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Appendix II - Institutional Profile

A. Background Information Relative to the Institution

1. General Information

Name and Address of the Institution

California State University, Los Angeles
5151 State University Drive
Los Angeles, California 90032

Name and Title of the Chief Executive Officer of the Institution

Dr. James M. Rosser
President

Name and Position of Person Submitting the Completed Questionnaire

Dr. Kuei-wu Tsai
Dean, College of Engineering, Computer Science, and Technology

2. Type of Control

California State University, Los Angeles (Cal State L.A.) is a state-supported, public institution. It is one of 23 universities that comprise the California State University System (CSU).

Cal State L.A. is a unique institution within the CSU and the State of California. This uniqueness derives in large part from its location and the resulting ethnic diversity of its students. Situated in an urban environment four miles east of downtown Los Angeles, Cal State L.A. serves the predominantly Mexican-American community of East Los Angeles and the predominantly Asian-American community of the San Gabriel Valley. Because of the ethnic diversity of its students, Cal State L.A. was the first university in California having an engineering program to become a federally-designated Title III "Minority Institution" and the first institution in California to qualify as an "Hispanic Serving Institution (HSI)," therefore making the University eligible for membership in the Hispanic Association of Colleges and Universities (HACU).

3. Regional or Institutional Accreditation

California State University, Los Angeles is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC), the agency responsible for granting national accreditation to colleges and universities in California, Hawaii, Guam, and the Trust Territories. The University received its initial WASC accreditation in 1954. In June 1999, WASC re-accredited Cal State L.A. for a ten-year period. A progress report was submitted in 2004. The next comprehensive visit by WASC will take place in Spring 2009.

4. Faculty and Students

The numbers of full-time and part-time faculty and students for the entire institution are presented in Table II-1.

5. *Mission*

Mission of the University

Cal State L.A.'s nearly 22,000 students represent a variety of backgrounds, ages and interests that reflect this major world city's dynamic mix of populations. Building upon the strengths of this rich diversity, the University prepares students for success in advanced studies, in their careers, and throughout their lives. Cal State L.A. graduates constitute a major leadership force in Greater Los Angeles, a microcosm of the global society.

The University is committed to free scholarly inquiry, to high-quality teaching, and to academic excellence in undergraduate, graduate, and other post-baccalaureate and continuing education programs. This commitment underlies strong educational programs that are sensitive to the needs of the University's uniquely diverse student body. These programs include research, scholarship, creative activity, and community service. With the support of the administration, staff, alumni, and community, highly qualified faculty are the keystone of the University and the basis for the excellence of our programs.

A comprehensive university, California State University, Los Angeles offers a broad range of liberal and professional programs designed to encourage student excellence, achievement and well being. Facilitated by close interaction between faculty and students, educational programs are designed to foster habits of disciplined inquiry and critical thinking while helping students master a body of knowledge. The University strives to promote understanding of and respect for diversity, and to serve the changing needs of a global society. Recognizing its commitment to teaching, research, scholarship, creative activities, and service, the University supports an effective library and the use of new technologies that enrich the instructional process and provide effective access to information in its various forms.

The University is committed to providing students with a balanced and well-rounded educational experience including co-curricular activities that contribute to personal enrichment, leadership development, and institutional pride. Student organizations, campus residence life, artistic events, multicultural events, intercollegiate athletics, and intramurals are designed to be a significant part of this experience.

The close proximity of the University to civic, cultural, and economic centers enables it to foster strong cooperative relationships with alumni, community, business, scientific, educational, cultural, and government constituencies. Partnerships with these constituencies will continue to grow for the mutual enhancement of academic programs and the community.

California State University, Los Angeles is committed to fostering collegial relationships among faculty, administration, students, and staff. The principles of academic freedom and professional ethics are the responsibility of the entire academic community. We take pride in our continuing evolution as the University serving the Los Angeles Basin.

Goals and Objectives of the University

The University adopted a five-year Strategic Plan, which is annually reviewed and updated. In this plan, the following ten priority strategic initiatives are identified. The strategic plan drives the budget process. In fact, for the 2004-05 fiscal year, the university identified approximately \$22,909,000 of resources that were devoted to these initiatives.

- Develop and implement faculty and staff recruitment and retention plans within the context of institutional plans that identify priorities and areas of growth.
- Recruit graduate and undergraduate students in order to meet enrollment targets consistent with institutional priorities.
- Ensure students receive high quality academic and student support services.
- Continue to develop and assess student learning to provide excellent in curriculum and instruction.
- Provide instructional and administrative technologies to support students, faculty, staff and administrators.
- Continue to improve customer service with students as the top priority.
- Foster an environment that provides a positive, enriching, and stimulating student life experience.
- Identify undergraduate and graduate programs for reorganization and/or expansion/revitalization, and implement.
- Continue to implement a Marketing Plan.
- Expand the Cal State L.A. circle of influence in the community.

Two-year and five-year measurable objectives were established for each initiative. The plan is tied to the University budget process, with a portion of the University budget allocated each year to specific initiatives. The complete report on the University Strategic Planning Initiative will be available in the ABET Resource Room.

6. *Institutional Support Units*

a. **Library**

The John F. Kennedy Memorial Library’s mission is to provide instructional support for the campus. Detailed information about the University Library and the services provided can be found on its web page: www.calstatela.edu/library.

To ensure that the Library achieves its mission, each College and its departments has a librarian liaison, who provides a single point of contact for all library needs. The liaison to the College of Engineering, Computer Science and Technology is Ken Ryan. In addition to a Masters in Library Science, and a Masters in Linguistics (Computational), Mr. Ryan has undergraduate work in the sciences as well as a Bachelors Degree in Mathematics, and worked for many years as a technical writer/editor and contracts manager for a Fortune 500 global semiconductor, sensors & controls and educational products & services corporation. Mr. Ryan additionally serves in the capacity of the Library’s Acting Associate Dean (Associate University Librarian).

Over the years, the Library has striven to maintain its commitment to the College of Engineering, Computer Science, and Technology in a variety of ways, including support through the purchase of relevant materials – books, journals, electronic resources, media materials, etc. The following table shows expenditures in various categories.

Year	Books	# Titles	Journals	Databases	Total
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		Added			
1999/2000	\$23,972	794	\$14,890	\$6,175	\$44,737
2000/2001	\$52,924	829	\$31,722	\$6,175	\$90,821
2001/2002	\$54,339	1,130	\$26,173	\$6,175	\$86,687
2002/2003	\$46,171	613	\$23,810	\$7,409	\$77,390
2003/2004	\$25,125	916	\$27,440	\$7,409	\$69,974
2004/2005	\$26,909	849	\$49,444	\$7,409	\$83,762
2005/2006	\$16,000	754	\$44,350	\$7,409	\$67,759

As with all publicly supported institutions, fiscal uncertainties and challenges continually present themselves. Hence, the annual totals above have fluctuated, based on the availability of extra funding from the campus (occasionally), drastic price increases from publishers (fairly routine), the need for expensive reference books and sets, and so forth. In balance, the average expenditures on behalf of the College of Engineering, Computer Science and Technology is about \$76,000 annually. The Library is in the process of developing statistical allocation formulas to ensure that all campus departments, programs and colleges receive appropriate funding support in the Library for their respective programs.

In terms of the journal collection supporting the College, currently there are about 1,600 subscriptions, the vast majority of which (over 95 percent) are available on-line in full-text form. In addition to online full-text access to engineering articles in journals through journal publishers' websites (e.g., ASME Online Journals, Elsevier ScienceDirect, Wiley InterScience, etc.), the Library subscribes to Ei Village which gives citation access and full-text links to a vast collection of scholarly engineering society and commercial and professional publications. Automatic linking systems ("Find It!", the local name for the ExLibris SFX platform), connect the user from a database citation to the full text of an article, or to an automated interlibrary loan ordering system through which articles may be ordered at no cost to the requestor with merely a few clicks of the mouse. Electronic deliveries via e-mail are made in a matter of a few days. Additional interlibrary loan systems work in parallel to ensure that items that the Library does not own are made accessible to the user. The Library also provides assistance in setting up accounts with ILLiad and with Ingenta for document delivery. All of the Library's electronic resources are available on- and off-campus to students and faculty.

The Library's book collection currently includes 45,159 books in the engineering and technology call number ranges. Of these, 42,336 are circulating books and 2,823 are in the reference collection or reserved for library use only.

Finally, as part of its educational mission, the Library provides individual and group instruction as a part of its information literacy programs. Over the period of this review, nearly 1,000 students (and their instructors) from the College have participated in nearly 50 information literacy instruction sessions in the Library. While these numbers are modest in comparison with, for example, the numbers of information literacy sessions given by librarians to freshman English composition classes, they are significant in that the incoming freshmen and transfer students in the College are receiving an introduction to an important skill that will carry through with them throughout their careers and strengthen their marketability upon graduation.

b. Computer Center

Computer support for the engineering educational unit has both centralized and decentralized components. The centralized support, provided by the University, is discussed in this section. The decentralized support is discussed in each program's self-study as well as "Section J – Non-Academic Support Units" in this Appendix.

The Division of Information Technology Services (ITS) provides administrative direction for information technology to fully support the University's strategic plan and technology needs. Vital support services are provided through the following four units within the division:

- **Collaborative Management Systems (CMS) and Enterprise Systems:** CMS and Enterprise Systems continue to support the migration to the California State University's CMS, and is an active partner in developing and implementing the web-based Golden Eagle Territory (GET) Student Administration system. The initial rollout is in four phases, with subsequent upgrades and functionality being rolled out in increments of six months or less.

This ITS unit contributes to the installation, upgrades, application development, and technical support for Financials Systems (general ledger, asset management, grants, etc.), HR Systems (employee records), Contributor Relations, Student Financials, Financial Aid, and Student Administration (including Admissions, Student Records, Campus Community, and Academic Advisement).

- **IT Infrastructure** – provides services ranging from technical architecture and design, to configuration and support in the areas of network (LAN/WAN), servers, computer operations, database administration, telecommunications, and desktop services. These services are delivered to a diverse constituency of students, faculty and staff.

This ITS unit is heavily involved in the architecture, configuration, and deployment of the technical infrastructure components to support the web-based GET Student Administration system and the campus-wide Technology Infrastructure Initiative (TII) Terminal Resources Project.

- **IT Security Management and Compliance** – ensures that the use of information technology at Cal State L.A. adheres to Federal and State statutory regulations and requirements, as well as University policies and procedures.

This unit is responsible for writing ITS guidelines and policies, auditing ITS procedures for security compliance, managing the ITS document control process, and maintaining the campus directory. In addition, this unit sponsors campus security awareness events and the *RUSecure?* website, where users get the latest security best practices and related links.

- **Support Services** – provides support designed to increase the personal productivity of both the campus users and the ITS division. It is responsible for maintaining the ITS software archive; distributing site license software; distributing access accounts for e-mail, OASIS, and GET. This unit offers a variety of staff and student workshops, as well as documentation for basic applications and Internet navigation. Support Services also installs and maintains the equipment available in the dozens of Electronic Classrooms, Technologically Enhanced Classrooms (TEC), and Media Enhanced Classrooms (MEC)

located throughout the university; and provides the ITS Help Desk, a one-stop source for information on computing resources.

