
Somewhat interested	105	34.88 %
Not interested	70	23.26 %
Don't know or n/a	29	9.63 %
Total Responses	**301**	**100%**

	Count	Percent
Academic counseling		
Very interested	122	40.40 %
Somewhat interested	107	35.43 %
Not interested	45	14.90 %
Don't know or n/a	28	9.27 %
Total Responses	**302**	**100%**

	Count	Percent
Tutorial services		
Very interested	99	33.22 %
Somewhat interested	116	38.93 %
Not interested	58	19.46 %
Don't know or n/a	25	8.39 %
Total Responses	**298**	**100%**
Study skills training		
Very interested	86	29.55 %
Somewhat interested	84	28.87 %
Not interested	92	31.62 %
Don't know or n/a	29	9.97 %
Total Responses	**291**	**100%**
Vocational ESL classes		
Very interested	38	13.29 %
Somewhat interested	53	18.53 %
Not interested	138	48.25 %
Don't know or n/a	57	19.93 %
Total Responses	**286**	**100%**
Job placement services (One-Stop Employment Services)		
Very interested	79	27.34 %
Somewhat interested	85	29.41 %
Not interested	83	28.72 %
Don't know or n/a	42	14.53 %
Total Responses	**289**	**100%**

Why are you taking classes in this program at Coastline? (Mark all that apply.)

(Not Answered)	15	4.07 %
Personal interest	40	10.84 %
Vocational need	18	4.88 %
To earn a Certificate	3	0.81 %
To earn an A.A. degree	105	28.46 %
To transfer to a 4-year college	222	60.16 %
Convenience	50	13.55 %
Other	23	6.23 %
Total Responses	**476**	**100%**

Are you currently enrolled at another college in addition to your Coastline classes? (Mark all that apply.)

(Not Answered)	30	7.98 %
Golden West College	75	19.95 %
Irvine Valley College	5	1.33 %
Orange Coast College	77	20.48 %
Saddleback College	6	1.60 %
Santa Ana College	9	2.39 %
Santiago Canyon College	4	1.06 %
Other community college	29	7.71 %
A four-year college	65	17.29 %
No: Enrolled only at Coastline	100	26.60 %

Total Responses	400	100%

In what types of Science classes are you now enrolled Coastline? (Mark all that apply.)

(Not Answered)	50	13.30 %
Evening class	59	15.69 %
Day class	8	2.13 %
Weekend College class	19	5.05 %
Telecourse	221	58.78 %
WWW/Internet course	73	19.41 %
Other	7	1.86 %
Total Responses	437	100%

Do you have Internet access? (Mark all that apply.)

(Not Answered)	24	6.38 %
Yes: through em-ployer	74	19.68 %
Yes: through another college	60	15.96 %
Yes: America OnLine or similar content provider	134	35.64 %
Yes: other Internet service provider (Worldnet, Earthlink, etc.)	150	39.89 %
No	20	5.32 %
Total Responses	462	100%

If you have Internet access, how do you most often connect to the Internet?

(Not Answered)	48	13.15 %
Dial-up phone line w/28kbs modem	37	10.14 %
Dial-up phone line w/56kbs modem	153	41.92 %
DSL	54	14.79 %
Cable	51	13.97 %
T1 or ISDN	13	3.56 %
Other	9	2.47 %
Total Responses	365	100%

What is your primary language (the language you are most comfortable speaking, reading, or writing)?

(Not Answered)	26	7.05 %
English	231	62.60 %
Spanish	10	2.71 %
Vietnamese	94	25.47 %
Other	8	2.17 %
Total Responses	369	100%

What is your ethnicity?					
(Not Answered)	29	7.80 %	White	110	29.57 %
African-American	16	4.30 %	Decline to state	18	4.84 %
Asian: Vietnamese	120	32.26 %	Other	10	2.69 %
Asian: Other	30	8.06 %	Total Responses	372	100%
Hispanic	39	10.48 %			

Question: Are there other courses in the Science program that you would like Coastline College to offer?

Microbiology, Bio Chemistry, Physiology
Human Physiology, Bio Chemistry
Physics
Antropology
How about Pathophysiology.
Cancer Biology
Some Medical courses or Microbiology courses.
Physiology without Anatomy
Physiology
Human Physiology
Human Physiology.
Human Sexuality
Micro/Macrobiology,
Yes, Chem (General Chemistry, Organic Chemistry), Microbiology, Human Physiology.
Physiology, Microbiology, Organic Chemistry and Physics.
I would like Coastline College open the other science such as Organic Chemistry and Physiology and more Biology and Chemistry courses.
Microbiology, Physiology - Your Anatomy class is not complete without Physiology.
More weekend, 4 or 6 week classes, and Internet classes.
Nutrition, PE.
Intro Physiology
Microbiology, Human Physiology.
Physiology 175, Biochemistry.
Human Physiology, Organic Chemistry I & II, Medical Microbiology, Physics I & II.
Physiology, Microbiology, Chemistry, Physics
Biochemistry, Microbiology, Physics.
Physiology, Biochemistry
Microbiology, bio 210, 175 Physiology, Biochemistry
Bio 210, Physiology and Microbiology.
Physiology, General Chemistry II, Pathophysiology.
Yes, Physiology, Bio 175, and Bio 210, Micro Biology
Physics
Physics
Any course that will transfer to a four year college would be great, maybe Physical Science.
Yes, Physics
Physiology/Pharmicology
4 week Chemistry
No - I like the courses that Coastline College has.
Lower Math course
Marine Biology (or Oceanography) in the evening or weekend on telecourse.
Biology of aging.
Next course in series of Geology after 140.
Intro Archaology.
No I am not that interested in Science.
No comment. I am not yet acquainted fully with all the courses presently offered.
I'm happy.
None that I can recall
Chemistry 100
Bio Class on primate behavior.
The Science program I would like are already available.
Haven't had a need for more.
A Science class with the interest to persue alternative forms of energy, fuel, transportation etc.
Astronomy
Political Science 180.
No, just more classroom Science courses with a better variety of time.
More Marine Biology or Advnaced Oceanogrophy.
Economic through Internet.
Coastline is providing Sciences needed.
Geology (intro)
Yes, Physics.
Pre Chemistry class.
Class to prepare for general Chemistry.
Subsitute for high school Chemistry.
a Pre-Chemistry class.
Pre Chemistry to help sutdents get ready.
Preparation for Chemistry, Physics

Pre Chemistry
Math, Physics
Physics - higher level Physics than the intro Physics offered now.
We need Pre Chemistry before 180.
Need to help students start Chemistry by another class.
Can you make a class to get started in Chemistry?
Vietnamese classes
Biology for elementary teachers, or Science for elementary teachers.
No, I am satisfied with the courses offered.
So far my professors have been terrific - I love weekend college.
I think Chemistry 100
Foreign Language
Not sure haven't thought about it.

Question: Do you have any other comments, recommendations, or commendations?

Some students who just first time with online program. They have trouble when log in program online. The technician need to clear how log in program online without to be trouble.
Bookstore hours are limited for working students.
Need a cafeteria with good, healthy food and a library.
I really like this school and the instructors because they are caring and very nice to students. I hope the school will open more classes in the future.
Cafeteria with microwave.
Need way more organization from bookstore, registration to scheduling of classes.
Please open these classes: Microbiology and Physiology
If you pay a laboratory fee the materials should be delivered to laboratory and ready to use prior to start of program. On campus library would be helpful.
Chemistry is tough!!
More subjects.
Keep up helping working students.
I would recommend telecourse to anyone, especially if they are visual learners.
I would like to contact an instructor when I want to work.
Thank you for the flexibility and convenience.
I am enjoying my courses at Coastline College. Thank You.
I think this school should improve it's size, faculity and education.
Geology 140 telecourse was convientent and effective.
Great Instructor!
I like the www. and telecourses.
Proof read materials before printing and distributing to students.
Please offer evenings to meet at one of the centers for every three to four chapters covered.
Toward better understanding of material covered.
I really appreciate the telecourses and the review sessions.
Have more telecourses.
Love it.
Thank God for Coastline! I was short a class on my grad check.
Classes are working out great for my situation.
Love telecourses-makes it easy to get ahead in credits!
No, Good Job!
Working 40 hours a week it makes it difficult to take classes at the college. Telecourses a wonderful idea.
Yes, some telecourse/www classes do not have a hard-copy of the handbook available.
There should be an option of the web as well as the paperback version.
Thanks for getting another chance to go back to school.
Make the texbooks more affordable.
I really like how convenient these telecourses are.
This school is great - very accomidating and up-to-date on teaching techniques.
I would like a Geometry class in the Math deparment.
The Marine Science 100 teacher has been the best I've had at Coastline.
I like to study distance learning courses because it is convenient for me.
I would like to see other zip codes included in procter based examinations.
Gear some services toward the working professional. Class times are not the only factor that will essure enrollments and success. I will not return to Coastline and will continue at OCC..
This is the first time I've enrolled, so I haven't known your school.
I like telecourses and internet classes because you can do most of the work in your own timing on prefered days.
People come here to help their education. This professor only hinders it because it's not like what they really will have to incounter at a JC or 4 year.
Keep up the good work! :)
I believe the courses at Coastline are very productive

and helpful. It's convenient to most students and gives you a flexible schedule.

I love Coastline College so much, that give me an idea that I never want to stop going to school. I love all teachers and program that Coastline have provided. Thank You!:)

No comment. Everything is great.

Work on distance learning department.

Please add more Vietnamese classes.

No, Good job to all !

Excellent college, very friendly and helpful.

Biology 100 & 101 are difficult to handle as they don't seem very synthonized. I have 4 books, 2 student manuals, 2 audio and 3 video tapes, And for me it is difficult to juggle all the material and make sense of it all . . .I think I'd prefer one book that parallels the video tapes and has laboratory exercises included in it.

Receiving information from distance learning office that is not accurate. Example, getting progress report prior to instructor handing in grades. Very Alarming!!

Question: If you marked "Not satisfied" to any of the items on the first page, please explain your concerns.

Found the textbook for Geology 140 Telecourse to be very confusing. Seemed as if I should have had prior knowledge of many of the subjects in the book. Wording was not very concise or logical to me.

No classes are offered in Architecture or Construction Technology. Some classrooms are maintained very poorly. Termites and poor lighting.

More evening classes. More variety in Math, Language and English.

Poles in middle of classroom.

It's just an opinion.

The textbooks are really expensive and not often used on the whole.

Equipment is not up to par with other 'standard' community colleges. Rooms not conipatable with instruction ie: Pharacology taught in a laboratory class - 3 hour class in a very uncomfortable room. No video machine capabilities.

Coastline should provide Physiology and Microbiology, Chemistry, and Physics. There are many prenursing program students who would enroll.

Classroom instruction provides student/teacher interaction - much better and more effective than telecourse or internet courses.

Need to add physiology and Microbiology to program.

Need to improve laboratory facilities. Need to have instructor pick their choice of textbook and materials for class.

Laboratory kit was incomplete, no one answered e-mail. I like Internet courses, but feel when there is a problem, I'm lost in space.

The laboratory equipment is way too expensive.

Not enough subjects.

Admin. support for Biology - kept getting different answers to same questions had to ask repeatedly they never made sense.

Scheduling of classes - History 150 T.V. bad show times. Laboratory equipement - have repeatidly tried to get missing laboratory items. Staff -Prof in Chemistry have been rude.

Responce time- Never received response.

The laboratory for Geology was difficult for me to understand without direct teacher instruction.

The teacher doen't always reply or answer the questions the students ask.

8 week Syllabus was not available until a few days before start. No phone number for instructor was provided. Letter in mail stated second as instructor. Spelling error in teacher's name in syllabus.

Testing Center does not repsond quick enough.

(It's just that I need the course for General Ed. purposes)

There are a ton of mis-prints in the workbook which match up to the laboratories. The process of investigating which chapter actually went to the laboratory was frustrating.

I'd like more Social Science courses to be readily available.

I'm graduating from OCC, but I like the classes here.

You don't have a lot of the classes I need to meet my requirements. Also, when I mail in a quiz it takes 3 months in order to get my grade.

I don't agree with the General Education courses required to obtain a BA degree. When it doesn't apply to the career or interests of the working professional. Tutorial services for Biology are non-existant and the college doesn't make the effort to ensure the success of working professionals.

The professor was a goof and made the test harder to study for then giving us an outline.

The answers to the test and his jokes were not necessary.

Instructor never call back! Even if message is provided!

Coastline does not offer any Physics classes. Schedule of classes could be better offer more frequently or more sections. More focus is being put on Vietnamese students.

I have fallen behind. I haven't bought the book, so I need to correct this.

There is not a proper correlation of materials.

Don't learn as much as going to class.

Some of the courses I have wanted to take do not transfer to CSULB.

All related to the fact that the Internet portions of every class I have taken through

Coastline has been awful. Info is not current, quizes never seem to be submitted correctly, and a language barrier often comes into play when trying to verify any issues.

Telecourse midterms interfere greatly with 4 week Intersession courses in the fall. Too much information is given in 4 week courses causing brain overload when studying for midterms.

APPENDIX 3
FACULTY SURVEY AND RESULTS

	Count	Percent
Relevancy of courses to vocational, academic, or personal needs of students		
Very satisfied	9	100.00 %
Total Responses	**9**	**100%**

Scheduling of classes		
Very satisfied	8	88.89 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Adequacy of instructional facilities		
Very satisfied	6	66.67 %
Somewhat satisfied	2	22.22 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Quality of general instructional equipment		
Very satisfied	5	55.56 %
Somewhat satisfied	2	22.22 %
Not satisfied	1	11.11 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Quality of instructional equipment unique to science		
Very satisfied	3	33.33 %
Somewhat satisfied	5	55.56 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Availability of general instructional equipment		
Very satisfied	5	55.56 %
Somewhat satisfied	3	33.33 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Extent to which the program uses technology to enhance teaching and learning		
Very satisfied	7	77.78 %
Somewhat satisfied	2	22.22 %
Total Responses	**9**	**100%**

Extent of staff support for the program and classes		
Very satisfied	9	100.00 %
Total Responses	**9**	**100%**

Responsiveness of the program and faculty to the needs of culturally diverse students		
Very satisfied	6	66.67 %
Somewhat satisfied	1	11.11 %
Don't know or n/a	2	22.22 %
Total Responses	**9**	**100%**

Responsiveness of the program and faculty to the needs of non-traditional students		
Very satisfied	7	77.78 %
Somewhat satisfied	1	11.11 %
Don't know or n/a	1	11.11 %
Total Responses	**9**	**100%**

Opportunities for you to participate in curriculum and program development		
Very satisfied	6	66.67 %
Somewhat satisfied	3	33.33 %
Total Responses	**9**	**100%**

Extent to which media development or other computer facilities are available to instructors		
Very satisfied	8	88.89 %
Somewhat satisfied	1	11.11 %
Total Responses	**9**	**100%**

Prerequisite knowledge in the discipline		
Very well prepared	1	11.11 %
Somewhat prepared	6	66.67 %
Not prepared	2	22.22 %
Total Responses	**9**	**100%**

Reading level		
Very well prepared	2	22.22 %
Somewhat prepared	6	66.67 %
Not prepared	1	11.11 %
Total Responses	**9**	**100%**

English proficiency (spoken)		
Very well prepared	2	22.22 %
Somewhat prepared	6	66.67 %
Not prepared	1	11.11 %
Total Responses	**9**	**100%**

Critical thinking skills		
Very well prepared	1	11.11 %
Somewhat prepared	6	66.67 %
Not prepared	2	22.22 %
Total Responses	**9**	**100%**

English proficiency (written)		
Very well prepared	2	22.22 %
Somewhat prepared	6	66.67 %
Not prepared	1	11.11 %
Total Responses	**9**	**100%**

Study skills		
Very well prepared	1	12.50 %
Somewhat prepared	5	62.50 %
Not prepared	2	25.00 %
Total Responses	8	100%

Question: In which of the following professional development activities have you participated within the past two years? (Mark all that apply.)

General Faculty Meeting	100.00%
Discipline flex-day workshops	11.11%
Technology flex-day workshops	22.22%
Other flex-day workshops	33.33%
Professional conferences	66.67%
Graduate classes/program	11.11%
Other classes	33.33%
Professional training	44.44%
Discipline-related reading	77.78%
Technology-related reading	77.78%
Other (develop online class, research at CSUF)	22.22%

Question: Are there other courses in Science or related to Science that you would like Coastline College to offer?

Oceanography, Physics

Enviromental Science

Biology could expand to include majors-level classes if staff was interested. A prep-chem course would be helpful to many students.

Online geology is now available. We may have a need for a course to prepare students for general chemistry.

Question: Do you have any other comments or recommendations?

I think the department has done a great job to meet student needs and support their learning objectives

Question: Please list the awards, honors, and grants you have received in the past three years:

Nominated for Disney "Teacher of the Year" 3/2001. Participant in the NSF-Funded "Molecular Science Project." Participated on the FIPSE/U.S. Dept. of Ed. funded "Mastering Chemistry" development team.

California Virtual College grant to develop online courses with complex media. Director curriculum section of Genesis grant (globalization of curriculum).

CSUF research grants from Chevron Petroleum Technology, Science Applications International, Raytheon Services, and TRW Environmental

Who is Who among Science Teachers

Question: List the committees on which you have served during the past three years:

This is my first teaching experience ever (less than one year). I am very impressed by the college and the staff in particular. It has been a very positive experience.

Program Review Emeritus Institute; Program Review Adaptive PE; Gerontology Advisory Committee; Hiring Committees for Senior Secretary, Typist Clerk, Special Education Instructor

Librarian search committee at CCC

APPENDIX 4
COURSE ENROLLMENT DATA

SCIENCE PROGRAM

Five and a Half-Year Summary of Enrollments and FTES

PROGRAM AND COLLEGE DATA	1996-97 FALL 962	1996-97 SPRING 963	1997-98 FALL 972	1997-98 SPRING 973	1998-99 FALL 982	1998-99 SPRING 983	1999-00 FALL 992	1999-00 SPRING 993	2000-01 FALL 002	2000-01 SPRING 003	2001-02 FALL* 012
FTES											
Program	95.01	91.33	104.04	107.32	133.08	133.80	123.20	139.46	128.18	173.54	145.26
College	1535.12	1473.89	1628.05	1568.21	1608.48	1591.14	1636.13	1618.98	1698.32	1673.35	1731.86
Program as % of College	6.2%	6.2%	6.4%	6.8%	8.3%	8.4%	7.5%	8.6%	7.5%	10.4%	8.4%
Program Sections											
Total Sections Scheduled	23	19	24	24	23	29	25	34	37	44	28
Sections Cancelled	7	5	3	3	0	4	0	2	4	2	1
Sections (adjusted for concur-rent/canc.)	13	10	14	14	15	17	17	21	24	30	27
Avg. Enroll. All Classes	76	95	81	82	87	84	82	74	60	61	62
Seat Count at Census											
Program	989	953	1,130	1142	1,304	1421	1402	1554	1447	1836	1683
College	14,955	14,210	15,989	17,045	17,860	17,585	17,816	17,444	17,491	16,858	16,015
Program as % of College	6.6%	6.7%	7.1%	6.7%	7.1%	8.0%	7.7%	8.7%	8.0%	10.1%	9.3%
Seat Count at Semester End											
Program	705	737	847	846	1,000	1162	1092	1225	1120	1512	1311
College	12,377	12,063	13,076	14,052	14,803	14,684	14,699	14,334	14,336	14,582	13,508
Program as % of College	5.7%	6.1%	6.5%	6.0%	6.8%	7.9%	7.4%	8.5%	7.8%	10.4%	9.7%
Attrition (Cens. to End Seats)											
Program	28.7%	22.7%	25.0%	25.9%	23.3%	18.2%	22.1%	21.2%	22.6%	17.6%	22.1%
College	17.2%	15.1%	18.2%	17.6%	19.1%	17.6%	17.5%	17.8%	18.0%	13.5%	15.7%

Differential Fee for Bachelor's Degree In Effect: Spring 1993-Spring 1995 ***Source: ADATERM reports***

REAP and local DL sections combined to determine average enrollment.

***Fall 2001 data incomplete; FTES and enrollments repre-sent projections**

APPENDIX 5
PowerPoint Presentation
Summary of the Program Review

Science Department Program Review 2001-2002

David Paul Licata, Department Chair

Shannon Christiansen, Dean

Review Committee:

Randall Warwick Ken Ostrowski Alison Welsh

Julie McNamara Martha Finn

Who We Are: Life Science Staff

James Beazell	Anatomy, Biology
Mike Curtis	Biology, Marine Science
Jennifer Gloucester	Pharmacology
Jeff Johnson	Biology
Dewey Mayes	Pharmacology
Joan McNamara	Biology
John Phillips	Biology, Geology
William Rice	Geology
Randall Warwick	Anatomy, Biology

Physical Sciences Staff

David Licata	Chemistry
Ken Gordon	Astronomy
Vance Gritton	Chemistry
John Maas	Geology
John McNamara	Geology
Mark Orme	Chemistry
Ken Ostrowski	Astronomy, Chemistry, Geology
John Phillips	Geology
William Rice	Geology
James Rubio	Geology
Deborah Seward	Geology

What We Teach: Courses

Life Science	Physical Science
Intro to Biology & Lab	Intro to Chemistry with Lab
Anatomy with Lab	General Chemistry AB
Pharmacology	and Lab AB
Ecology	Intro to Geology
Marine Science	California Geology
	Intro to Physics
	Astronomy

New Courses and Faculty

New Courses

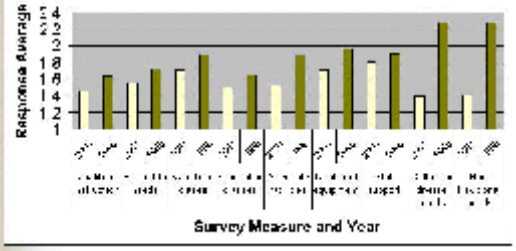
Pharmacology	California Geology
General Chemistry	

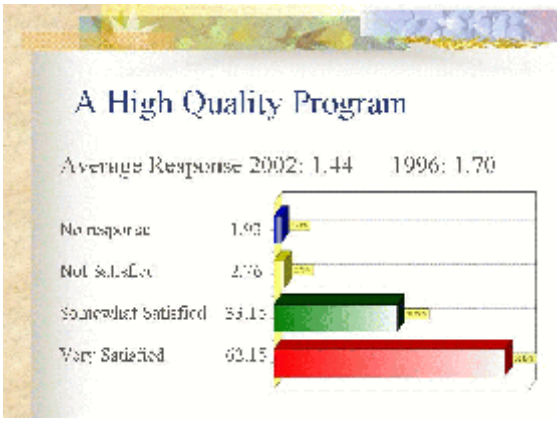
New Faculty

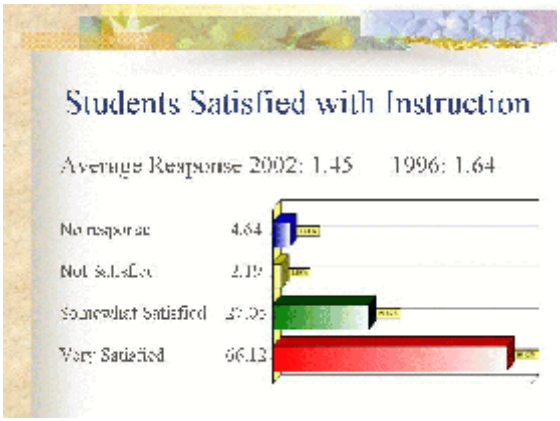
Vance Gritton	John Maas
John McNamara	Mark Orme
Ken Ostrowski	Dewey Mayes
William Rice	James Beazell

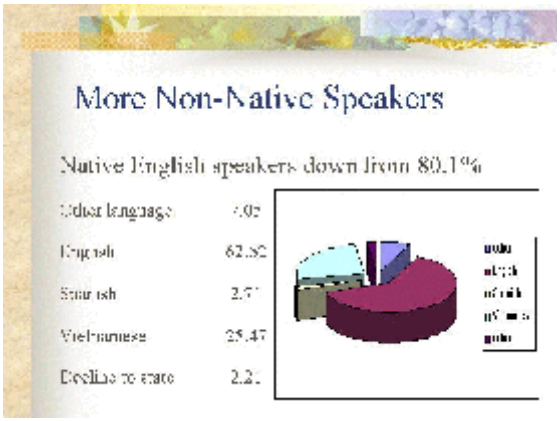
Science Improved in All Measures

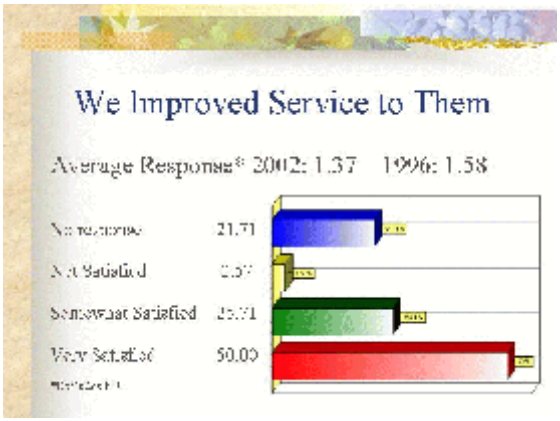
Comparison of 2001 and 1998

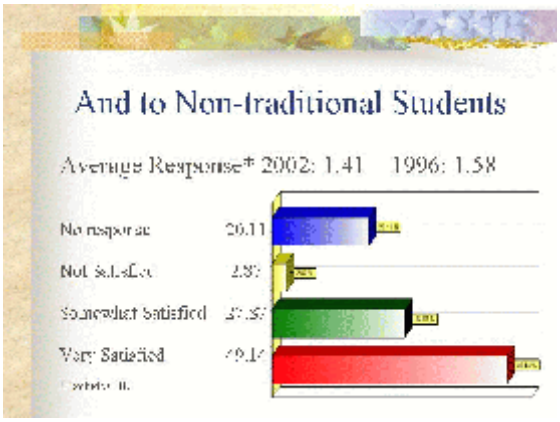


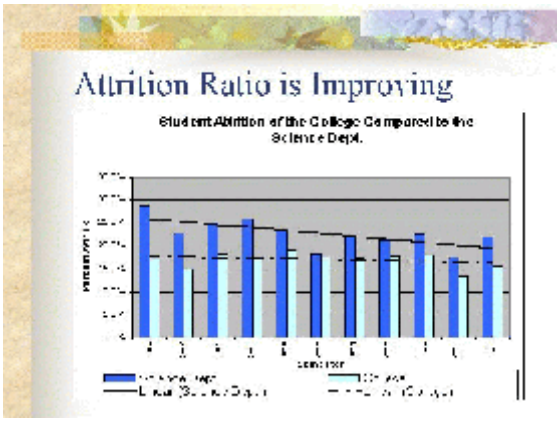

A High Quality Program
Average Response 2002: 1.44 1996: 1.70
Very Satisfied
63.15


Students Satisfied with Instruction
Average Response 2002: 1.45 1996: 1.64
Very Satisfied
66.13


More Non-Native Speakers
Native English speakers down from 80.1%
Other language
English
Vietnamese
25.47


We Improved Service to Them
Average Response* 2002: 1.37 1996: 1.58
Somewhat Satisfied
Very Satisfied
50.00


And to Non-traditional Students
Average Response* 2002: 1.41 1996: 1.58
Very Satisfied


Attrition Ratio is Improving

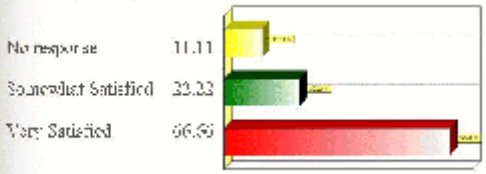
Important Partnerships

- Molecular Science Project with UCLA
- Mentoring Chemistry with CSUF
- Geology Research with CSUF and Chevron
- Web development with CSULB
- TVCAC articulation meetings

GGC Has Improved Facilities

Instructors are much more satisfied with available facilities (no one unsatisfied)

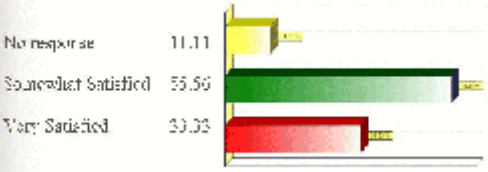
Average Response* 2002: 1.56 1996: 2.71



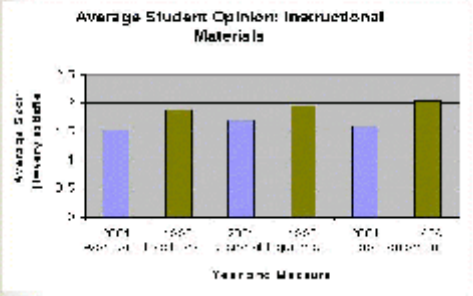
And Improved Science Equipment

Instructors are much more satisfied with new lab equipment (no one unsatisfied)

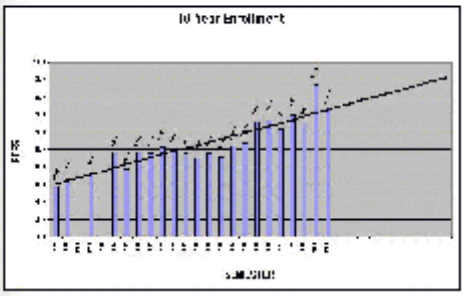
Average Response* 2002: 1.39 1996: 3.15



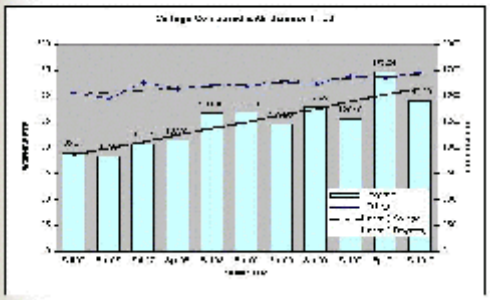
Students Recognize Improvement

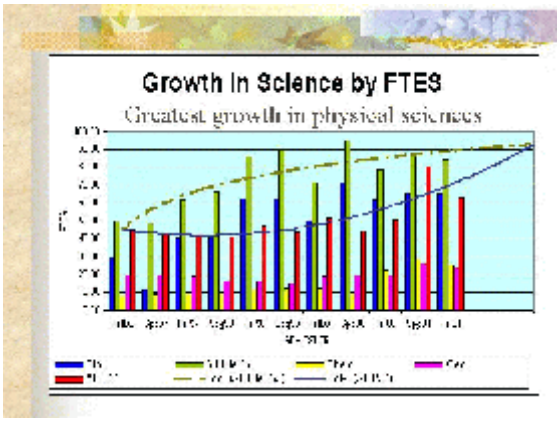


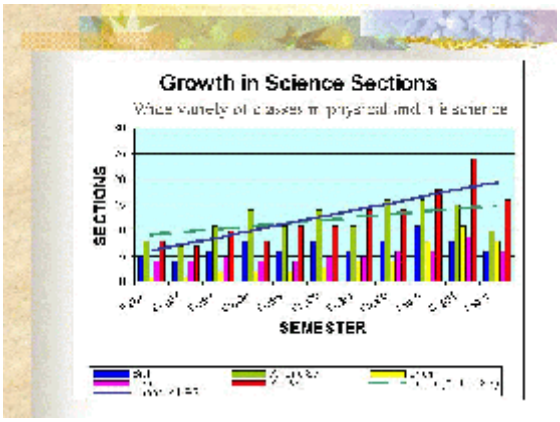
10-Year Growth is Favorable

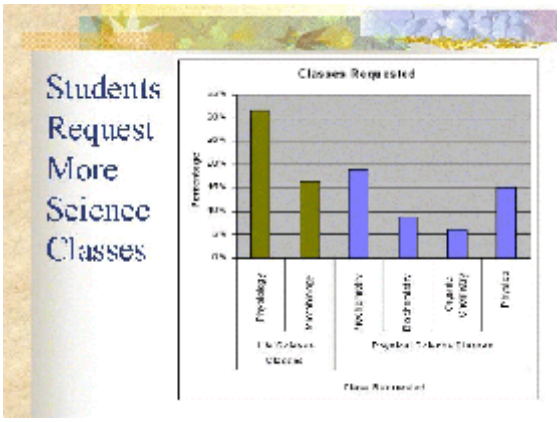


And Faster than the College

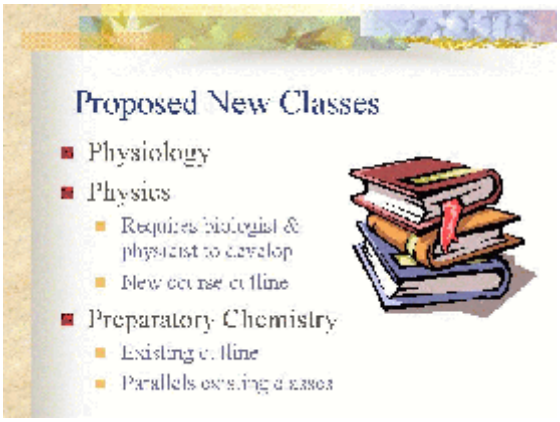



Growth In Science by FTES
Greatest growth in physical sciences


Growth in Science Sections
SECTIONS
SEMESTER


Students Request More Science Classes
Classes Requested


Science Department 5-Year Goals
Increase Number of Courses
Add a Full-time Physical Science Instructor
Develop an AA or Certificate Program


