

Skyline College

Telecommunications and Network Information Technology

Program Review

Executive Summary



Short Summary of Findings

A recent study commissioned by AT&T indicates that a 7 billion dollar telecommunication sector investment is coming which will create thousands of new jobs in the converging technologies of phone, cable, wireless, and satellite communications. The Telecommunications and Network Information Program is a dynamic and vital program that is poised to meet the emerging needs of the industry. It addresses the Missions and Goals of the San Mateo Community College District by providing occupational education and training directed toward student career development that is current, linked to industry, and adaptive to technological change. The program has proven that it has the capacity to maintain high quality instruction in fields that are often on the cutting edge of new technologies. This program is one that the San Mateo Community College District can be very proud to offer its students.

Three Strengths of the Program

- The Program provides strong and current curriculum offerings that meet the needs of industry for skill based education. The Program is constantly being updated and expanded to meet these needs.
- The Programs faculty is highly trained and dedicated. Most of the faculty members are working members of industry who have made a commitment to Education, the College and their Profession.
- Strong links with industry are maintained by the Program through an active Advisory Council. This linkage has aided the Program in remaining current with industry needs for an educated and trained workforce.

Three Suggestions for Improvement

- **Program Marketing**-Solicit professional help to develop and implement an aggressive marketing program. This program directly competes with private institutions that offer similar programs and that have extensive marketing programs. If the Program is going to be successful in recruiting students it must also market its offerings.
- **Consolidate and Upgrade Facilities** -Move the course offerings and equipment located in room 1227 to a facility that is accessible to all students and locate it, in or near, the Center for Advanced Technology in building 2 where other program classes are being offered in room 1220 and 1222.
- **Maximize Facilities and Staff**-Adapt the timing and scheduling of instructional offerings to maximize facilities and staff. Plan course offerings to insure maximum class size without inhibiting the ability of students to receive degrees and certificates.


Omer B. Thompson

Full-Time Faculty Signatures


Norman DelPrado

September 30, 2005

**Telecommunication and Network Information Technology
2005**

**SKYLINE COLLEGE
PROGRAM REVIEW SELF STUDY**

PART A: Overview of Program

1. State the goals/focus of this program and how the program contributes to the mission and priorities of the College and District.

The mission of the Telecommunications and Network Information Technology Program at Skyline College is to provide occupational training and workforce development in keeping with the mission and goals of the California Community Colleges. The program's focus is to provide both entry level and experienced students with employment based degrees and certificates designed to blend critical knowledge with the hands-on application skills necessary for successful careers.

This program contributes to the mission and priorities of the College by providing opportunities for students to pursue in-depth study of core educational materials in the Telecommunication, Wireless and Network Engineering fields sufficient to establish the foundations of life-long learning and to also provide adequate study in current industry applications and critical skill sets that students will be and have the opportunity to remain marketable in a variety of employment areas.

The program at Skyline specifically addresses goals two and three of the mission and goals of the San Mateo Community College District.

- The program provides lower division units which students can transfer to baccalaureate institutions.
- The program provides occupations, education and training directed toward career development in cooperation with business and industry.

Specific Program Objectives :

1. To ensure sufficient instructional depth that entry level students can achieve the necessary skills and knowledge to obtain employment in targeted areas.
2. To provide activities and hands-on instruction based upon direct employment skills and knowledge.
3. To provide curriculum, certificates and degrees for telecommunications and network professionals to update or upgrade their skills and knowledge.
4. To design and update curricula that utilizes current technologies of the Telecommunications, Wireless and Networking industries.

2. Discuss how this program coordinates, impacts, and/or interacts with other programs in the College.

- The program coordinates cross-disciplinary offerings with the Science Math Technology and Business Divisions in network and computer science instruction. Instruction is offered under Business, Computer Science and Telecommunications course numbers with the TCOM department providing the instruction. This has been a very successful approach.
- Some Telecommunications students receive financial aid while enrolled in their course of study.
- Telecommunications has an active role in the Cooperative Education offerings of Skyline College.
- The Telecommunications Department works with the Career Center in providing employment opportunities, developing resumes, put on career fairs and other related activities.
- The Telecommunications program is linked to occupational programs of local high schools through the Tech Prep Program.
- Telecommunications students use the services of the Learning Center.