The Support Services unit works closely with Educational Support Services delivering the technology used in instruction and research, and ensuring that the appropriate computing and information services are available for the academic community.

A wide variety of services designed to increase the personal productivity of our users are offered, such as: Administrative Support Services; Baseline Project Management; Digital Documentation Services; ITS Help Desk & Services Accounts; Media Technical Support Services; Multimedia Services; Training Services; and Web Services.

Educational Support Services (ESS) provides leadership and support for promoting and maintaining CSULA's academic goals, instructional computing services (technology-mediated classroom instruction and distance learning), and commitment to effective teaching and learning. In collaboration with other units and constituencies within the University, this includes planning for academic technology, coordinating the relationship between instructional and administrative technology plans, and managing CSU academic technology projects.

To accomplish this mission, ESS offers the following specific services:

The [Center for Innovation and Excellence in Teaching and Learning \(CIETL\)](#) helps fulfill CSULA's commitment to assist and promote teaching excellence, which leads to successful and meaningful learning.

The [Faculty Instructional Technology Support Center \(FITSC\)](#) trains and supports faculty in the application of appropriate pedagogy and computer-based technology as tools of instruction both in the classroom and at a distance.

[Information Technology Consultants \(ITCs\)](#) are professionals playing critical roles in the use of information technology to support teaching and learning. ITCs are resources and liaisons between ESS, the six CSULA colleges and the Library and Extended Education, and Information Technology Services (ITS).

[Open Access Labs \(OALs\)](#) provide CSULA students with the computing tools and staff support to accomplish their academic goals.

ESS coordinates the installation of [Instructional Software](#) on workstations in Open Access Labs, Computer Classrooms, and Technology-Enhanced Classrooms, providing faculty and students the software tools necessary to enhance learning outcomes.

Faculty and students can access computing facilities both on- and off-campus. Off-campus access is provided through the campus modem pool or an Internet service provider. To facilitate off-campus work, faculty are given licensed copies of Cisco VPN client software, Internet Explorer, Netscape Communicator, and MS Office 2003 for use at home. Detailed information regarding hardware and software available to students and faculty will be available in the ABET Resource Room.

To further support the computer needs of faculty, staff, and students, ATS assigns Instructional Technology Consultants (ITCs) to each academic unit. Telephone and e-mail help desks are also available to the campus community. The College of Engineering,

Computer Science, and Technology currently has three ITCs assigned to us: Yin Tam, Fernando Loza and Jeffrey Cheam (who also supervises all of the ITCs on campus).

The primary vehicle for faculty training in computer usage (such as in-class presentation tools, electronic communication with students, web-based delivery of instruction, information retrieval skills, discipline-specific computer applications, and computerized student records access and advising) is the Faculty Instructional Technology Support Center (FITSC), operated by the Academic Affairs unit.

B. Background Information Relative to the Engineering Unit

1. Engineering Educational Unit

a. Organizational Chart Showing Position of the Engineering Unit

Table II-2, *Engineering Educational Unit-Organizational Chart*, shows the organization of the College and the reporting line to the President.

b. Description of the Engineering Educational Unit

The College of Engineering, Computer Science, and Technology is organized into five academic departments.

Three are engineering departments:

- Department of Civil Engineering
- Department of Electrical and Computer Engineering
- Department of Mechanical Engineering

The fourth is the Department of Computer Science, and the fifth is the Department of Technology.

The Department of Technology offers undergraduate programs in Industrial Arts, Fire Protection, Graphic Communications, Aviation Administration, and Industrial Technology. The department also offers an M.A. degree in Industrial and Technical Studies. Significant beneficial synergies exist between the Department of Technology and the four other departments in the college. Examples are shared laboratories and computer facilities, joint participation in student design competitions, faculty collaboration, and joint outreach and student recruitment efforts.

Two auxiliary units report directly to the Dean of the College: the Computer Productivity Center (CPC) and the Mathematics, Engineering, Science Achievement Center (MESA). The CPC is responsible for administering all College computer-related activities. The roles of the CPC and MESA in achieving the objectives of the engineering programs are addressed in Section II-J.

c. Administrative Heads

- Dr. Kuei-wu Tsai, Dean
College of Engineering, Computer Science, and Technology

- Dr. Benjamin Lee, Acting Associate Dean
College of Engineering, Computer Science, and Technology

- Dr. Rupa Purasinghe, Chair
Department of Civil Engineering

- Dr. Fred Daneshgaran, Chair

Department of Electrical and Computer Engineering

Dr. Maj Mirmirani, Chair
Department of Mechanical Engineering

Dr. Raj Pamula, Chair
Department of Computer Science

Mr. Jeff Cheam, Director
Computer Productivity Center

Mr. Bruce Fischer, Technical Administrator
College of Engineering, Computer Science, and Technology

Ms. Christina Marcale, Resource Manager
College of Engineering, Computer Science, and Technology

Mr. David Linnevers, Coordinator
Outreach and Advising Center
College of Engineering, Computer Science, and Technology

Ms. Jane Hansen, Development Director
College of Engineering, Computer Science, and Technology

Mr. Eric McDowell, Director
MESA MEP Center

Ms. Frances Hidalgo-Segura, Director
MESA MSP Center

d. Other Administrative Units

All engineering units report to Dr. Kuei-wu Tsai, Dean of Engineering, Computer Science, and Technology.

e. Engineering Education Unit Mission Statement

The vision and mission statements of the College of Engineering, Computer Science, and Technology are presented below.

Vision Statement

To be a pre-eminent engineering, computer science, and technology program that prepares students from diverse backgrounds for productive careers by providing them with a student-centered, practically-focused quality learning experience.

Mission Statement

The mission of the College of Engineering, Computer Science, and Technology is to graduate well-educated engineers, computer scientists, and technologists who are prepared to meet the challenges of a rapidly changing, increasingly complex world. This is accomplished through:

- A well-qualified faculty who care about students and their success

- A dynamic, up-to-date curriculum that has an optimal balance between theory and practice
 - Laboratories, computer facilities, and instructional classrooms on par with any engineering and technology program in the nation
 - Unique co-curricular opportunities for students such as participation in student design competitions, professional student organizations, and pre-professional employment
 - Opportunities for undergraduate and graduate students to participate in research and industry-funded design clinic projects
 - Mutually beneficial partnerships with area industry that take advantage of our location in one of the most concentrated high-tech centers in the nation
 - Strong, cooperative relationships with local high schools, community colleges, and other four-year institutions
-

2. Programs Offered and Degrees Granted

California State University, Los Angeles offers the following engineering and computer science degrees:

Bachelor of Science in Civil Engineering
 Bachelor of Science in Electrical Engineering
 Bachelor of Science in Mechanical Engineering
 Bachelor of Science in Engineering with Special Option (non-accredited)
 Bachelor of Science in Computer Science (in process)

And the following MS degrees:

Master of Science in Civil Engineering
 Master of Science in Electrical Engineering
 Master of Science in Mechanical Engineering
 Master of Science in Computer Science

3. Information Regarding Administrators

See the following *curriculum vitae* for:

Dr. Kuei-wu Tsai, Dean
 College of Engineering, Computer Science, and Technology

Dr. Benjamin Lee, Acting Associate Dean
 College of Engineering, Computer Science, and Technology

Mr. Jeff Cheam, Director
 Computer Productivity Center

Mr. Bruce Fischer, Technical Administrator
 College of Engineering, Computer Science, and Technology

Ms. Christina Marcale, Resource Manager
 College of Engineering, Computer Science, and Technology

Mr. David Linnevers, Coordinator
Outreach and Advising Center
College of Engineering, Computer Science, and Technology

Ms. Jane Hansen, Development Director
College of Engineering, Computer Science, and Technology

Mr. Eric McDowell, Director
MESA MEP Center

College of Engineering, Computer Science, and Technology

Ms. Frances Hidalgo-Segura, Director
MESA MSP Center
College of Engineering, Computer Science, and Technology

Kuei-wu Tsai (Dean)

Dr. Kuei-wu Tsai received his B.S. Degree in Civil Engineering from National Taiwan University, M.A., M.S.E. and Ph.D. Degrees from Princeton University. He was on the faculty at San Jose State University, including eight years as the Department Chairman of Civil Engineering, and seven years as Associate Dean of Engineering. He has received many national and local awards, including the campus highest honor, the Outstanding Professor Award of San Jose State University in 1992; and the 1993 James M. Robbins National Outstanding Teaching Award, the highest honor conferred by Chi Epsilon, the National Civil Engineering Honor Society.

In addition to teaching and research, Dr. Tsai has been active in engineering practice. He is a Registered Civil and Geotechnical Engineer in the State of California. His projects include power plants, refinery facilities, oil and water tanks, steel mill, sewage treatment plants, low- and high-rise buildings, bridges, highways, subways, waterfront structures, large scale land reclamation and development, dams and other earth structures, both in the United States and overseas.

He has been an active leader in many national and local professional and community service organizations for more than 30 years including serving as President of Cross Culture Community Service Center of the Silicon Valley. This organization served at risk youth and provided training and job placement for over 800 young people per year in East San Jose. He is currently serving on the Executive Advisory Council of Hispanic Engineer National Achievement Awards Corporation, a non- profit organization for promoting engineering and science achievements and career paths.

Dr. Tsai was appointed as the Dean of Engineering, Computer Science, and Technology at California State University Los Angeles in August of 2001. He has played a leading role in fostering a nurturing environment for students to learn and to grow. He has developed new partnerships with industry, K-14 schools, and the community, revamped and enhanced the College's Industry Advisory Board, increased major gifts to the programs, increased new major faculty research projects, including a \$6 million NASA University Research Center award in 2003.

Benjamin Lee (Acting Associate Dean)

Dr. Benjamin Lee is a Professor of Technology. He also is a Chair Professor of Wuhan University in China and a Fellow of Institute of Print-Media Professionals (IPP) in Hong Kong. He developed the new B.S. in Graphic Communications Degree Program with nineteen new courses and designed/initiated the Graphic Communications/Digital Document Management/Media Lab, which includes digital imaging, printing, electronic publishing, e-commerce, PDF workflow, and cross-media production based on the models that he developed and presented at national professional conferences. He earned his doctorate at University of Northern Iowa. He worked in the printing and publishing industry as a managing director and a manager for eight years and taught at Central Michigan University and Eastern Michigan University for five years before he began teaching at California State University, Los Angeles. He has been certified by National Association of Industrial Technology as a Certified Senior Industrial Technologist.

Dr. Lee received the Education Award of Excellence from Printing Industries of America/Graphic Arts Technical Foundation in 2005, College Teacher of the Year Award from the Los Angeles County Industrial Technology Education Association in 2005, 2004-2005 Professor of the Year Award from the ECST Student Council, California State University, Los Angeles in 2005, the PIASC Educators of the Year 2003 Award from the Printing Industries Association of Southern California in 2003, Educator of the Year Award (one award recipient worldwide) from the Electronic Document Systems Foundation in 2002, the Outstanding Professor Award from The National Association of Industrial Technology in 2001, the International Man of the Year for 1997/1998 from International Biographical Center, Cambridge, England in 1998, has been included in the 2000 Outstanding People, 2000 Outstanding Intellectuals of the 21st Century, Outstanding People of the 20th Century, Who's Who in Engineering Education, Dictionary of International Biography, Who's Who in the Midwest, and International Who's Who of Intellectuals. To date, he has published eight books and 96 papers, major libraries such as the U.S. Congress Library, the Yale University Library, and the National Central Library of the Republic of China collect some of them; eight of those papers have been selected and published in the annual Selected Paper of the National Association of Industrial Technology. He served as the principal investigator of nineteen grants and had acquired fifteen equipment and major software donations. He has made 30 invited keynote speeches and nineteen presentations at the national and international level, participating in international research such as The Global Future Study and serves as a Round Table Scholar of Round Table Group.