Proposed New Classes
Physiology
Physics
Requires biologist & physicist to develop
New course outline
Preparatory Chemistry
Existing outline
Parallels existing classes


Need for Full-time Physical Science Instructor
Only one F/T instructor
Second largest FTE generator
Lab needs regular oversight
New AS program has major impact on chemistry (26 Lab)
Physical science participation in grants, development, and workshops is lacking

Possible New Certificates

- Laboratory Technology
- Pharmacy Technician
- Environmental Technology and Waste Management

Production Credits

- Data Processing and Analysis by Pat Arlington
- Report and PowerPoint Summary by David Licata
- Duplication and Printing in the Office of Grants and Research
- Projection Equipment from Distance Learning Department

Table of Contents
Science Faculty

Cumulative Count and Percent
Science Program Review--Faculty Survey

	Count	Percent	Cumulative Count	Cumulative Percent
Relevancy of courses to vocational, academic, or personal needs of students				
Very satisfied	9	100.00 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Scheduling of classes				
Very satisfied	8	88.89 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Adequacy of instructional facilities				
Very satisfied	6	66.67 %	6	66.67 %
Somewhat satisfied	2	22.22 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Quality of general instructional equipment				
Very satisfied	5	55.56 %	5	55.56 %
Somewhat satisfied	2	22.22 %	7	77.78 %
Not satisfied	1	11.11 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Quality of instructional equipment unique to science				
Very satisfied	3	33.33 %	3	33.33 %
Somewhat satisfied	5	55.56 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Availability of general instructional equipment				
Very satisfied	5	55.56 %	5	55.56 %
Somewhat satisfied	3	33.33 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Extent to which the program uses technology to enhance teaching and learning				
Very satisfied	7	77.78 %	7	77.78 %
Somewhat satisfied	2	22.22 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Extent of staff support for the program and classes				
Very satisfied	9	100.00 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**

Cumulative Count and Percent
Science Program Review--Faculty Survey

	Count	Percent	Cumulative Count	Cumulative Percent
Responsiveness of the program and faculty to the needs of culturally diverse students				
Very satisfied	6	66.67 %	6	66.67 %
Somewhat satisfied	1	11.11 %	7	77.78 %
Don't know or n/a	2	22.22 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Responsiveness of the program and faculty to the needs of non-traditional students				
Very satisfied	7	77.78 %	7	77.78 %
Somewhat satisfied	1	11.11 %	8	88.89 %
Don't know or n/a	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Opportunities for you to participate in curriculum and program development				
Very satisfied	6	66.67 %	6	66.67 %
Somewhat satisfied	3	33.33 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Extent to which media development or other computer facilities are available to instructors				
Very satisfied	8	88.89 %	8	88.89 %
Somewhat satisfied	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
Prerequisite knowledge in the discipline				
Very well prepared	1	11.11 %	1	11.11 %
Somewhat prepared	6	66.67 %	7	77.78 %
Not prepared	2	22.22 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
English proficiency (spoken)				
Very well prepared	2	22.22 %	2	22.22 %
Somewhat prepared	6	66.67 %	8	88.89 %
Not prepared	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**
English proficiency (written)				
Very well prepared	2	22.22 %	2	22.22 %
Somewhat prepared	6	66.67 %	8	88.89 %
Not prepared	1	11.11 %	9	100.00 %
Total Responses	**9**	**100%**	**9**	**100%**

Cumulative Count and Percent
Science Program Review--Faculty Survey

		Count	Percent	Cumulative Count	Cumulative Percent
Reading level					
Very well prepared		2	22.22 %	2	22.22 %
Somewhat prepared		6	66.67 %	8	88.89 %
Not prepared		1	11.11 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
Critical thinking skills					
Very well prepared		1	11.11 %	1	11.11 %
Somewhat prepared		6	66.67 %	7	77.78 %
Not prepared		2	22.22 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
Study skills					
Very well prepared		1	12.50 %	1	12.50 %
Somewhat prepared		5	62.50 %	6	75.00 %
Not prepared		2	25.00 %	8	100.00 %
	Total Responses	**8**	**100%**	**8**	**100%**
Other					
Somewhat prepared		2	66.67 %	2	66.67 %
Not prepared		1	33.33 %	3	100.00 %
	Total Responses	**3**	**100%**	**3**	**100%**
ASTRO 100 Introduction to Astronomy					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
ASTRO 100L Astronomy Lab					
Excellent		5	55.56 %	5	55.56 %
Don't know		4	44.44 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
BIOL 100 Introduction to Biology					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
BIOL 101 Introduction to Biology Lab					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**

Cumulative Count and Percent
Science Program Review--Faculty Survey

		Count	Percent	Cumulative Count	Cumulative Percent
BIOL 120 Biology of Aging					
Excellent		3	33.33 %	3	33.33 %
Don't know		6	66.67 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
BIOL 170 Human Anatomy					
Excellent		3	33.33 %	3	33.33 %
Don't know		6	66.67 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
BIOL 200 Pharmacology					
Excellent		2	22.22 %	2	22.22 %
Don't know		7	77.78 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 110 Introduction to Chemistry (includes lab)					
Excellent		3	33.33 %	3	33.33 %
Don't know		6	66.67 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 130 Preparatory Chemistry					
Excellent		3	33.33 %	3	33.33 %
Don't know		6	66.67 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 180 General Chemistry A					
Excellent		4	44.44 %	4	44.44 %
Don't know		5	55.56 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 180L General Chemistry A Lab					
Excellent		4	44.44 %	4	44.44 %
Don't know		5	55.56 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 185 General Chemistry B					
Excellent		4	44.44 %	4	44.44 %
Don't know		5	55.56 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
CHEM 185 General Chemistry B Lab					
Excellent		4	44.44 %	4	44.44 %
Don't know		5	55.56 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**

Cumulative Count and Percent
Science Program Review--Faculty Survey

		Count	Percent	Cumulative Count	Cumulative Percent
ECOL 100 Human Ecology					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
GEOL 130 California Geology					
Excellent		5	55.56 %	5	55.56 %
Don't know		4	44.44 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
GEOL 140 Introduction to Geology					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
GEOL 141 Introduction to Geology Lab					
Excellent		6	66.67 %	6	66.67 %
Don't know		3	33.33 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**
PHYS 100 Introduction to Physics					
Excellent		5	55.56 %	5	55.56 %
Don't know		4	44.44 %	9	100.00 %
	Total Responses	**9**	**100%**	**9**	**100%**

Count and Percent
Science Program Review--Faculty Survey

	Count	Percent
In which of the following professional development activities have you participated within the past two years? (Mark all that apply.)	Respondents: 9	
CCC General Faculty Meeting	9	100.00 %
Discipline flex-day workshops	1	11.11 %
Technology flex-day workshops	2	22.22 %
Other flex-day workshops	3	33.33 %
Professional conferences	6	66.67 %
Graduate classes/program	1	11.11 %
Other classes	3	33.33 %
Professional training	4	44.44 %
Discipline-related reading	7	77.78 %
Technology-related reading	7	77.78 %
Other	2	22.22 %
Total Responses	**45**	**100%**

Listing of "other" Responses by Question
Science Program Review--Faculty Survey

Question: In which of the following professional development activities have you participated within the past two years? (Mark all that apply.)

developed online class
Research Grants at CSUF

Text and Paragraph Responses by Question
Science Program Review--Faculty Survey

Question: Are there other courses in Science or related to Science that you would like Coastline College to offer?

Oceanography, Physics

Enviromental Science

Biology could expand to include majors-level classes if staff was interested. A prep-chem course would be helpful to many students.

Online geology is now available. We may have a need for a course to prepare students for general chemistry.

Question: Do you have any other comments or recommendations?

I think the department has done a great job to meet student needs and support their learning objectives

---

Question: Please list the awards, honors, and grants you have received in the past three years:

Nominated for Disney "Teacher of the Year" 3/2001. Participant in the NSF-Funded "Molecular Science Project." Participated on the FIPSE/U.S. Dept. of Ed. funded "Mastering Chemistry" development team.

Califonria Virtual College grant to develop online courses with complex media. Director curriculum section of Genesis grant (globalization of curriculum).

CSUF research grants from Chevron Petroleum Technology, Science Applications International, Raytheon Services, and TRW Environmental

Who is Who among Amomiish Teachers

Question: List the committees on which you have served during the past three years:

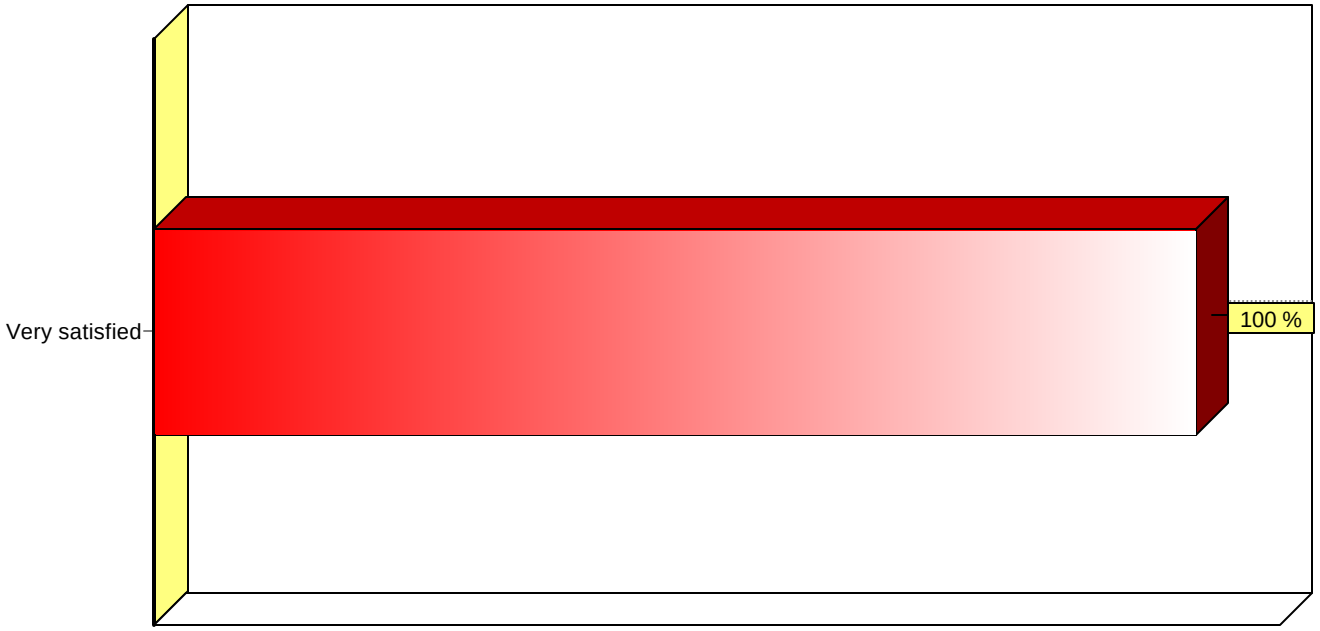
This is my first teaching experience ever (less than one year). I am very impressed by the college and the staff in particular. It has been a very positive experience.

Program Review Emeritus Institute; Program Review Adaptive PE; Gerontology Advisory Committee; Hiring Committees for Senior Secretary, Typist Clerk, Special Education Instructor

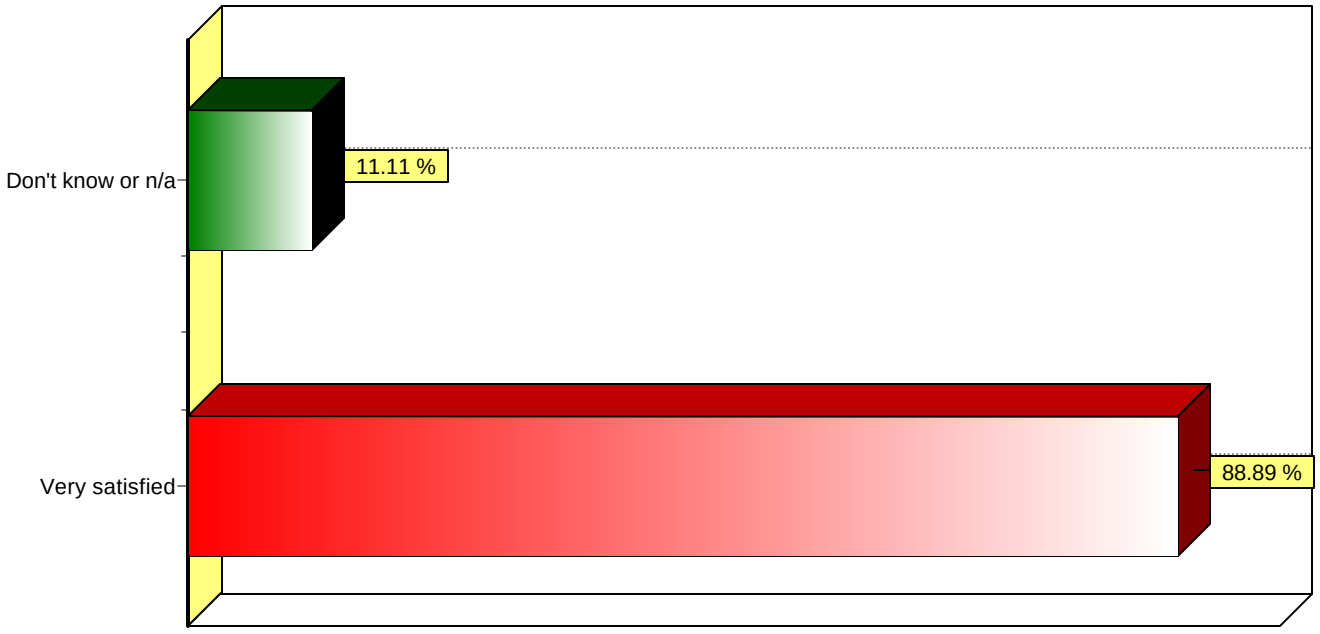
Librarian search committee at CCC

Bar Graphs
Science Program Review--Faculty Survey

Relevancy of courses to vocational, academic, or personal needs of students

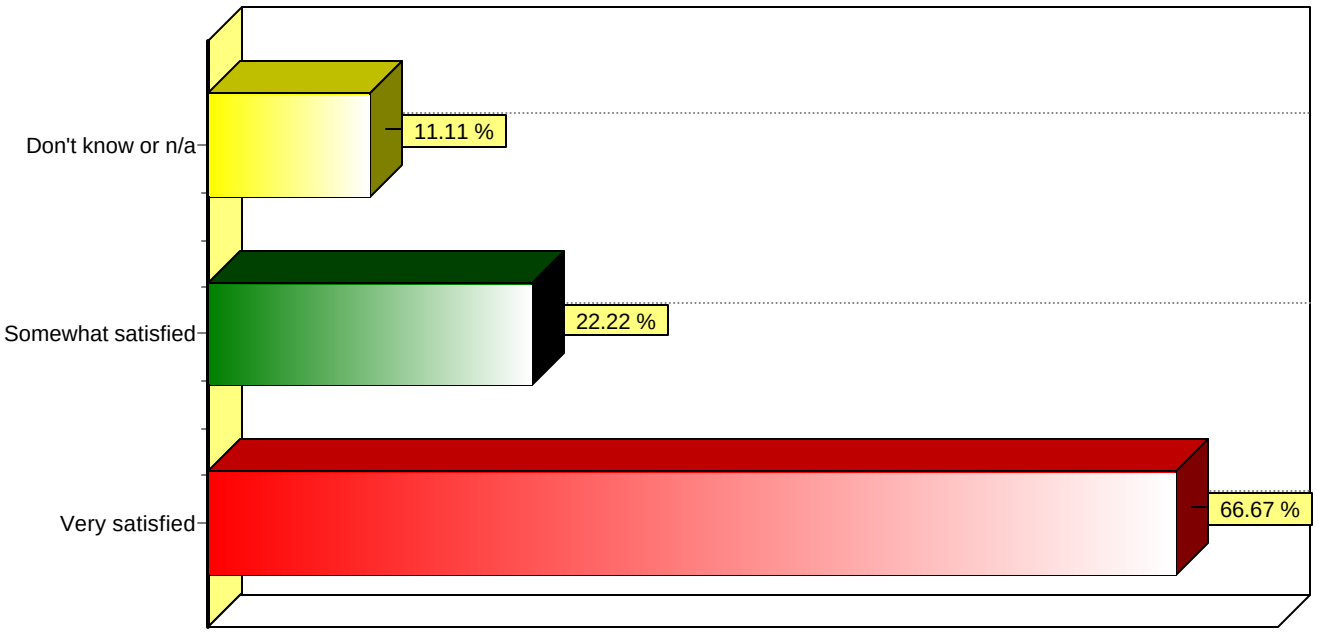


Scheduling of classes

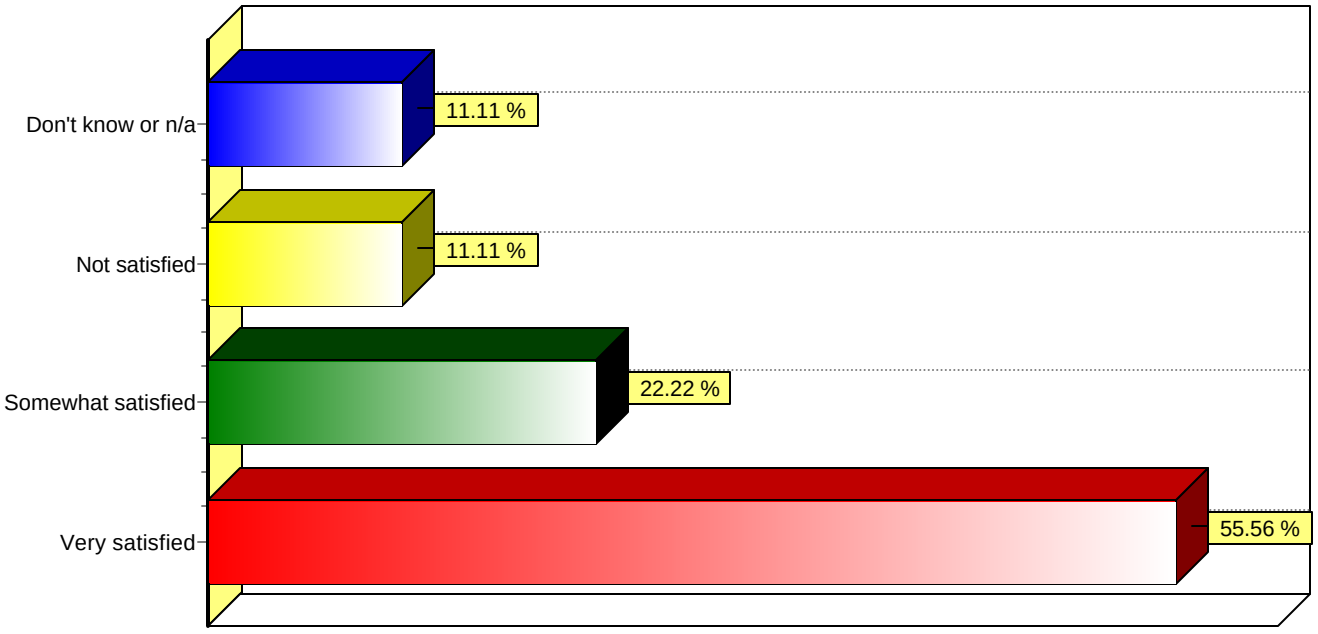


Bar Graphs
Science Program Review--Faculty Survey

Adequacy of instructional facilities

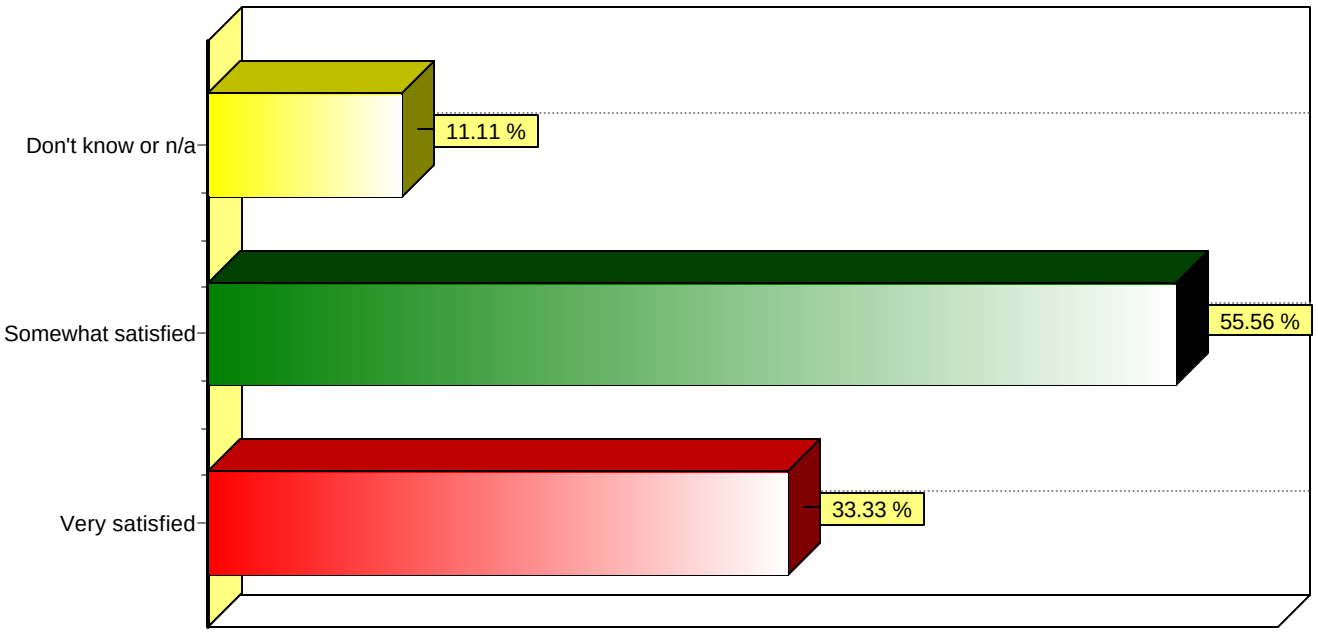


Quality of general instructional equipment

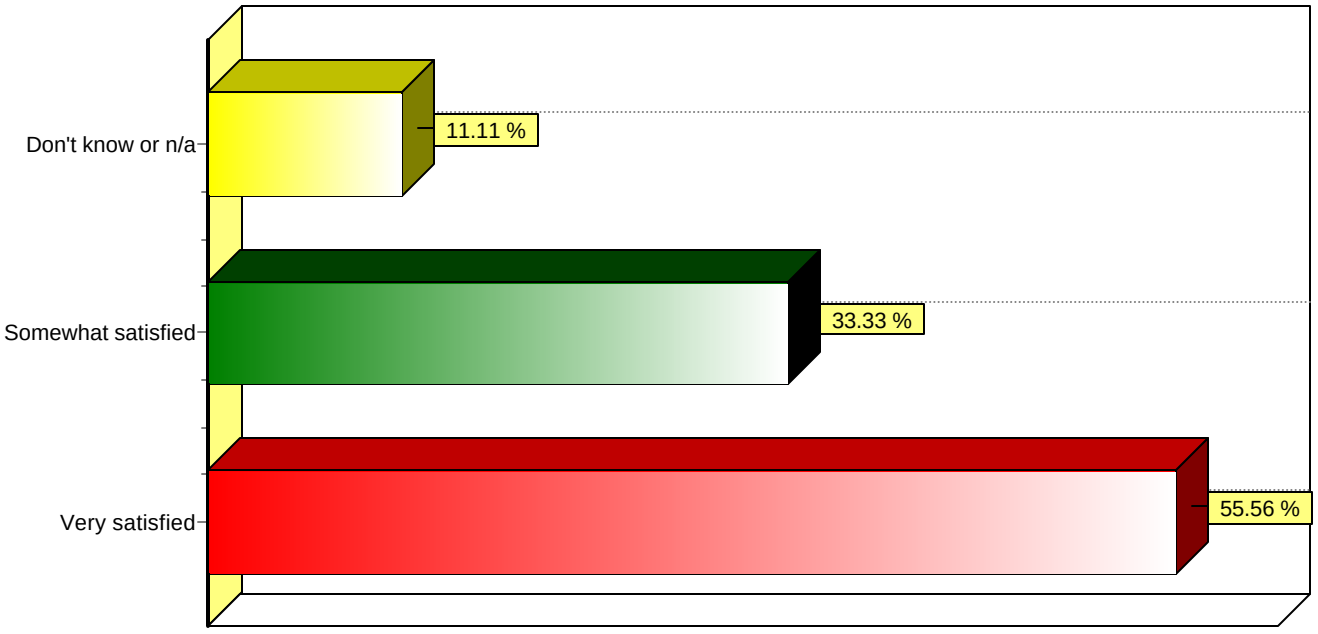


Bar Graphs
Science Program Review--Faculty Survey

Quality of instructional equipment unique to science

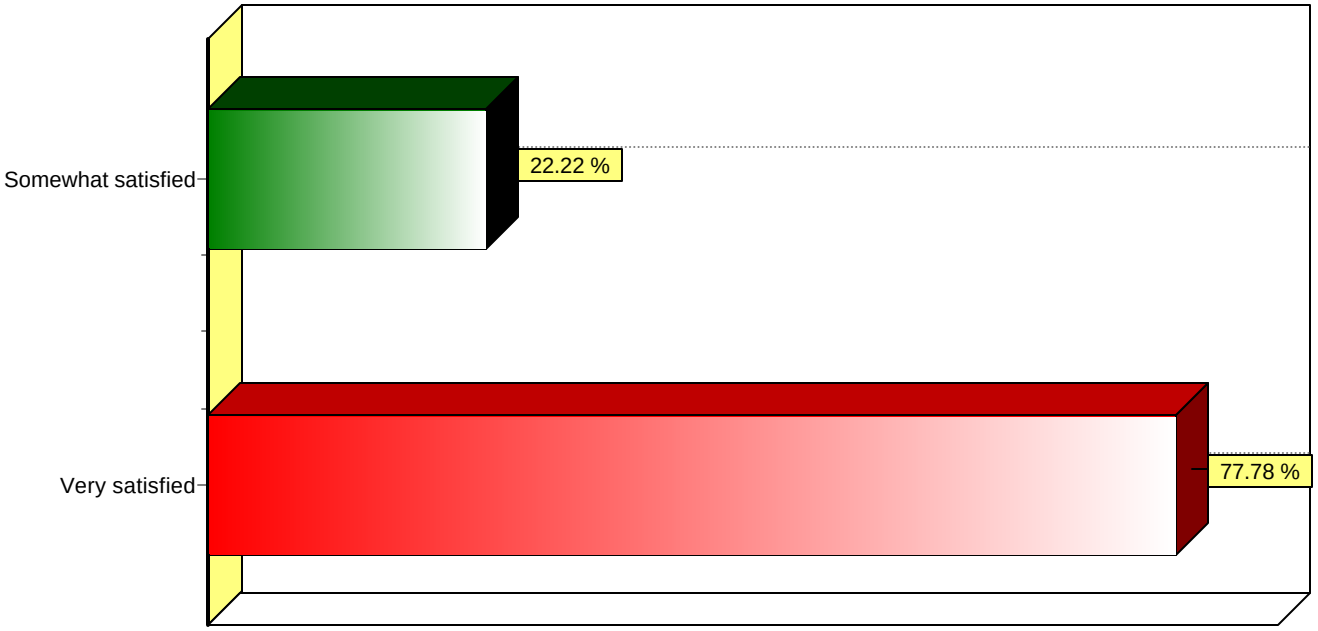


Availability of general instructional equipment

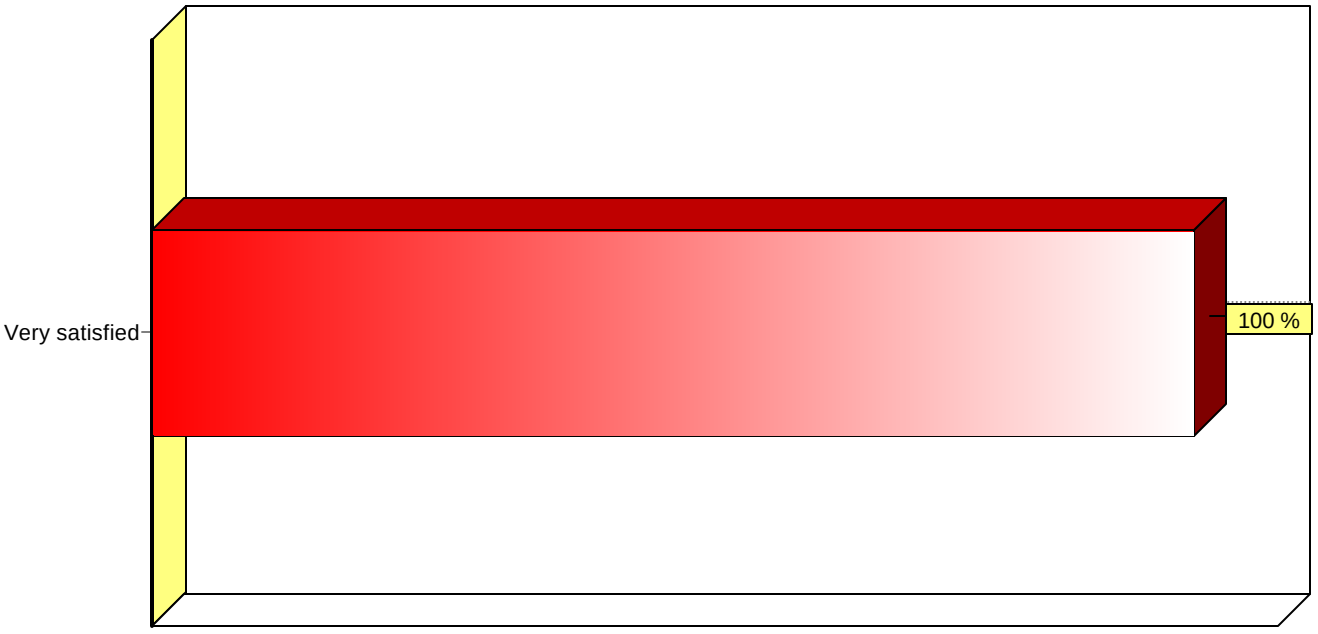


Bar Graphs
Science Program Review--Faculty Survey

Extent to which the program uses technology to enhance teaching and learning

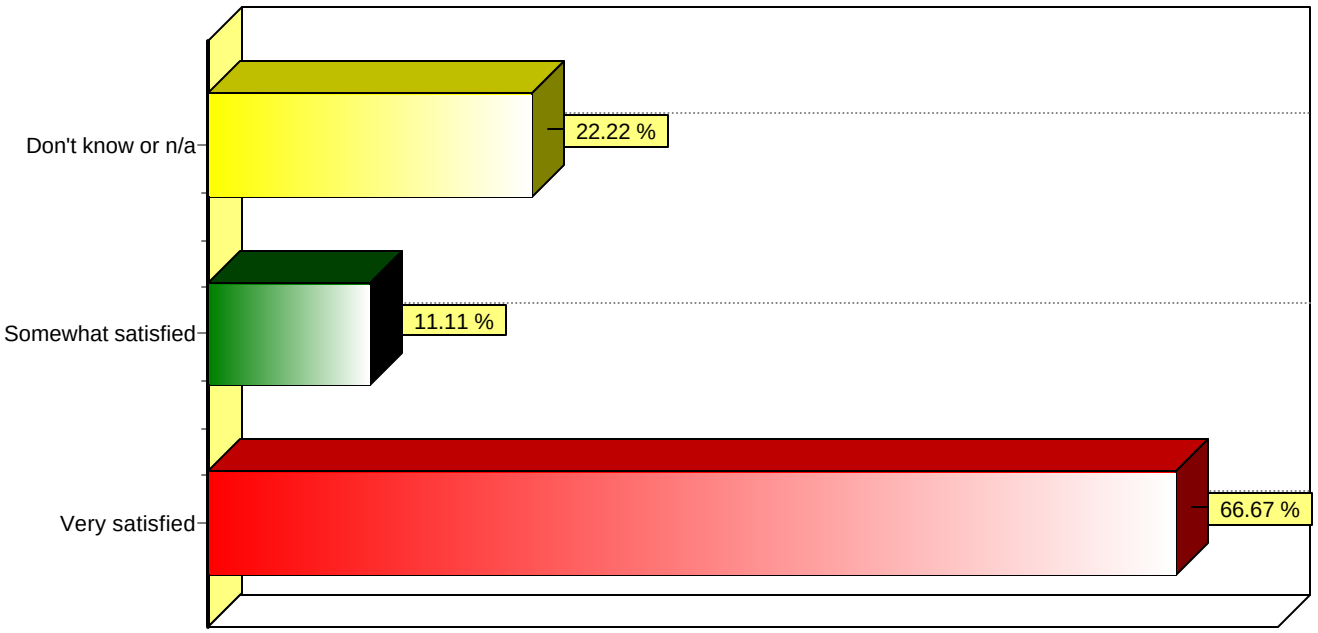


Extent of staff support for the program and classes

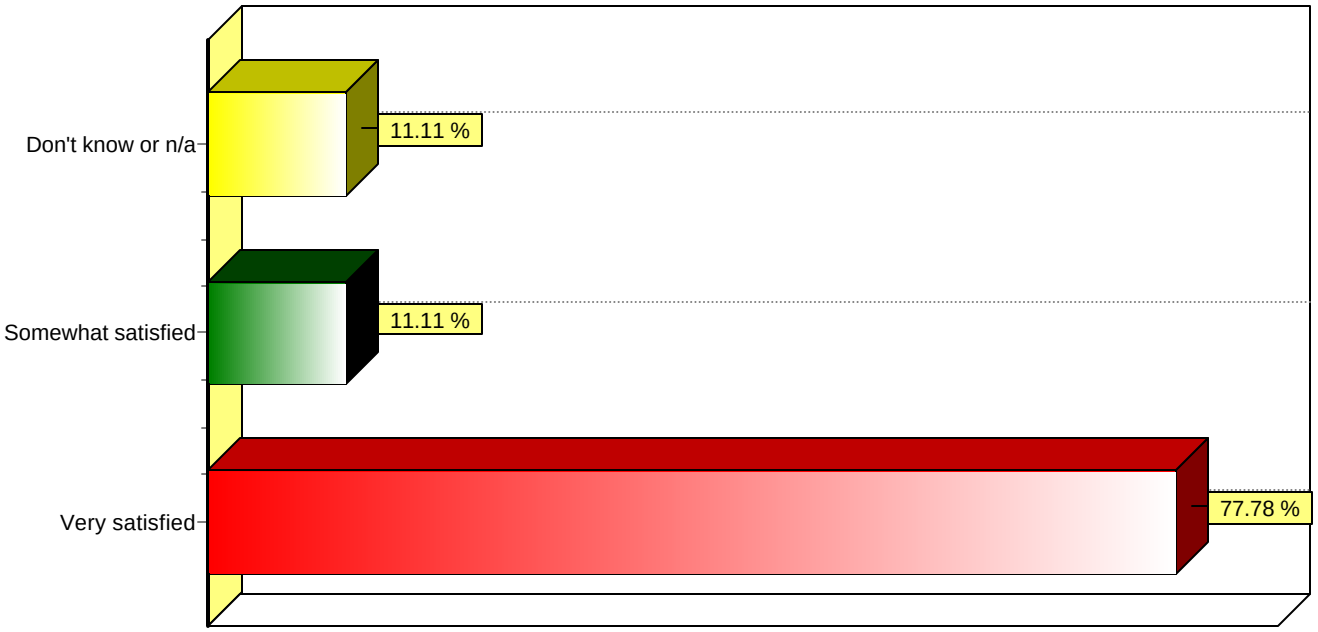


Bar Graphs
Science Program Review--Faculty Survey

Responsiveness of the program and faculty to the needs of culturally diverse students