3. If the program utilizes advisory boards and/or professional organizations, describe their roles.

The Telecommunications Program was originally developed with the aid of an industry consortium and has maintained an Advisory Board since its inception in 1983. The present Advisory Board consists of selected members from various employment and educational areas in telecommunications and networking. The Board meets on a formal basis once or twice a year and performs most of its work by select committee.

The major role and responsibility of the Advisory Board is:

- To review the program on a regular basis and to provide industry insight into employment trends.
- To recommend additions and changes to the Curriculum.
- To provide a sounding board for the recommendation and review of projected changes and adjustments to the program.
- To make suggestions related to the effectiveness of the program in preparing students for employment.
- To assist the program in acquiring equipment loans and donations.
- To provide assistance in the recruiting of qualified faculty.
- To assist the program in providing students with employment and internship opportunities.

4. Explain how this program meets the needs of our diverse community.

The program provides an open entry forum for all students who have the abilities and interest in developing employment skills for the Telecommunications, Wireless and Networking industry. Should language or other such barriers exist then the telecommunications department works with the appropriate college departments to address these areas so that successful instruction can continue.

Employment in the Telecommunications, Wireless and Networking industry is limited in some employment areas for those that have access limitations. Sufficient diversity in job classifications exists to provide for ample opportunity for all students to achieve successful employment.

5. If the program has completed a previous self-study, evaluate the progress made toward previous goals. Review of this Program Review was last performed in 1999.

The Telecommunications Technology Program, as it was called during its last program review in 1999, was undergoing a major review of its course offerings and degree requirements. Several courses were under development and the overall certificate and associates requirements were also being reviewed. All of the courses targeted for development were completed and the program courses and degree requirements were adjusted in 2000. Since that time the program has been reviewed and updated again with the last review of the Telecommunications Degree and Certificate being completed during the spring of 2003. (See Part B-2)

The Program intends to continue its relationship with industry partners to develop and implement courses in instruction specific to needs on a short timeline. This partnership has continued and has produced number of valuable Tcom 665 classes. Some of these classes have been incorporated in the core or elective offerings of the Department, Wireless Networks (Tcom 465) and the incorporation of T-Carrier into Tcom 440.

At the time of the last review the Program was offering and intends to continue offering "Special Topics in Telecommunications" classes. These classes were offered on Saturday to expand the access opportunities for working students. The Department continues this practice.

PART B: Curriculum

1. Describe how the courses offered in the program meet the needs of the discipline(s) and the students. (This may be answered through descriptive narrative evaluation or quantitative research).

Summary: Program Provides Skyline Students with:

- Two A.S. Degrees and Associated Certificates (listed)
- Three Skill Endorsements (listed)
- Preparation Assistance for Professional Exams
- Special Topics in Telecommunications (TCOM-665 Courses)

Discussion:

The Department has observed that a majority of Telecommunications and Networking students come to the Skyline College Program for one of three reasons:

- They are seeking entry level education in order to gain employment.
- They are presently part of the employed workforce and need or desire skill and knowledge upgrades.
- They are pursuing a baccalaureate degree in telecommunications or a related field.
- They are retraining due injury or other medical reasons.

The telecommunications and Network Information Program provides students with a complete basic core of instruction and electives that fulfill the requirement of entry level employment as defined and specified by Industry and verified by our advisory council. Upon completion of the programs core and elective requirements, students are eligible to apply for a Certificate in Telecommunications and Wireless Technology and, as of August 26th of 2005, a Certificate in Network Engineering. If students have completed the general education requirements of the college they may also apply for an A.S. in these same areas.

The Departments' elective courses have been developed to provide a program that can adapt to the changes in technology and provide students with options in choosing instruction that are in keeping with their area of employment interest. We have found that most students will complete all elective courses, even after they have received their certificate.

Students who are seeking skill and knowledge upgrades can receive advanced placement in the program and can select from both the core and elective courses, providing they can meet the prerequisite requirements.

Students can receive basic Skill Endorsements in selected employment areas as they progress through their course of study toward a degree or certificate. These endorsements have been designed to verify that students have reached a minimum skill level for employment in several areas of the Telecommunications and Networking fields.

The program also provides opportunities for students to prepare for specific Professional Certification Exams by offering basic instruction and exam preparation classes in these areas. Presently A+, CCNA, and Checkpoint Network Security have been targeted for directed preparation.