Dr. Lee served as the President of the Graphic Communications Division of The National Association of Industrial Technology, the Consultant of the Hong Kong Printing Specifications (HKPS) project, an Advisory Board member of DOCUMENT Magazine, a member of the Los Angeles County Regional Occupational Program Advisory Committee, a Director of the Executive Board of The National Association of Industrial Technology, a reviewer for grant proposals for the California Governor's Office on

Service and Volunteerism, a Judge of the Printing Industries Association, Inc. of Southern California Student Assembly and Academic Decathlon, a member of the California Industrial and Technology Education Association Annual Conference Planning Committee, the Region Six Director of The National Association of Industrial Technology, a Judge of the Los Angeles County Fair Education EXPO, a member of the Advisory Committee of Inner-City Graphic Communications Academy and Pasadena Graphic Communications Academy, a reviewer for Grant Competition for the Office of Postsecondary Education, United States Department of Education, a reviewer of Delmar Publishers Inc., a Director of the Printing Industries Association, Inc. of Southern California Education Committee and initiated a 2+4+Career program which allows high school students to take a full year of graphic communications courses at California State University, Los Angeles.

Jeff Cheam (Director of Information Technology Consultants)

Jeff Cheam is the Director of Information Technology Consultants and Open Access Labs in the Department of Educational Support Services. He oversees twenty full time Information Technology consultants (ITC) staff that are assigned to the five Colleges, Extended Education department and the Library; and six open access computer facilities on campus. Mr. Cheam is also the lead ITC for the College of Engineering, Computer Science and Technology, a position he has held since March 1988.

Mr. Cheam received his A.A. degree in Business Accounting from El Camino College and his B.S. degree in Quantitative Systems from California State University, Long Beach.

In 1984, Mr. Cheam joined Cal State L.A. as an Instructional Computing Consultant in what was then known as the Information Services and Data Processing Unit. His early duties included debugging computer programs and managing the campus' only computing facility. The organization was later renamed Academic Technology Support (ATS), and his duties extended to meeting the growing computer-related needs of the campus community and managing all university computer labs and computer classrooms.

Mr. Cheam's areas of specialization are user services, computer lab management, personal computers, workstations, operating systems, and engineering applications software (including CAD/CAM software). In 1990, under his leadership, the College of Engineering, Computer Science and Technology became the first unit on campus to be totally networked. In 2000, he supervised the relocation of the college's computer facilities into its renovated building. This complex task involved setting up and configuring computer hardware and software in the many new computer classrooms and instructional laboratories.

Customer service is one of Mr. Cheam's most valuable strengths. Both documented and anecdotal comments made by faculty, staff, and students are testimony of his commitment to quality customer service. In June 1999, he became the School's first staff member to receive the prestigious University Outstanding Staff Award (only one such awardee for the entire campus) at the 25th Annual Staff Awards Ceremony.

Finally, Mr. Cheam represents the College of Engineering, Computer Science and Technology on the CSU System wide Computer-Aided Productivity in Engineering (CAPE) group. CAPE coordinates the provision of engineering applications software and training obtained through donations and

corporate discounts to engineering and computer science programs throughout the CSU System. Mr. Cheam is responsible for the coordination of Parametric Technology Corporation (PTC) products such as Pro/ENGINEER and Pro/MECHANICA. He is also instrumental in negotiating and acquiring a number of important software used in the College and on campus.

Bruce Fischer (Technical Administrator)

Bruce Fischer has worked for the College of Engineering, Computer Science, and Technology as our Technical Administrator for over twenty two years. Some of his duties in this capacity are to research, develop, design, fabricate and maintain all of our approximately 5,000 pieces of laboratory instructional equipments in all five departments that support our extensive and impressive curriculum. He supervises our College technical staff team, performs the duties of the College Property Control Designee and accomplishes diagnostic analysis and repair on our sophisticated laboratory equipments. He operates in the capacity of technical advisor for College laboratory development, faculty research activities and grants, and student special projects which have included our Concrete Canoe projects, Steel Bridge projects, Mini-Baja vehicle project and our national record holding Super Mileage vehicle project. Prior to his current position, he has taught basic electronics, drafting and all automotive technology classes for the department of Technology.

Some of his professional experiences prior to CSULA, consist of technical work in the aerospace industry performing research and development on Apollo/LEM mission transducers, controls and systems. He served in the U.S. Navy on a Destroyer as an Interior Communication Electrician.

Christina Marcale (Resource Manager)

Christina Marcale was appointed Resource Manager in August 2005. Prior to appointment, she served as Resource Analyst for the College of Engineering, Computer Science, and Technology beginning September 2003 and as Administrative Coordinator for the Department of Electrical & Computer Engineering from April 2001 through September 2003. She is responsible for planning, implementing and maintaining college resources, including support staff, full-time and part-time faculty, facilities, equipment and operating budgets.

Ms. Marcale has experiences in both private and public sectors. She has served in capacities ranging from coordinating the April 2001 Presidential Inauguration for California State University, Northridge to receiving the California State University, Los Angeles Annual Fund Black Onyx Award in July 2000 for high achievement in fundraising. In addition, Ms. Marcale worked for NASA (National Aeronautics and Space Administration) in the summer of 2005 as Resident Director of NASA SHARP (Summer High School Apprenticeship Research Program) and supervised three staff and twenty high school interns, managed the budget and planned activities.

She is a California State University, Los Angeles alumna who holds a Bachelor of Arts and is currently completing her Master of Science in Business Administration degree. In addition to volunteering for various non-profit organizations, Ms. Marcale currently belongs to the Association of California State Supervisors and the American Association of University Women.

David Linnevers (Coordinator of Outreach and Advising Center)

David Linnevers serves as the Outreach, Advising, and Retention Director for prospective freshman, transfer and graduate students. He is responsible for building strong relationships and partnerships with local high school and community colleges. This is done to enhance the enrollment and the development of a strong pipeline of students into the Engineering, Computer Science, and Technology majors. He also serves as the faculty transfer advisement specialist for the Title V grant – “Enhancing the Transition Experience for Low Income and Hispanic Students”. The grant requires him to work closely with students, faculty, and staff at Pasadena City College, Los Angeles City College, and Pasadena City College. An outstanding presenter, transfer adviser, and strategic thinker, David joined us in 2002 with a strong track record of enrollment success. He has spearheaded many new initiatives designed to increase enrollment and the exposure of our high quality nationally ranked programs. He holds a degree in Aviation Science from Bridgewater State College and is currently completing his Master of Science in Business Administration at California State University, Los Angeles.

Eric McDowell (Director of MEP Program)

Eric Eugene McDowell, an administrator, businessman, and entrepreneur earned a Bachelor of Science degree from California State Polytechnic University, Pomona in Electronics and Computer Engineering Technology, and a Master of Science degree from California State University, Long Beach in Student Development in Higher Education. Currently, Eric is pursuing a Doctorate degree at Walden University in the field of Higher Education.

As a professional, Eric has accomplished a great deal in such little time. At Cal Poly Pomona, he began his career in Student Affairs and University Housing Services as the Student Assessment Team Coordinator and Residence Life Coordinator, respectively. As the Student Assessment Team Coordinator he was responsible for overseeing a team of five students who conducted assessments of departments within the Division of Student Affairs. As the Residence Life Coordinator he was in charge of an entire residence hall; housing over 500 students and responsible for the daily operation of the building and administrative tasks for the safety and living conditions of all students. During his tenure he managed to chair committees such as: Leadership Development, Multicultural, and staff search committees. Later, he accepted a position as the Retention Coordinator for the Maximizing Engineering Potential Program (MEP) within the College of Engineering. After two years, Eric would become the Associate Director and a Faculty Lecture responsible for retaining students and teaching several engineering courses in the college. He has done impressive work with the faculty to organize, train and facilitate a series of workshops on academic advising. Currently, Eric is an administrator in the College of Engineering, Computer Science, and Technology at California State University, Los Angeles where he is the Director of the MESA Engineering Program. In this capacity he supervises two

professional staff members, several student assistants, and one faculty member. As the director, he is responsible for making sure that students have the necessary academic services to assist them with graduating in a timely manner.

Additionally, Eric has managed to stay grounded within his community by serving as Chair for the Black Faculty and Staff Association as well as advisor for many student clubs and organizations such as the Black Student Union, Black History Month Committee, National Society of Black Engineers, and the African-American Student Center. He is also affiliated with several professional organizations: American College Personnel Association (ACPA), Association for Professionals in Student Affairs (APSA), National Association of Minority Engineering Program Administrators (NAMEPA), National Association of Student Personnel Administrators (NASPA), and the Western Association of College University Housing Officers (WACUHO).

Other activities include his participation in a full assessment and detailed evaluation regarding Campus Climate for Lafayette and Moravian Colleges in Pennsylvania. He has written Grant proposals and been awarded monies from the National Science Foundation (NSF), Statewide MESA Organization, Luis Stokes-Alliance for Minority Participation (AMP), and Southern California Edison. He has given academic presentations and facilitations on such topics as “Importance of Academic Advising,” “Best Practices for Improving Retention,” “How to Use an Automated GPA Program,” “Leadership Development,” “Creating Innovation within an Organization,” and “Diversity and Multiculturalism for Tomorrow.”

Frances Hidalgo-Segura (Director of the MESA Schools Program)

Frances Hidalgo-Segura is the Director of the MESA (Mathematics Engineering Science Achievement) Schools Program at California State University Los Angeles since November 2005. The MESA Schools Program is an academic and outreach program which prepares pre-college students (6th-12th) for eligibility in entering a four-year university and pursuing math-based majors. Prior to coming to Cal State LA, Frances served for 6 years at the Director of the MESA Schools Program at San Jose State University.

Frances received a Bachelor of Science degree in Chemical Engineering from the University of California Santa Barbara in 1995, where MESA served as the backbone to obtaining her engineering degree and was instrumental in unleashing her leadership potential through its MEP program at UC Santa Barbara. While still a student at UC Santa Barbara, Frances discovered her true calling is to work with educationally disadvantaged students in assisting them unleash their potential in math and science. She grew up in Los Angeles and participated in the Cal State LA MESA Program for six years as a pre-college student where she was given the support, guidance, and preparation to attend college.

Jane Hansen (Development Director)

Jane has served the non-profit sector in a career spanning 20 years work for charities throughout Los Angeles and Orange Counties in Southern California. During this time, she has held key positions including: Assistant Director of Development at Anaheim Memorial Hospital, Director of Development and Campaign Manager for the Volunteer Center of Greater Orange County, Development Director, Major Gifts and Marketing for the Boys and Girls Clubs of Long Beach, Director of Corporate and Foundation Relations for KOCE public television, and now as Director of Development at Cal State L.A.