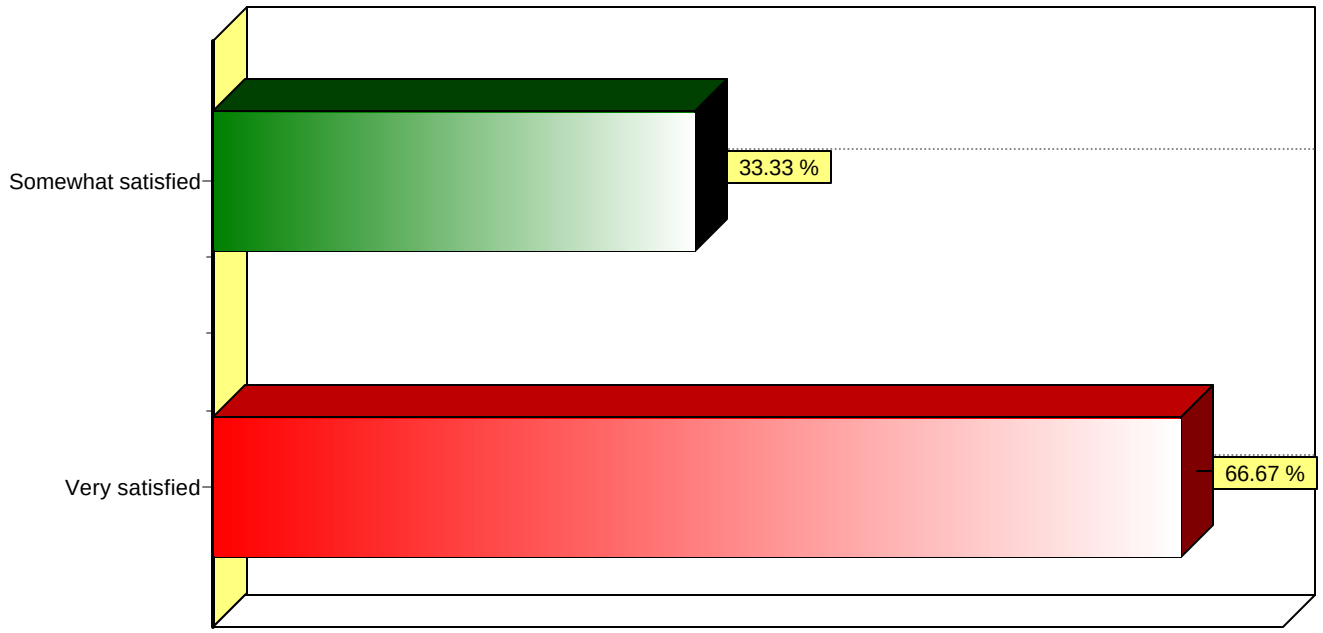


Responsiveness of the program and faculty to the needs of non-traditional students

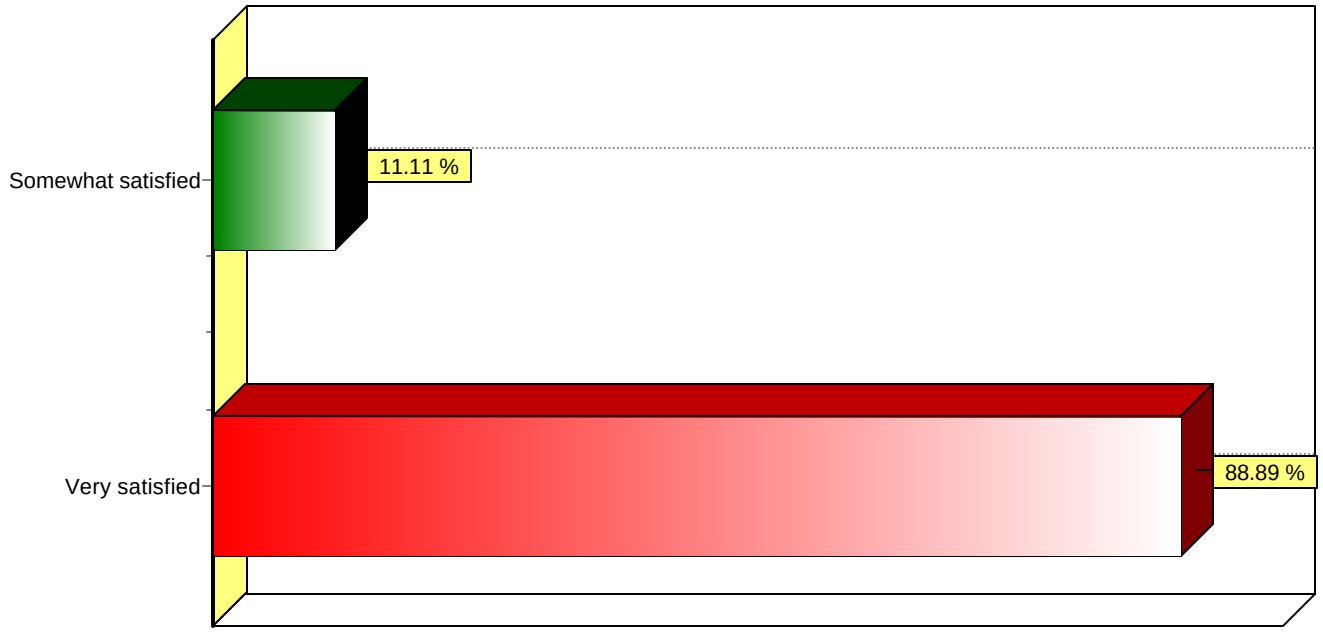


Bar Graphs
Science Program Review--Faculty Survey

Opportunities for you to participate in curriculum and program development

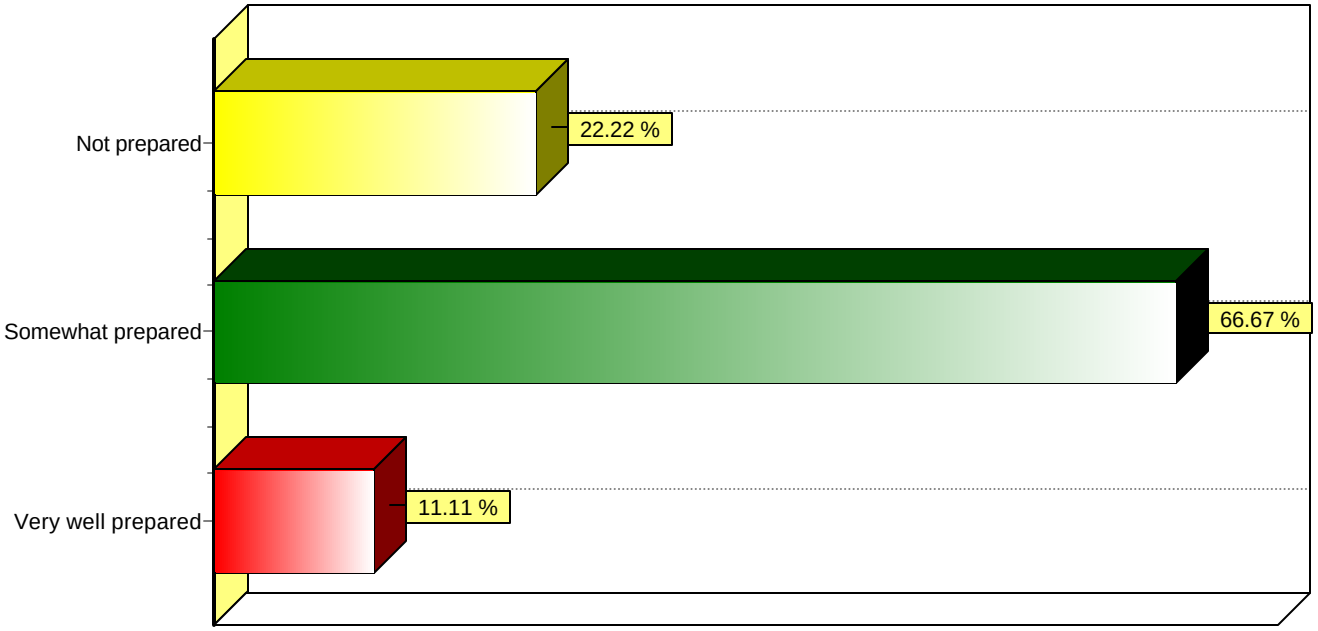


Extent to which media development or other computer facilities are available to instructors

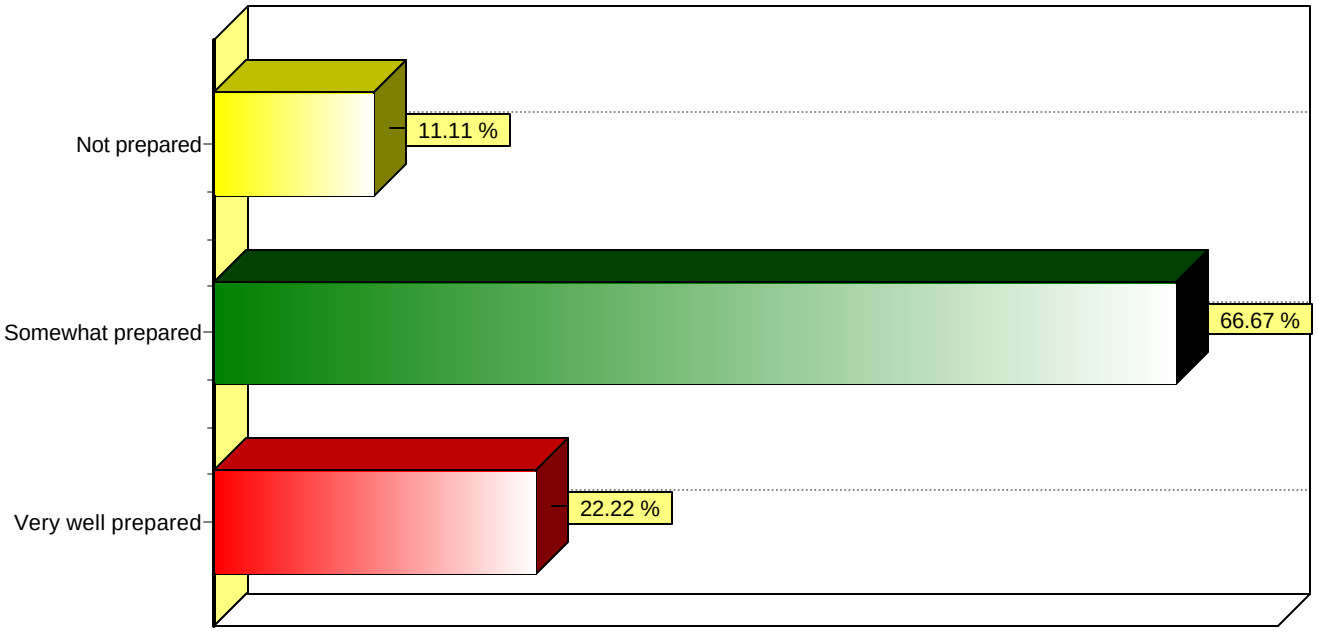


Bar Graphs
Science Program Review--Faculty Survey

Prerequisite knowledge in the discipline

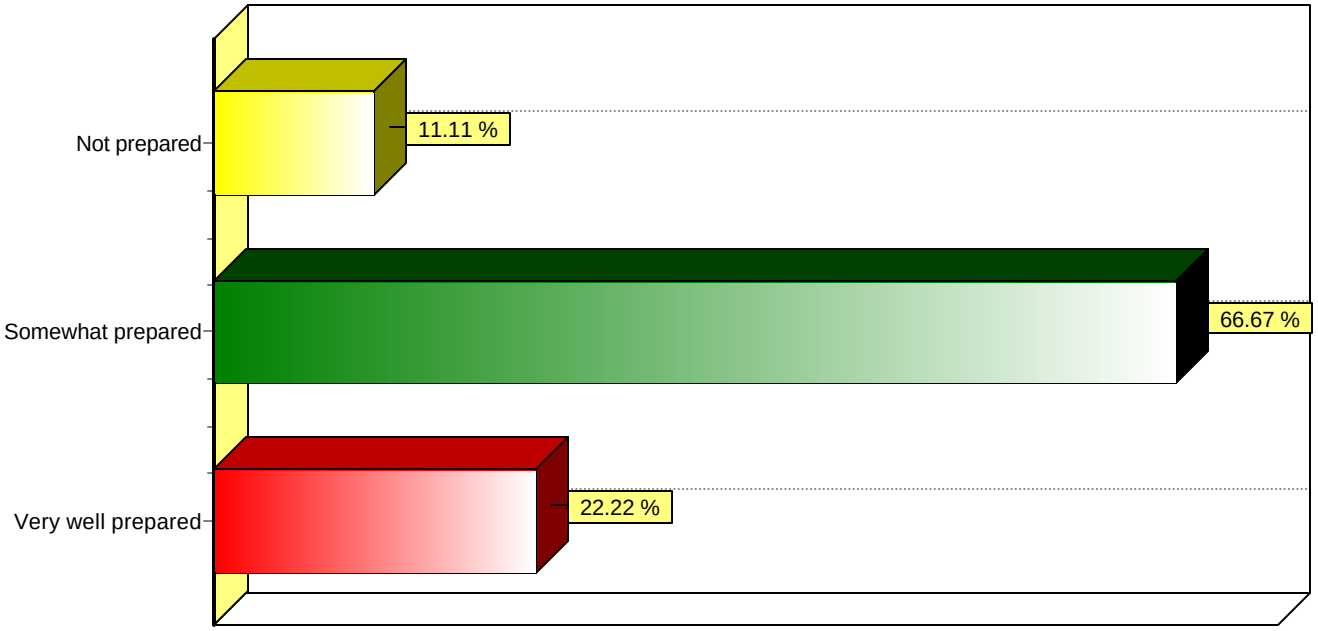


English proficiency (spoken)

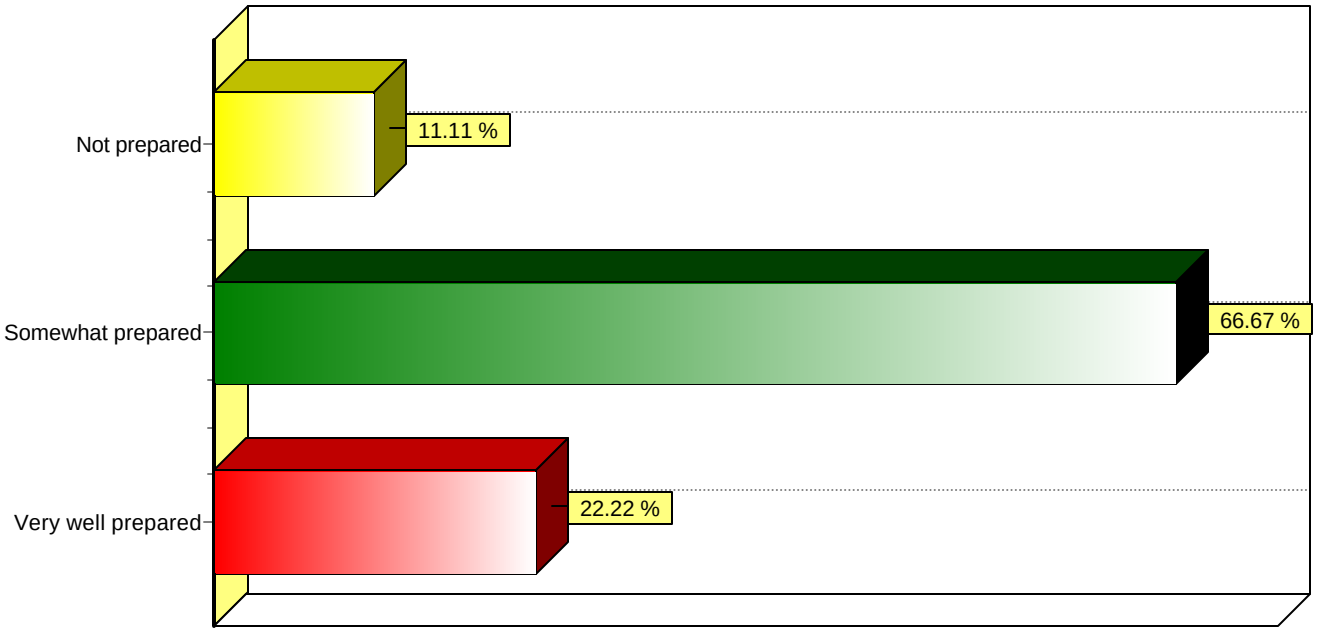


Bar Graphs
Science Program Review--Faculty Survey

English proficiency (written)