Telecommunications and Wireless A.S. and Certificate Requirements
36 units (Core 33 Elective 3)

Required Core Courses:

TCOM 100 Telecommunications, Networking and Wireless Technologies	(3)
TCOM 405 Electrical Fundamentals for Telecommunications	(6)
TCOM 410 Wiring and Installation for Telecommunications and Networking	(6)
TCOM 415 Wireless and Mobile Communications Fundamentals	(3)
TCOM 420 Signal Transmission and Radio Frequency (R.F.) Fundamentals	(6)
TCOM 440 Transport Networks and the Fundamentals of Digital Communications	(6)
TCOM 445 Wireless and Mobile Communications Systems and Applications	(3)

Plus a selection of 3 elective units from the following:

TCOM 451 PC Configuration and Repair	(6)
TCOM 460 Fiber Optics Technology	(3)
TCOM 465 Wireless Local Area Networks	(3)
TCOM 480 Network Fundamentals (LAN)	(3)
TCOM 481 Network Systems Administration	(3)
TCOM 482 Introduction to Routers	(3)
TCOM 483 Network Switches-Concepts and Applications	(3)
TCOM 484 Advanced Routing Concepts and Applications	(3)
TCOM 485 Troubleshooting the Internetwork	(3)
TCOM 486 Network Security	(3)

Network Engineering Associate and Certificate Degree Requirements

33 Units (Core 30 Elective 3)

Required Core Courses:

ELECT 110 Fundamentals of Electronics	(3)
TCOM 451 PC Configuration and Repair	(6)
TCOM 480 Network Fundamentals (LAN)	(3)
TCOM 481 Network Systems Administration	(3)
TCOM 482 Introduction to Routers	(3)
TCOM 483 Network Switches-Concepts and Applications	(3)
TCOM 484 Advanced Routing Concepts and Applications	(3)
TCOM 485 Troubleshooting the Internetwork	(3)
TCOM 486 Network Security	(3)

Plus a selection of 6 units from the following Electives:

TCOM 100 Telecommunications, Networking and Wireless Technologies	(3)
TCOM 405 Electrical Fundamentals for Telecommunications	(6)
TCOM 410 Wiring and Installation for Telecommunications and Networking	(6)
TCOM 415 Wireless and Mobile Communications Fundamentals	(3)
TCOM 465 Wireless Local Area Networks	(3)

Skill Endorsements -

Discussion: These endorsements provide an opportunity for short-term study. They are verification that students have achieved a specific level of competency in a selected area of entry level employment. Students may achieve these endorsements on their own or while they are completing their studies for degrees or certificates.

Skill Endorsement in Networking

TCOM 410 Wiring and Installation for Telecommunications and Networking	(6)
TCOM 451 PC Configuration and Repair	(6)
TCOM 480 Network Fundamentals (LAN)	(3)
TCOM 481 Network Systems Administration	(3)
Required Units	18

Skill Endorsement in PC Configuration and Repair

ELECT 110 Fundamentals of Electronics (or)	(3)
TCOM 405 Electrical Fundamentals for Telecommunications (and)	(6)
TCOM 451 PC Configuration and Repair	(6)
Required Units	9 to 12

Skill Endorsement in Wiring and Installation

TCOM 405 Electrical Fundamentals for Telecommunications	(6)
TCOM 410 Wiring and Installation for Telecommunications and Networking	(6)
TCOM 460 Fiber Optics Technology	(3)
Required Units	15

2. State how the program has remained current in the discipline(s).

Program review is an ongoing and continuous process for vocational programs in high tech areas. The Telecommunications and Network Information Technology program continually updates, modifies and adds to its curriculum. As new technology develops in the Telecommunications and Networking fields elective courses are added to the curriculum offerings. During the 2003/2004 school year the entire program was revised and realigned to reflect changes in the employment requirements of the industry. This process was carried out under the supervision of our advisory council.

Summary of Updates and Adjustments:

- The Telecommunications Certificate and Associates Degrees requirements were updated to include Wireless Communications.
- The name of the department name was changed from Telecommunications Technology to Telecommunications and Network Information Technology.
- Network Engineering Certificate and A.S. Degree offerings development was completed and brought before the Curriculum Committee.
- Skill Endorsements in specific employment areas were added to program offerings.
- Application to State Chancellors Office made for a Degree and Certificate in Network Engineering to be added to the Telecommunications and Network Information Technology Department.

