LAMAR UNIVERSITY

COLLEGE OF ARTS AND SCIENCES REPORT

CALENDAR YEAR 2008 - 2009

Department: Computer Science

***Please take a few minutes to relect on your depart/program’s progress toward each of the following:***

1. ***IE Plans***—What has the department learned from the assessment data so far? What are your plans as a

result of the evaluation? Do you need anything to enhance your plans?

As a result of our assessment of the students’ work in Data Structures and in the Senior Seminar, as well as comments in student evaluations and exit interviews, we determined that the curriculum needed more emphasis on design of computer programs. As a result we have changed COSC 3304 from “Object-Oriented Design and User Interfaces” to “Design and Analysis of Algorithms.” The course has changed from one of teaching how to express problems with object oriented methods to one emphasizing algorithms and analysis of alternative algorithms in terms of efficiency and scalability. Also, we have noticed that our students needed more awareness of the local and global impact of technology. As a result we have changed Objective 2 of our program to read “Graduates will have sufficient awareness of the local and global impact of technology and of the ethical issues in computer science to make decisions regarding their personal and professional responsibilities.” In addition, we have added modules on social impact to four courses which previously did not contact such content.

Students sometimes complained in our Exit Surveys and Exit Interviews that they wanted to study more topics than our curriculum offered. Although we have offered a large number of electives every year, our undergraduates have had trouble taking them along with the 16 required courses for the B.S. in Computer Science. We have responded to that need by approving a new Bioinformatics concentration at the bachelor’s level that we hope will be attractive to majors. This concentration also will include a minor in Biology. The Curriculum Committee has also looked at two other possible concentrations: theory and implementation of games, and computer systems. However, even though the department thinks these concentrations will increase our retention of high potential majors, given the size of our faculty (nine tenured or tenure track faculty and two instructors), we do not believe we can implement those concentrations until we have more faculty.

2. ***Strategic Plans***—Which of the following strategic initiatives has your department contributed to this year? What are your plans for next year?

***Students.***

1a. **To attract, retain, and graduate high-quality students.**

Department Goal: To increase the number of upper division undergraduates by 10 % per year. We have been employing more upper division students through research grants and our faculty have been trying to engage undergraduates and graduates in research. Several students attended prestigious national and international conferences where they have presented posters and papers in 2008. In previous years, only one or two upper division students worked each year with faculty on research. Last year at least four faculty members worked with upper division students on research. Next year, we intend to continue and expand undergraduate research.

**1b. To engage students with faculty and staff through academic, social, and civic experiences.**

Department Goal: 1. To increase by 10% per year the number of undergraduate research projects. In the past we have had only one or two undergraduates working on research per year. In 2008 that number increased to approximately 12 as the INSPIRED program had six to eight students, and several faculty members guided students on successful research efforts. In addition, our students worked at two summer academies for middle school children and one academy for high school students in the summer of 2008. Our students also went to Career Day at Westbrook High School and contributed to the Open House events at Lamar in the fall and spring. Next year we want to duplicate this goal.

Department Goal: 2. To increase by 10% per year, the number of students involved in outreach efforts to middle schools and high schools, and

Department Goal: 3. To increase by one each year from spring 2008 to spring 2011, the number of co-curricular events in the department.

The INSPIRED program and our student chapter of the computer science professional societies, the ACM and UPE, were highly involved in outreach activities. Our students worked in three summer academies for middle school and high school girls, and some of them worked during Open House and Career Day at Westbrook High School.

In addition to the work of the INSPIRED students, the department instituted a weekly Research seminar that included external speakers such as Professor Ariel Fernandez from Rice University as well as professors from the Computer Science department and the Mathematics departments at Lamar. We have never had such a seminar before. Also, we had an International Day that emphasized cultures and food from countries represented by our students. A CS Day was created to be held in April of each year in which the students design their own activities such as competitive games and movies. There are no regularly scheduled classes that day.

Next year, want to increase the number of middle and high school students who participate in our academies. Already in March of 2009 we held one academy for middle school students on a Saturday that involved 35 students, which is the largest number to attend so far. We are increasing contacts with teachers and principals in the area K-12 public and private schools. In 2009, our goal is to continue this trend.

***Faculty and Staff*. To attract, develop, and reward a staff and a faculty of teacher-scholars committed to the mission and values of Lamar University.**

**2a. To attract and retain high-quality faculty and staff by offering salaries and benefits that are competitive with other universities and, where appropriate, with the private sector.**

Department Goal 1: Upgrade Mr. Sun’s position in 2008 so that it includes both system administrations and teaching so that he can manage our instructional labs and provide for excellent facilities for

COSC 1371, which earns approximately 350 to 400 SCH per semester for the department. He has been the Coordinator for that course for the last two years. Mr. Sun is currently employed as a Tech Support 2 in spite of the fact that he takes care of research equipment in other labs on campus such as those in Physics, he has a M.S. in Computer Science from the University of Houston, he teaches COSC 1371 and acts as a coordinator for the COSC 1371 with other instructors of the course. He has several years of working experience in industry as a system administrator, and he is certified to teach courses in computer network security by SCP. By upgrading Mr. Sun’s position, we ensure a stable, effective laboratory environment for both instruction and research in the department and in related programs on campus. Mr. Sun can easily find employment outside Lamar University, but he prefers to stay here. He is currently paid at the same rate as an entry level technician in the IT Department. Our goal is to keep improving in this area.