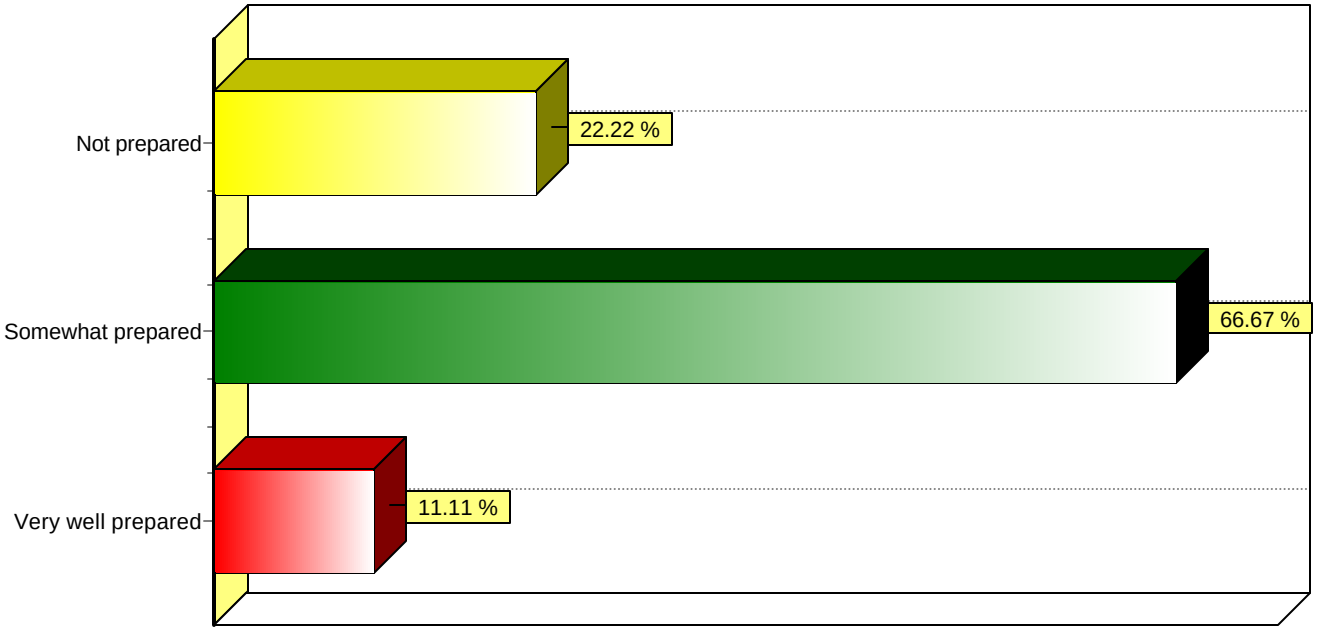


Reading level

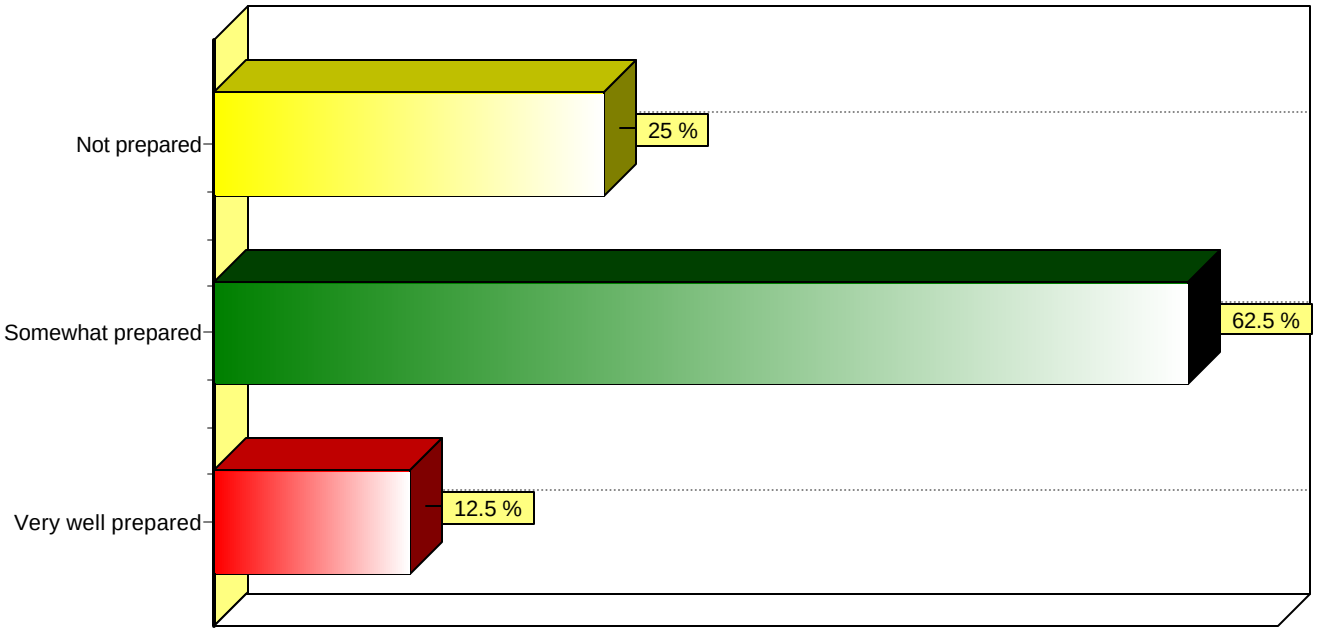


Bar Graphs
Science Program Review--Faculty Survey

Critical thinking skills

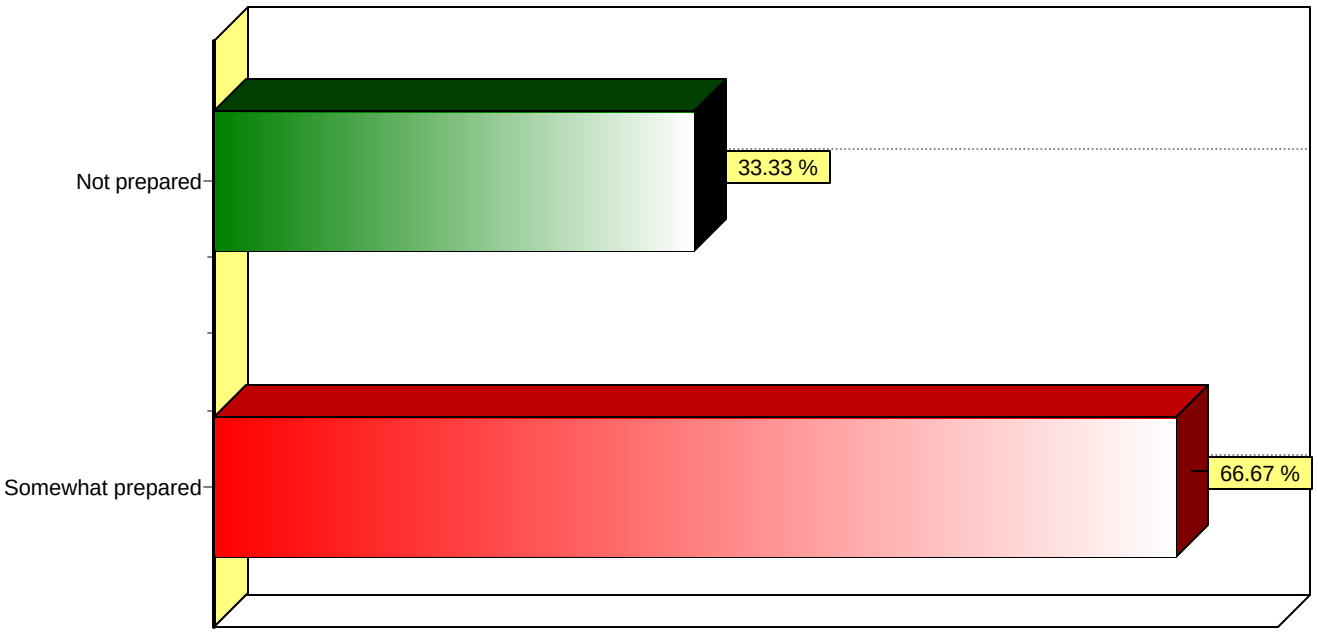


Study skills

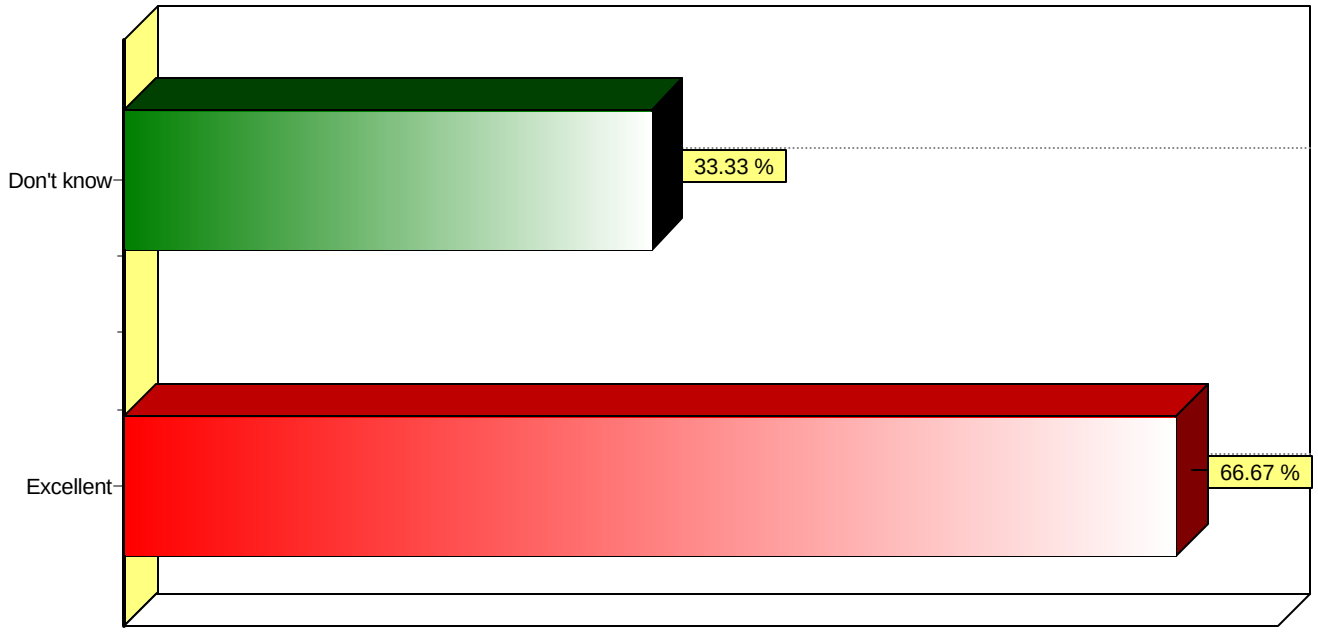


Bar Graphs
Science Program Review--Faculty Survey

Other

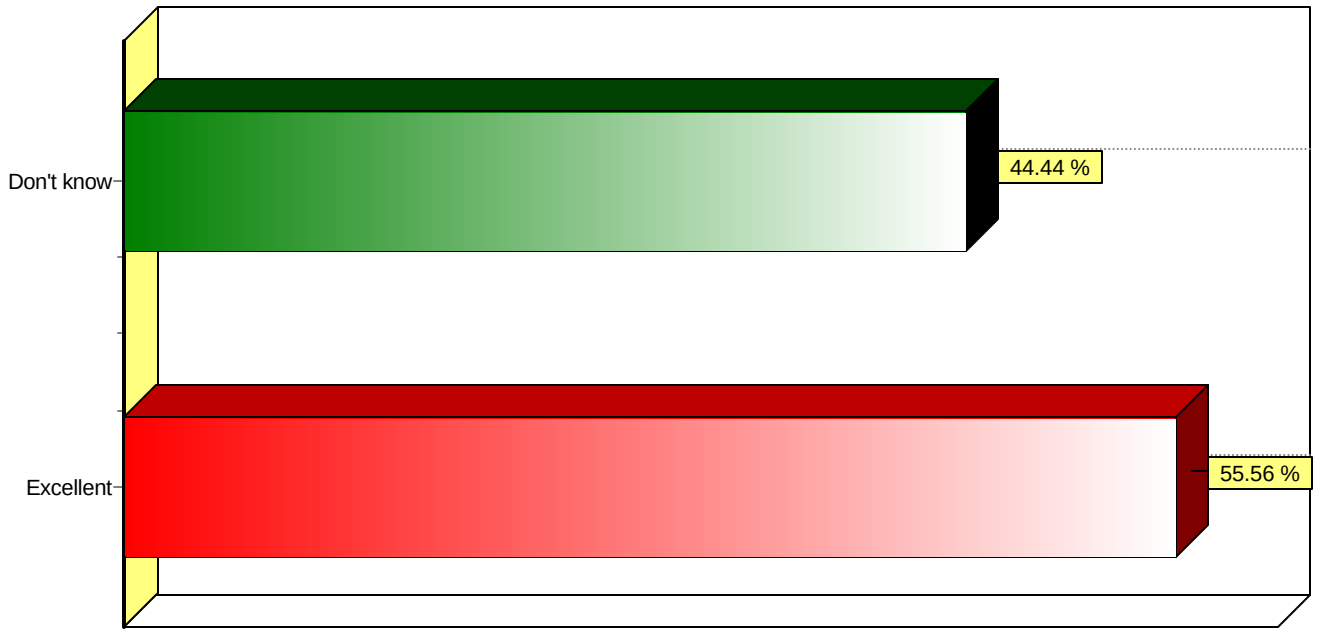


ASTRO 100 Introduction to Astronomy

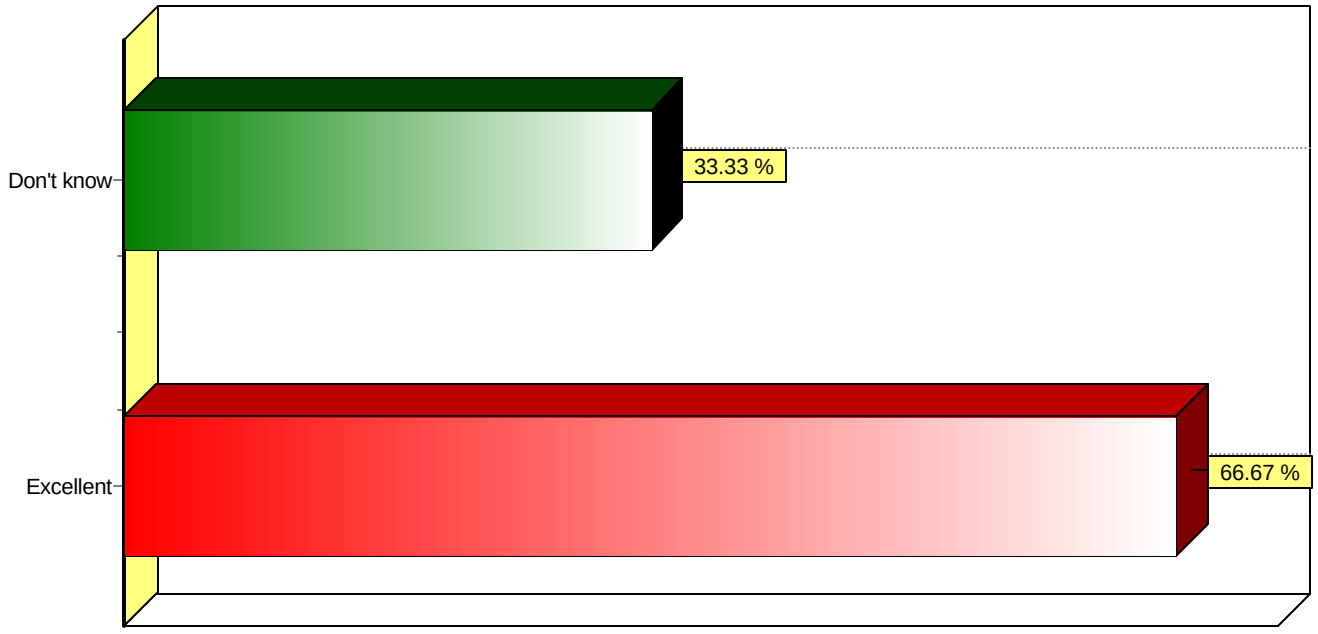


Bar Graphs
Science Program Review--Faculty Survey

ASTRO 100L Astronomy Lab

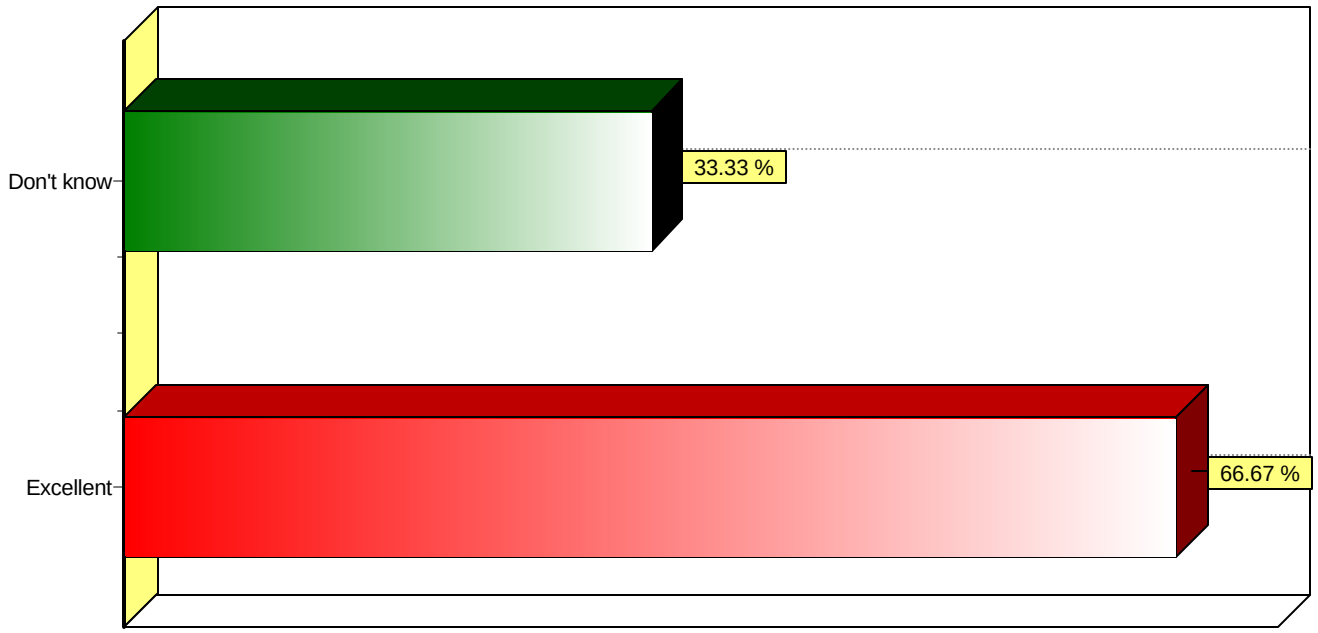


BIOL 100 Introduction to Biology

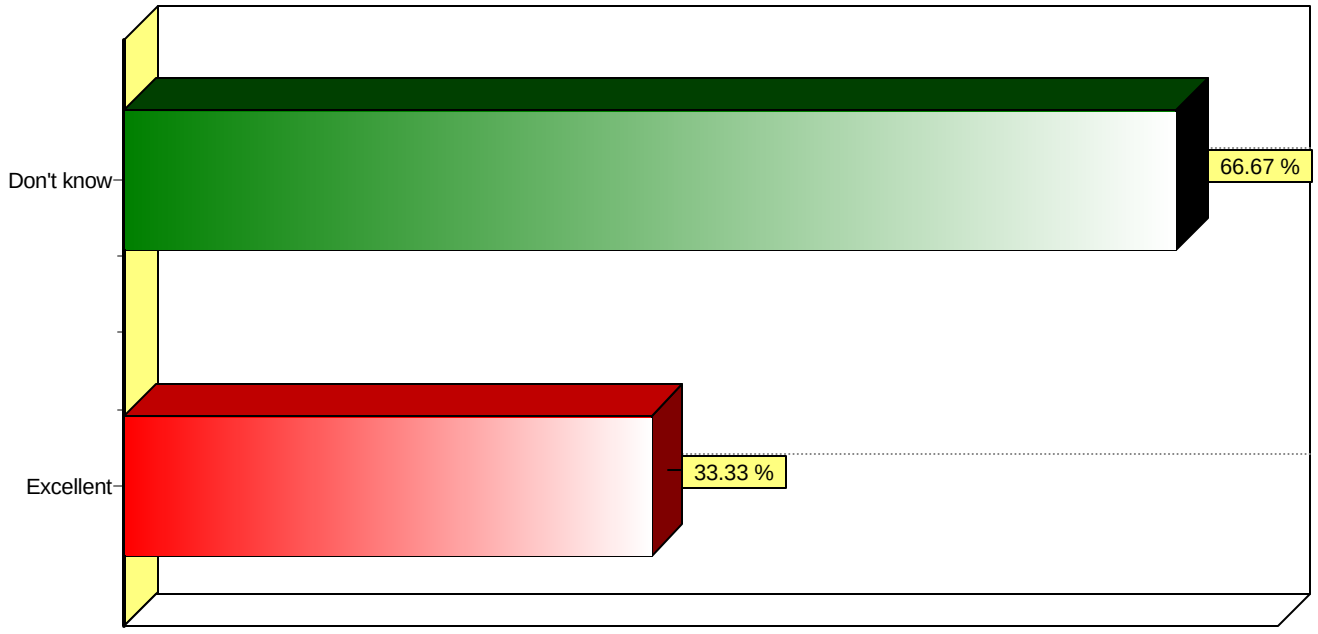


Bar Graphs
Science Program Review--Faculty Survey

BIOL 101 Introduction to Biology Lab

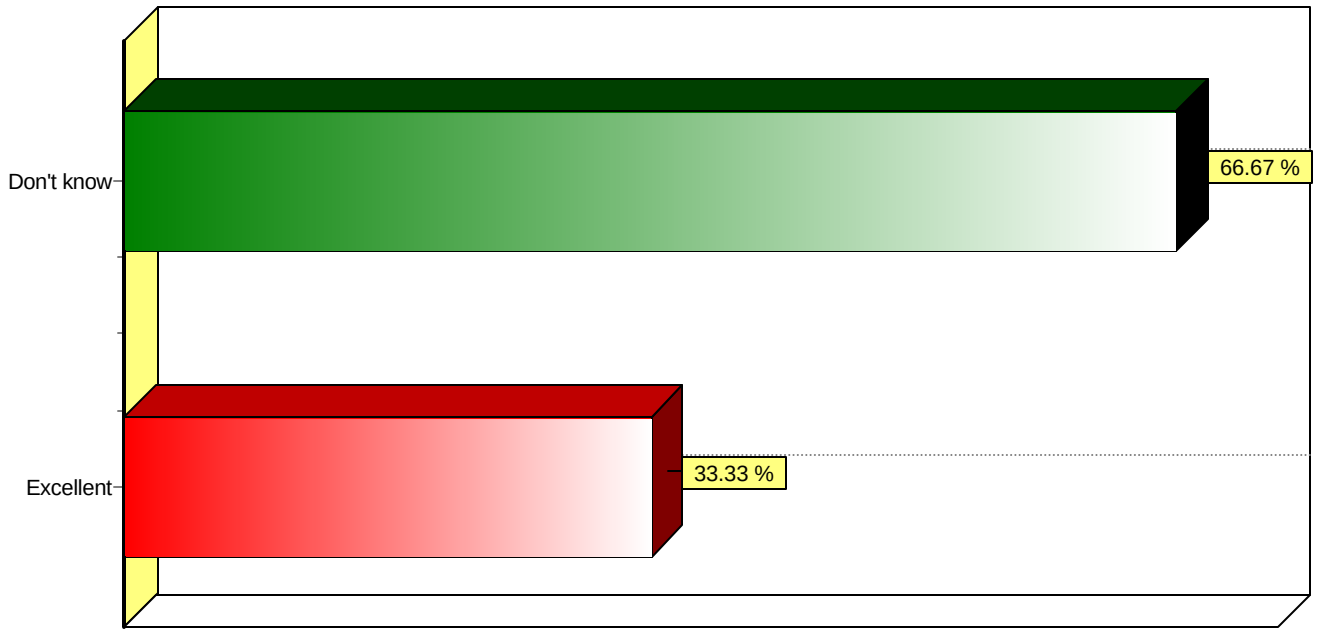


BIOL 120 Biology of Aging

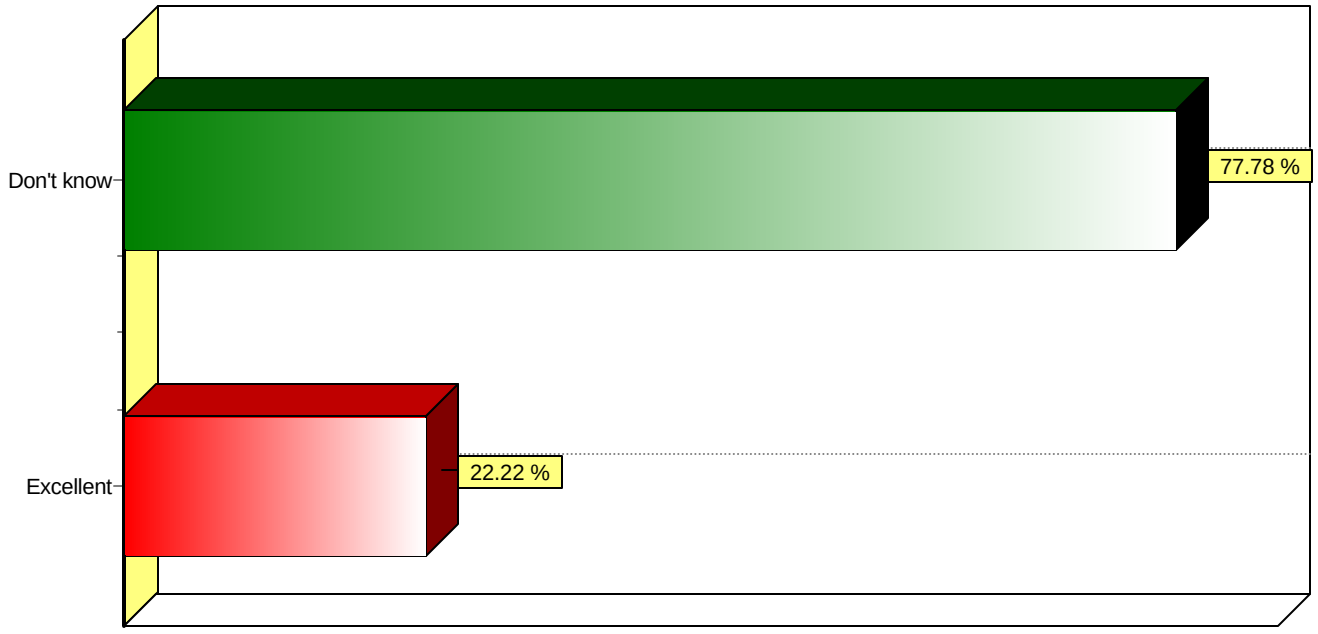


Bar Graphs
Science Program Review--Faculty Survey

BIOL 170 Human Anatomy

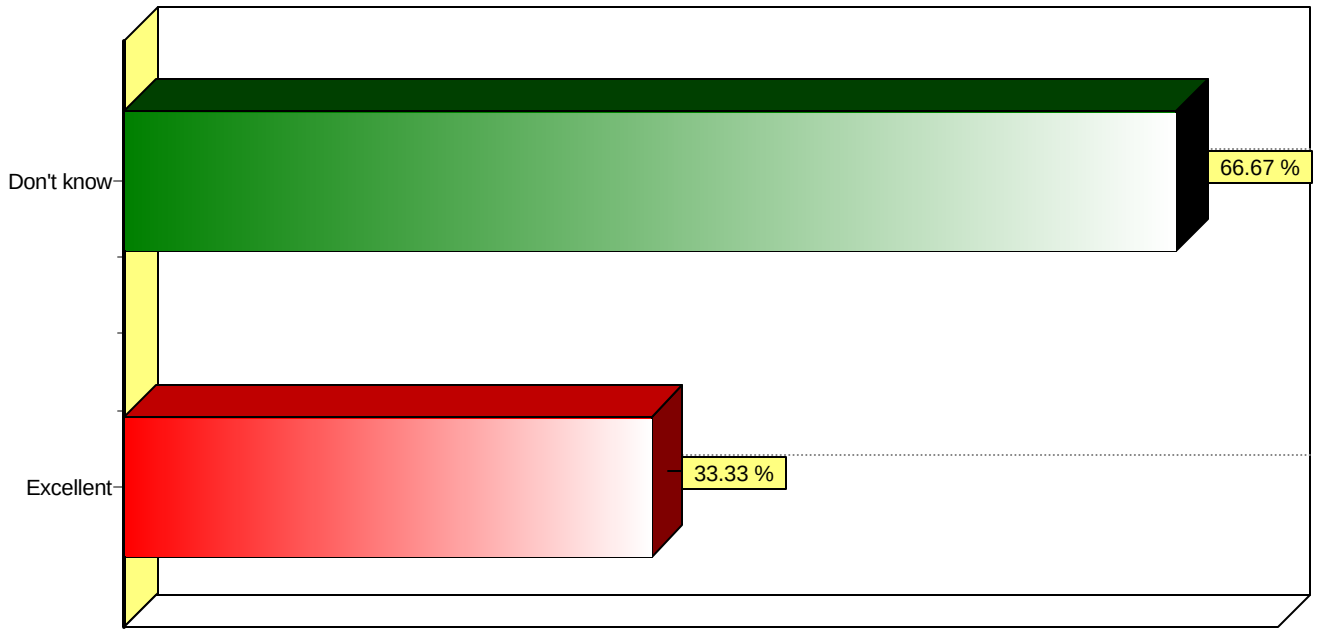


BIOL 200 Pharmacology

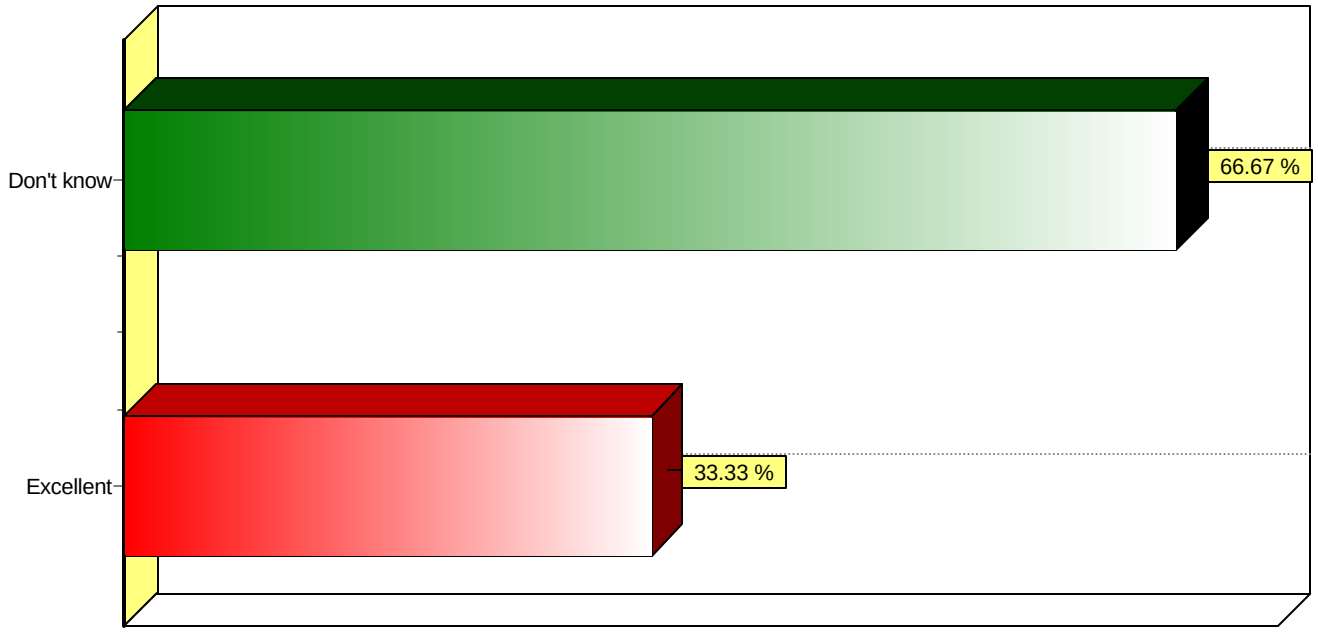


Bar Graphs
Science Program Review--Faculty Survey

CHEM 110 Introduction to Chemistry (includes lab)