Discussion:

This process of adding wireless to the Telecommunications Degree and Certificate took nearly a year and required the review, modification and realignment of the entire Telecommunications core curriculum with the addition of several courses specific to Wireless communications. The name of the department was modified to include Network Information Technologies due to the substantial number of elective course offerings in Networking that had been developed to support the needs of this expanding industry.

Under direction and recommendation of its Advisory Council, the Telecommunications Department completed a long-standing goal to combine its network courses into a second A.S. degree and Certificate Program. When completed, this degree and certificate would interlace and share courses and offerings with the existing Telecommunications Program offerings. A number of course offerings that were waiting development have been funded and completed. This was a lengthy process that included a grant from SBC of 30 thousand dollars and years of course development. Upon completion of the development process the proposed Network Engineering Degree and Certificate program was brought before the Curriculum Committee in the spring of 2002. After careful review by the committee it was approved.

Skyline College and Telecommunications Department then made application to the California Community College Chancellor's Office to offer this second degree and certificate to Skyline College students. This process was brought to a successful conclusion when on **August 20, 2005**, LeBaron Woodyard, Dean of Academic Affairs and Education Services of the State Chancellors office, notified Regina Stanback-Stroud and Omer Thompson that our College's application for an **Associate of Science Degree and Certificate in Network Engineering had been approved.**

3. If the student population has changed, state how the program is addressing these changes.

No substantial change in student population attending Telecommunications and Network Information Technology Classes has been observed.

4. All courses in this program should be reviewed and, if appropriate, modified every six years. If this has not occurred, please list the courses and explain.

All active Telecommunications (TCOM-xxx) courses were reviewed for content during the fall and spring of 2004/2005 and their course outlines were all updated during the spring of 2005.

Note: Copies of these courses are available under separate cover and by transfer from electronic storage in Word Format.

• Active TCOM-xxx Courses Fall of 05	
1. TCOM 100 Telecommunications Networking and Wireless Technologies	(3)
2. TCOM 405 Electrical Fundamentals for Telecommunications	(6)
3. TCOM 410 Wiring and Installation for Telecommunications and Networking	(6)
4. TCOM 415 Wireless and Mobile Communications Fundamentals	(3)
5. TCOM 420 Signal Transmission and Radio Frequency (R.F.) Fundamentals	(6)
6. TCOM 440 Transport Networks and the Fundamentals of Digital Communications	(6)
7. TCOM 445 Wireless and Mobile Communications Systems and Applications	(6)
8. TCOM 451 PC Configuration and Repair	(6)
9. TCOM 452 A+ Exam Preparation	(3)
10. TCOM 460 Fiber Optics Technology	(3)
11. TCOM 465 Wireless Local Area Networks	(3)
12. TCOM 480 Network Fundamentals (LAN)	(3)
13. TCOM 481 Network Systems Administration	(3)
14. TCOM 482 Introduction to Routers	(3)
15. TCOM 483 Network Switches-Concepts and Applications	(3)
16. TCOM 484 Advanced Routing Concepts and Applications	(3)
17. TCOM 485 Troubleshooting the Internetwork	(3)
18. TCOM 486 Network Security	(3)
19. TCOM 670 Tcom Work Experience	(1.0 to 4.0)
20. ELEC 110 Fundamentals of Electronics	(3)

Note: TCOM 462 Switching Technology and TCOM 490 are listed in the college catalog but are not active courses and were not reviewed or updated. The program intends to have these classes deleted from its offerings.

4. If external accreditation or certification is required, please state the certifying agency and 9/21/2005

No certifications are required for this program.

6. Discuss plans for future review and program modification.

- The Telecommunications and Networking department is presently planning for a fall start Program that will not offer all of its courses each semester. This transition is necessary to adjust to the changes in student enrollment and employment trends as the industry recovers from its economic downturn and adjusts to new technologies.
- The Program is continuing to adjust to student needs adding courses in emerging technologies and presently has a number of TCOM 665 classes being taught. Some of these courses will be incorporated into the Telecommunications and Networking curriculum, such as Voice over Internet Protocol, Unix and Linux Operating Systems, CCNA exam preparation and others.
- The program intends to work on the development of advanced concentration skill sets in Network Security, Disaster Recovery, and Wireless Systems Administration. The program would like to investigate the use of WEB enabled instruction to enhance its ability to serve working professionals.
- The Department intends to continue to work with its industry partners and advisory council to maintain high quality instruction that will serve the needs of its students.