Her professional experience includes: directing capital and major gift campaigns, extensive experience in marketing and communications, and developing partnerships with corporate and private foundations. She has written newsletters, direct mail solicitation letters, press releases, and brochures, as well as successfully promoting organizations with her expertise in media relations. She has coordinated teams to develop numerous grant proposals presenting the organizational case for support for capital and outreach program projects raising millions in corporate, private, and government funding.

Jane received her Bachelor of Arts degree in Communications from Wichita State University graduating with honors. She earned her CFRE, (Certified Fund Raising Executive) credential in 2000 and renewed her certification in 2003. She served several years as a board member, then president of a local Shakespearean theater company and the arts remain one of her passions. She is an active member of the Association of Fundraising Professionals, and served as Media Relations Chairperson for AFP Orange County's 2004 National Philanthropy Day. Jane currently serves on the Board of Directors of the Orange County Chapter of AFP.

4. Supporting Academic Departments

Table II-4 gives information about academic units that support the engineering programs.

5. Engineering Finances

Expenditures for support functions of the engineering educational unit as a whole and for each program within it for fiscal years 2003-04, 2004-05, and 2005-06 are shown in Table II-5. Included are expenditures for operations, travel, equipment purchased with institutional funds, equipment acquired through grants and gifts, graduate teaching assistants, and part-time assistants. Projections for 2006-07 are also shown.

6. Engineering Personnel and Policies

a. Personnel

The number of personnel, both full- and part-time, for the entire engineering unit and for each of the three engineering departments is presented in Table II-6. Included are administrative personnel, tenure-track faculty, temporary and part-time faculty, student teaching assistants, student research assistants, technical staff, and clerical staff. Also shown are the numbers of undergraduate and graduate students supported by this personnel.

b. Faculty Salaries, Benefits, and Other Policies

Initial probationary appointments of tenure track faculty are made for a period of two years. The normal probationary period is six years, with tenure and promotion granted at the beginning of the seventh year of service. Up to two years of service credit based on previous service at a postsecondary educational institution, previous full-time CSU employment, or comparable experience may be granted at the time of initial appointment. During his or her probationary period, a faculty member may request consideration for early tenure or early promotion, but only once.

Probationary faculty are appointed at the rank of assistant professor at a salary in a range specific to the rank and based on market and equity considerations.

Faculty are eligible for salary increases in three categories: (1) across-the-board general salary increases (GSI); (2) Faculty Merit Increases (FMIs); and (3) Service Salary Increases (SSIs). All faculty receive general salary increases in an amount negotiated by the CSU Chancellors Office and the California Faculty Association (CFA). FMIs are awarded annually (provided funds are in the budget) to faculty based on merit. Up to eight 2.4 percent SSIs (not to exceed the maximum salary for the faculty member's rank) are awarded annually to faculty deemed to have performed in a satisfactory manner.

Reappointment of probationary faculty and the granting of tenure and promotion are based on performance reviews by a department-level peer review committee, the department chair, a College-level peer review committee, the College dean, the Provost and Vice President for Academic Affairs, and the President. The performance review evaluates faculty performance in three categories:

Instructional Performance

Professional Achievement

Other Contributions to the University

Detailed policies and procedures related to faculty appointment, reappointment, tenure, promotion, and post-tenure review can be found in Chapter VII of the University Faculty Handbook at the following web site: www.calstatela.edu/academic/senate/handbook/. This information is supplemented by the current MOU, Articles 12 through 15, which can be found at http://www.calstate.edu/LaborRel/Contracts_HTML/CFA_CONTRACT/CFAtoc.shtml.

Faculty receive liberal benefits, including the Public Employee Retirement System (PERS), health insurance, vision care, dental plans, death benefits, accrual of sick leave, life insurance, and long-term disability. Detailed information on faculty benefits can be found in Chapter VIII of the Faculty Handbook (see web page above). Faculty benefits also include the following professional development opportunities: a fee waiver program, sabbatical leaves, difference-in-pay leaves, and short-term absence with pay to attend conferences, workshops, and other professional meetings.

Current faculty salary data for the institution as a whole, the engineering educational unit as a whole, and each School program is presented in Table II.7.

c. Faculty Workload

The normal pattern for faculty is to work the first three quarters following their anniversary date. However, with approval, faculty may work any three of the four quarters during the one-year period following their anniversary date.

The standard load for a full-time faculty member is 15 units per quarter. Twelve of these are teaching units and three units are allocated to student advising and other departmental, School, and University duties. The teaching load can consist of lecture courses and/or laboratories. One unit of lecture meets 50 minutes per week for ten weeks plus a final exam during the eleventh week. Faculty receive two units of teaching credit for a one-unit laboratory that meets two hours, 50 minutes per week for ten weeks plus a final examination. Faculty receive 1/3 unit of teaching credit for supervising the directed study of one undergraduate student and 1/2 unit of teaching credit for supervising the directed study of one graduate student.

The 12-unit teaching load can be reduced in a number of ways. Faculty are provided with release time for special assignments such as assessment, academic advising, curriculum development, facilities planning, or instructionally-related research. Faculty development funds are available to faculty to reduce their teaching load for the purpose of updating their skills, conducting research, writing proposals, and developing new curriculum. In addition, faculty who receive external funding may reduce their teaching loads by charging their time to their grants. Consequently, the average teaching load for engineering faculty during the past three years has been approximately 10.5 units per quarter.

Instructional responsibilities extend beyond duties in the classroom and include such activities as preparation for class, evaluation of student performance, syllabus preparation and revision, and review of current literature and research in the subject area, including instructional methodology. The professional responsibilities of faculty members include research, scholarship, and creative activity that contribute to their currency and to the contributions they make within the classroom and to their professions.

d. Supervision of Part-Time Faculty

Because of our close proximity to a large number of high tech industries, we have a large pool of highly qualified practicing engineers and computer scientists from which to draw part-time faculty. Such faculty bring a high degree of technical expertise and a unique industry perspective to our students. Approximately 10-15 percent of engineering and computer science courses offered in a typical quarter are taught by part-time faculty. The part-time faculty pool is continuously updated, since we are required by University policy to advertise annually for new applicants.

All part-time faculty are hired from this applicant pool based on the recommendation of the department chair and with the approval of the Dean. The initial hiring decision is based, in part, on the candidate's resume, three written letters of recommendation, and verification of degrees.

Part-time faculty are supervised and evaluated by the respective departments. All new part-time faculty receive a general orientation from the department chair and are referred to the coordinator of the course they are teaching for specific information on course objectives and content. All part-time faculty are provided an office to use while they are on campus, and each is required to maintain a minimum of 20 minutes of office hours per week for each unit taught.

Written faculty class visitation peer reviews and student evaluations are obtained once a year in all courses taught by part-time faculty, and the results are reviewed by the department chair and placed in the individual faculty member's personnel file. The performance of part-time faculty members is evaluated annually by both a departmental peer committee and the department chair.

7. Engineering Enrollment and Degree Data

Engineering student enrollment and degrees conferred for the engineering educational unit as a whole and for each of our three engineering programs and the computer science program for the current year (2005-06) and the preceding five academic years are presented in Table II-8.

Our full-time undergraduate student enrollment has decreased during 1995-2000. However, through a team effort of our faculty, staff, and students, the College has reversed the past downward trend and experienced 21 % of growth in 2001-03. We suffered some decline the following year, but are now positioned to continue our growth. The data indicates that our full-time undergraduate student enrollment was 713 in 2005-2006. We also serve approximately 300 part-time (enrolled in less than 12 units) students. Number of degrees granted was 96 in 2004-2005. At the graduate level, we have approximately 250 part-time and 50 full-time students. We grant approximately 50 M.S. degrees in engineering annually.

We expect our engineering enrollment to increase. There are several reasons why we expect this increase to continue. First, the engineering employment climate in Southern California, which was soft for several years, is now booming. Second, we expect a continuing return from an extensive outreach and student recruitment effort that has been underway for the past five years. The College's outreach and student recruitment effort is described in more detail in Section B.10.e. - "Outreach and Student Recruitment Program."

8. Definition of Credit Unit

Cal State L.A. operates on the quarter system. One credit hour represents one class hour per week (50 minutes) or three laboratory hours per week (2 hours, 50 minutes). One academic year consists of three 11-week quarters, including final examinations.

9. Admission and Graduation Requirements, Basic Programs

The following sections discuss the admissions and graduation requirements for the three engineering programs within the engineering educational unit.

a. Admission of Students

This section presents admission criteria and procedures for first-time freshmen and transfer students. Historical data for admission of freshmen is shown in Table II-9 and for transfer students in Table II-10.

Requirements for undergraduate admission to the University (or, in fact, any of the 23 institutions in the California State University System) are set in accordance with Title 5, Chapter 1, Subchapter 3 of the *California Code of Regulations*. Under Title 5, students may qualify for admission as either first-time freshman or undergraduate transfer students.

Upper division transfer applicants must have completed 90 transferable quarter units, have a GPA of 2.0 or better (2.4 for non-residents of California), completed at least 45 quarter units of general education including Oral Communication, Written Communication, Critical Thinking and Math/Quantitative Reasoning, and be in good academic standing at the last college attended.

Any student admitted to the University can select engineering or computer science as his or her major. There are no special admissions criteria for the engineering and computer science programs, although students are advised to complete four years of college preparatory mathematics.

All undergraduate applicants to the University whose preparatory education was principally in a language other than English must demonstrate competence in English by achieving a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

i. General Criteria And Procedures for Admitting Students (First-Time Freshmen) to Engineering and Computer Science Programs

Criteria for admission of first-time freshmen are established in response to a California State mandate that CSU institutions admit the top one-third of California high school graduates. To qualify for admission as a first-time freshman, an applicant must meet the following conditions:

Be a high school graduate

Have an eligibility index of 2,900 or higher (Note: This index is determined by multiplying the student's high school GPA by 800 and adding their total SAT score)

Have completed a required pattern of college preparatory subject requirements, with grades of C or better

The required pattern of college preparatory subject requirements is:

Social Science: 2 years with one year of U.S. history or U.S. history and American government, and one year of social science

English: 4 years

Mathematics: 3 years including algebra, geometry, and intermediate algebra, integrated math, and advanced math.

Foreign Language: 2 years in the same language

Visual and performing arts: 1 year of art, dance, theater, or music

College Preparatory electives: 1 year of coursework included in the UC "A-G" list.

Applicants having a high school GPA of 3.0 or higher automatically meet the CSU admissions requirement and therefore are not required to submit SAT scores.

ii. History of Admission Standards for Freshmen

Table II-9 shows the numbers of new freshman engineering students enrolled and their composite SAT scores for the past six years. As the table indicates, we enroll approximately 100 first time freshmen each year.

iii. General Criteria and Procedures for Evaluating Advanced Placement Course Credits from Programs Not EAC-Accredited

The criteria and procedures for granting credit to undergraduate transfer students are as follows. During the admissions phase, an evaluator examines all transcripts of courses taken at other institutions (both community colleges and four-year institutions) to determine transferable units. "Transferable units" are unit credit values for courses recommended by the faculty of a regionally accredited college or university and certified as appropriate for baccalaureate credit by the institution, and therefore acceptable at least as elective credit by the University.

Once an admitted student indicates his or her intention to enroll, the process of determining which graduation requirements are satisfied by the "transferable units" begins. First, credit for General Education courses is determined by an evaluator in the University Admissions Office. When approved articulation agreements are in place and have been entered in the on-

line student records system, ASSIST, credit for General Education and for any articulated major requirements (see discussion of articulation below) is done automatically on line.