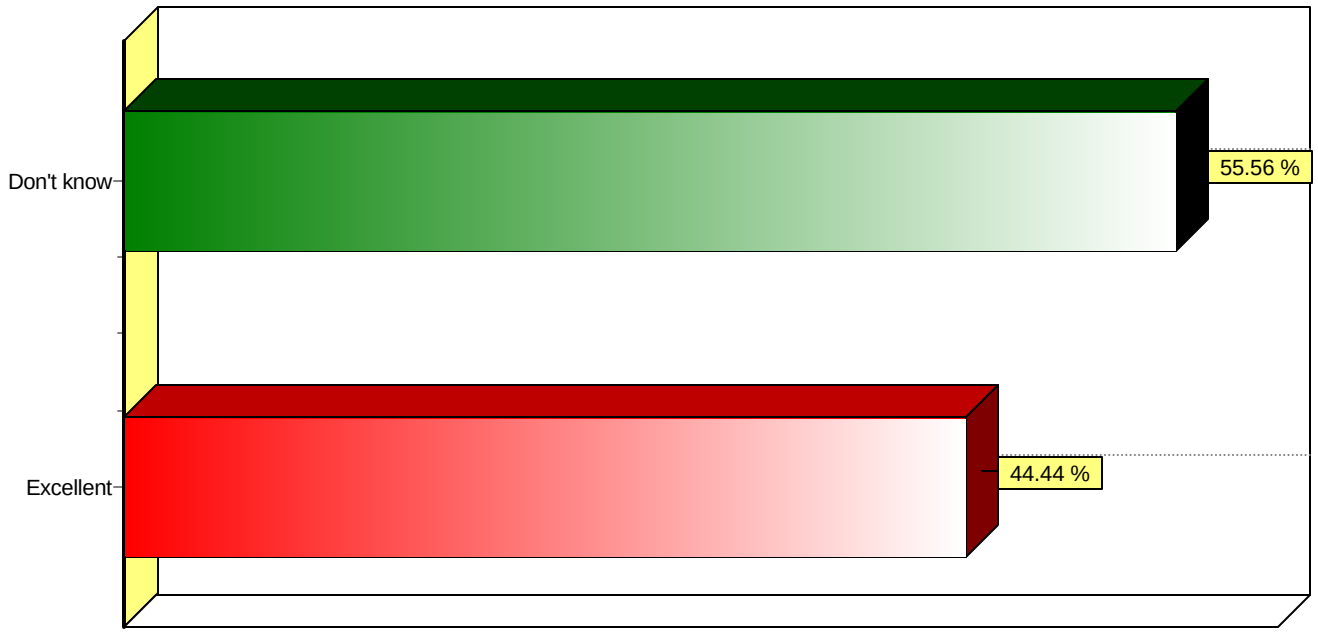


CHEM 130 Preparatory Chemistry

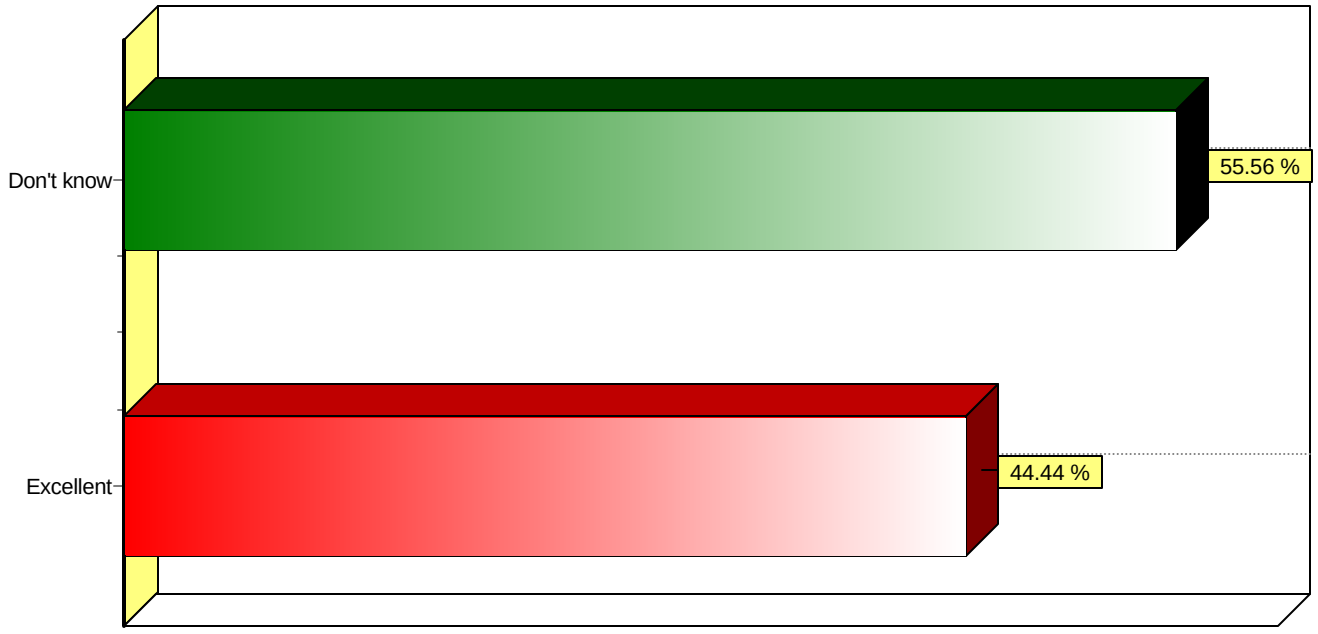


Bar Graphs
Science Program Review--Faculty Survey

CHEM 180 General Chemistry A

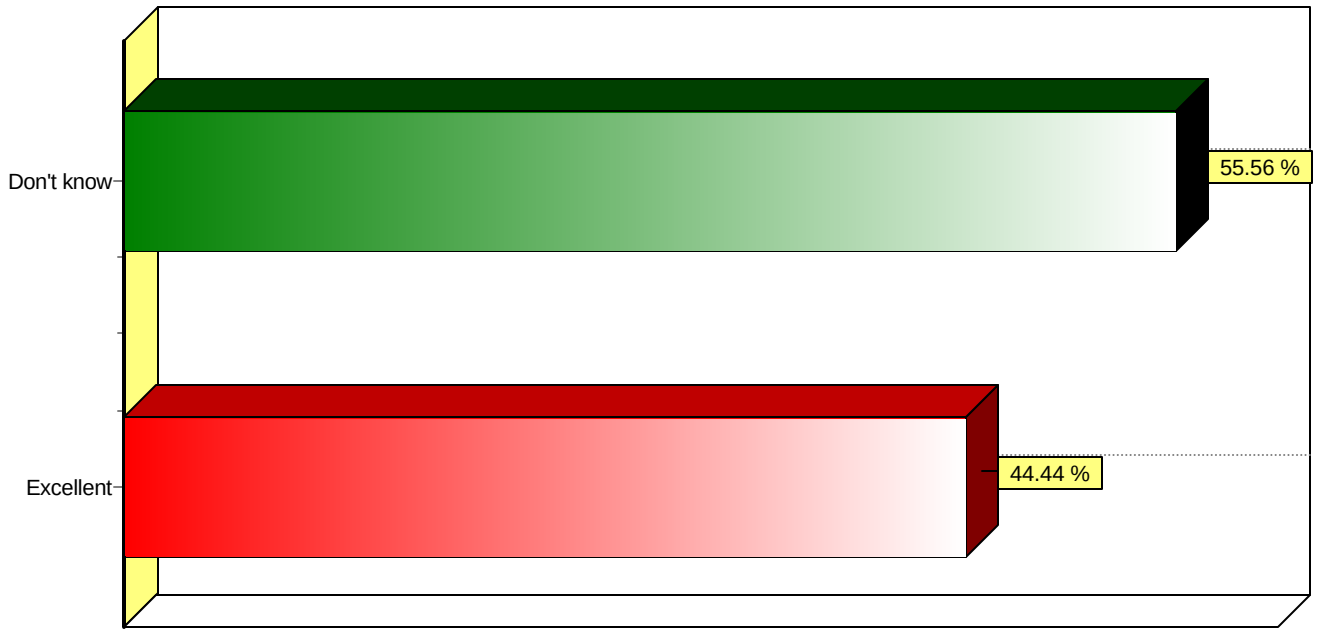


CHEM 180L General Chemistry A Lab

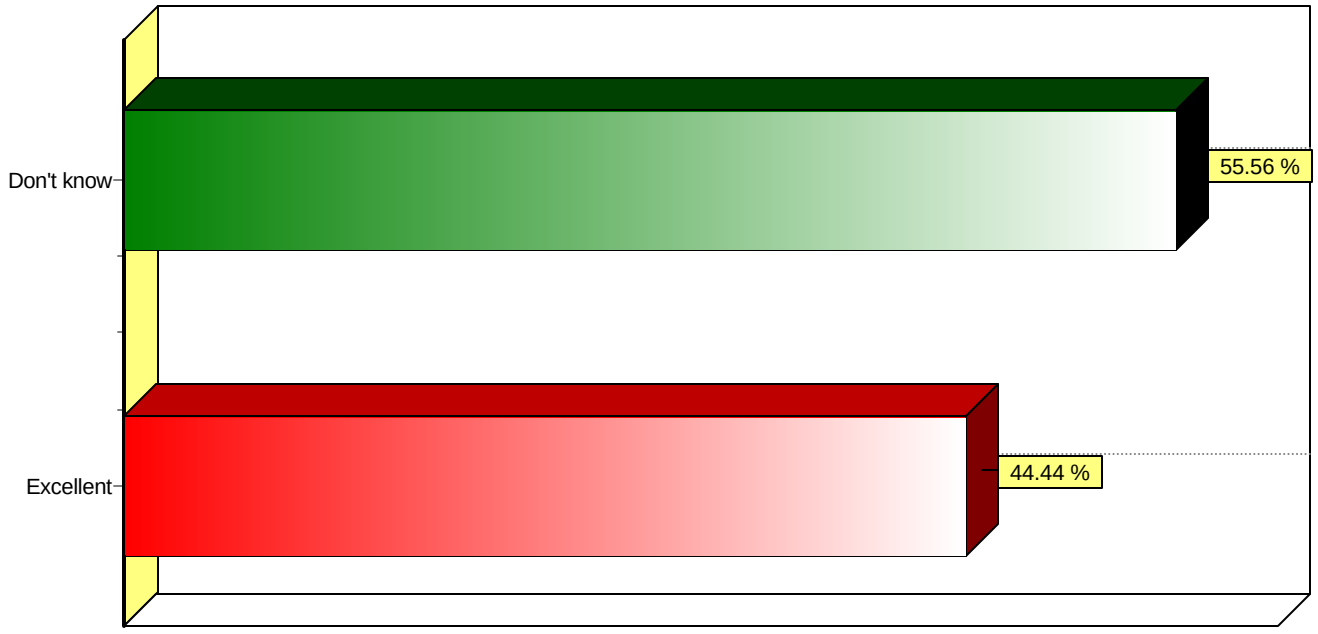


Bar Graphs
Science Program Review--Faculty Survey

CHEM 185 General Chemistry B

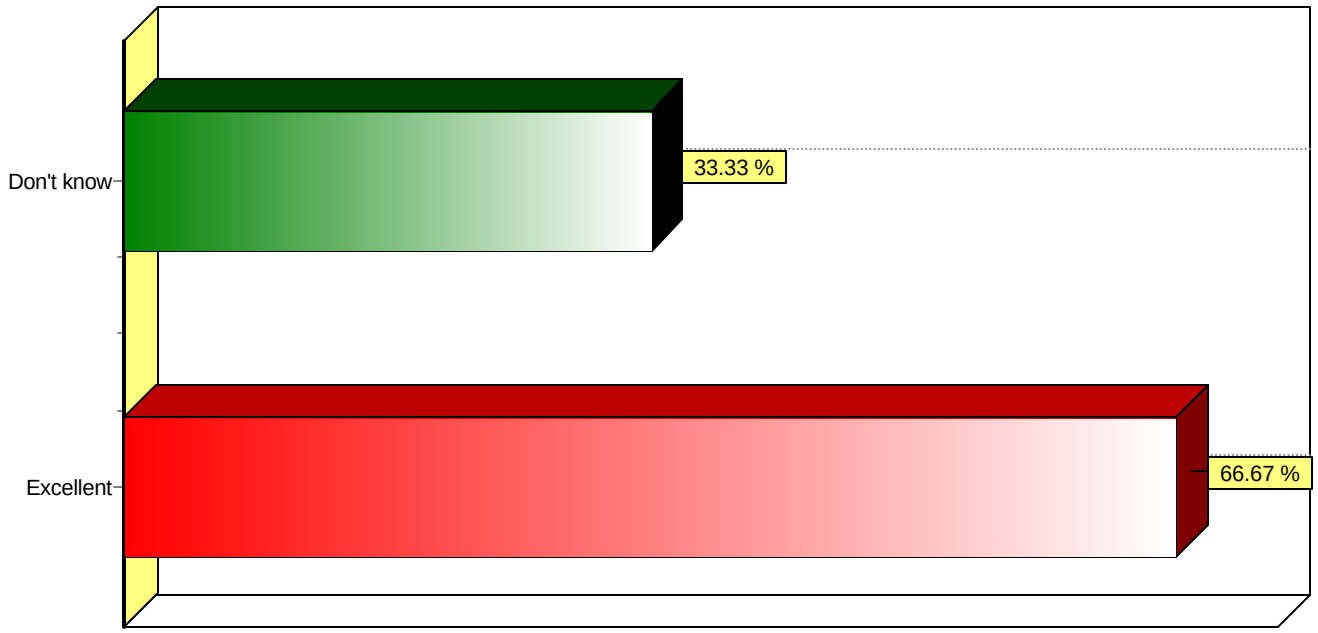


CHEM 185 General Chemistry B Lab

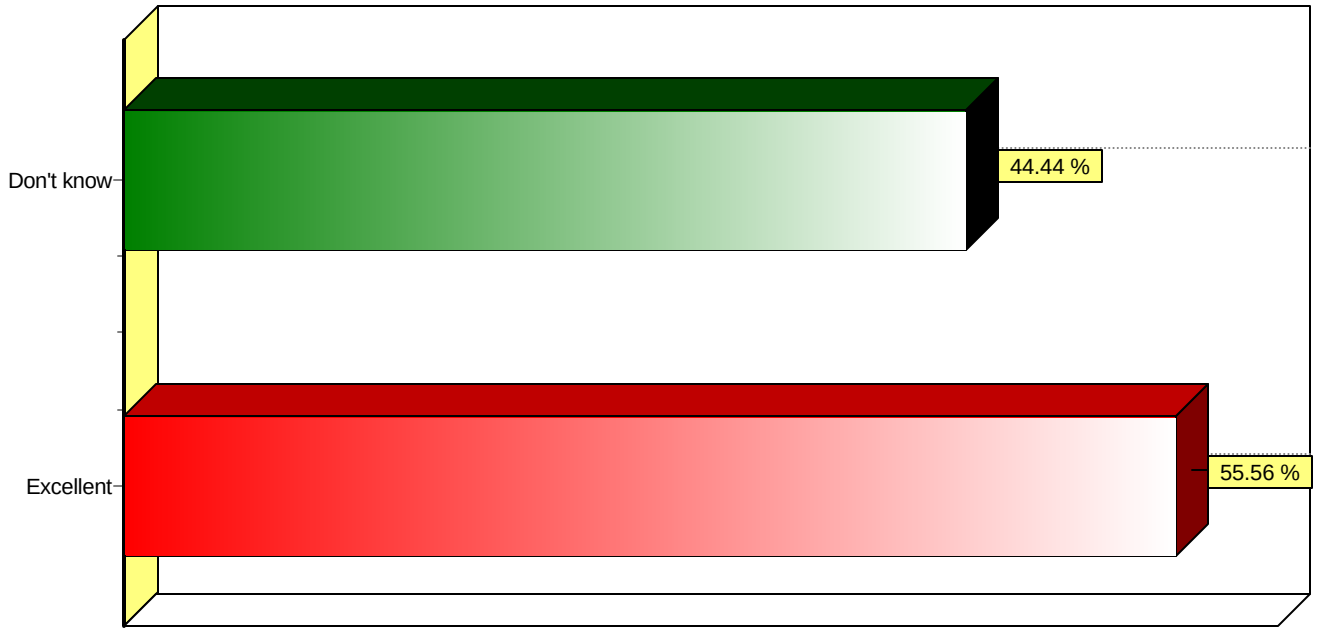


Bar Graphs
Science Program Review--Faculty Survey

ECOL 100 Human Ecology

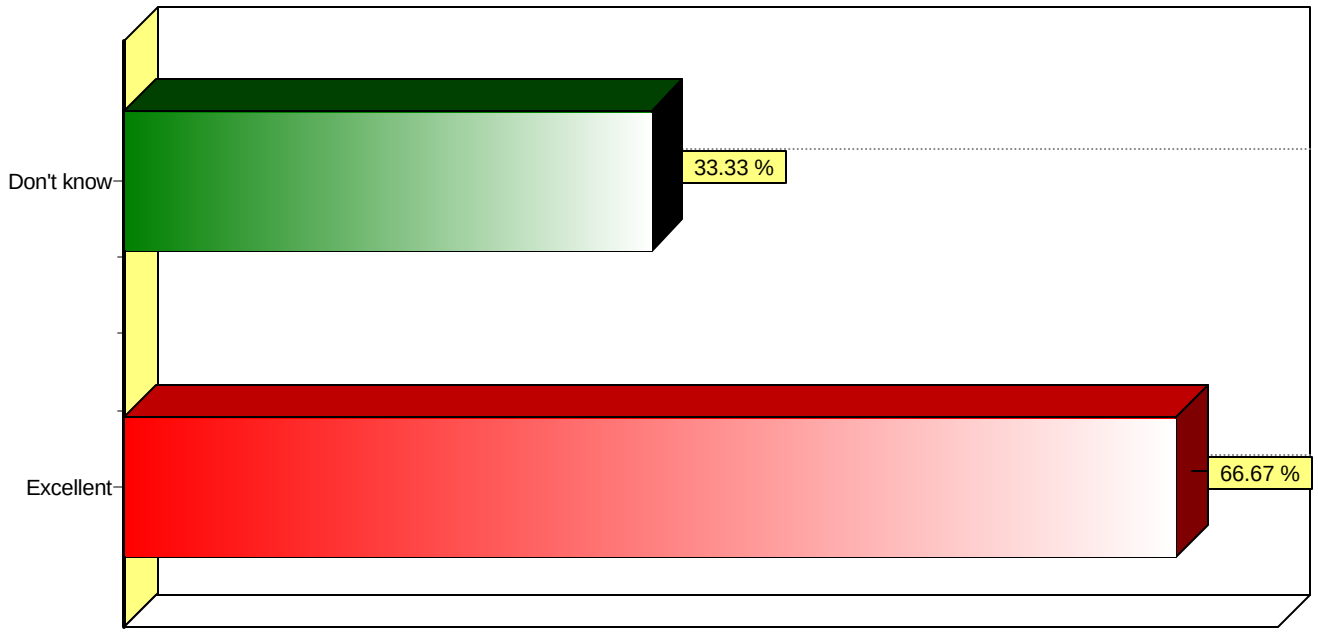


GEOL 130 California Geology

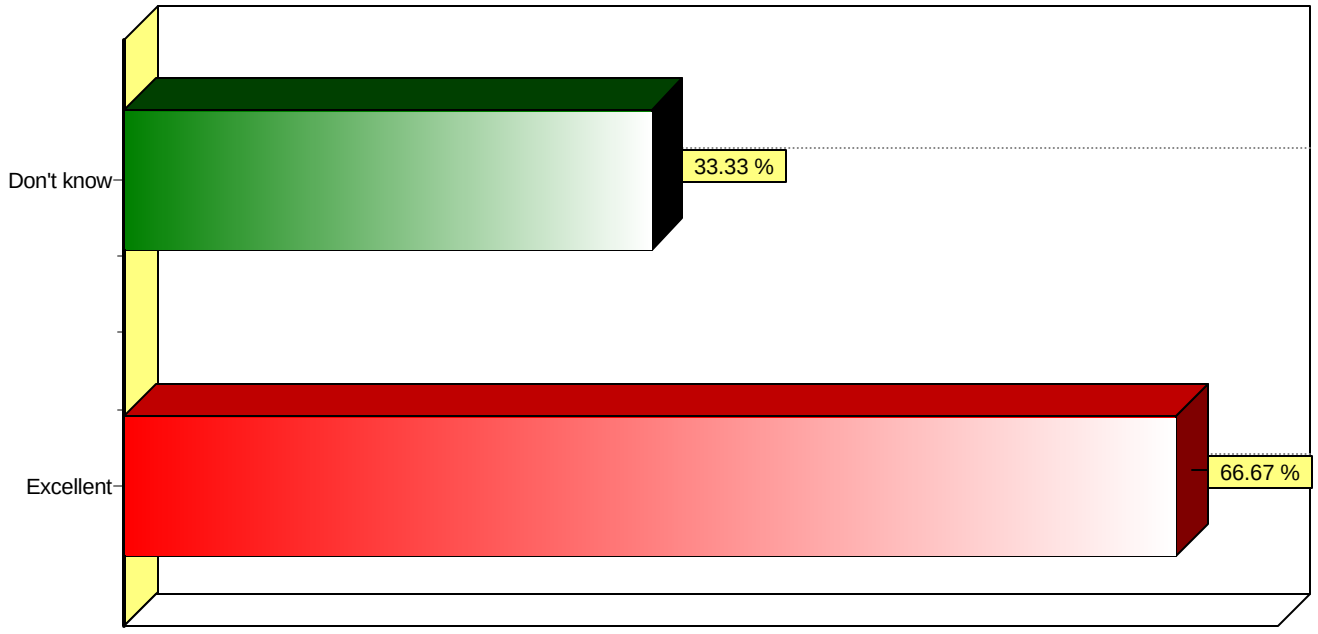


Bar Graphs
Science Program Review--Faculty Survey

GEOL 140 Introduction to Geology

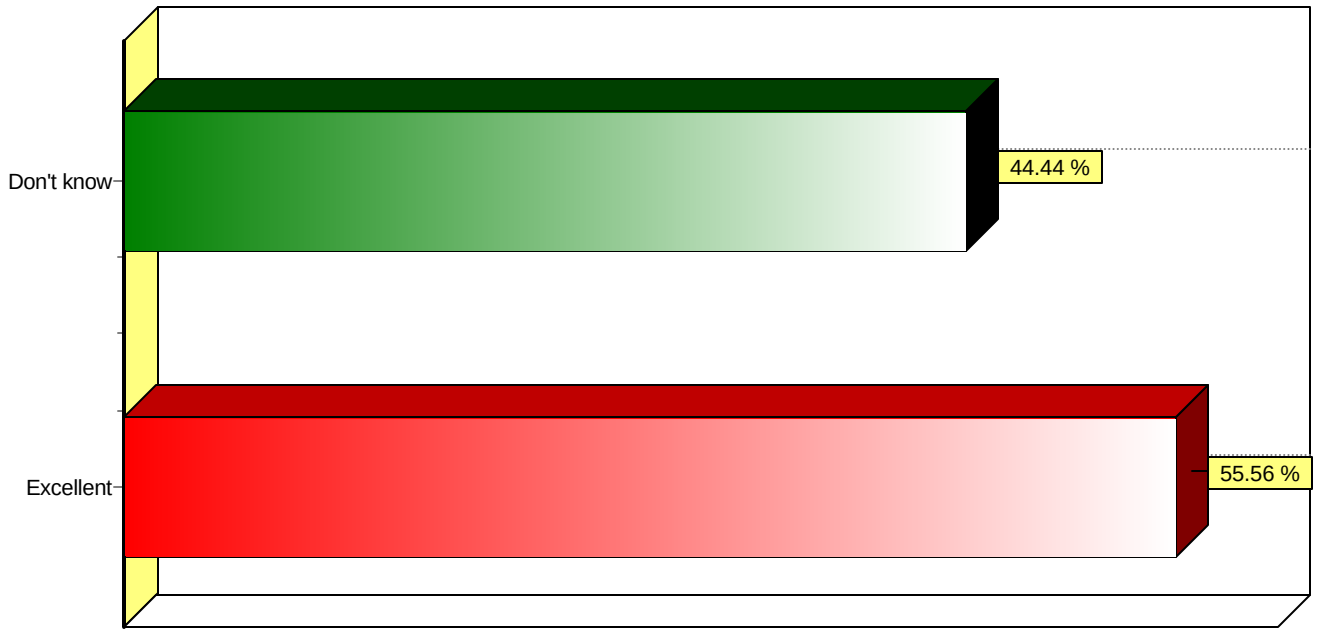


GEOL 141 Introduction to Geology Lab



Bar Graphs
Science Program Review--Faculty Survey

PHYS 100 Introduction to Physics



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Science Student

Cumulative Count and Percent
Science Program Review--Student Survey

		Count	Percent	Cumulative Count	Cumulative Percent
Quality of instruction					
Very satisfied		242	66.12 %	242	66.12 %
Somewhat satisfied		99	27.05 %	341	93.17 %
Not satisfied		8	2.19 %	349	95.36 %
Don't know or n/a		17	4.64 %	366	100.00 %
	Total Responses	**366**	**100%**	**366**	**100%**
Variety of classes					
Very satisfied		179	48.77 %	179	48.77 %
Somewhat satisfied		139	37.87 %	318	86.65 %
Not satisfied		24	6.54 %	342	93.19 %
Don't know or n/a		25	6.81 %	367	100.00 %
	Total Responses	**367**	**100%**	**367**	**100%**
Scheduling of classes					
Very satisfied		214	59.44 %	214	59.44 %
Somewhat satisfied		125	34.72 %	339	94.17 %
Not satisfied		8	2.22 %	347	96.39 %
Don't know or n/a		13	3.61 %	360	100.00 %
	Total Responses	**360**	**100%**	**360**	**100%**
Relevancy of classes to your vocational, academic, or personal needs					
Very satisfied		202	55.80 %	202	55.80 %
Somewhat satisfied		130	35.91 %	332	91.71 %
Not satisfied		19	5.25 %	351	96.96 %
Don't know or n/a		11	3.04 %	362	100.00 %
	Total Responses	**362**	**100%**	**362**	**100%**
Adequacy of the instructional facilities					
Very satisfied		205	57.10 %	205	57.10 %
Somewhat satisfied		128	35.65 %	333	92.76 %
Not satisfied		15	4.18 %	348	96.94 %
Don't know or n/a		11	3.06 %	359	100.00 %
	Total Responses	**359**	**100%**	**359**	**100%**
Quality of general instructional equipment					
Very satisfied		185	51.39 %	185	51.39 %
Somewhat satisfied		124	34.44 %	309	85.83 %
Not satisfied		20	5.56 %	329	91.39 %
Don't know or n/a		31	8.61 %	360	100.00 %
	Total Responses	**360**	**100%**	**360**	**100%**
Appropriateness of textbooks					
Very satisfied		210	57.85 %	210	57.85 %
Somewhat satisfied		122	33.61 %	332	91.46 %
Not satisfied		22	6.06 %	354	97.52 %
Don't know or n/a		9	2.48 %	363	100.00 %
	Total Responses	**363**	**100%**	**363**	**100%**

Cumulative Count and Percent
Science Program Review--Student Survey

	Count	Percent	Cumulative Count	Cumulative Percent
Adequacy of available laboratory equipment in relationship to student needs and course objectives				
Very satisfied	136	39.19 %	136	39.19 %
Somewhat satisfied	106	30.55 %	242	69.74 %
Not satisfied	29	8.36 %	271	78.10 %
Don't know or n/a	76	21.90 %	347	100.00 %
Total Responses	**347**	**100%**	**347**	**100%**
Availability of instructional equipment				
Very satisfied	139	40.64 %	139	40.64 %
Somewhat satisfied	128	37.43 %	267	78.07 %
Not satisfied	14	4.09 %	281	82.16 %
Don't know or n/a	61	17.84 %	342	100.00 %
Total Responses	**342**	**100%**	**342**	**100%**
Staff (other than instructor's) support for the program and classes in terms of effective response to materials and facilities				
Very satisfied	185	51.10 %	185	51.10 %
Somewhat satisfied	110	30.39 %	295	81.49 %
Not satisfied	18	4.97 %	313	86.46 %
Don't know or n/a	49	13.54 %	362	100.00 %
Total Responses	**362**	**100%**	**362**	**100%**
Extent to which faculty and staff meet the needs of culturally diverse students				
Very satisfied	175	50.00 %	175	50.00 %
Somewhat satisfied	90	25.71 %	265	75.71 %
Not satisfied	9	2.57 %	274	78.29 %
Don't know or n/a	76	21.71 %	350	100.00 %
Total Responses	**350**	**100%**	**350**	**100%**
Extent to which faculty and staff meet the needs of non-traditional students				
Very satisfied	171	49.14 %	171	49.14 %
Somewhat satisfied	97	27.87 %	268	77.01 %
Not satisfied	10	2.87 %	278	79.89 %
Don't know or n/a	70	20.11 %	348	100.00 %
Total Responses	**348**	**100%**	**348**	**100%**
Instructor's response time to your questions				
Very satisfied	240	66.67 %	240	66.67 %
Somewhat satisfied	69	19.17 %	309	85.83 %
Not satisfied	17	4.72 %	326	90.56 %
Don't know or n/a	34	9.44 %	360	100.00 %
Total Responses	**360**	**100%**	**360**	**100%**

Cumulative Count and Percent
Science Program Review--Student Survey

		Count	Percent	Cumulative Count	Cumulative Percent
Overall program quality					
Very satisfied		225	62.15 %	225	62.15 %
Somewhat satisfied		120	33.15 %	345	95.30 %
Not satisfied		10	2.76 %	355	98.07 %
Don't know or n/a		7	1.93 %	362	100.00 %
	Total Responses	**362**	**100%**	**362**	**100%**
Your own success in the program					
Very satisfied		169	46.30 %	169	46.30 %
Somewhat satisfied		156	42.74 %	325	89.04 %
Not satisfied		16	4.38 %	341	93.42 %
Don't know or n/a		24	6.58 %	365	100.00 %
	Total Responses	**365**	**100%**	**365**	**100%**
Once a week					
Strongly prefer		131	47.29 %	131	47.29 %
Somewhat prefer		103	37.18 %	234	84.48 %
Dislike		22	7.94 %	256	92.42 %
Strongly dislike		21	7.58 %	277	100.00 %
	Total Responses	**277**	**100%**	**277**	**100%**
Twice a week					
Strongly prefer		87	31.75 %	87	31.75 %
Somewhat prefer		121	44.16 %	208	75.91 %
Dislike		44	16.06 %	252	91.97 %
Strongly dislike		22	8.03 %	274	100.00 %
	Total Responses	**274**	**100%**	**274**	**100%**
Mornings					
Strongly prefer		50	19.31 %	50	19.31 %
Somewhat prefer		61	23.55 %	111	42.86 %
Dislike		90	34.75 %	201	77.61 %
Strongly dislike		58	22.39 %	259	100.00 %
	Total Responses	**259**	**100%**	**259**	**100%**
Afternoons					
Strongly prefer		46	17.76 %	46	17.76 %
Somewhat prefer		91	35.14 %	137	52.90 %
Dislike		81	31.27 %	218	84.17 %
Strongly dislike		41	15.83 %	259	100.00 %
	Total Responses	**259**	**100%**	**259**	**100%**
Evenings					
Strongly prefer		137	49.28 %	137	49.28 %
Somewhat prefer		89	32.01 %	226	81.29 %
Dislike		34	12.23 %	260	93.53 %
Strongly dislike		18	6.47 %	278	100.00 %
	Total Responses	**278**	**100%**	**278**	**100%**

Cumulative Count and Percent
Science Program Review--Student Survey

		Count	Percent	Cumulative Count	Cumulative Percent
Weekends					
Strongly prefer		72	27.27 %	72	27.27 %
Somewhat prefer		87	32.95 %	159	60.23 %
Dislike		59	22.35 %	218	82.58 %
Strongly dislike		46	17.42 %	264	100.00 %
	Total Responses	**264**	**100%**	**264**	**100%**
Four-week Intersession class					
Strongly prefer		66	25.78 %	66	25.78 %
Somewhat prefer		95	37.11 %	161	62.89 %
Dislike		57	22.27 %	218	85.16 %
Strongly dislike		38	14.84 %	256	100.00 %
	Total Responses	**256**	**100%**	**256**	**100%**
Telecourse					
Strongly prefer		192	60.00 %	192	60.00 %
Somewhat prefer		96	30.00 %	288	90.00 %
Dislike		23	7.19 %	311	97.19 %
Strongly dislike		9	2.81 %	320	100.00 %
	Total Responses	**320**	**100%**	**320**	**100%**
WWW/Internet class					
Strongly prefer		169	58.68 %	169	58.68 %
Somewhat prefer		74	25.69 %	243	84.38 %
Dislike		31	10.76 %	274	95.14 %
Strongly dislike		14	4.86 %	288	100.00 %
	Total Responses	**288**	**100%**	**288**	**100%**
Combination Internet and classroom					
Strongly prefer		99	36.80 %	99	36.80 %
Somewhat prefer		111	41.26 %	210	78.07 %
Dislike		43	15.99 %	253	94.05 %
Strongly dislike		16	5.95 %	269	100.00 %
	Total Responses	**269**	**100%**	**269**	**100%**
Vocational/career counseling					
Very interested		97	32.23 %	97	32.23 %
Somewhat interested		105	34.88 %	202	67.11 %
Not interested		70	23.26 %	272	90.37 %
Don't know or n/a		29	9.63 %	301	100.00 %
	Total Responses	**301**	**100%**	**301**	**100%**
Academic counseling					
Very interested		122	40.40 %	122	40.40 %
Somewhat interested		107	35.43 %	229	75.83 %
Not interested		45	14.90 %	274	90.73 %
Don't know or n/a		28	9.27 %	302	100.00 %
	Total Responses	**302**	**100%**	**302**	**100%**

Cumulative Count and Percent
Science Program Review--Student Survey

		Count	Percent	Cumulative Count	Cumulative Percent
Tutorial services					
Very interested		99	33.22 %	99	33.22 %
Somewhat interested		116	38.93 %	215	72.15 %
Not interested		58	19.46 %	273	91.61 %
Don't know or n/a		25	8.39 %	298	100.00 %
	Total Responses	**298**	**100%**	**298**	**100%**
Study skills training					
Very interested		86	29.55 %	86	29.55 %
Somewhat interested		84	28.87 %	170	58.42 %
Not interested		92	31.62 %	262	90.03 %
Don't know or n/a		29	9.97 %	291	100.00 %
	Total Responses	**291**	**100%**	**291**	**100%**
Vocational ESL classes					
Very interested		38	13.29 %	38	13.29 %
Somewhat interested		53	18.53 %	91	31.82 %
Not interested		138	48.25 %	229	80.07 %
Don't know or n/a		57	19.93 %	286	100.00 %
	Total Responses	**286**	**100%**	**286**	**100%**
Job placement services (One-Stop Employment Services)					
Very interested		79	27.34 %	79	27.34 %
Somewhat interested		85	29.41 %	164	56.75 %
Not interested		83	28.72 %	247	85.47 %
Don't know or n/a		42	14.53 %	289	100.00 %
	Total Responses	**289**	**100%**	**289**	**100%**
Other					
Very interested		15	10.87 %	15	10.87 %
Somewhat interested		25	18.12 %	40	28.99 %
Not interested		35	25.36 %	75	54.35 %
Don't know or n/a		63	45.65 %	138	100.00 %
	Total Responses	**138**	**100%**	**138**	**100%**

Count and Percent
Science Program Review--Student Survey

	Count	Percent
Why are you taking classes in this program at Coastline? (Mark all that apply.)	Respondents: 369	
(Not Answered)	15	4.07 %
Personal interest	40	10.84 %
Vocational need	18	4.88 %
To earn a Certificate	3	0.81 %
To earn an A.A. degree	105	28.46 %
To transfer to a 4-year college	222	60.16 %
Convenience	50	13.55 %
Other	23	6.23 %
Total Responses	**476**	**100%**
Are you currently enrolled at another college in addition to your Coastline classes? (Mark all that apply.)	Respondents: 376	
(Not Answered)	30	7.98 %
Golden West College	75	19.95 %
Irvine Valley College	5	1.33 %
Orange Coast College	77	20.48 %
Saddleback College	6	1.60 %
Santa Ana College	9	2.39 %
Santiago Canyon College	4	1.06 %
Other community college	29	7.71 %
A four-year college	65	17.29 %
No: Enrolled only at Coastline	100	26.60 %
Total Responses	**400**	**100%**
In what types of Science classes are you now enrolled at Coastline? (Mark all that apply.)	Respondents: 376	
(Not Answered)	50	13.30 %
Evening class	59	15.69 %
Day class	8	2.13 %
Weekend College class	19	5.05 %
Telecourse	221	58.78 %
WWW/Internet course	73	19.41 %
Other	7	1.86 %
Total Responses	**437**	**100%**
Do you have Internet access? (Mark all that apply.)	Respondents: 376	
(Not Answered)	24	6.38 %
Yes: through employer	74	19.68 %
Yes: through another college	60	15.96 %
Yes: America OnLine or similar content provider	134	35.64 %
Yes: other Internet service provider (Worldnet, Earthlink, etc.)	150	39.89 %
No	20	5.32 %
Total Responses	**462**	**100%**

Count and Percent
Science Program Review--Student Survey

		Count	Percent
If you have Internet access, how do you most often connect to the Internet?		Respondents:	365
(Not Answered)		48	13.15 %
Dial-up phone line w/28kbs modem		37	10.14 %
Dial-up phone line w/56kbs modem		153	41.92 %
DSL		54	14.79 %
Cable		51	13.97 %
T1 or ISDN		13	3.56 %
Other		9	2.47 %
	Total Responses	**365**	**100%**
What is your primary language (the language you are most comfortable speaking, reading, or writing)?		Respondents:	369
(Not Answered)		26	7.05 %
English		231	62.60 %
Spanish		10	2.71 %
Vietnamese		94	25.47 %
Other		8	2.17 %
	Total Responses	**369**	**100%**
What is your ethnicity?		Respondents:	372
(Not Answered)		29	7.80 %
African-American		16	4.30 %
Asian: Vietnamese		120	32.26 %
Asian: Other		30	8.06 %
Hispanic		39	10.48 %
White		110	29.57 %
Decline to state		18	4.84 %
Other		10	2.69 %
	Total Responses	**372**	**100%**

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: Are there other courses in the Science program that you would like Coastline College to offer?

Microbiology, Bio Chemistry, Physiology

Human Physiology, Bio Chemistry

Physics

Antropology

How about Pathophysiology.

Cancer Biology

Some Medical courses or Microbiology courses.

Physiology without Anatomy

Physiology

Human Physiology

Human Physiology.

Human Sexuality

Micro/Macrobiology,

Yes, Chem (General Chemistry, Organic Chemistry), Microbiology, Human Physiology.

Physiology, Microbiology, Organic Chemistry and Physics.

I would like Coastline College open the other science such as Organic Chemistry and Physiology and more Biology and Chemistry courses.

Microbiology, Physiology - Your Anatomy class is not complete without Physiology.

More weekend, 4 or 6 week classes, and Internet classes.

Nutrition, PE.

Intro Physiology

Microbiology, Human Physiology.

Physiology 175, Biochemistry.

Human Physiology, Organic Chemistry I & II, Medical Microbiology, Physics I & II.

Physiology, Microbiology, Chemistry, Physics

Biochemistry, Microbiology, Physics.

Physiology, Biochemistry

Microbiology, bio 210, 175 Physiology, Biochemistry

Bio 210, Physiology and Microbiology.

Physiology, General Chemistry II, Pathophysiology.

Yes, Physiology, Bio 175, and Bio 210, Micro Biology

Physics

Physics

Any course that will transfer to a four year college would be great, maybe Physical Science.

Yes, Physics

Physiology/Pharmicology

4 week Chemistry

No - I like the courses that Coastline College has.

Lower Math course

Marine Biology (or Oceanography) in the evening or weekend on telecourse.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: Are there other courses in the Science program that you would like Coastline College to offer?

Biology of aging.

Next course in series of Geology after 140.

Intro Archaology.

No I am not that interested in Science.

No comment. I am not yet acquainted fully with all the courses presently offered.

I'm happy.

None that I can recall

Chemistry 100

Bio Class on primate behavior.

The Science program I would like are already available.

Haven't had a need for more.

A Science class with the interest to persue alternative forms of energy, fuel, transportation etc.

Astronomy

Political Science 180.

No, just more classroom Science courses with a better variety of time.

More Marine Biology or Advnaced Oceanogrophy.

Economic through Internet.

Coastline is providing Sciences needed.

Geology (intro)

Yes, Physics.

Pre Chemistry class.

Class to prepare for general Chemistry.

Subsitute for high school Chemistry.

a Pre-Chemistry class.

Pre Chemistry to help sutdents get ready.

Preparation for Chemistry, Physics

Pre Chemistry

Math, Physics

Physics - higher level Physics than the intro Physics offered now.

We need Pre Chemistry before 180.

Need to help students start Chemistry by another class.

Can you make a class to get started in Chemistry?

Vietnamese classes

Biology for elementary teachers, or Science for elementary teachers.

No, I am satisfied with the courses offered.

So far my professors have been terrific - I love weekend college.

I think Chemistry 100

Foreign Language

Not sure haven't thought about it.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: Are there other courses in the Science program that you would like Coastline College to offer?

No need for my personal goals at this time.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: If you marked "Not satisfied" to any of the items on the first page, please explain your concerns.

Found the textbook for Geology 140 Telecourse to be very confusing. Seemed as if I should have had prior knowledge of many of the subjects in the book. Wording was not very concise or logical to me.

No classes are offered in Architecture or Construction Technology. Some classrooms are maintained very poorly. Termites and poor lighting.

More evening classes. More variety in Math, Language and English.

Poles in middle of classroom.

It's just an opinion.

The textbooks are really expensive and not often used on the whole.

Equipment is not up to par with other 'standard' community colleges. Rooms not conipatable with instruction ie: Pharacology taught in a lab class - 3 hour class in a very uncomfortable room. No video machine capabilities.

Coastline should provide Physiology and Microbiology, Chemistry, and Physics. There are many prenursing program students who would enroll.

Classroom instruction provides student/teacher interaction - much better and more effective than telecourse or internet courses.

Need to add physiology and Microbiology to program. Need to improve lab facilities. Need to have instructor pick their choice of textbook and materials for class.

Lab kit was incomplete, no one answered e-mail. I like Internet courses, but feel when there is a problem, I'm lost in space.

The lab equipment is way too expensive.

Not enough subjects.

Admin. support for Biology - kept getting different answers to same questions had to ask repeatedly they never made sense.

Scheduling of classes - History 150 T.V. bad show times. Lab equipement - have repeatidly tried to get missing lab items. Staff -Prof in Chemistry have been rude. Responce time- Never received response.

The lab for Geology was difficult for me to understand without direct teacher instruction.

The teacher doen't always reply or answer the questions the students ask.

8 week Syllabus was not available until a few days before start. No phone number for instructor was provided. Letter in mail stated second as instructor. Spelling error in teacher's name in syllabus.

Testing Center does not repsond quick enough.

(It's just that I need the course for General Ed. purposes)

There are a ton of mis-prints in the workbook which match up to the labs. The process of investigating which chapter actually went to the lab was frustrating.

I'd like more Social Science courses to be readily available.

I'm graduating from OCC, but I like the classes here. You don't have a lot of the classes I need to meet my requirements. Also, when I mail in a quiz it takes 3 months in order to get my grade.

I don't agree with the General Education courses required to obtain a BA degree. When it doesn't apply to the career or interests of the working professional. Tutorial services for Biology are non-existant and the college doesn't make the effort to ensure the success of working professionals.

The professor was a goof and made the test harder to study for then giving us an outline.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: If you marked "Not satisfied" to any of the items on the first page, please explain your concerns.

The answers to the test and his jokes were not necessary.

Instructor never call back! Even if message is provided!

Coastline does not offer any Physics classes. Schedule of classes could be better offer more frequently or more sections. More focus is being put on Vietnamese students.

I have fallen behind. I haven't bought the book, so I need to correct this.

There is not a proper correlation of materials.

Don't learn as much as going to class.

Some of the courses I have wanted to take do not transfer to CSULB.

All related to the fact that the Internet portions of every class I have taken through Coastline has been awful. Info is not current, quizes never seem to be submitted correctly, and a language barrier often comes into play when trying to verify any issues.

Telecourse midterms interfere greatly with 4 week Intersession courses in the fall. Too much information is given in 4 week courses causing brain overload when studying for midterms.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: Do you have any other comments, recommendations, or commendations?

Some students who just first time with online program. They have trouble when log in program online. The technician need to clear how log in program online without to be trouble.

Bookstore hours are limited for working students.

Need a cafeteria with good, healthy food and a library.

I really like this school and the instructors because they are caring and very nice to students. I hope the school will open more classes in the future.

Cafeteria with microwave.

Need way more organization from bookstore, registration to scheduling of classes.

Please open these classes: Microbiology and Physiology

If you pay a lab fee the materials should be delivered to lab and ready to use prior to start of program. On campus library would be helpful.