PART C: Faculty and Staff

1. List major development activities completed by faculty and staff in this program in the last six years and state what development is needed or proposed by faculty in this program.

The faculty of the Department has engaged in short term and long term professional development as well as considerable personal study. Until the start of this fall term, when a second tenure faculty was hired, the faculty of the Department has consisted of one full time instructor and a dedicated adjunct staff. This mix has allowed the Department to benefit from the training its adjunct faculty received by their primary employers in industry. A partial list of those development activities follows:

- Mobile (Cellular) Wireless Technology. (long term development-6 Units) 2003
- Cisco Certified Academy Instructor/ training and testing. 6/2003
- Cisco Remote Access Class focuses on software and hardware of remote access. 1/2003
- Checkpoint Security System Administration focusing on firewall administration. 12/2002
- CISSP Preparation focusing on security principles and practices. 11/2004.
- Wireless class focused on introduction topics and basic features. 2/ 2003
- Conferences and Educational Seminars in Telecommunications, Wireless and Networking.

Development activities will be required to upgrade faculty knowledge and skills in the areas the Department has determined to focus its future development as described in Section B part 6. Examples: Voice over Internet Protocol, Network Security Administration, Disaster Recovery of Systems in Telecommunications and Networking, as well as others.

2. Describe the orientation process for new faculty and staff (include student workers such as tutors and aides).

The Program presently employs two full time and 12 adjunct faculty, when new faculty members are hired they are provided with the opportunity to participate in Skyline's orientation process and an experienced faculty member is assigned to act as their mentor.

Note: Tutors or aides are placed with an experienced faculty member for training and supervision.

3. If recruitment of new and/or diverse faculty is needed, suggest recruitment techniques.

The recruitment of faculty who are current with the rapidly changing technologies of the Telecommunications and Networking fields is a critical component to maintaining the high quality of the program. We have been successful in using our advisor committee and network of Student Graduates to attract adjunct faculty. We recently hired a second full time faculty member who joined the department this fall. That individual was recruited from our adjunct faculty.

Comment:

Telecommunications and Networking graduates from Skyline College command higher salaries upon entry level employment than those we offer to attract and retain the teachers who instruct them. A method of compensation must be developed that will provide financial recognition on a reasonable par with salaries these individuals can command in industry.

PART D: Facilities, Equipment, Materials and Maintenance

1. Discuss the effectiveness of the facilities, equipment, equipment maintenance, and materials for the program to meet its goals and focus. Include if they impact success and if they are accessible to all students.

At present the facilities provided for instruction in the Department are located in three different buildings on campus. These facilities vary in age but at the present time are adequate to meet the instructional needs of the students.

Facilities Summary:

- Building 1 – Room 1227 the old dressing room for the theater. This location is in service four days a week and Saturday. It contains two lab facilities separated by a temporary wall that was constructed in 1987. The Department refers to this location as the loft. Contained within this facility are the routers, network switches, servers, computer systems and fiber optic equipment to support a variety of courses. The equipment in this facility is aging and will require replacement in the next few years. We have received considerable industry support in the form of donations to equip this facility. ***This facility is not accessible to all students*** and plans are presently under way to move the courses being taught and their associated equipment to the first floor of building 2. As part of this planned move some of the outdated equipment is slated for replacement.

- Building 2 – Room 2120 This classroom is in the Center for Advanced Learning and is only a few years old. It is the best of the locations we are presently using. Its equipment is current at this time but will require replacement or upgrade in the next few years. We teach Basic Networking, Computer Configuration and Repair, and Wireless Networking in this location. It is currently accessibility compliant.
- Building 7 – Rooms 7101,7105 and the office/store room of 7103. This location is the original site of the Telecommunication Program and contains the equipment and supplies to support the courses of study in that discipline. Some equipment in these rooms has been in use since 1985 and is beginning to fail. The department will experience a major disruption when these facilities are made inoperable by the upcoming retrofit of Building

2. List projected needs.

Projected Facility Needs;

- A new location needs to be provided so that the accessibility of instruction can be guaranteed for students who wish to take courses now offered in 1227.
- An adequate temporary location is needed to relocate the equipment and instruction of room 7101, 7103 and 7105, prior to the retrofit of building 7.