Granting of transfer credit for major requirements based on work done at California institutions is generally straightforward. We have developed course-by-course and 2+2 articulation agreements with all community colleges from which we draw an appreciable number of undergraduate transfer students. These articulations are developed jointly by our engineering department chairs and the community college engineering department chair. Once developed, articulation agreements must be approved by both our Dean of Undergraduate Studies and the community college's articulation officer. Approved agreements are then entered into the on-line student records system (ASSIST) and serve as a contract with prospective students.

In addition, Cal State L.A. participates with all California community colleges and most public four-year institutions in the California Articulation Number (CAN) System. Through CAN, a common number is assigned to transferable lower-division courses, and students who complete CAN courses at a participating campus are guaranteed credit at other participating campuses.

If articulation agreements do not exist, acceptance of transfer credit to meet major requirements is based on the recommendation of the student's advisor and requires approval of the department chair. The determination of whether transfer courses are equivalent is made based on catalog descriptions, textbooks used, student notes, and consultations with engineering faculty at the other institution. Specific consideration is given to whether a course under consideration is equivalent in terms of ABET curricular criteria and program outcomes.

iv. Special Admission Requirements for Entry into the Upper Division in the Engineering Educational Unit

There are no special admission requirements for entry into the upper-division engineering program. In order to register for an upper-division course, students must have met all prerequisites for that course. They also must pass the University Writing Proficiency Exam prior to completing 135 quarter units.

v. Admissions Policies for Engineering Students Transferring from Other Institutions

Undergraduate transfer applicants are eligible for admission if they have a grade point average of 2.0 or higher in all transferable units attempted, are in good standing at the last college or university attended, and meet one of the following three conditions:

Meet the freshman admission requirements based on their high school record

Meet the freshman admission requirements except for the college preparatory subject requirements and have made up the missing subject requirements

Have completed at least 90 transferable quarter units (60 semester units), made up any missing college preparatory subject requirements, and completed at least 45 quarters units of General Education requirements including Oral Communication, Written Communication, Critical Thinking and Math/Quantitative Reasoning.

vi. History of Engineering Transfer Students

The number of new transfer students enrolled annually for the past six years is shown in Table II-10.

As the table indicates, we enroll almost as many new transfer students as new freshmen each year. The relatively large number of transfer students reflects the important role that California's 106 community colleges play in higher education in the State. Approximately one-half of these community colleges have strong lower-division engineering programs, and even where no formal engineering program exists, students can complete a significant portion of our lower division requirements by taking calculus, chemistry, physics, and General Education coursework.

We maintain very close relationships with our top six feeder community colleges: East Los Angeles College, Pasadena City College, Glendale Community College, Los Angeles City College, Los Angeles Trade Technical College, and Mt San Antonio College. Through these relationships, we have developed 2+2 articulation agreements that are widely disseminated to students through "Targeted Articulation Transfer Brochures" (Examples of these will be available in the ABET Resource Room) and also on the web site.

A primary resource for community college students who wish to transfer to Cal State L.A. is the University web site: www.calstatela.edu/transfer. This web site contains information on articulation of courses between Cal State L.A. and over 85 California community colleges.

b. Requirements for Graduation

i. Process Used to Certify that Graduates Meet ABET Criteria

As described in Section 4 – Professional Component and Appendix IA, Table I of each program self-study, the published curriculum for each engineering program meets the ABET Professional Component (Criterion 4) requirements in the areas of basic mathematics and science, engineering topics, general education, and major design experience. Each program's self study describes how the program curriculum meets the curricular requirements of the ABET Program Criteria (Criterion 8) as well. Degrees are only granted to students who meet each and every course requirement in these curricula.

There are three ways students can meet these graduation requirements: (1) take all required courses at Cal State L.A. and achieve passing grades; (2) obtain transfer credit for a Cal State L.A. required course through a course taken at another institution (as explained above in Section I.1.c); or (3) gain approval to substitute an equivalent course for a required one.

Substitutions for graduation requirements are made only for serious and compelling reasons, and the student's faculty advisor and department chair must agree that the substituted course is equivalent to the required course in meeting ABET's curricular requirements.

Certifying that a student has met all graduation requirements, and therefore has complied with ABET criteria (both general and program specific), is a simple but functional process. Before the end of the quarter that precedes the last two quarters before graduation, each prospective engineering or computer science graduate is required to complete a Graduation Application form and Bachelor's Degree Worksheet, pay appropriate fees, and meet with his or her department chair.

During this meeting, the department chair verifies that all ABET curricular criteria listed in Criterion 4 and Criterion 8 have been met or will be met in the two remaining quarters. During the meeting, the chair also discusses the student's professional society affiliations, plans for professional registration, and career goals. During the 2005-06 year, the process is being greatly facilitated by an advising and degree audit module in GET. This module allows the chair (or faculty adviser) to view the student's entire academic record and quickly identify any degree requirements that have not yet been met. Once the pilot portion of this project is

complete, the plan calls for giving each student access to his/her degree audit so the student can quickly see all remaining requirements for graduation at any time (even at time of entrance into the university).

After the meeting, the department chair updates the student's academic record in GET and forwards the Graduation Application form to the Graduation Office of the University Registrar's Office. At the end of the quarter in which the student is expected to graduate, the Graduation Office verifies that the student has met all remaining requirements. If so, the degree is granted and a diploma is issued. If not, the graduation application is transferred to the next quarter for processing. If the student is still ineligible to graduate at the end of the second quarter, he or she must restart the graduation application procedure.

ii. Programs Offered in Alternative Modes

No programs are offered in alternative modes. We make no distinction between day and evening offerings, and thus far no engineering courses are offered off-campus or by distance learning.

iii. Grade-Point Average Required for Graduation

By University policy, graduation requirements mandate a minimum of a 2.0 GPA in the following:

All units attempted, including units accepted as transfer units from another institution

All units attempted at Cal State L.A.

All courses used to meet the General Education requirements

All courses required for the major

University policy permits students to repeat a course one time to replace a previous grade of C- or lower. The earlier grade remains on the transcript, but is not included in the grade point average calculation. Grade replacement for engineering and computer science majors is limited to a maximum of 20 quarter units and one time per course.

10. Non-Academic Support Units

The following sections describe six units within the College of Engineering, Computer Science and Technology that support the Engineering and Computer Science academic programs: (1) the ECST Computer Productivity Center; (2) the MESA Center; (3) the Technical Staff Unit; (4) the Industry Relations, Alumni Relations, and Development Program; (5) the Outreach and Student Recruitment Program; (6) The Lower Division Transfer Pattern (LDTP); and (7) the College Industry Advisory Board.

a. ECST Computer Productivity Center

The Engineering, Computer Science and Technology Computer Productivity Center (CPC) supports the computing needs of engineering, computer science and technology students, faculty, and staff in the College. It provides facilities, hardware, software, and training to encourage the many uses and applications of computers as part of the educational experience (e.g., engineering computation, modeling and simulation, computer-assisted design, computer programming, graphics and laboratory applications).

The CPC is housed in a multi-room suite located in the Engineering and Technology Building (C-wing, second floor) that includes six primary-use rooms and three support rooms. In the center of the suite is a support area that consists of a student "help desk," file server room,

plotter room, and director's office. The help desk is surrounded by five computer classrooms: three for general college computer-related instruction and two for specialized use. The sixth primary use room is an open access facility.

The CPC's flexible, functional design allows for support staff to monitor and assist in all areas of the CPC, while allowing for classroom privacy, as needed. Scheduling is done so that classrooms can provide additional open access stations during high demand time. When the entire facility is operating in "open access" mode, students have access to more than 150 workstations.

The CPC provides users an array of hardware, software, documentation, handouts, file servers, and output devices. A number of Dell PowerEdge servers are used as file servers and license servers. A Sun Fire 880 server w/ 900 MHz CPU, referred to as "Mars," supports software applications under the UNIX environment. All of the College users' physical home drives reside on this server. Output devices available in the CPC include HP laser printers, Epson printers, and high-end HP Designjet color plotter. All workstations in the CPC are connected to the campus-wide network. In addition to access to local applications (Windows, Mac and UNIX), students and faculty have access to other academic time-share computing systems both on- and off-campus, such as library resources, electronic bulletin boards, electronic mail, and the Internet.

The open access facility, known as the "ECST Computer Link," is open six days and 68 hours per week during the quarter. The computer facility provides individual access to 42 workstations including PC, Sun, and Macintosh platforms. Among the 42 workstations, are 32 Dell Optiplex GX620 Pentium 4 workstations. The Dell workstations are configured with 2GB DDR2 RAM, 160 Gig SATA hard drive, 256MB nVidia graphics card, CD-RW/DVD Combo drive, and 19" Dell Ultrasharp Flat Panel monitors. All of these workstations operate under Windows XP SP2 OS. General and college specific applications available to users include Microsoft Office 2003 Suite, Microsoft Visual Studio, Microsoft Visual Studio .NET, Visio, Microsoft Project, Adobe Photoshop, Macromedia Flash, Macromedia Dreamweaver, Borland JBuilder, SICStus Prolog, Allegro CL, Oracle, Pro/ENGINEER Wildfire, Pro/MECHANICA Wildfire, Ideas, SolidWorks, Cosmos, CATIA V5, Delmia, Autodesk Suite, MicroStation, SolidEdge, MasterCAM, MathCAD, SAP 2000, ETAB, MSC Nastran, and Matlab.

Users also have access to eight Sun Ultra 10 workstations to run UNIX applications. The Sun Ultra 10 model is configured with 360MHz UltraSPARC-Iii, 512MB RAM, CD-ROM drive, floppy drive, Elite3D graphics accelerator card, and a 21" monitor. Available UNIX applications include FORTRAN and C++ compilers, VI and EMACS editors Pro/ENGINEER Wildfire, Pro/MECHANICA Wildfire, IDEAS, CATIA V5, Mathematica, MATLAB, MSC NASTRAN, PATRAN, Cadence software suite, TeX and Star Office.

Two high-end Apple Power Macintosh G5 with 17" flat panel monitors are also available to support needs of specific graphics users.

In addition to the E&T Computer Link, the CPC has three PC-based general application computer classrooms (C255D, C255E, and C255G) each equipped with 25 Pentium-based workstations. One of the classrooms is equipped with Dell GX270, each having a Pentium 4, 2.60GHz, 512 MB DDR, 80GB EIDE hard drive, 250 MB ZIP drive, CD-ROM drive, and a 21" multiscan monitor. The other two classrooms are equipped with Dell Optiplex GX620 Pentium 4 2.8 Ghz, 1GB DDR2 RAM, 160GB SATA hard drive, CDRW/DVD Combo drive. Computers in room C255E have 19" Dell Ultrasharp Flat Panel monitors. The computers in

room C255G have 17" Dell Ultrasharp Flat Panel monitors. All three classrooms are multimedia-ready with state-of-the-art instructional aids such as an XGA resolution projection system, a retractable projection screen, and the LINK Video Networking System.