Chemistry is tough!!

More subjects.

Keep up helping working students.

I would recommend telecourse to anyone, especially if they are visual learners.

Ya. David Licata shouldn't be rude to students trying to learn.

I would like to contact an instructor when I want to work.

Thank you for the flexibility and convenience.

I am enjoying my courses at Coastline College. Thank You.

I think this school should improve it's size, faculity and education.

Geology 140 telecourse was convientent and effective.

Great Instructor!

I like the www. and telecourses.

Proof read materials before printing and distributing to students.

Please offer evenings to meet at one of the centers for every three to four chapters covered. Toward better understanding of material covered.

I really appreciate the telecourses and the review sessions.

Have more telecourses.

Love it.

Thank God for Coastline! I was short a class on my grad check.

Classes are working out great for my situation.

Love telecourses-makes it easy to get ahead with credits!

No, Good Job!

Working 40 hours a week it makes it difficult to take classes at the college. Telecourses a wonderful idea.

Yes, some telecourse/www classes do not have a hard-copy of the handbook available. There should be an option of the web as well as the paperback version.

Thanks for getting another chance to go back to school.

Make the texbooks more affordable.

I really like how convenient these telecourses are.

This school is great - very accomidating and up-to-date on teaching techniques.

I would like a Geometry class in the Math deparment.

Text and Paragraph Responses by Question
Science Program Review--Student Survey

Question: Do you have any other comments, recommendations, or commendations?

The Marine Science 100 teacher has been the best I've had at Coastline.

I like to study distance learning courses because it is convenient for me.

I would like to see other zip codes included in procter based examinations.

Gear some services toward the working professional. Class times are not the only factor that will essure enrollments and success. I will not return to Coastline and will continue at OCC..

This is the first time I've enrolled, so I haven't known your school.

I like telecourses and internet classes because you can do most of the work in your own timing on prefered days.

People come here to help their education. This professor only hinders it because it's not like what they really will have to incounter at a JC or 4 year.

Keep up the good work! :)

I believe the courses at Coastline are very productive and helpful. It's convenient to most students and gives you a flexible schedule.

I love Coastline College so much, that give me an idea that I never want to stop going to school. I love all teachers and program that Coastline have provided. Thank You!:)

No comment. Everything is great.

Work on distance learning department.

Please add more Vietnamese classes.

No, Good job to all !

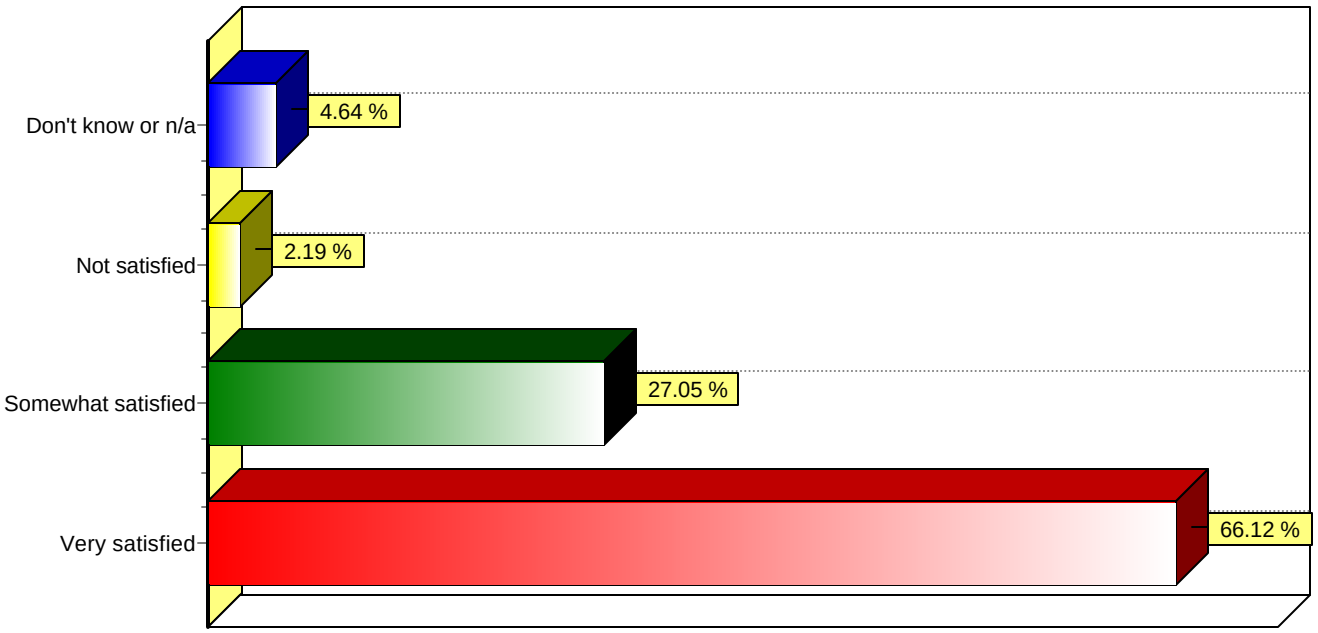
Excellent college, very friendly and helpful.

Biology 100 & 101 are difficult to handle as they don't seem very synthonized. I have 4 books, 2 student manuals, 2 audio and 3 video tapes, And for me it is difficult to juggle all the material and make sense of it all . . .I think I'd prefer one book that parallels the video tapes and has lab exercises included in it.

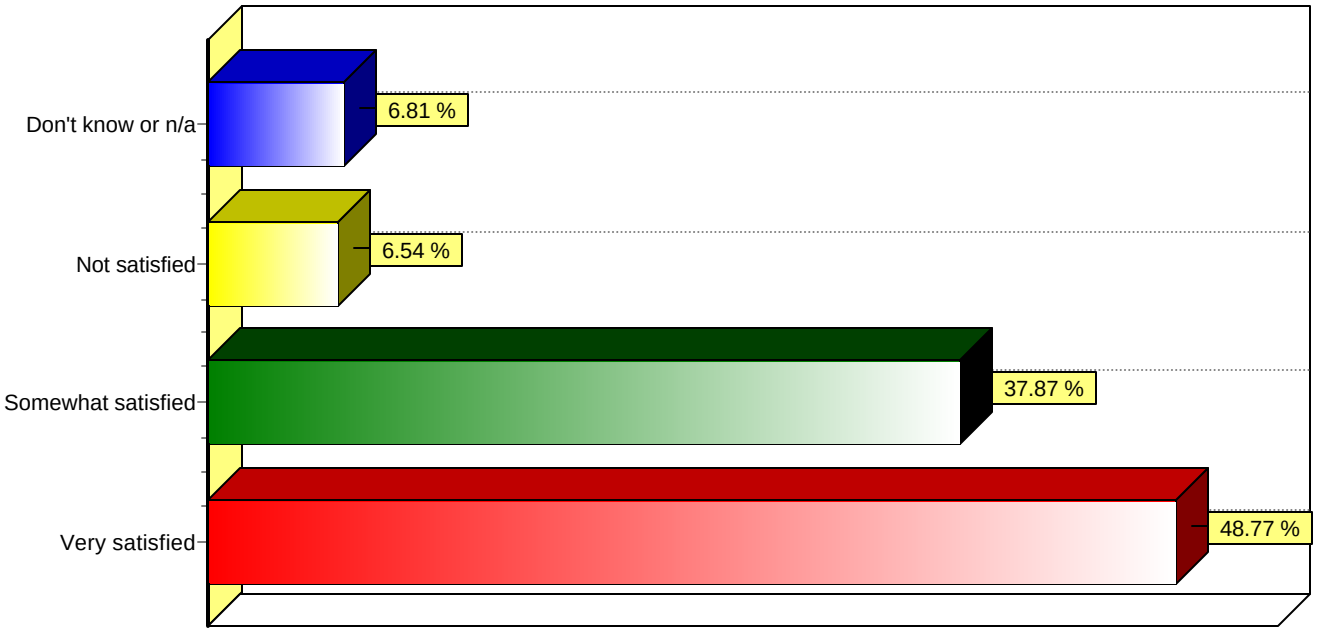
Receiving information from distance learning office that is not accurate. Example, getting progress report prior to instructor handing in grades. Very Alarming!!

Bar Graphs
Science Program Review--Student Survey

Quality of instruction

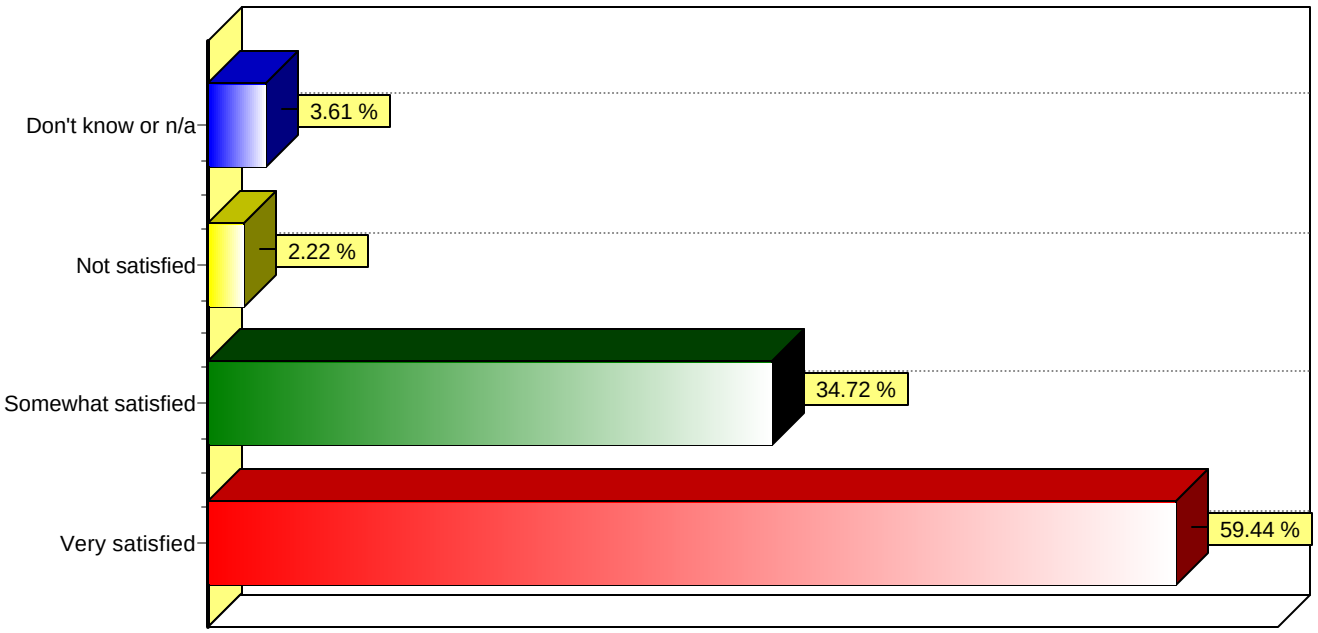


Variety of classes

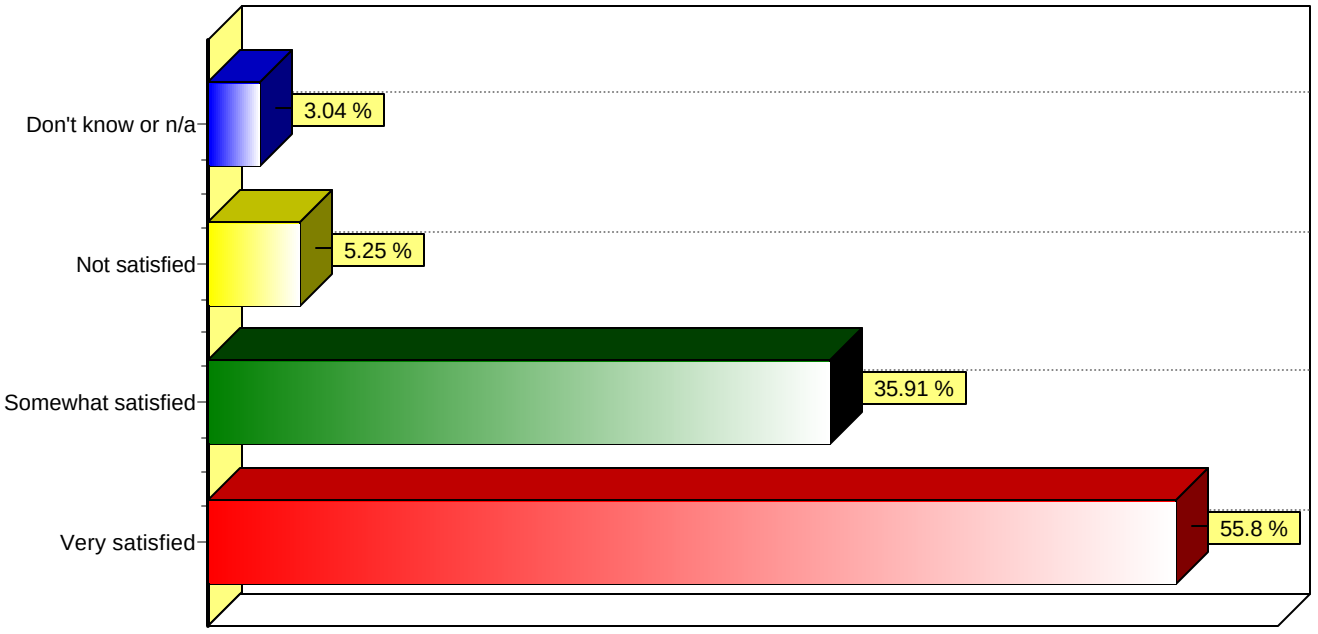


Bar Graphs
Science Program Review--Student Survey

Scheduling of classes

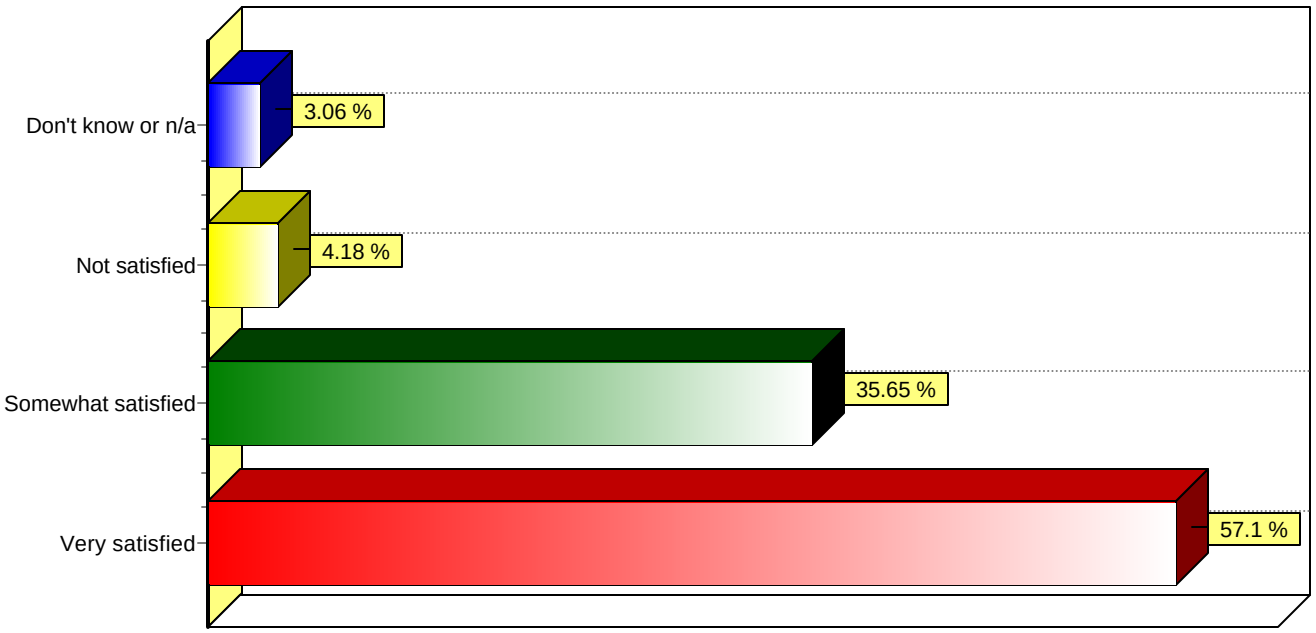


Relevancy of classes to your vocational, academic, or personal needs

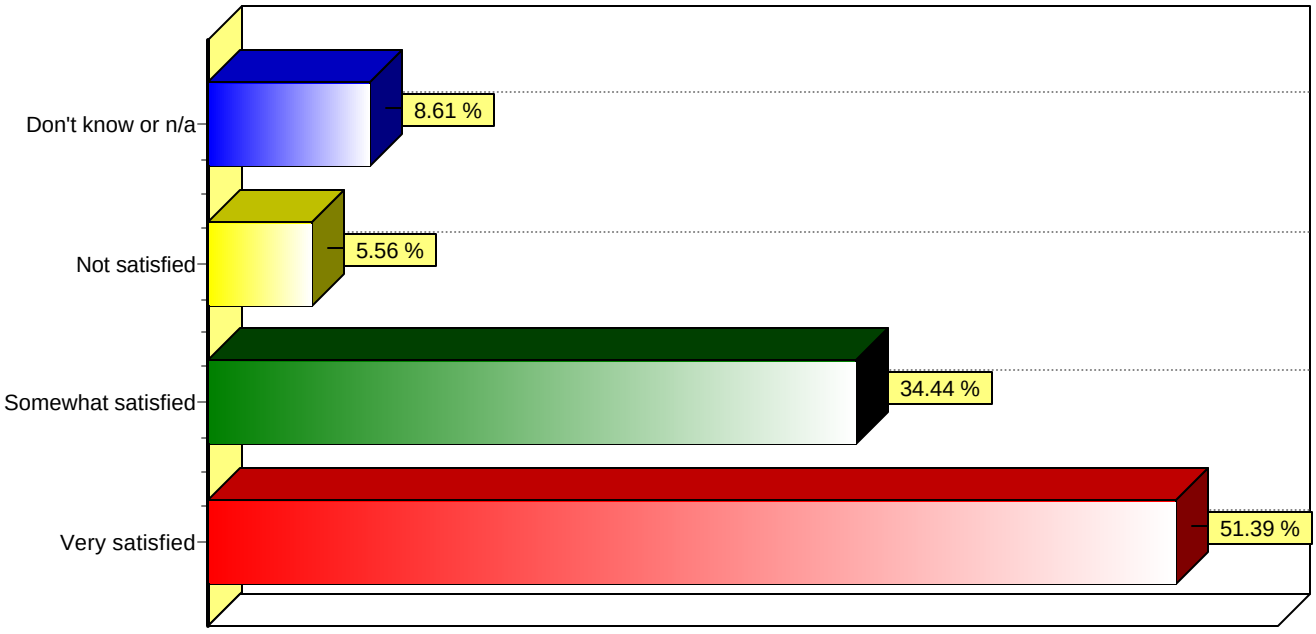


Bar Graphs
Science Program Review--Student Survey

Adequacy of the instructional facilities

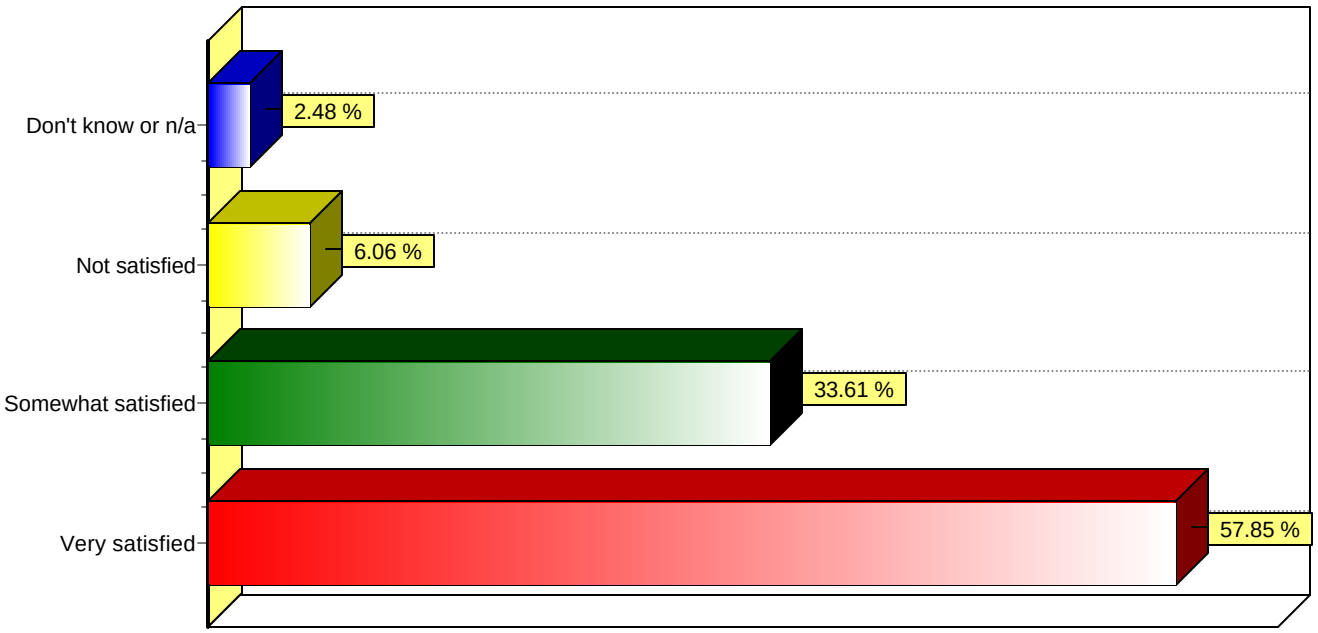


Quality of general instructional equipment

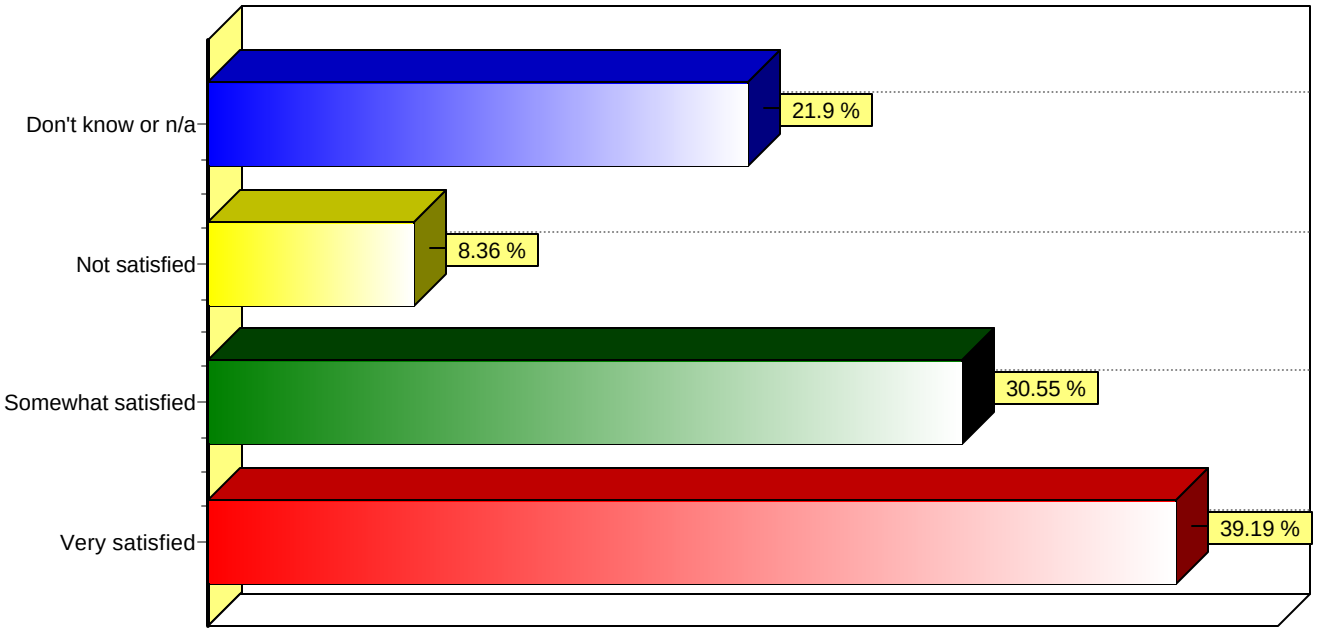


Bar Graphs
Science Program Review--Student Survey

Appropriateness of textbooks

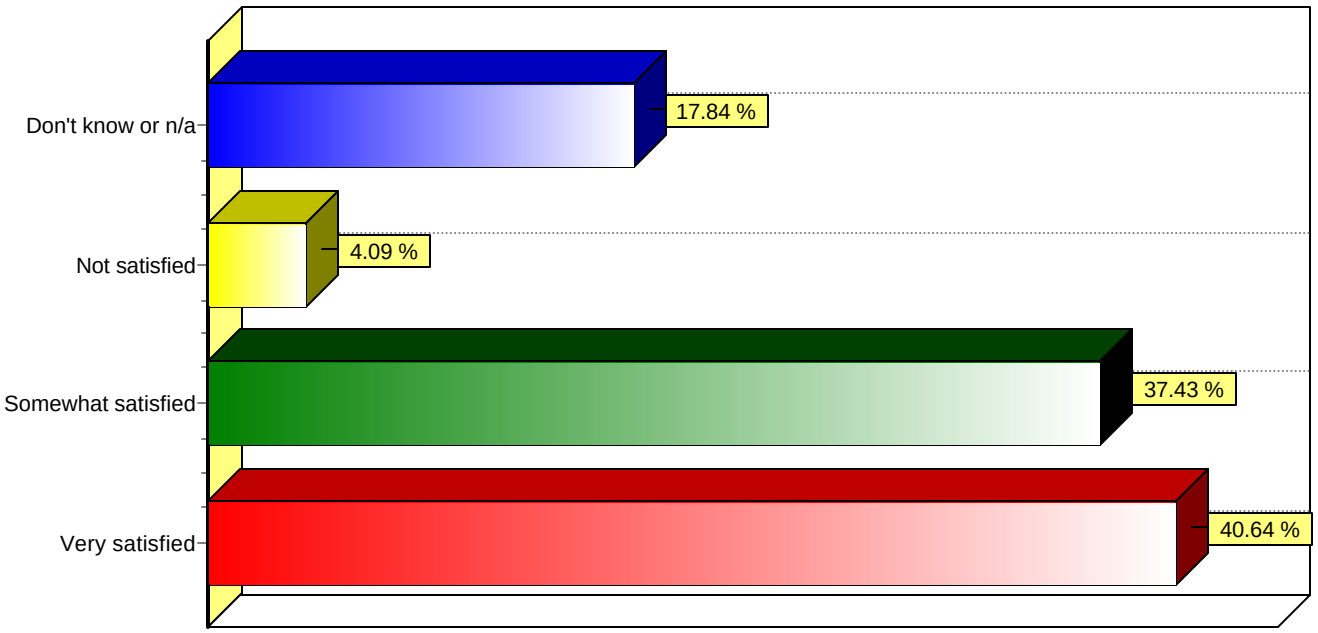


Adequacy of available laboratory equipment in relationship to student needs and course objectives

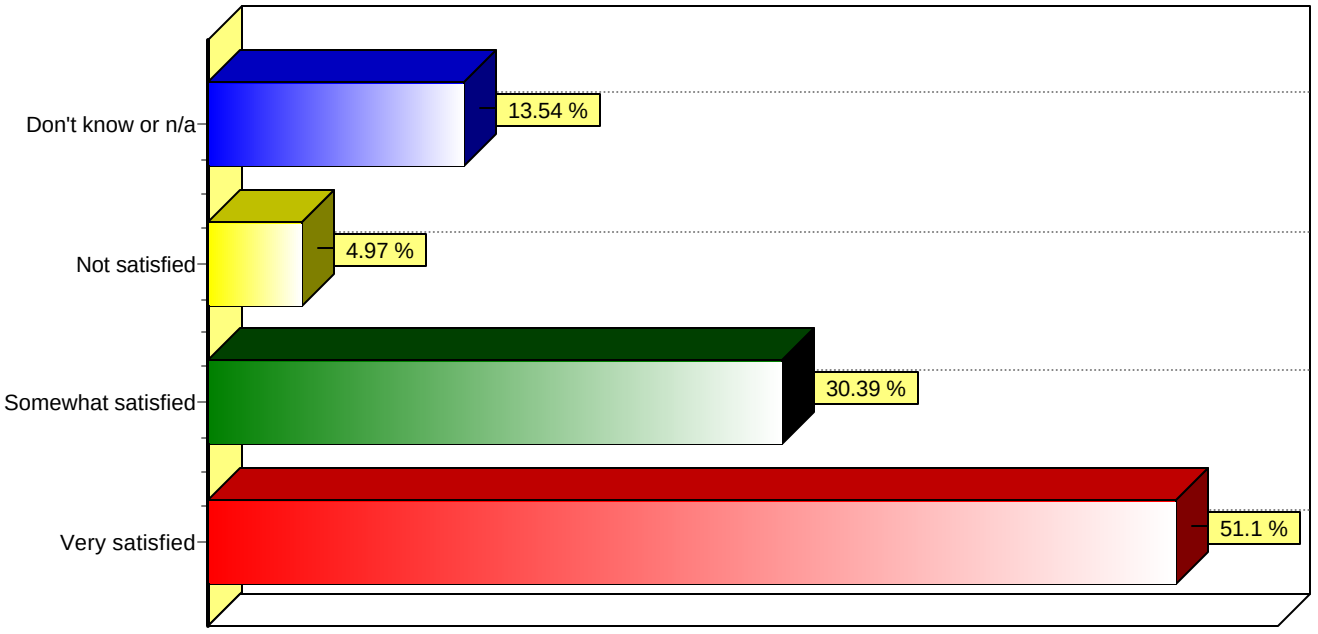


Bar Graphs
Science Program Review--Student Survey

Availability of instructional equipment

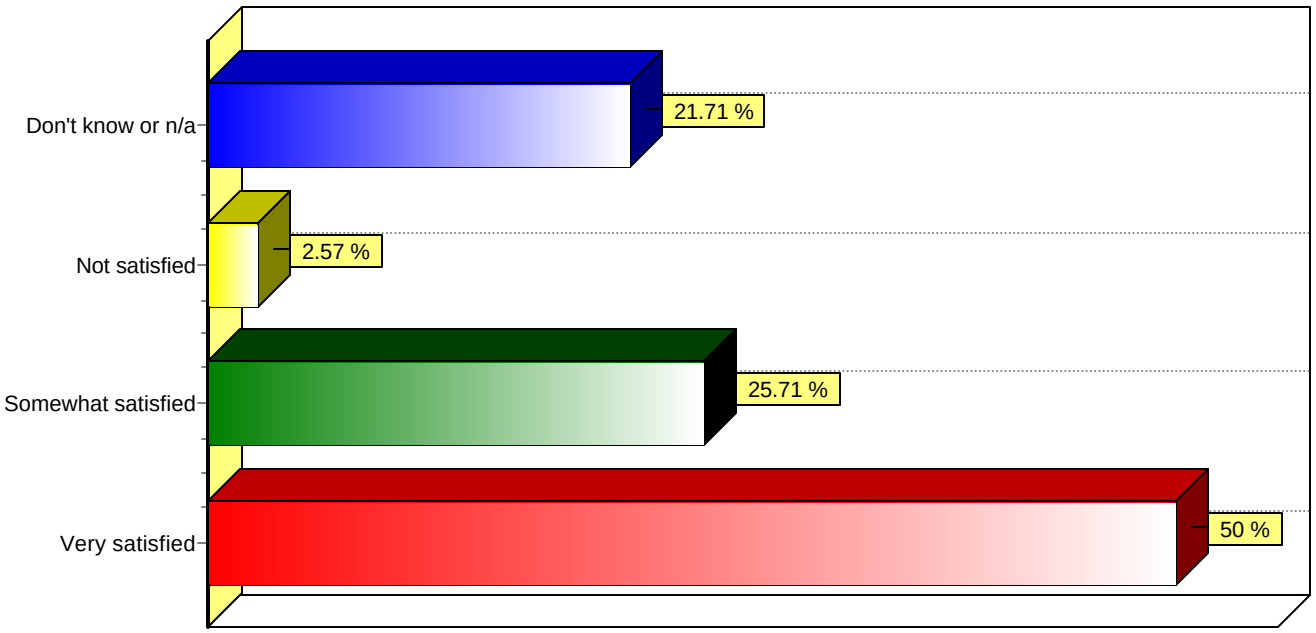


Staff (other than instructor's) support for the program and classes in terms of effective response to materials and facilities