3. Describe the use of technology in the program and discuss if technology is current and comparable to other college and business or industry.

The program uses technology to teach technology. It is constantly challenged to maintain the level of laboratory equipment, computer hardware and software necessary to provide students with the direct hands on instruction that has been its hallmark. The Telecommunications and Network Technology labs have taken years to equip and supply. Very few classes taught in the department do not use equipment in the teaching of their subjects. Skyline has a superior program in regard to what it can provide students in relationship to the technology it teaches.

4. If appropriate, describe the support the program receives from industry. If the support is not adequate, what is necessary to improve that support?

The support received from industry is critical to the success of the Program. The program receives support in the form of equipment donations, instructor training, and curriculum development. The industry serves on our advisory council, hires our students, and provides us with assistance in recruiting instructors. Present support could be improved if additional time could be devoted to developing and maintaining industry relationships.

PART E: Budget Request

1. What resources (staff, facilities, equipment and/or supplies) will be needed in the next six years?

The success of the Telecommunications and Network Information Technology Program will always be tied to the institution ability to provide adequate facilities and equipment to support upgrading and expansion of program offerings. As in any high technology area the future is difficult to predict and so will the needed resources. Present identified future needs include:

- Replacement of the Network Switches and Cisco Routers for the network classes.
- Replacement or upgrade of the Network Computers and Servers in room 1227.
- Software license agreements for the Security and Network Trouble shooting classes.
- Replacement of the basic electronics lab equipment in room 7101.
- Technical support to repair and maintain instructional systems.
- Additional equipment, hardware and software to meet evolving instructional needs

2. If appropriate, discuss methods the program could share resources with other programs in the College and District.

Although the Department coordinates instruction with its sister colleges in related areas of study it is not aware of ways that resources other than faculty could be shared.

End of Report

Report Prepared by:
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Telecommunications and Network Information Technology

Assisted by: Norm DelPrado, John Frank and the faculty of the Department.

September 30,2005

Skyline College Program Review
Worksheet for Enrollment, Performance and WSCH/FTE
Telecommunications and Network Information Technology

Weekly Student Contact Hours – WSCH

Report the 3 previous **Fall** semesters with the most recent on the right.

Year	2002	2003	2004
WSCH	1352	1219	1094

Please comment on program enrollment and expected trends.

- The program has faced decreasing enrolment trends.
- The Department feels that a lack of adequate program marketing and the state of the economy has directly affected enrollment figures.
- Similar trends have been seen industry wide and are directly reflected in the enrollment patterns of Communications and Networking Technology Programs.
- There is a bright future coming where these trends can be reversed. A study released in September that was commissioned by A.T.T. and published in the Silicon Valley Business Journal indicates a 7 billion dollar Telecommunications sector investment is coming which will create thousands of new jobs in the converging technologies of phone, cable, wireless and satellite communications.

FTE and WSCH/FTE (LOAD)

Report the previous 3 Fall semesters with the most recent on the right

	2002	2003	2004
FTE	5.17	4.03	3.79
WSCH/FTE	262	302	288

Please comment on the comparison of this program to College trends.

Analysis indicates that the Departments (Load) factor is below the average for the College. Meeting the requirements of the objectives set out for occupational programs requires them to be competency based. This creates the need for class sizes that are inherently lower than those of the college as a whole. The Department is actively engaged in planning and scheduling to maximize the balance between FTE and WSCH.

Retention and Success

Report data on program retention and success rate with the most recent on the right.

	2001	2002	2003
Retention	82%	89%	91%
Success	72%	83%	84%

Please comment on the programs success and retention rate. Include factors that affect the rates and how college services are used to provide multiple avenues for student success.

The Telecommunications and Network Information Departments retention and success rates indicate that the departments' performance is consistent with, and in some areas, well above the college averages.

The gender mix of program as cumulative totals from 1997-2003 were 88% male and 12% female.

The Department would like to address the gender mix and increase the number of females to the program. It feels that a proper marketing effort could accomplish this goal.

Looking at specific populations of students the following cumulative success patterns can be seen (1997-2003):

	Retention Rate	Success Rate
Filipino	85%	76%
African-American	87%	69%
White	83%	76%
Hispanic	78%	68%
Asian	88%	80%
Male	85%	75%
Female	81%	76%

Specific population statistics indicate that the departments' performance is consistent with college averages.

End.