The two other computer classrooms are designed to meet specialized curricular needs. One classroom (C254) is a computer aided design laboratory equipped with twenty workstations. Each workstation is a Dell Precision Workstation 370, Pentium 4 2.80GHz, 1GB RAM, 160 GB SATA hard drive, 128MB nVidia Quadro FX 1300 video card, CD-RW/DVD combo drive and a 21" multiscan monitor. The fifth classroom (C256) is group work laboratory. There are 19 Hewlett Packard Kayak Pentium III 600MHz, 512MB RAM, 60 GB hard drive, CD-ROM drive, and a 21" monitor.

There are four other computer classrooms outside the CPC area that are used for specialized curricular needs. The Mac lab in B9 is used mainly to teach graphics and desktop publishing courses. There are 25 Apple Power Mac G5 Dual 2Ghz Processors with 1GB DDR SDRAM, DVD-RW, 160 GB SATA hard drive, ATI Radeon 9600 128MB graphics card and 17" flat panel display. The remaining three computer classrooms, C159, A210 & A220, are mainly used by Computer Science department. There are 30 Dell GX260 Pentium 4 2.26 GHz with 512MB RAM, 80GB hard drive, ZIP 250, CD-ROM drive and a 17" monitor in A210. There are 30 Dell GX240 Pentium 4 1.7GHz with 256MB RAM, 40GB hard drive, ZIP 250, CD-ROM drive and a 17" monitor in A220. C159 computer classroom has 30 Dell Optiplex GX620 Pentium 4 2.8 Ghz, 1GB DDR2 RAM, 160GB SATA hard drive and CDRW/DVD Combo drive and 17" monitor. All the computers in the classrooms are connected to the campus-wide network, access to local applications, access to other academic time-share computing systems both on- and off-campus, such as library resources, electronic bulletin boards, electronic mail, and the Internet. These computer classrooms are multimedia-ready with instructional aids such as an XGA resolution projection system and a retractable projection screen.

University and College programs support faculty use of instructional technology. Part of this support is the installation and support of Technology Enhanced Classrooms (TEC), also known as Smart Classrooms. Current TEC classrooms are equipped with a network computer, speakers, Laptop hookup, Multimedia projector, DVD/VCR combo, and document camera. There are now eight university-supported TEC rooms (ET A126, ET 127, ET A129, ET A226, ET A332, ET B108, ET C154 and ET C160) in the College. Additional university-supported Technology Enhanced Classrooms is scheduled to be installed in the next five years. There are currently four portable TEC carts that can be checked out by faculty for use in classroom that are not considered TEC rooms. Current TEC carts are equipped with a network computer, speakers, laptop hookup, and multimedia projector and DVD/VCR combo. In addition, College is in the process of equipping the remainder of its instructional labs with instructional technology including workstations, multimedia projectors, DVD/VCR combo, document camera, laptop hookup and wireless access.

Distance Learning Facility: The design of the renovated Engineering and Technology Building provides an infrastructure that provides capability for sending and receiving data, video and audio to/from the building and distribution throughout (i.e, classrooms, labs) through a central routing/control room in ET A330.

Room ET A331 is design to include all components of Technology Enhanced Classroom (TEC) and distance learning functions. It is currently equipped to serve as a distance learning

classroom with capabilities including two-way interactive audio, videoconferencing and one-way microwave video with two-way audio. This allows for uplink/downlink capabilities with satellite and cable television providers. Equipment in the room includes a Polycom Viewstation EX, Dell Precision 380 Workstation MT 64, Parkervision Presenter Camera System, wireless microphone and all the equipment found in a TEC room setup. Video streaming capabilities are handled via video streamer server and recorded classes can be archived and accessed 24/7.

Mr. Jeff Cheam is the lead Information Technology Consultant (ITC) for the College and he is also the Director of Educational Technology Support. Under him are two other full time ITCs, Mr. Yin Tam and Mr. Fernando Loza. They all work closely with department chairs, faculty, staff and college administration to ensure that the computing needs of the college programs are met. ITC's job responsibilities include training of students, staff, and faculty; updating and maintaining hardware, software and documentation; ensuring the college's hardware configuration meets current and evolving needs; and participating in College and University system development projects.

b. MESA Center

Under the MESA MEP director, Mr. Eric McDowell and the MSP director, Ms. Frances Hidalgo-Segura, the Cal State L.A. MESA Center operates two comprehensive School programs: (1) the MESA Schools Program (MSP); and (2) the MESA Engineering Program (MEP).

The MESA Schools Program operates in 18 local middle and high schools to inform, motivate, and prepare students for college majors in math, science, and engineering. MESA targets students who are disadvantaged economically or academically—students who have the potential for success in math-based majors but have traditionally been excluded. MESA students benefit from organized study groups, academic and financial aid advising, career exploration programs, parent involvement, and other enrichment activities.

At the university level, the MESA Engineering Program (MEP) works to improve the academic performance and graduation rates of more than 400 engineering and computer science majors from disadvantaged and underrepresented groups. The primary focus of the program is to build its students into a strong learning community based on shared academic goals and mutual support. This is accomplished through a mandatory year-long freshman orientation course, a student study center, an academic advising system that clusters students in common sections of their classes, structured study groups, ethnic- and gender-based student organizations, and a supportive program staff. A complementary emphasis is to strengthen MEP students' commitment to success in engineering study through career exploration activities and to help MEP students gain engineering-related employment experience.

The Cal State L.A. MESA Engineering Program (MEP) has served as a model for the nation, disseminating its approaches through publications, presentations, short courses, campus site visits, and consulting visits to other institutions.

c. Technical Staff Unit

The College Technical Administrator heads a technical staff of five trained, experienced technicians who maintain the College's instructional laboratories, instruments, and equipment. As the College Technical Administrator, Mr. Bruce Fisher works closely with

department chairs, faculty, staff, and administrators to establish priorities and monitor productivity.

Technical staff members have been selected and trained to develop their breadth and depth of knowledge related to the general and specialized requirements necessary to assure effective functioning of each laboratory and the equipment therein. Their complementary and supplementary sets of skills allow for utilization of a matrix management system, which is coordinated by the Technical Administrator. In this system, a member of the technical staff is assigned primary general responsibility for each laboratory and is also utilized across the College (by faculty, administrators, and other members of the technical staff) for their specialized expertise. This provides everyone in the organization with a clear method for identifying who is responsible and accountable for coordination of each lab's support, while making maximum utilization of the special skills and talents of each member of the technical staff.

Members of the technical staff work closely with the College Instructional Technology Consultant/Computer Productivity Center Director and the College Instructional Technology Consultants on issues related to computing as necessary. Where required, student assistants work for members of the technical staff to perform some functions under their direction and supervision.

Technical staff members are housed in appropriately designed technical support rooms within the Engineering and Technology Building, and have access to the tools, instrumentation, equipment, and resources necessary to perform their duties. In addition, the College has a fully equipped technician's laboratory and machine shop (B16).

d. Industry Relations, Alumni Relations, and Development Program

The Director of Development (DOD) heads the College of Engineering, Computer Science, and Technology's fund raising efforts. As the DOD, Ms. Jane Hansen is working with the Dean, alumni, current and retired faculty members, industry, and community leaders to address the following fund raising priorities:

**Hydrogen Fuel Cell Station
Sustainable Energy Facility
Scholarships
Student Design Projects**

**MESA Schools Program
MESA Engineering Program
Laboratory Naming Opportunities
Research Support for Faculty**

In pursuit of these priorities, the DOD work with the College's various constituent groups to accomplish the following:

- Build capacity through targeted prospect cultivation
- Increase the number of scholarships/fellowships/internships available to both undergraduates and graduates.
- Build support for faculty research.
- Increase the number of named laboratories.
- Cultivate and enhance relationships with alumni and industry/community leaders.
- Cultivate past Distinguished Alumni Awardees.
- Cultivate faculty emeriti for potential planned gifts.
- Continue stewardship of existing donors.

The College of ECST's Development goal for fiscal year 2005/2006 is \$7,200,000 (a sub-set goal of \$6,350,000 is for the Hydrogen Fueling Station and Sustainable Energy Facility which is being directed by former Director of Development, John Johns). The remaining cash goal for the College is \$850,000. As of September 30, 2005, the College had raised \$102,301 for fiscal year 2005/2006.

e. Outreach and Student Recruitment Program

Under the leadership of College Outreach Coordinator Mr. David Linnevers, the College operates a comprehensive outreach and student recruitment program. The program conducts activities in six primary areas: (1) articulation; (2) curriculum; (3) events; (4) visitations; (5) media; and (6) prospect tracking.

The goal of the "articulation" area is to have up-to-date, approved 2+2 articulated curricular agreements between each of our engineering programs and our primary local "feeder" community colleges. These curricular agreements are presented on 2+2 articulation sheets and through targeted articulation brochures both of which are disseminated widely to the community colleges. Samples of these articulation brochures will be available in the ABET Resource Room.

The "curriculum" area focuses on publicizing and offering new or existing courses that target two categories of non-engineering students: (1) high school students; and (2) other majors on campus. High school students enroll through the University Accelerated College Experience (ACE) program and are able to take the courses at little or no cost.

The "events" area encompasses a broad spectrum of activities to bring students, parents, teachers, and counselors to the campus. Each year we host a number of major "open house" events, some for community colleges and others for high schools. We also host small groups of high school or community college students for campus visits on an ongoing basis. During the past year, we held a highly successful "preview day" event for admitted students and their parents. Over the past four years, through a generous grant from the ARCO Foundation, Emeritus Dean Ray Landis developed and conducted an innovative and well-received course, "Introduction to Engineering for High School Teachers and Counselors." Over 150 teachers and counselors have completed the two-unit course.

Through the "visitations" program, College outreach staff, faculty, and administrators regularly visits local high schools and community colleges to represent College programs at college fairs; conduct workshops in high school career and college guidance centers and community college transfer centers; and speak at high school and community college classes.

The "media" area maintains the College web page, produces the School newsletter *Etcetera*, and creates recruitment brochures and videotapes. The media area also supports the writing and graphic needs of the other five areas—articulation, curriculum, events, visitations, and prospect tracking.

The "prospect tracking" area maintains a database of all student prospects, both prospects identified through outreach activities as well as unsolicited applicants. We send a series of informative mailings to these prospects and follow up through telephone calls. We also maintain a database of 2,000 math and science teachers and counselors at our top 50 feeder high schools with whom we keep in contact through regular mailings.

f. The Lower Division Transfer Pattern (LDTP)

The College of ECST has participated in the statewide joint meeting of the California Engineering Liaison Council (ELC) and Intersegmental Major Preparation Articulated

Curriculum (IMPAC). Topics of discussion were those related to the changes in the present articulation between the community colleges and state universities throughout California. The Lower Division Transfer Pattern (LDTP) was discussed extensively. Through LDTP, the students who plan to major in an engineering discipline at any CSU campus will complete the following before transferring to their respective CSU campus.

Civil Engineering LDTP:

- Lower division general education requirements (9 units)
- CSU graduation requirements in US History, Constitution, and American Ideals (6 units)
- One year of Calculus, Differential Equations, and Linear Algebra (11 units)
- General Chemistry and Biology (7 units)
- Physics (6 units)
- Statics (2 units)
- Surveying (3 units)
- Graphics with CAD (1 units).

These add up to 45 semester units. 15 to 25 campus specific units to bring the total to minimum of 60 and maximum of 70 units will complement the list.