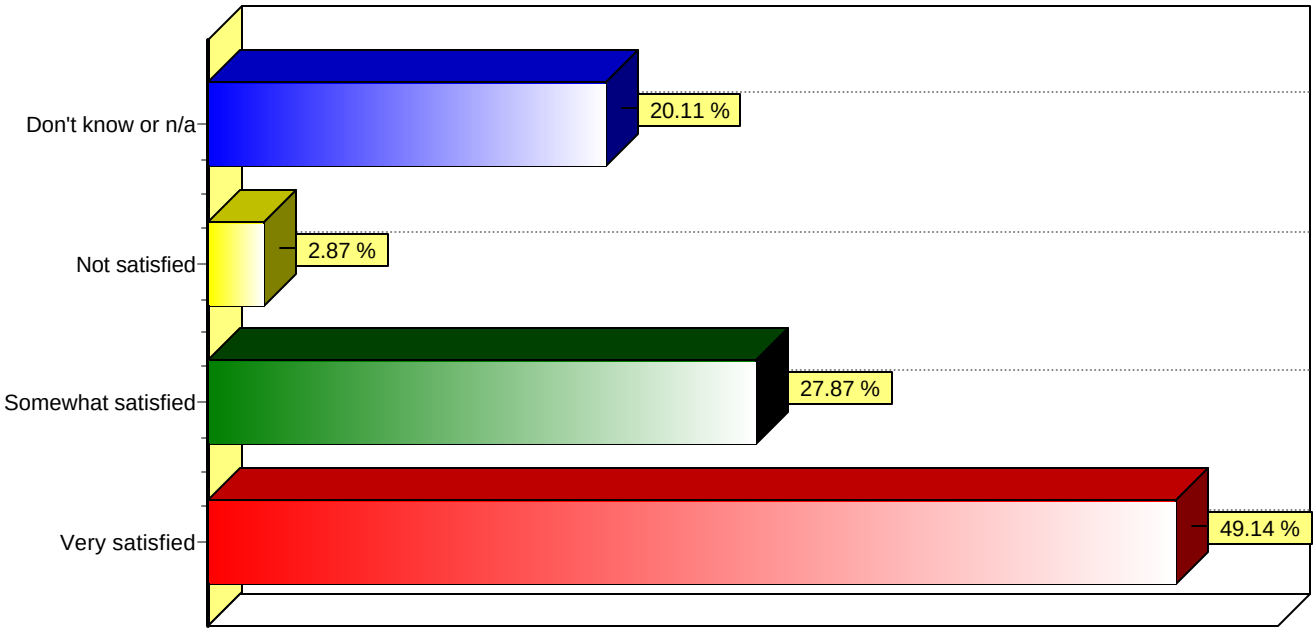


Bar Graphs
Science Program Review--Student Survey

Extent to which faculty and staff meet the needs of culturally diverse students

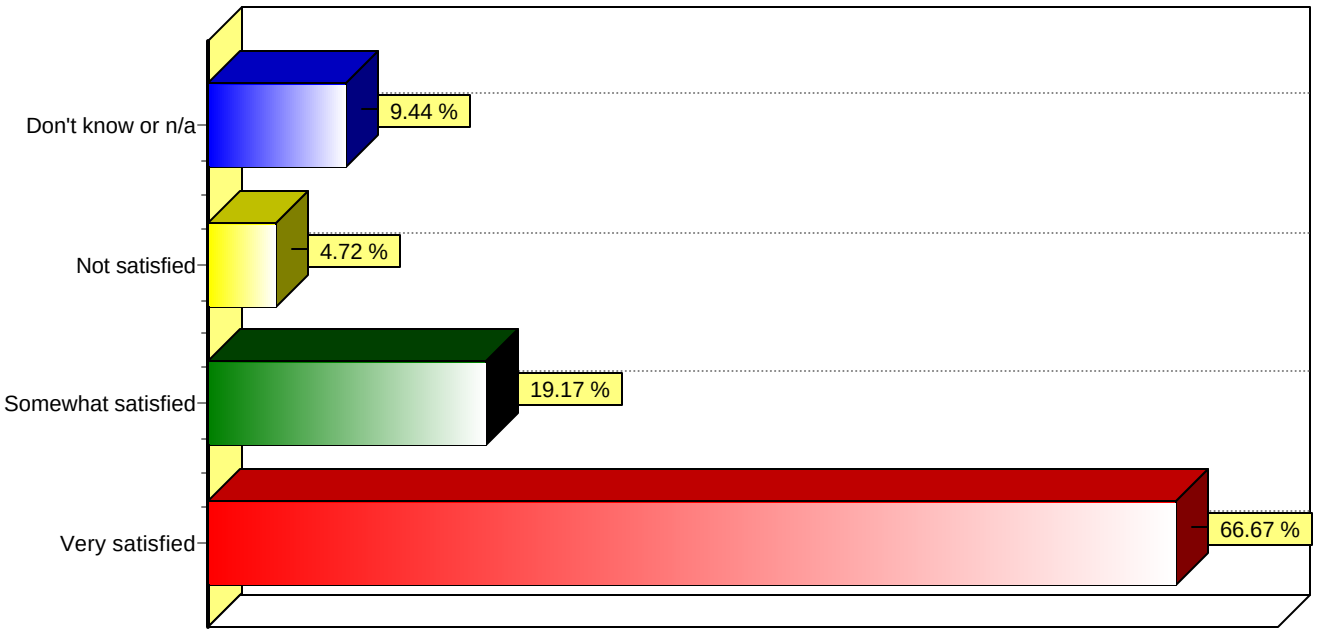


Extent to which faculty and staff meet the needs of non-traditional students

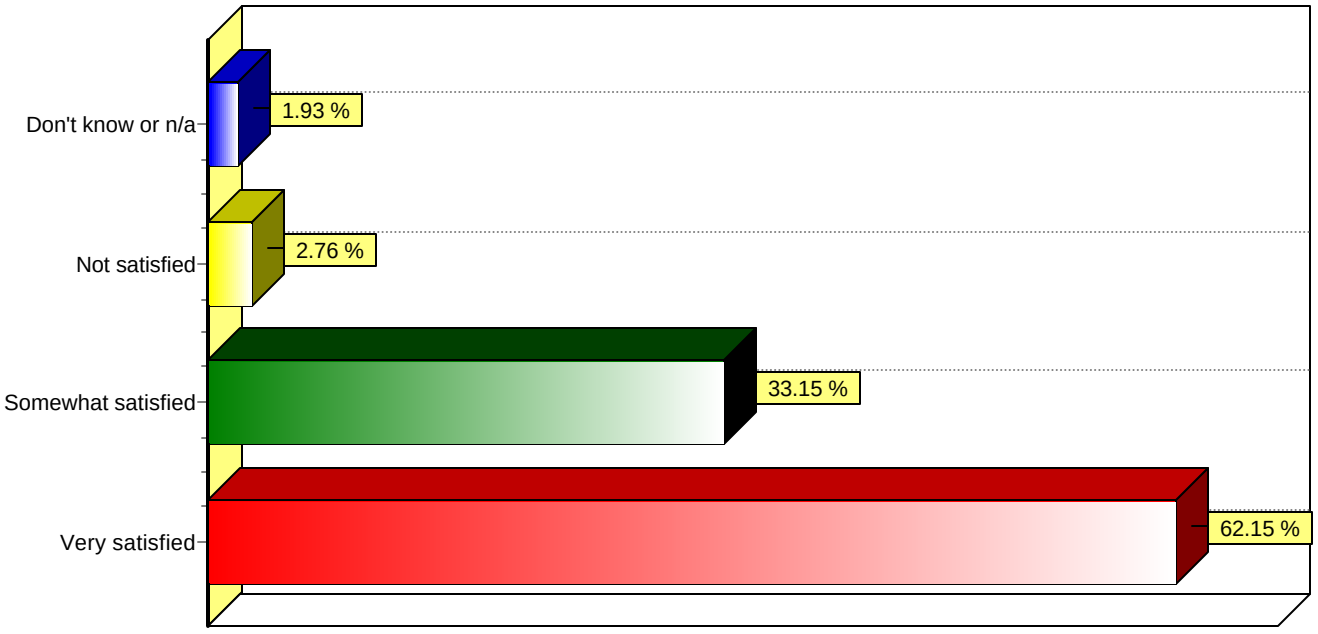


Bar Graphs
Science Program Review--Student Survey

Instructor's response time to your questions

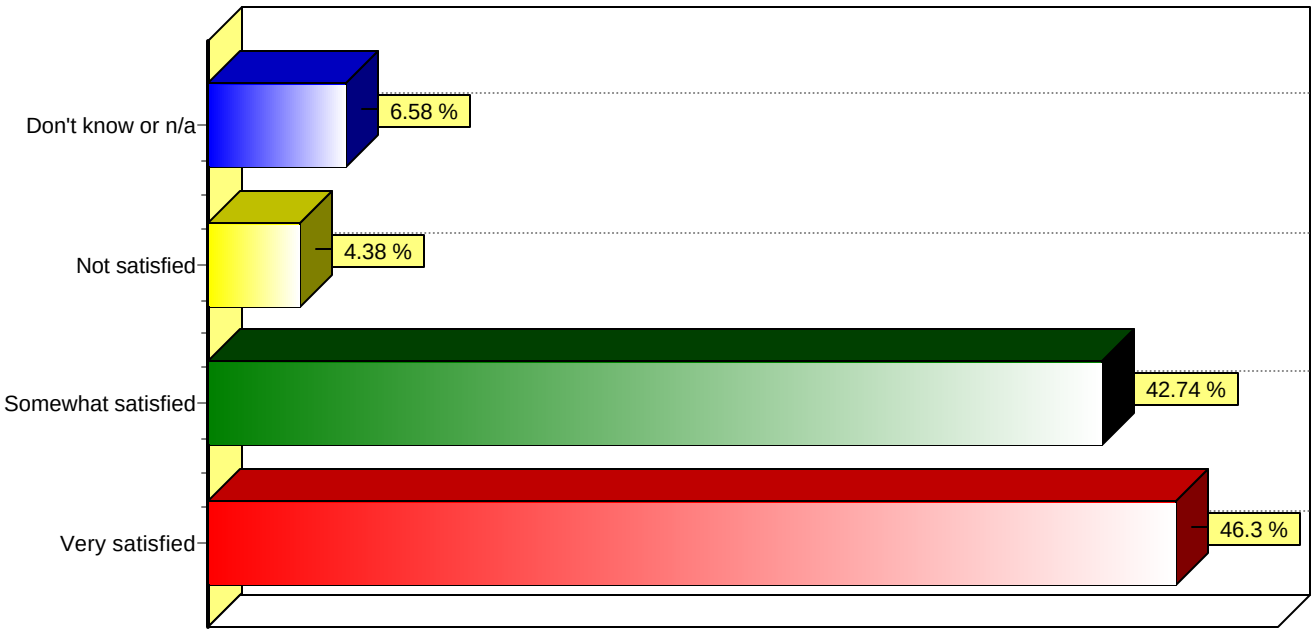


Overall program quality

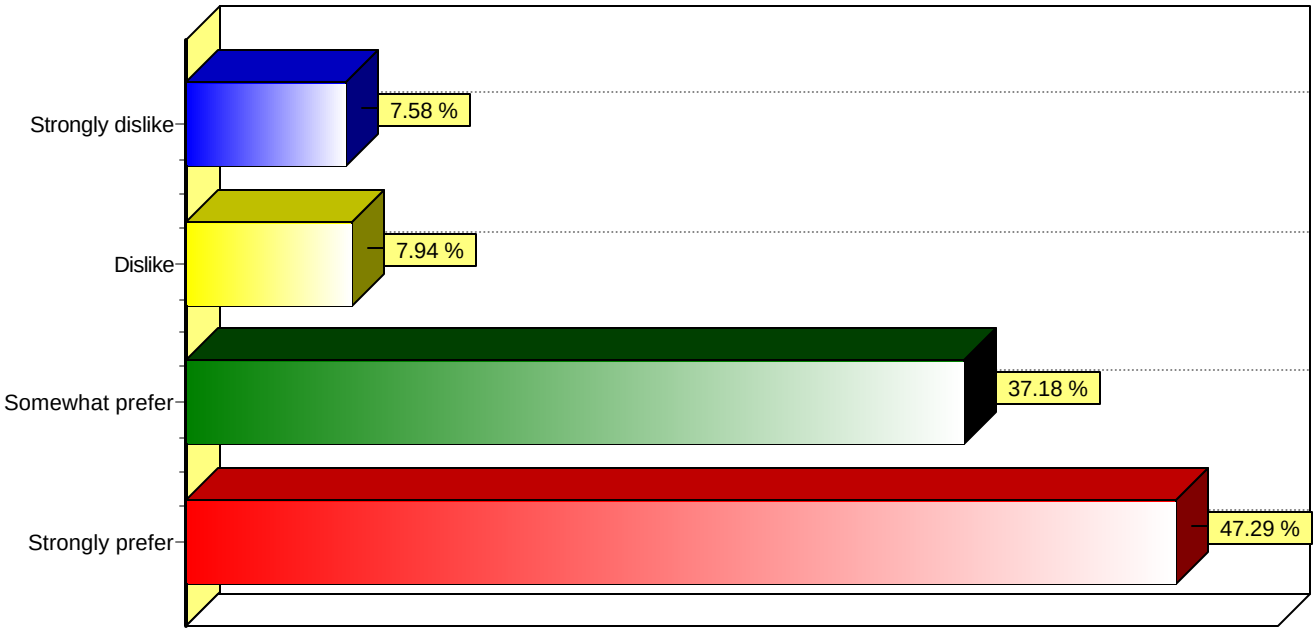


Bar Graphs
Science Program Review--Student Survey

Your own success in the program

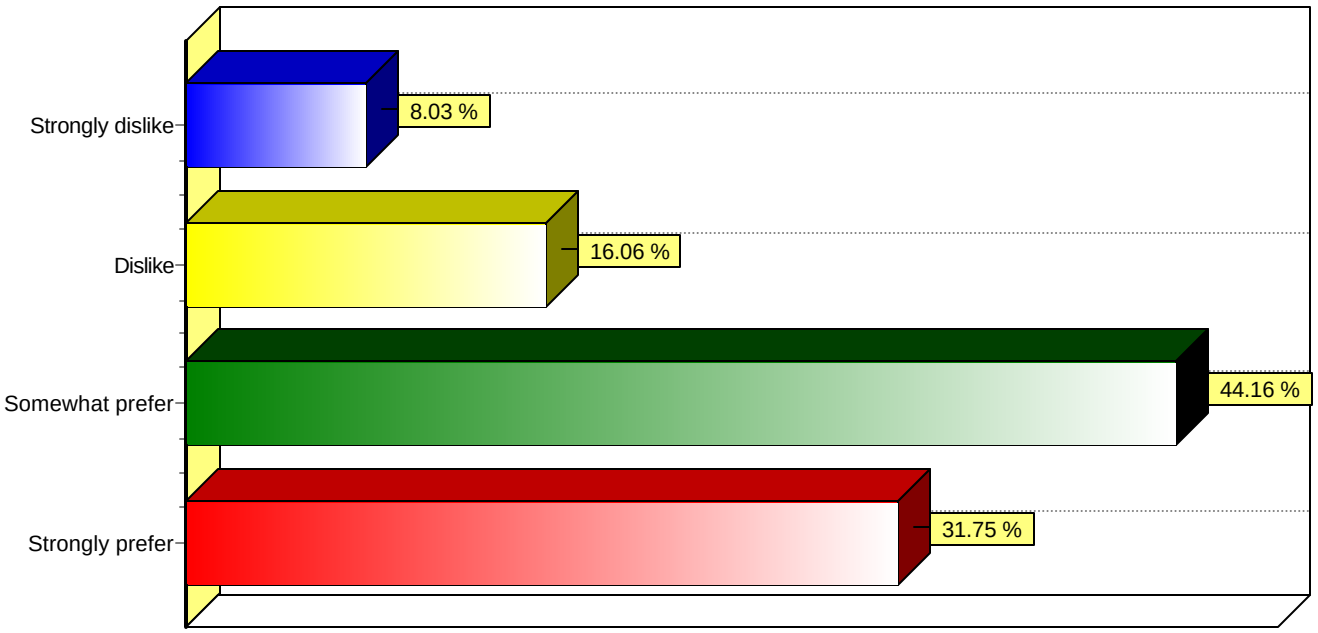


Once a week

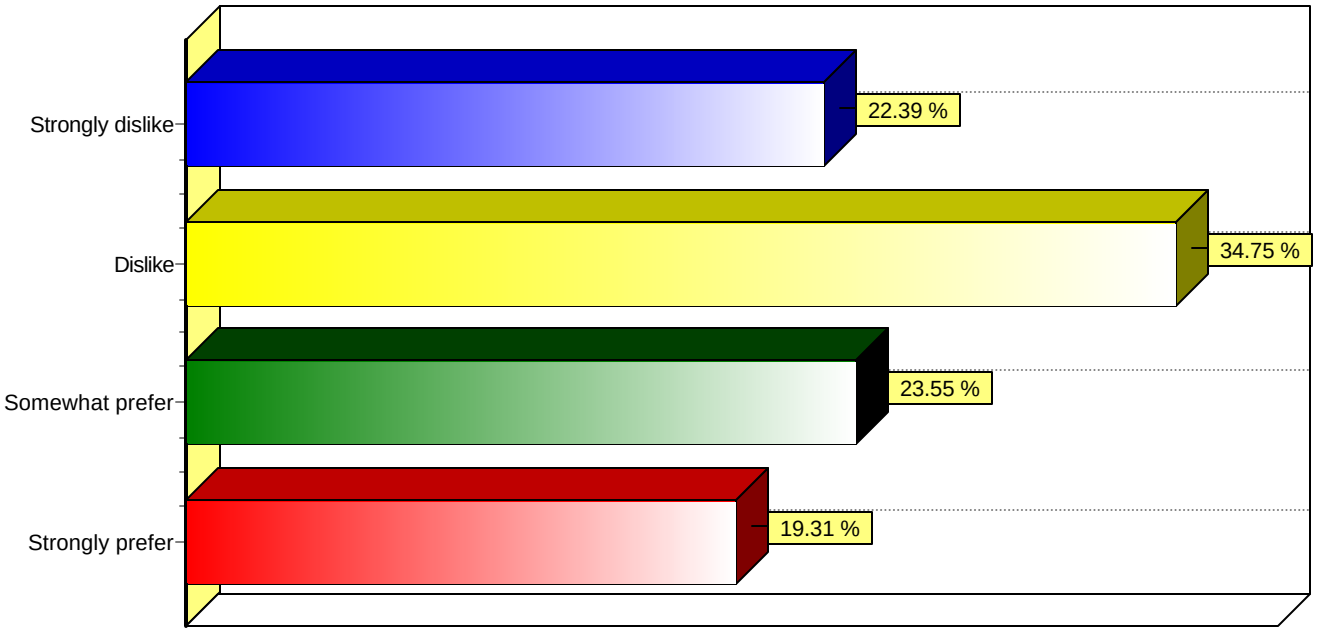


Bar Graphs
Science Program Review--Student Survey

Twice a week

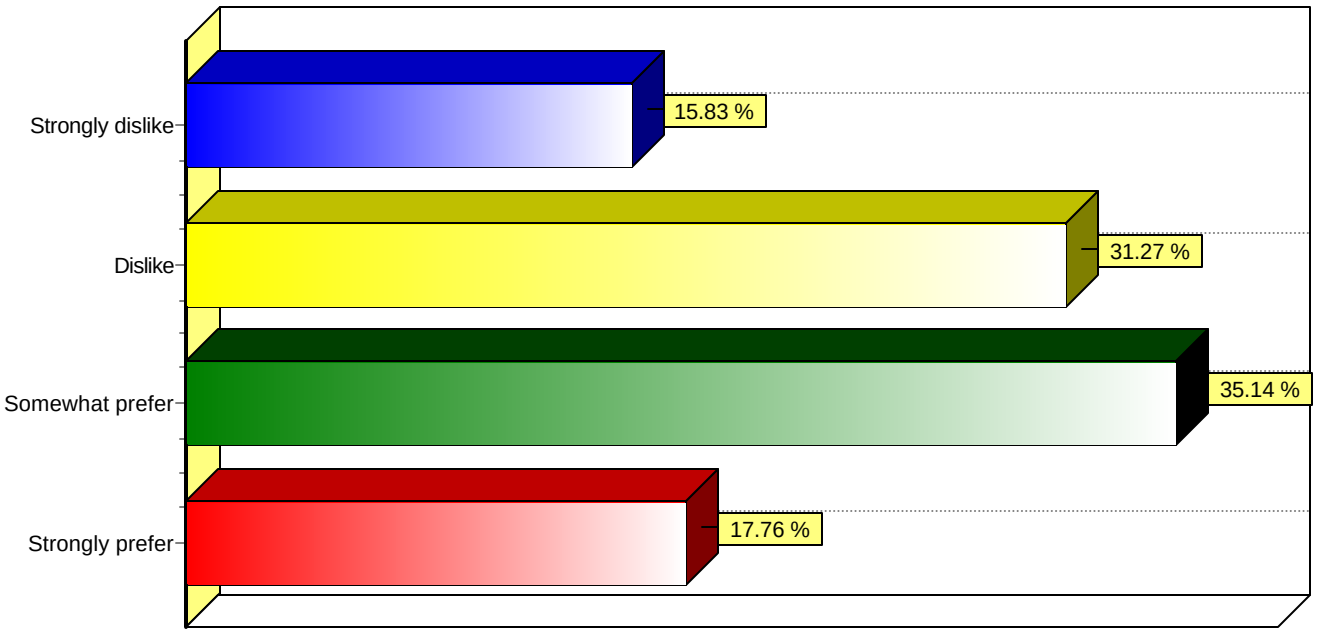


Mornings

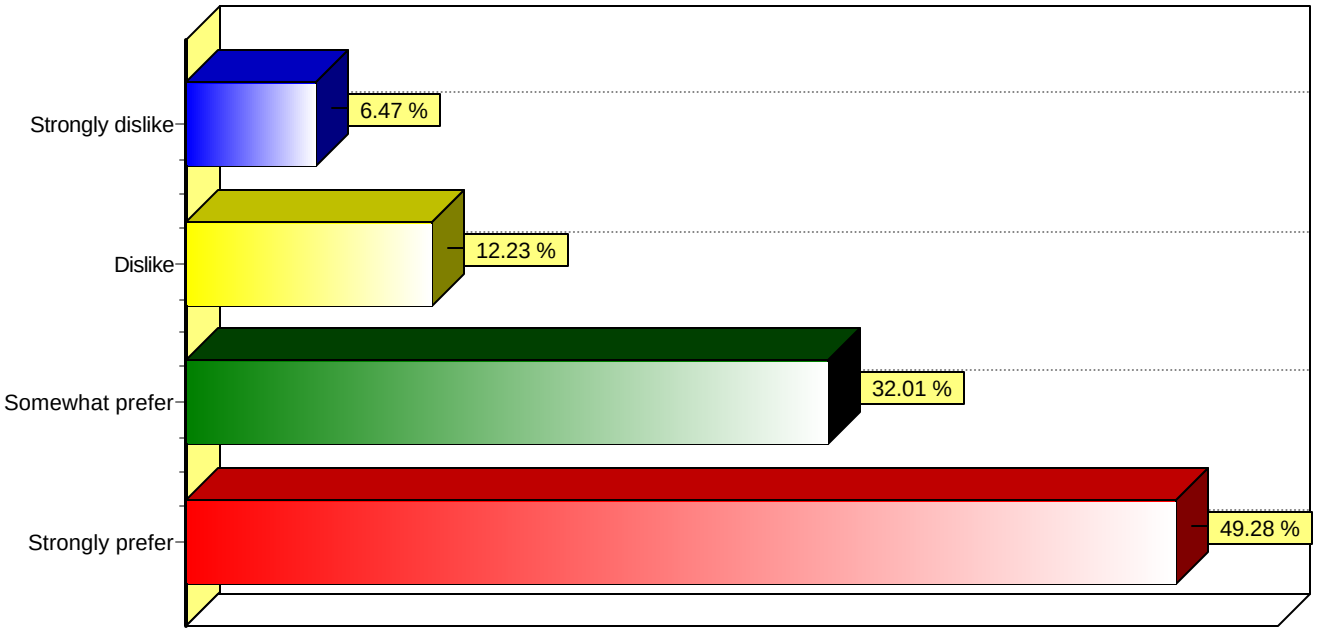


Bar Graphs
Science Program Review--Student Survey

Afternoons

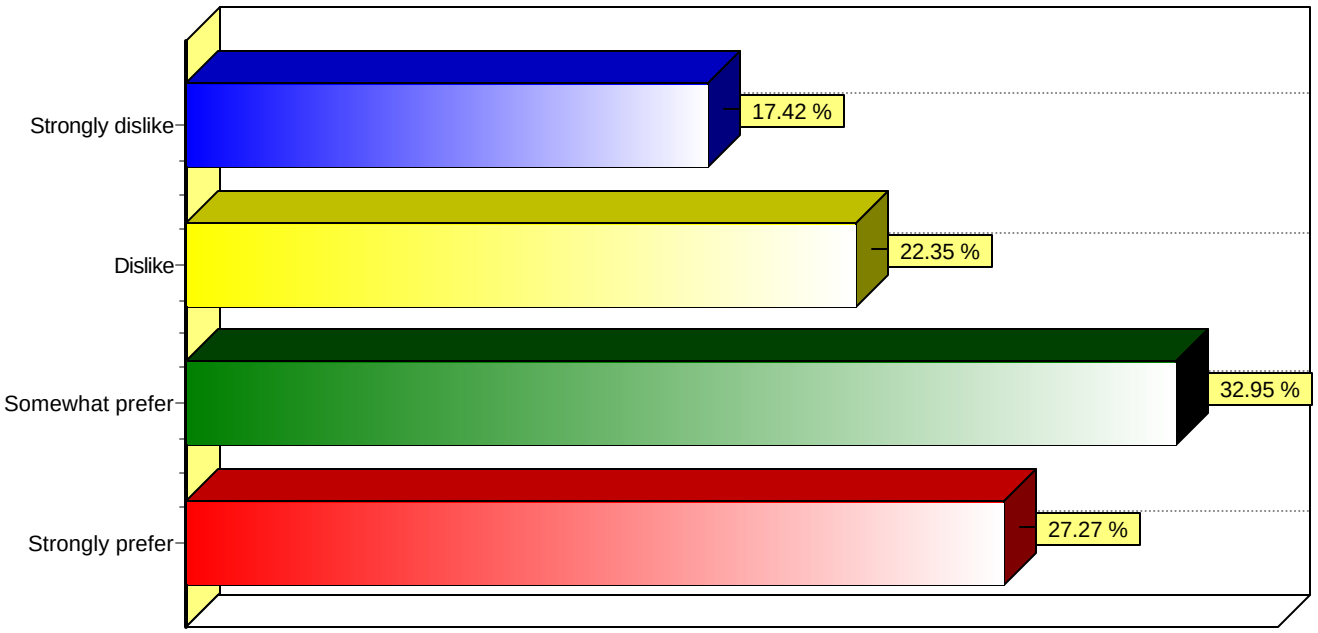


Evenings

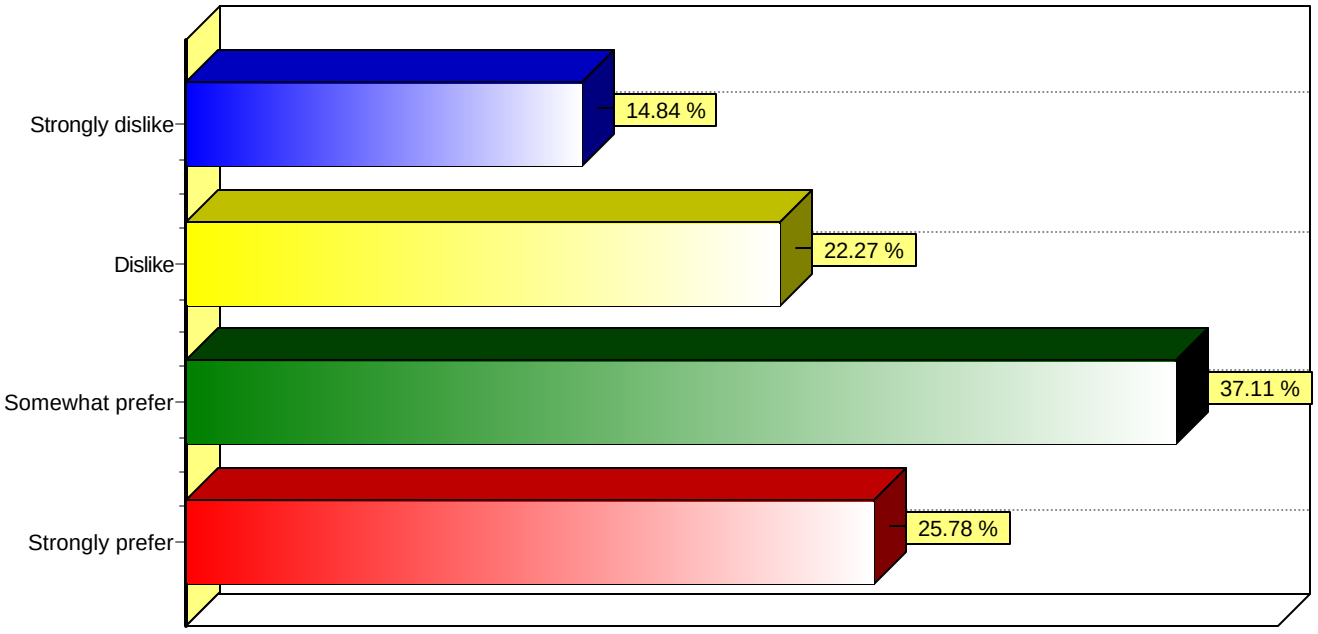


Bar Graphs
Science Program Review--Student Survey

Weekends

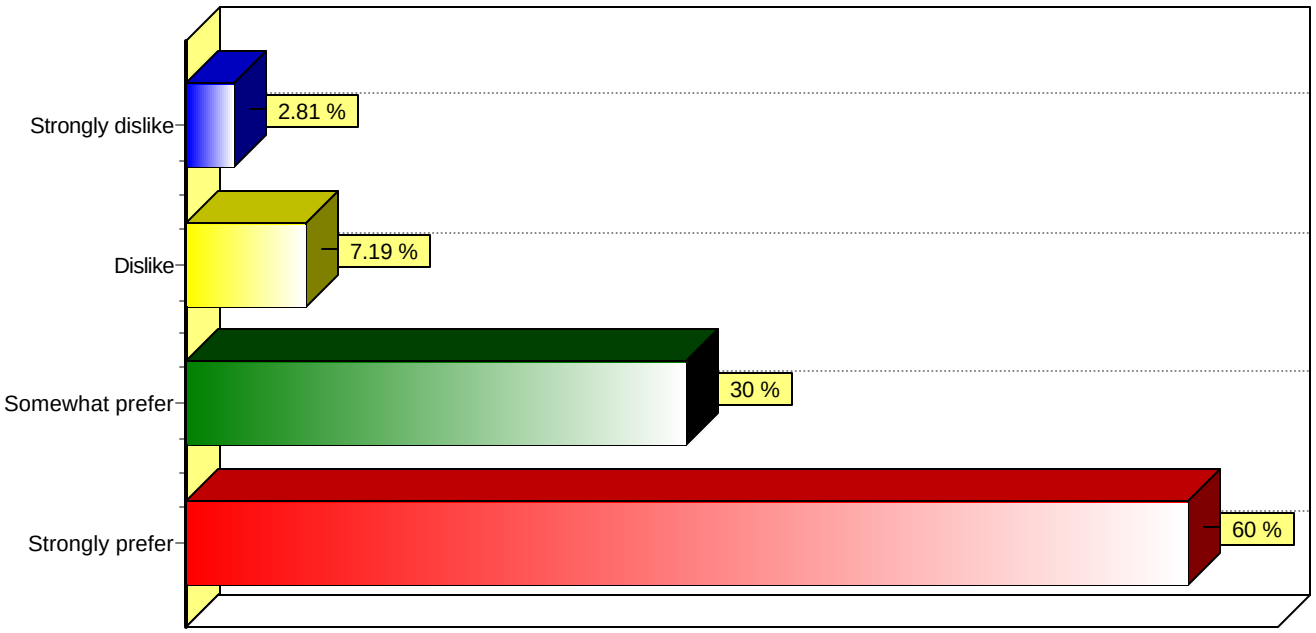


Four-week Intersession class

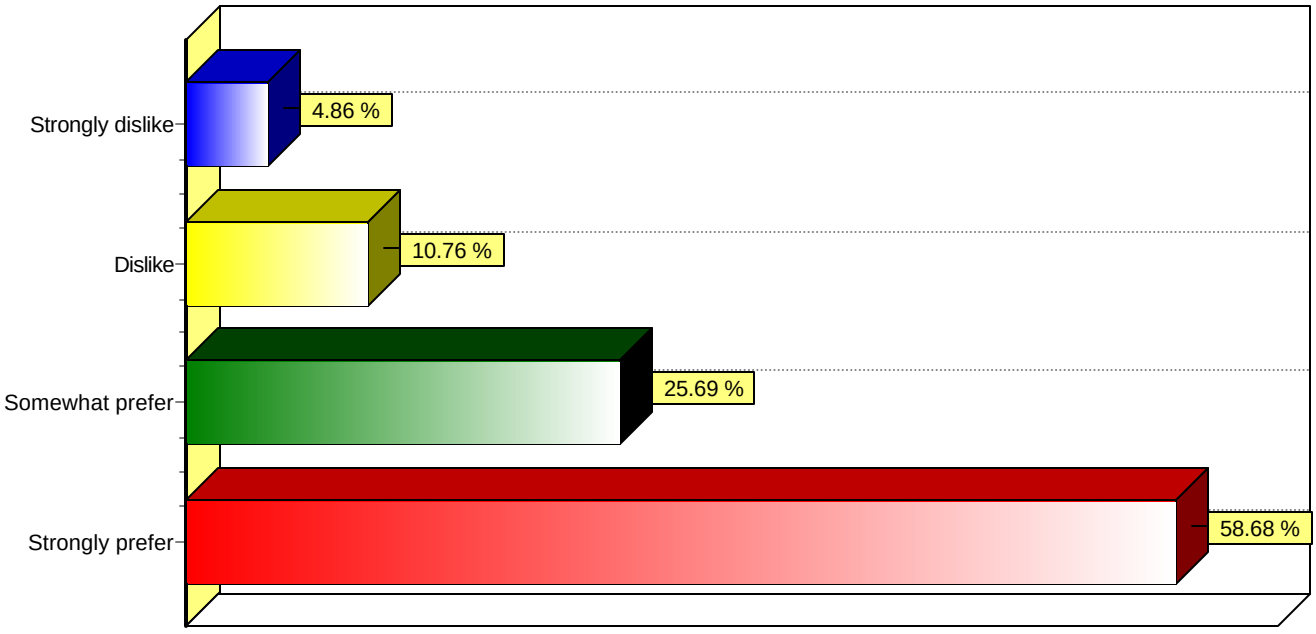


Bar Graphs
Science Program Review--Student Survey

Telecourse

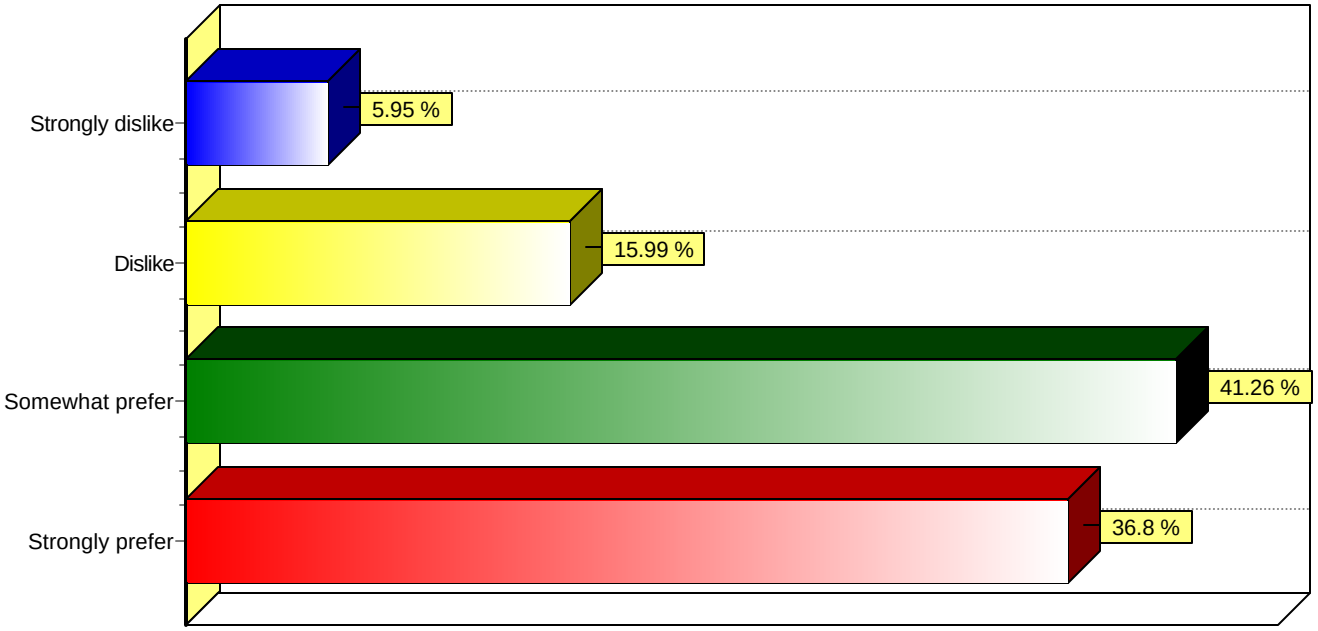


WWW/Internet class

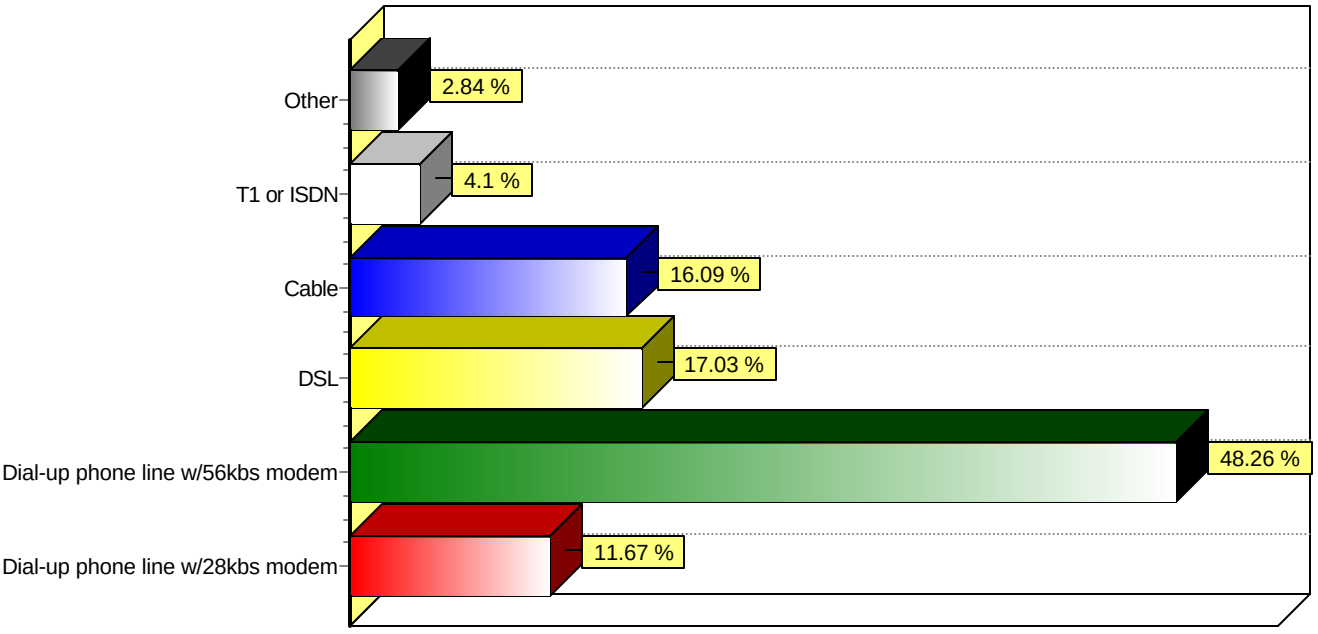


Bar Graphs
Science Program Review--Student Survey

Combination Internet and classroom

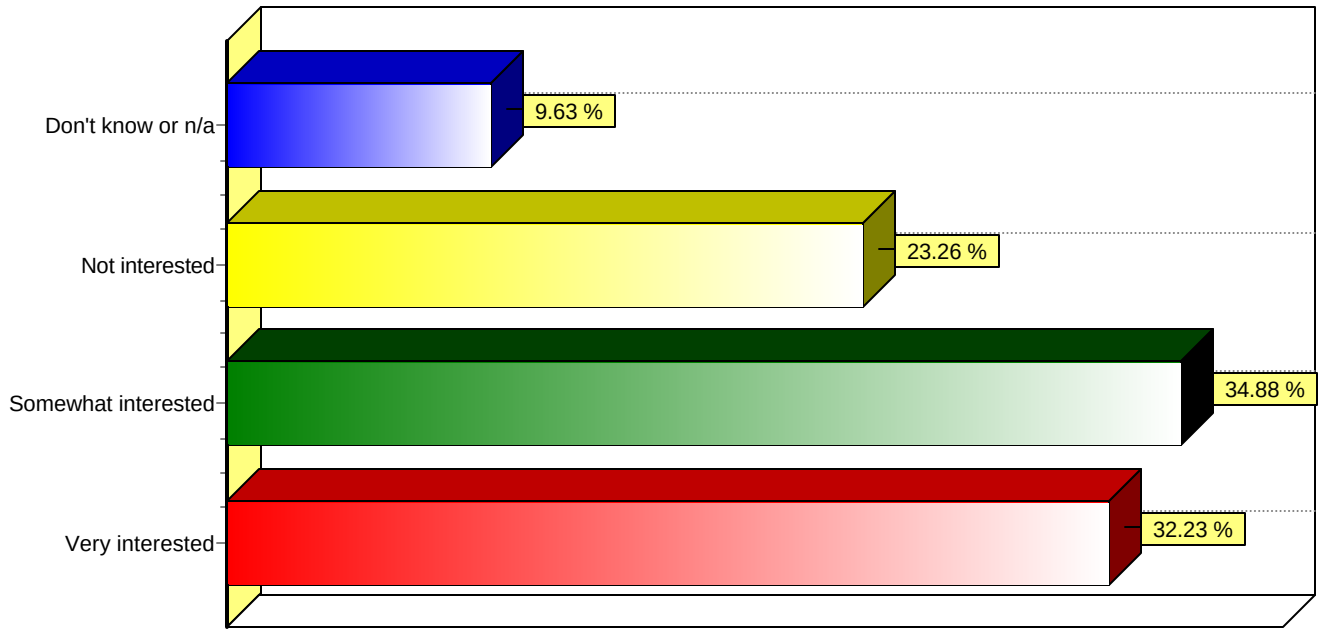


If you have Internet access, how do you most often connect to the Internet?

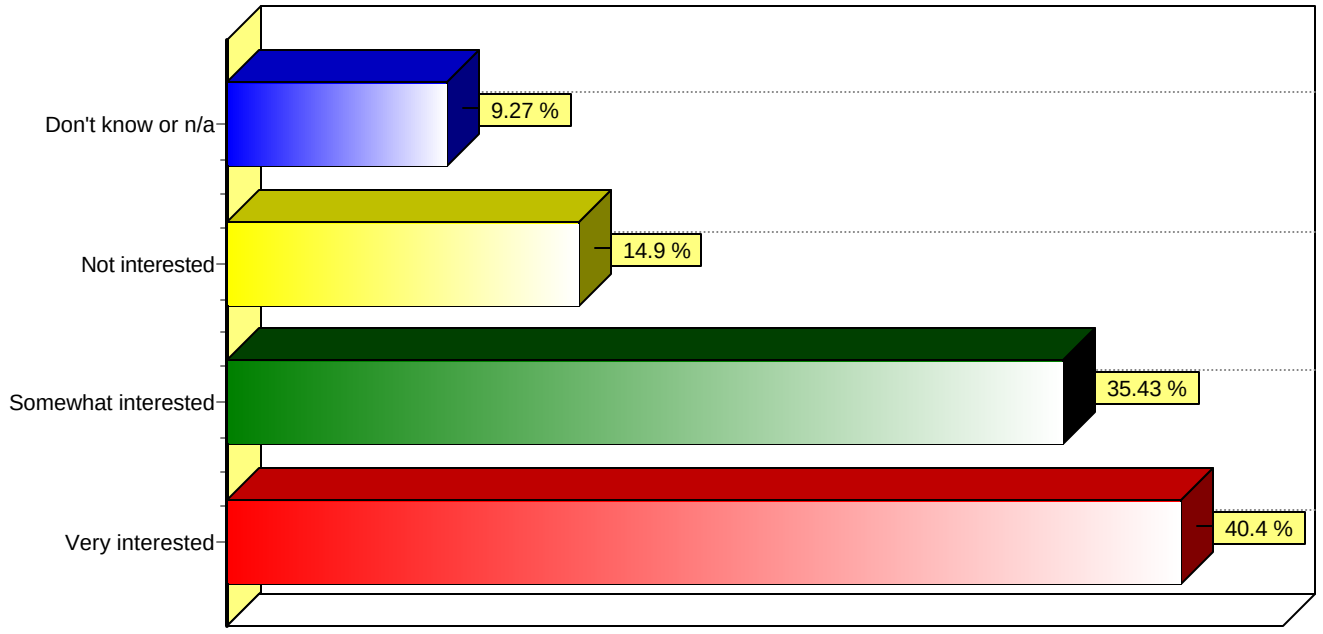


Bar Graphs
Science Program Review--Student Survey

Vocational/career counseling

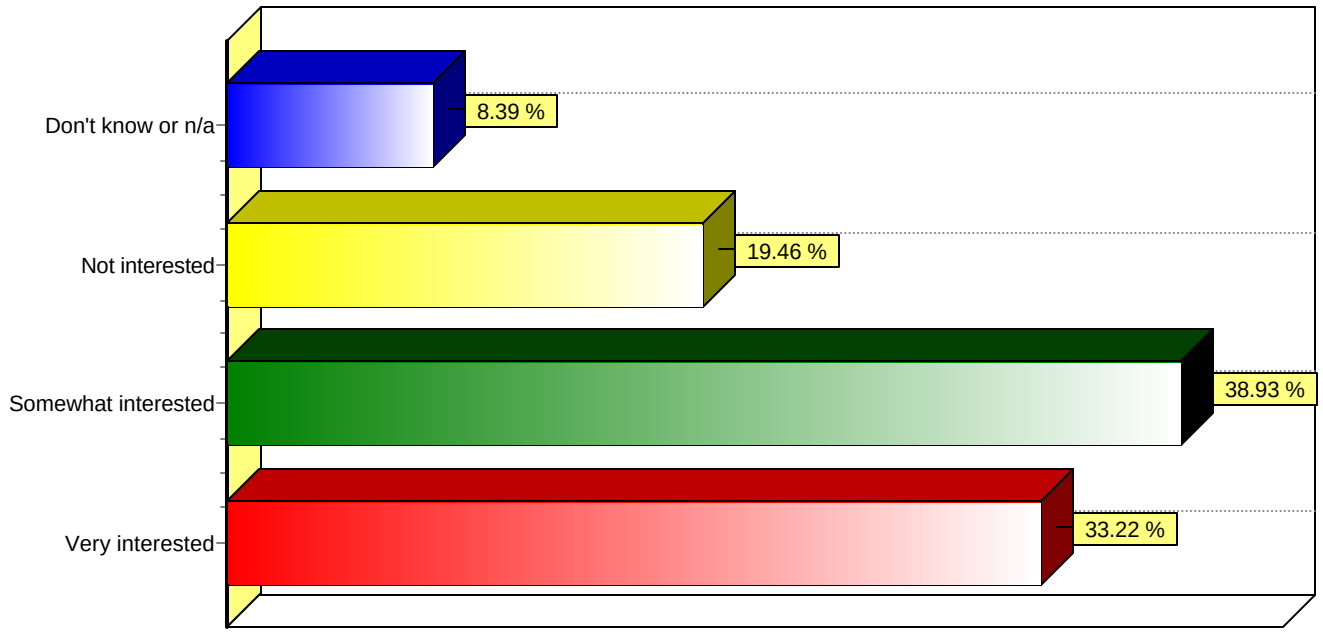


Academic counseling

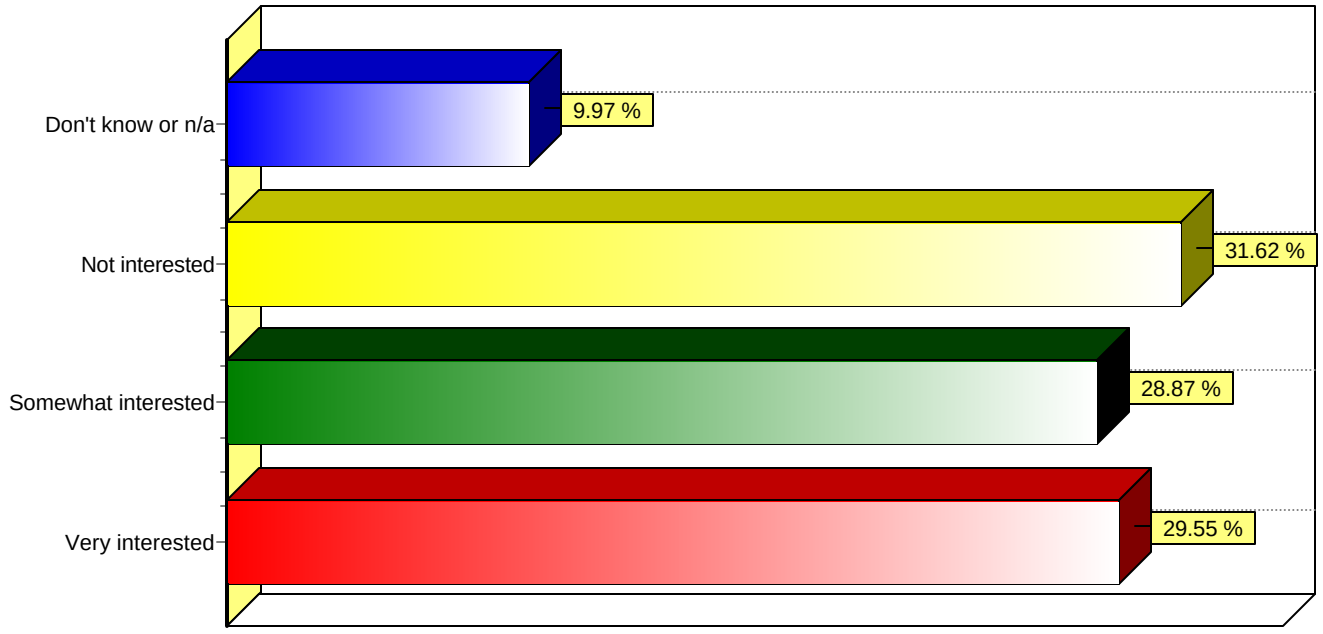


Bar Graphs
Science Program Review--Student Survey

Tutorial services

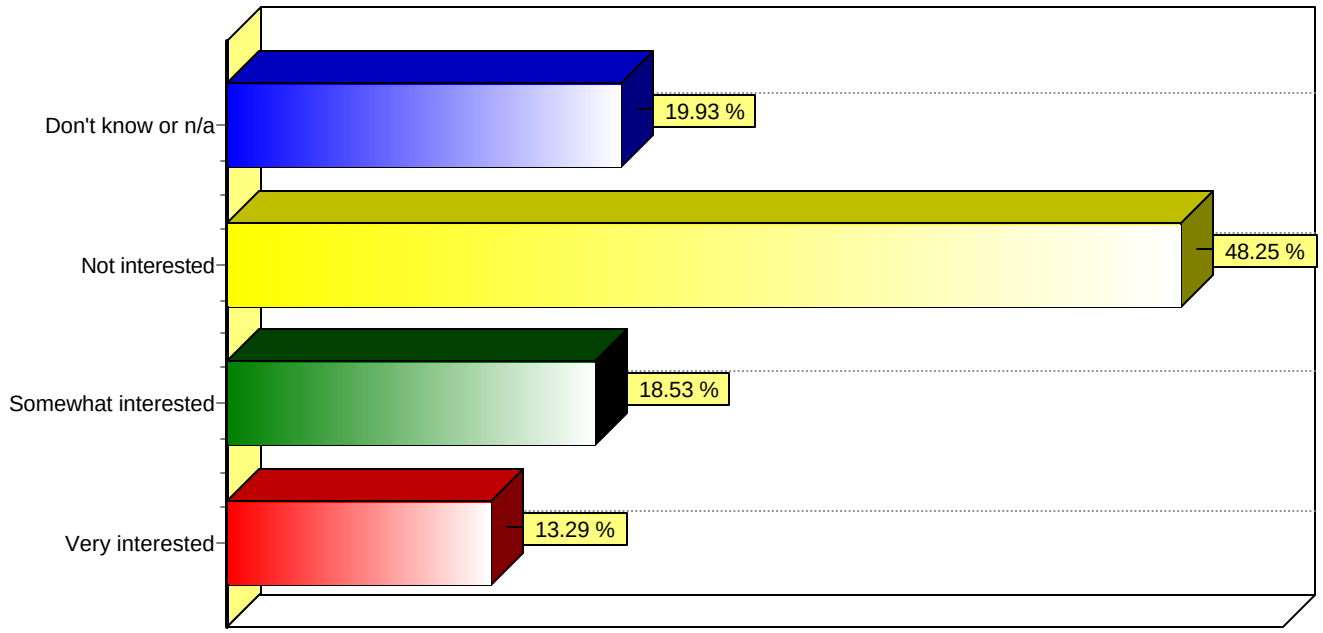


Study skills training

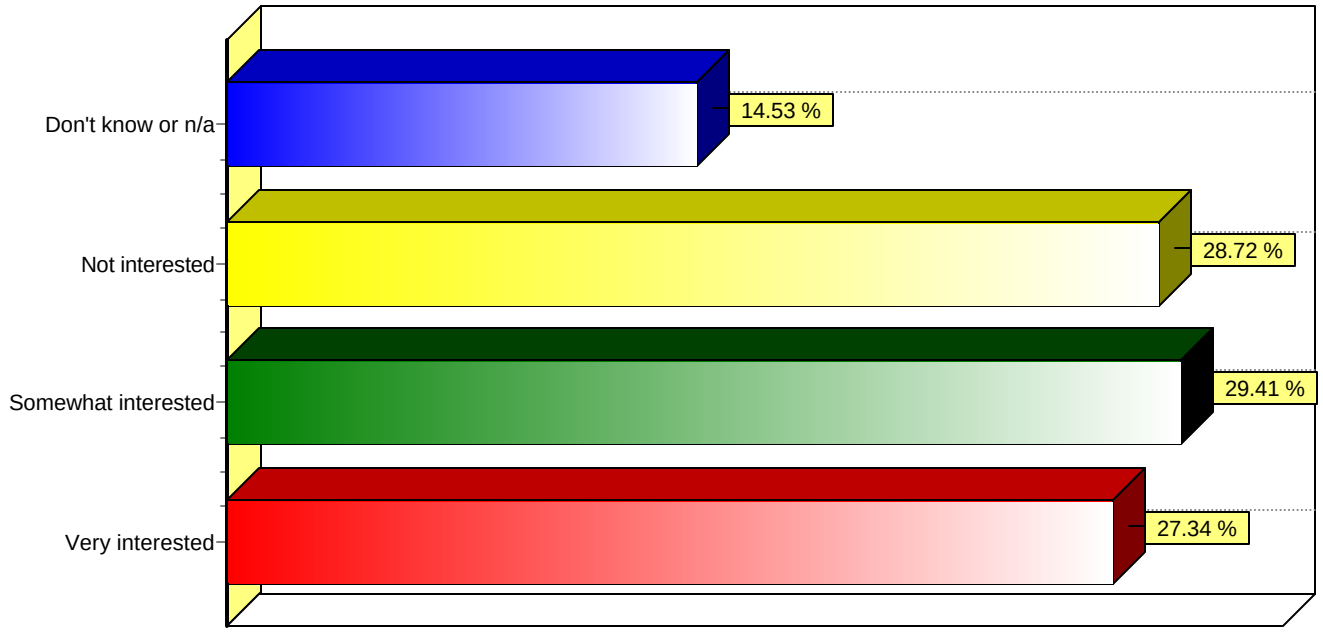


Bar Graphs
Science Program Review--Student Survey

Vocational ESL classes

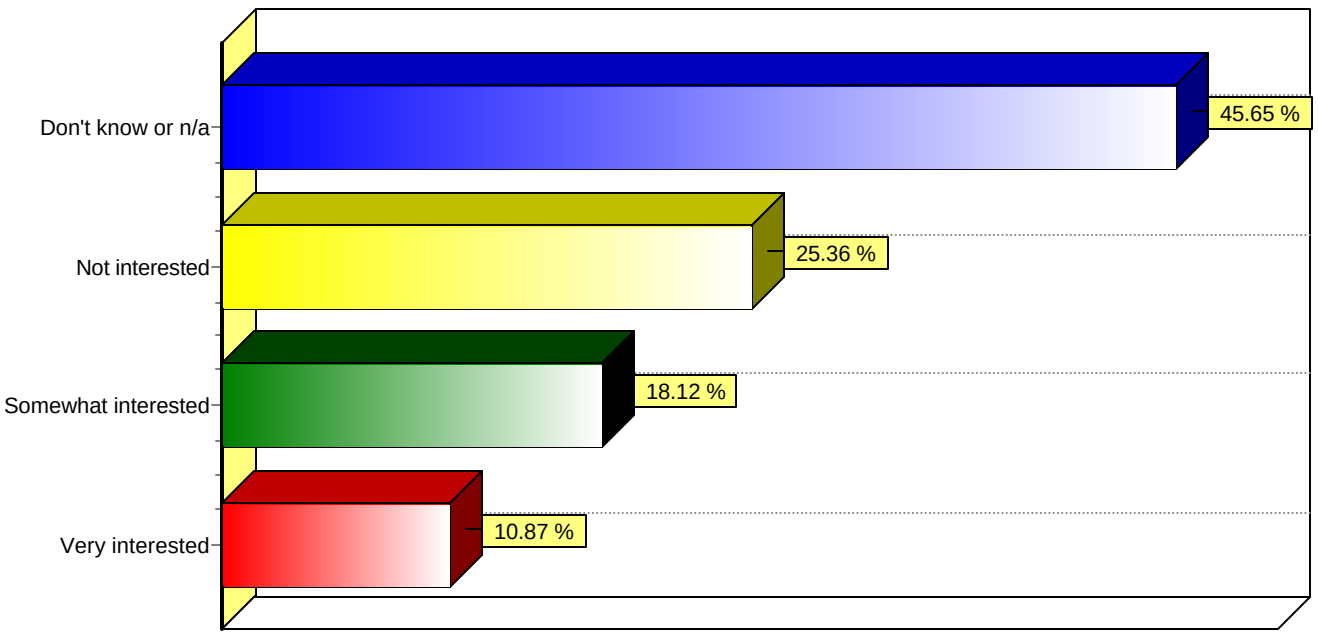


Job placement services (One-Stop Employment Services)



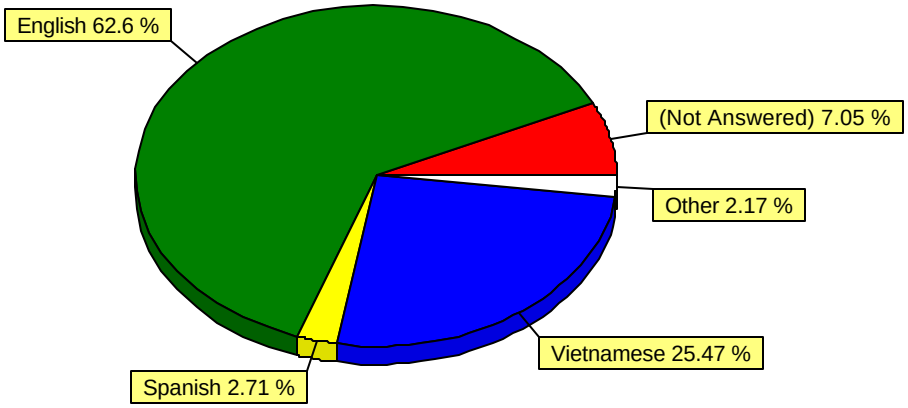
Bar Graphs
Science Program Review--Student Survey

Other

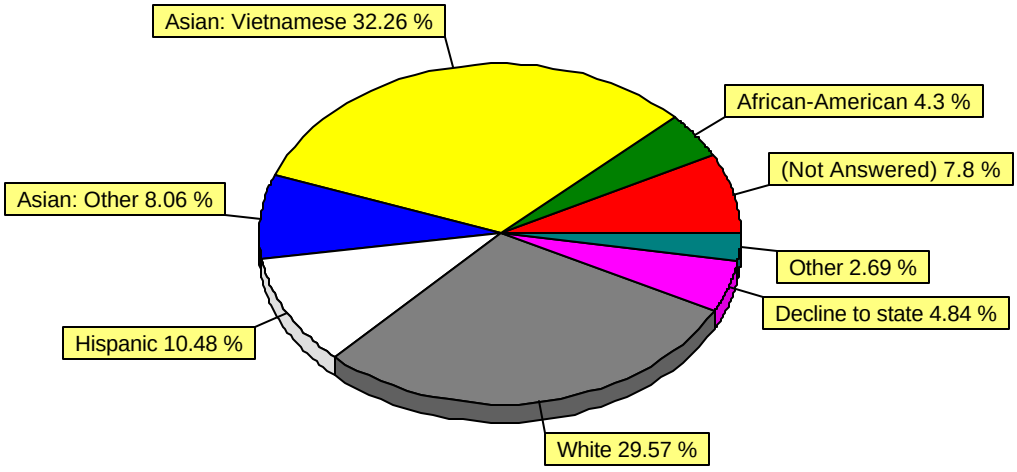


Language and Ethnicity
Science Program Review--Student Survey

What is your primary language (the language you are most comfortable speaking, reading, or writing)?



What is your ethnicity?



Coastline Community College
Program Review 2001-02
Validation Written Report

Science Program

1. Has the program adequately addressed the topics delineated in the "Qualitative Questions for Five-Year Program Review" self-study guidelines?

   _x__Yes ___No (Except two forms)

   If no, note which topics were either omitted or not addressed clearly or substantially enough:

   A. Need the Compliance Checklist and the Team Membership.

   Does the data substantiate the conclusions and recommendations made?

   _x__Yes ___No

   If no, note the areas and manner in which data does not match conclusions or recommendations.