Electical Engineering LDTP:

- Lower division general education requirements (12 units)
- CSU graduation requirements in US History, Constitution, and American Ideals, GE-Breath Area D course (9 units)
- One year of Calculus, Differential Equations, and Linear Algebra (11 units)
- Physics (8 units)
- Programming Concepts and Methodology (3 units)
- Circuits (3 units).

These add up to 46 semester units. 14 to 24 campus specific units to bring the total to minimum of 60 and maximum of 70 units will complement the list.

Mechanical Engineering LDTP:

- Lower division general education requirements (12 units)
- CSU graduation requirements in US History, Constitution, and American Ideals (6 units)
- One year of Calculus, Differential Equations, and Linear Algebra (11 units)
- General Chemistry and Physics (10 units)
- Statics (2 units)
- Engineering Materials (3 units)
- Circuits (3 units).

These add up to 47 semester units. 13 to 23 campus specific units to bring the total to minimum of 60 and maximum of 70 units will complement the list.

Since California law mandates LDTP, all state colleges and universities must prepare to accommodate students that follow the LDTP. CSU may expect receiving LDTP students with starting Fall 2007.

g. College Industry Advisory Board

In addition to departmental advisory boards, the college programs are supported and guided by an active College Industry Advisory Board (IAB). The College IAB is comprised of 18 high-level engineering executives, each representing a major local engineering employer. The Board meets once a year to provide advice and guidance in areas such as industry needs, curriculum, and organizational management. The IAB also helps the College through monetary and in-kind donations such as equipment, furniture, scholarships, and funding for technical projects. Because of their close relationship with the College, Board member companies are eager to recruit our students. To accomplish this, the companies participate in on-campus industry career days, conduct on-campus recruiting in the Career Center, and cultivate relationships with students through summer internships and part-time jobs.

Following are the names, positions, and organizations of the College's current IAB membership.

Mr. Ken Dozier*
Executive Director, Technology Transfer Center
USC, School of Engineering

Mr. Stephen Ehret* P.E.
Director, Antiterrorism and Force Protection Programs
Naval Facilities Engineering Services Center

Mr. Thomas Frascetti*
Program Manager Dawn Mission
Jet Propulsion Laboratory

Mr. Derrick Hamilton*
Vice President, Special services and Data Group
SBC

Dr. Ray M. Haynes
Director of University Alliances & Development
Northrop Grumman Space Technology

Mr. James A. Kelly
Vice President, Engineering and Technical Services
Southern California Edison

Dr. David M. Kotchick
Director, Technology & Processes
ECS Systems Engineering
Honeywell

Mr. Pervaiz Lodhie*
Founder and President
LEDtronics, Inc.

Mr. Raymond G. Mellado
Founder and Chairman
Hispanic Engineer National Achievement Awards Corporation

Mr. Andrew Meyer
Assistant Manager, Training Group

American Honda Motor Co., Inc.

Dr. Jay D. Pinson
President & CEO
Lifeline Tech

Mr. Joe M. Rivera
Director of Engineering and Technical Services
Sempra Energy Utilities

Mr. Gunjit S. Sikand
Founder and Chairman
Sikand Engineering

Dr. Dwight C. Streit*
Vice President of Foundation Technology
Northrop Grumman Corporation

Dr. John J. Tracy
Vice President of Engineering
Integrated Defense Systems
The Boeing Company

Mr. Stanley Wang
Founder and President
Pantronix Corporation

Dr. Morris Young
President, CEO
AXT Inc.

Mr. Nabih Youssef* S.E.
Founder and President
Nabih Youssef and Associates

Note: IAB members marked by * are CSULA Engineering alumni.

Table II-1. Faculty and Student Count for Institution

School Year: 2005/2006 (Fall 2005)

	HEAD COUNT		FTE (see Note 2)	TOTAL STUDENT CREDIT HOURS
	FT	PT		
Tenure Track Faculty	553	--	408	
Other Teaching Faculty (excluding student assistants)	---	595	223	
Student Teaching Assistants	---	163	93	
Undergraduate Students	10,872	4,083	12,229.7	183,445.5
Graduate Students	2,153	2,926	3,064.6	45,969
Professional Degree Students	NA	NA	NA	NA

1. Data provided here for the fall term immediately preceding the visit.

2. For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 credit-hours per term of institutional course work. For faculty members, 1 FTE equals what your institution defines as a full-time load.

Table II-2. Engineering Educational Unit-Organizational Chart

Table II-3 (Part 1). Engineering Programs Offered

1 Program Title	2 Modes Offered				3 Nominal Years to Complete	4 Administrative Head	5 Administrative Unit or Units (e.g. Dept.) Exercising Budgetary Control	6 Submitted for Evaluation		Offered, Not Submitted for Evaluation	
	Day	Co- op	Off Campus	Alternative Mode				Now Accred.	Not Now Accred.	Now Accred.	Not Now Accred.
1. Civil Engineering (B.S.)	X				4	Rupa Purasinghe	Department of Civil Engineering	X			
2. Electrical Engineering (B.S.)	X				4	Fred Daneshgaran	Department of Electrical and Computer Engineering	X			
3. Mechanical Engineering (B.S.)	X				4	Maj Mirmirani	Department of Mechanical Engineering	X			
4. Computer Science (B.S.)	X				4	Raj Pamula	Department of Computer Science		X		
5. Engineering with Special Option	X				4	Benjamin Lee	College of Engineering, Computer Science, and Technology				X
6. Civil Engineering (M.S.)	X				2	Rupa Purasinghe	Department of Civil Engineering				X
7. Electrical Engineering (M.S.)	X				2	Fred Daneshgaran	Department of Electrical and Computer Engineering				X
8. Mechanical Engineering (M.S.)	X				2	Maj Mirmirani	Department of Mechanical Engineering				X
9. Computer Science (M.S.)	X				2	Raj Pamula	Department of Computer Science				X

See instructions on following page.

Table II-3 (Part 2). Accredited Degrees Awarded and Transcript Designations

1 Program Title	2 Modes Offered				3 Name of Degree Awarded	4 Designation on Transcript
	Day	Co-op	Off Campus	Alternative Mode		
Civil Engineering	X				Bachelor of Science	Degree Awarded: Bachelor of Science Major: Civil Engineering
Mechanical Engineering	X				Bachelor of Science	Degree Awarded: Bachelor of Science Major: Electrical Engineering
Electrical Engineering	X				Bachelor of Science	Degree Awarded: Bachelor of Science Major: Mechanical Engineering
Computer Science (in process)	X				Bachelor of Science	Degree Awarded: Bachelor of Science Major: Computer Science

See instructions on following page.

Table II-4. Supporting Academic Departments

For Academic Year: 2005/06 (Fall 2005)

Department or Unit	1 Full-time Faculty Head Count	2 Part-time Faculty Head Count	3 FTE Faculty**	Teaching Assistants	
				4 Head Count	5 FTE**
Chemistry and Biochemistry	18	8	22.4	3	0.7
English	21	25	27.5	10	2.2
History	18	14	25.4	0	0
Mathematics	31	3	32.3	29	12.3
Physics and Astronomy	15	10	19.7	0	0
Political Science	15	10	19.4	0	0

* See instructions on reverse.

** For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For faculty members, 1 FTE equals what your institution defines as a full-time load.

Table II-5. Support Expenditures

Engineering Education Unit

	1	2	3	4
Fiscal Year	2003-04	2004-05	2005-06	2006-07
Expenditure Category				
Operations (1) (NOT including staff)	\$142,009	\$252,441	\$122,100	\$122,000
Travel (2)	\$38,965	\$57,573	\$45,756	\$43,000
Equipment (3)	\$338,885	\$236,600	\$370,625	\$441,500
(a) Institutional Funds	\$102,045	\$133,600	\$150,928	\$129,000
(b) Grants and Gifts (4)	\$236,840	\$103,000	\$219,697	\$312,500
Teaching Assistants	\$0	\$1,786	\$1,386	\$1,386
Part-time Assistance (5) (other than teaching) Student and Graduate Assistants	\$54,969	\$44,069	\$59,418	\$55,000

Program: Civil Engineering

	1	2	3	4
Fiscal Year	2003-04	2004-05	2005-06	2006-07
Expenditure Category				
Operations (1) (not including staff)	\$17,183	\$30,545	\$20,349	\$20,000
Travel (2)	\$5,296	\$8,527	\$7,744	\$7,500
Equipment (3)	\$135,797	\$28,616	\$15,000	\$12,000
(a) Institutional Funds	\$10,797	\$11,616	\$0	\$2,000
(b) Grants and Gifts (4)	\$125,000	\$17,000	\$15,000	\$10,000
Teaching Assistants	0	0	\$1,386	\$0
Part-time Assistance (5) (other than teaching)	0	0	0	0

Program: Electrical Engineering

	1	2	3	4
Fiscal Year	2003-04	2004-05	2005-06	2006-07
Expenditure Category				
Operations (1) (not including staff)	\$33,089	\$60,210	\$30,140	\$30,000
Travel (2)	\$8,362	\$13,464	\$12,736	\$10,000
Equipment (3)	\$134,087	\$92,440	\$168,197	\$251,500
(a) Institutional Funds	\$12,247	\$25,440	\$8,500	\$4,000
(b) Grants and Gifts (4)	\$111,840	\$67,000	\$159,697	\$247,500
Teaching Assistants	0	\$1,786	\$0	0
Part-time Assistance (5) (other than teaching)	0	0	\$2,000	0

Program: Mechanical Engineering

	1	2	3	4
Fiscal Year	2003-04	2004-05	2005-06	2006-07
Expenditure Category				
Operations (1) (not including staff)	\$20,023	\$35,594	\$20,987	\$20,500
Travel (2)	\$6,132	\$9,873	\$13,672	\$13,000
Equipment (3)	\$44,582	\$52,536	\$100,415	\$93,000
(a) Institutional Funds	\$44,582	\$33,536	\$55,415	\$38,000
(b) Grants and Gifts (4)	0	\$19,000	\$45,000	\$55,000
Teaching Assistants	0	0	0	0
Part-time Assistance (5) (other than teaching)	0	0	0	0

Program: Computer Science

	1	2	3	4
Fiscal Year	2003-04	2004-05	2005-06	2006-07
Expenditure Category				
Operations (1) (not including staff)	\$33,088	\$58,819	\$28,107	\$28,000
Travel (2)	\$11,093	\$12,694	\$9,000	\$9,000
Hardware/Software	\$12,814	\$18,428	\$80,000	\$60,000
Equipment (3)	\$10,193	\$803	\$3,097	\$3,000
(a) Institutional Funds	\$10,193	\$803	\$3,097	\$3,000
(b) Grants and Gifts (4)	0	0	0	0
Teaching Assistants	\$0	\$0	\$0	0
Part-time Assistance (5) (other than teaching) Student Assistants	\$2,686	\$7,200	\$6,000	\$6,000

Table II-6. Personnel and Students

Engineering Education Unit as a Whole

Year¹: Fall 2005

	HEAD COUNT		FTE (see Note 2)	RATIO TO FACULTY (3)
	FT	PT		
Administrative	7		5.33	
Faculty (tenure-track)	32	8	34.67	
Other Faculty (excluding student Assistants)		26	7.42	
Student Teaching Assistants				
Student Research Assistants		45	16.1	.38
Technicians/Specialists	8		7.33	.17
Office/Clerical Employees	10		9.5	.23
Others				

Undergraduate Student enrollment	686	248	421.17	10.01
Graduate Student enrollment	71	213	74.32	1.77

Enrollment and Degree Data for “Engineering Education Unit as a whole” include students in CE, EE, ME, and CS.

Program: Civil Engineering

Year¹: Fall 2005

	HEAD COUNT		FTE (see Note 2)	RATIO TO FACULTY (3)
	FT	PT		
Administrative	1		0.67	
Faculty (tenure-track)	6	3	6.33	
Other Faculty (excluding student Assistants)		7	2.0	
Student Teaching Assistants				
Student Research Assistants		8	2.2	.30
Technicians/Specialists*	1.5		1.5	.20
Office/Clerical Employees	1		1	.14
Others				

Undergraduate Student enrollment	123	55	78.59	9.43
Graduate Student enrollment	11	54	15.77	1.89

Program: Electrical Engineering

Year¹: Fall 2005

	HEAD COUNT		FTE (see Note 2)	RATIO TO FACULTY (3)
	FT	PT		
Administrative	1		0.67	
Faculty (tenure-track)	10	3	10.33	
Other Faculty (excluding student Assistants)		8	2.29	
Student Teaching Assistants				
Student Research Assistants		22	8.4	.72
Technicians/Specialists	2		2	.17
Office/Clerical Employees	1	1	1.5	.13
Others				

Undergraduate Student enrollment	205	76	128.62	10.19
Graduate Student enrollment	25	85	28.12	2.23

Program: Mechanical Engineering

Year¹: Fall 2005

	HEAD COUNT		FTE (see Note 2)	RATIO TO FACULTY (3)
	FT	PT		
Administrative	1		0.67	
Faculty (tenure-track)	7	2	7	
Other Faculty (excluding student Assistants)		5	1.43	
Student Teaching Assistants				
Student Research Assistants		12	4.29	.54
Technicians/Specialists	1.5		1.5	.19
Office/Clerical Employees	1		1	.13
Others				

Undergraduate Student enrollment	151	51	91.44	10.85
Graduate Student enrollment	8	29	9.49	1.13

Program: Computer Science

Year¹: Fall 2005

	HEAD COUNT		FTE (see Note 2)	RATIO TO FACULTY (3)
	FT	PT		
Administrative	1		0.67	
Faculty (tenure-track)	9		8.33	
Other Faculty (excluding student Assistants)		6	1.71	
Student Teaching Assistants				
Student Research Assistants		3	1.21	.12
Technicians/Specialists	2		2	.20
Office/Clerical Employees	1		1	.10
Others				

Undergraduate Student enrollment	207	66	122.50	12.20
Graduate Student enrollment	27	45	20.94	2.09

Table II-7. Faculty Salary Data

(Optional Table)

Academic Year 2005/2006

1. For the Institution as a Whole

	Professor	Associate Professor	Assistant Professor	Instructor
Number	320	132	101	
High	\$155,400	\$92,952	\$82,745	
Mean	\$91,218	\$65,050	\$61,323	
Low	\$70,159	\$57,706	\$52,680	

2. For the Engineering Educational Unit as a Whole

	Professor	Associate Professor	Assistant Professor	Instructor
Number	20	5	8	12
High	\$148,680	\$81,540	\$72,444	\$55,575
Mean	\$95,331	\$71,760	\$69,861	\$43,673
Low	\$81,744	\$63,756	\$65,228	\$32,670

3. Average Percent Salary Raises Given to Continuing Faculty Members for the Past Six (6) Years.

Unit	Year 2000-01	Year 2001-02	Year 2002-03	Year 2003-04	Year 2004-05	Year 2005-06
Institution as a Whole	NA	NA	NA	NA	NA	NA
Engineering Education Unit as a Whole	5.04%	4.62%	4.54%	0.53%	0.48%	4.38%

Report data for the academic year immediately preceding the visit. Include deans and department heads holding academic rank. These need not be specifically identified. Give number of persons receiving salary on an annual basis, whether working full-time or not. All salaries should be reported on an annual basis before any deductions, and normalized for a nine-month academic year. Give high, low, and mean of actual salaries being received by the individuals making up the number reported; if part-time, report full-time equivalent.

(continued)

TABLE II-7 (Continued)

4. For Each Program Submitted for Evaluation

Program		Professor	Associate Professor	Assistant Professor	Instructor
Civil Engineering	Number	5	1	0	2
	High	\$148,680	\$63,756		\$54,630
	Mean	\$93,655	\$63,756		\$43,166
	Low	\$77,376	\$63,756		\$32,535
Electrical Engineering	Number	6	2	2	4
	High	\$105,732	\$72,948	\$69,336	\$55,575
	Mean	\$95,528	\$72,462	\$67,282	\$47,948
	Low	\$87,792	\$71,976	\$65,228	\$35,685
Mechanical Engineering	Number	5	1	1	2
	High	\$111,972	\$68,580	\$66,240	\$49,725
	Mean	\$97,613	\$68,580	\$66,240	\$44,336
	Low	\$88,068	\$68,580	\$66,240	\$38,565
Computer Science	Number	3	1	5	4
	High	\$107,784	\$81,540	\$72,444	\$48,195
	Mean	\$93,928	\$81,540	\$71,616	\$39,949
	Low	\$81,744	\$81,540	\$70,368	\$32,670

Table II-8. Engineering Enrollment and Degree Data

Engineering Education unit as a whole:

** Degrees not broken out by FTPT

Year	AY	FT/ PT	Enrollment Year					Total UG	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			BS	MS	PhD	Other
Current 05-06		FT	137	96	144	309	27	713	44	NA*	NA*		
		PT	32	28	49	139	45	293	248				
1 04-05		FT	143	88	166	283	17	697	82	96	52		
		PT	18	21	45	120	23	227	182				
2 03-04		FT	175	144	121	274	18	732	64	122	53		
		PT	13	35	33	125	5	211	181				
3 02-03		FT	190	139	141	318	20	808	48	135	46		
		PT	29	33	45	138	9	254	185				
4 01-02		FT	226	134	105	291	23	779	41	112	31		
		PT	25	31	42	170	9	277	134				
5 00-01		FT	200	102	141	267	13	723	33	94	46		
		PT	20	19	45	141	9	234	118				

Enrollment and Degree Data for “Engineering Education Unit as a whole” include students in CE, EE, ME, and CS.

Program: Civil Engineering

Year	AY	FT/ PT	Enrollment Year					Total UG	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			BS	MS	PhD	Other
Current 05-06		FT	28	20	22	53		123	11	NA*	NA*		
		PT	8	7	9	31		55	54				
1 04-05		FT	25	16	28	43		112	12	9	9		
		PT	2	4	6	22		34	39				
2 03-04		FT	26	20	9	48		103	10	19	11		
		PT	3	4	5	20		32	50				
3 02-03		FT	20	14	16	41		91	12	14	13		
		PT	3	6	8	26		43	53				
4 01-02		FT	20	12	19	28		79	16	16	7		
		PT	5	6	5	29		45	36				
5 00-01		FT	22	19	16	40		97	11	19	11		
		PT	3	2	7	20		32	32				

NA*: Not available. Academic Year not yet completed.

Program: Electrical Engineering

Year	AY	FT/ PT	Enrollment Year					Total UG	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			BS	MS	PhD	Other
Current 05-06		FT	34	24	39	108		205	25	NA*	NA*		
		PT	7	7	13	49		76	85				
1 04-05		FT	43	21	54	105		223	49	39	34		
		PT	5	5	14	37		61	75				
2 03-04		FT	37	52	46	90		225	41	40	33		
		PT	3	12	9	43		67	91				
3 02-03		FT	49	43	42	114		248	30	56	24		
		PT	10	12	12	46		80	97				
4 01-02		FT	67	52	27	107		253	21	44	19		
		PT	6	15	9	62		92	77				
5 00-01		FT	69	34	41	101		245	18	36	24		
		PT	5	6	7	53		71	64				

Program: Mechanical Engineering

Year	AY	FT/ PT	Enrollment Year					Total UG	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			BS	MS	PhD	Other
Current 05-06		FT	25	22	43	61		151	8	NA*	NA*		
		PT	5	6	13	27		51	29				
1 04-05		FT	32	24	37	50		143	21	16	9		
		PT	2	4	12	24		42	18				
2 03-04		FT	43	29	28	41		141	13	15	9		
		PT	4	6	6	28		44	40				
3 02-03		FT	50	34	23	43		150	6	10	9		
		PT	6	3	9	31		49	35				
4 01-02		FT	40	23	18	45		126	4	18	5		
		PT	4	4	10	27		45	21				
5 00-01		FT	32	16	23	32		103	4	15	11		
		PT	3	5	11	30		49	22				

Program: Computer Science

Year	AY	FT/ PT	Enrollment Year					Total UG	Total Grad	Degrees Conferred			
			1st	2nd	3rd	4th	5th			BS	MS	PhD	Other
Current 05-06		FT	50	30	40	87	27	234		NA*	NA*		
		PT	12	8	14	32	45	111	80				
1 04-05		FT	43	27	47	85	17	219		32	0		
		PT	9	8	13	37	23	90	50				
2 03-04		FT	69	43	38	95	18	263		48	0		
		PT	3	13	13	34	5	68					
3 02-03		FT	71	48	60	120	20	319		55	0		
		PT	10	12	16	35	9	82					
4 01-02		FT	99	47	41	111	23	321		34	0		
		PT	10	6	18	52	9	95					
5 00-01		FT	77	33	61	94	13	278		24	0		
		PT	9	6	20	38	9	82					

NA*-Not available-Academic Year not yet completed.

Instructions for Table II-8

Give official fall term enrollment figures (head count) for the current and preceding five academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the fall visit. Provide data in the first left-hand block of spaces for the entire engineering educational unit and in separate blocks thereafter for each program being submitted for +evaluation.

Copy and paste sufficient copies of the program table to accommodate the number of programs being reported.

Table II-9. History of Admissions Standards for Freshmen

Academic Year	Composite ACT		Composite SAT		Percentile Rank in High School		Number of New Students Enrolled
	MIN.	AVG.	MIN.	AVG.*	MIN.	AVG.	
2000-01	11	16.0	480	866.2	NA	NA	121
2001-02	14	18.5	630	914.4	NA	NA	145
2002-03	12	20.2	440	902.9	NA	NA	113
2003-04	11	16.9	470	890.6	NA	NA	94
2004-05	12	18.9	610	987.1	NA	NA	98
2005-06	13	19.8	550	944.9	NA	NA	114

* Note: Students whose high school GPA exceeds 3.0 are not required to submit SAT scores

Instructions: Give minimum and average test scores and/or high school standing for the last six (6) academic years. Use either ACT or SAT as appropriate. The number of students enrolled should be for all programs in the engineering education unit. If standards differ for some engineering programs, either fill out additional table(s) or explain in the text. If formal admission to engineering programs is not made in the freshman year, give freshman figures for the overall institution and so indicate, and use the format of Table II-10, *History of Transfer Engineering Students*, to report standards for admission to engineering programs.

Table II-10. History of Transfer Engineering Students

Academic Year	Number of Transfer Students Enrolled
2005/06	99
2004/05	114
2003/04	78
2002/03	94
2001/02	79
2000/01	79

Instructions: Complete table for the last six (6) years.