2. List the most significant things (issues, trends, concerns, etc.) that are apparent from this report:

   A. Increase in numbers of non-native English speaking students

   B. Large proportion of DL to classroom delivery in sciences; continued dramatic enrollment growth in DL biology.

   C. Increase in district-mandated OSHA requirements

   D. Increase in number of program areas (STAR, TEACh^3, Access, etc.) in which full-time science leadership could play a critical role.

   E. Projection of an increased need for public school science teachers.

   F. Apparent student preferences for science scheduled late afternoon to evenings, not mornings.

   G. Progress made in attracting transfer students along with continued need for transferable courses to maintain science enrollments.

H. The five-year goals inherently address the need to offer additional courses, hiring of faculty, and development of A.A. programs

3. Are there any areas that are unclear or any significant points, which may have been overlooked?

_x__Yes ___No

If yes, note these areas or points:

A. References to “geography” should be deleted as they appear to be the result of a misunderstanding. Geography at Coastline will remain “housed” with social sciences

Do the concerns noted above and/or in question number 1 warrant a written response to the Program Review Steering Committee?

___Yes _x__No (Just correction to the report)

4. List any (realistic) suggestions the Steering Committee may have for the program based on information in the self-study.

A. Turn goals into statements about meeting student needs, out of which the conclusion might be: “add faculty”, “add courses,” etc.

B. Make a more meaningful case for full-time physical sciences faculty by addressing such elements as: realistic science area minimum qualification combinations that might be held by an applicant, enrollment numbers for a realistic combination of physical science areas and how that supports a full load with “cushion,” etc.

C. Explore further the goal to develop a program in one or more laboratory technologies.

D. Explore certificate program options, and explore combining certificate with A.A. transfer degree to CSU in related major subject areas where compatible.

5. Program accomplishments and commendations:

A. Excellent and very interesting Program Review study

B. Significant increase in level of respondent satisfaction in all surveyed areas, including faculty satisfaction with involvement in curriculum and program development

C. Attrition rate declining

D. Involvement in several important partnerships that result in enhanced programs

E. Growth in science enrollments through efforts of faculty

F. Leader in development of DL lab courses

G. Addition of new faculty and courses to meet student needs

H. Serving increased number of non-native English-speaking students

I. Equipping and supplying the new Garden Grove lab from scratch

I. Leadership in “rescuing” and improving our science articulation agreements

K. Technology advancements in instruction

L. Strong leadership by adjunct faculty

Program Review Steering Committee
May 2002