We are currently advertising for an Instructor position which will include both systems administration and teaching responsibilities. Mr. Sun may be able to obtain that position, which, if he is successful, improve his salary and working conditions. We also hired a new technician in 2009, Mr. Jason Foster, who has increased our ability to troubleshoot PC software and hardware problems in the department. He has made a great difference in reducing the downtime of equipment due to malfunctioning software, hardware, or computer viruses. Our goal is to further improve his expertise.

Department Goal 2. Continue to hire faculty members with upstanding teaching and research potential. The department hired Dr. Kami Makki as an Associate Professor in fall 2008. He has ten years of

of experience as a professor, and he has brought three external grants to Lamar.  We were allowed to do so, because Dr. Dehu Qi left in spring 2008. We want to add a faculty live next year to cope with new demands for increased diversity in our course offerings including Academic Partners and online distance education initiatives.

**2b. To retain and reward faculty and staff who demonstrate outstanding support for the mission and core values of the university.**

Department Goal 2008: Our goal is to provide incentives and encouragement to faculty who develop online courses for the department. We want our required upper division undergraduate courses online by the end of 2008. We believe that the department will meet the needs of community college graduates in computer science throughout Southeast Texas including Houston. To retain our faculty and reach our goal, we found monies from the Administration to give grants to faculty members who developed online classes, and we are paying them for an overload the first time the course is offered online. We want to continue these practices next year.

**2c. To implement professional development activities that support the mission and core values of the university.**

Department Goal 2008: All of our faculty attend at least one workshop given by the Distance Education program to enhance the electronic technology and course design skills of our faculty for delivering

courses to remote users. All tenure track faculty members will attend an ABET Assessment workshop over the next two years. All but two of our faculty members attended workshops given by Distance Education, and all but one attended an ABET assessment workshop during 2008. Five members of the department attended the weeklong seminar on Process Education presented by Pacific Crest. Two members went to a weeklong workshop in Denver to learn more about how to develop quality online courses. Both of these individuals have since used what they learned to put courses online.

***Diversity.*  To promote a rich and varied campus culture through diversification of programs, services and people.**

**\*3a. To offer and continuously enhance curricular and co-curricular programs that develop students’ abilities to function in a multicultural world.**

Department Goal 2008: The Computer Science Department is fortunate to have a large graduate program that consists mostly of international students from India, Nepal, and China. We intend to continue to have project teams consisting of both American and International students when possible. Moreover, in the INSPIRED program, graduate international students support the undergraduates with their technical knowledge and experience. The department also has a professional organization, the Association for Computing Machinery, which encourages all students to belong and to participate in a variety of activities including a yearly banquet, regional programming contests, movie nights, game nights, and LAN parties. Our goal is to continue to further interaction among the many nationalities represented in our programs.

We did achieve this goal in 2008. All of the activities mentioned above we did. Next year, we hope to continue to foster social and intellectual interaction among our American and international students through the continuation of the activities mentioned above.

**\*3b. To further diversify Lamar University’s students, faculty, and staff.**

Department Goal 2008: Our staff currently includes a system administrator from Mongolia, faculty members from the Peoples’ Republic of China, Korea, Vietnam, Romania, and the U.S.A. We have about 100

American students at the undergraduate level that represent the ethnic composition of the region, and we have approximately 130 international students primarily from Asia. It is our goal to continue to recruit and retain faculty and staff that mirror the composition of people interested in our field throughout the world. Our most recent faculty hire in summer of 2007 came from Singapore and is a native of Romania. Our commitment to finding the best people for our department and working in harmony with one another is one we want to maintain.

In 2008, we hired Dr. Kami Makki, an American Permanent Resident born in Iran. We intend to continue our policy of recruiting excellent faculty regardless of ethnicity or gender. Dr. Makki has three significant external grants which he could have used at the University of Toledo. Instead he did the extra work to bring them to Lamar. We also hired Mr. Jason Foster as a member of staff to assist Mr. Frank Sun in maintaining our equipment. He has proven to be a knowledgeable and friendly asset to the department. He gives us further depth in responding to viruses on PCs and to hardware and software problems in general. He comes to us with an MIS degree from Lamar and several years of work experience.

***Collegial Environment.* To provide physical, social and learning environments which are diverse and collegial and which enhance the personal and professional development of students, faculty and staff.**

**4a. To continuously improve all aspects of university life by using data-driven collegial decision making.**

Department Goal 2008: We intend to use data derived from student surveys, exit interviews, objective tests, student projects graded with rubrics, and final exam results, and student oral defenses to improve our

curricula, including the communication and leadership skills of our students. We want to engage the students in classes in projects directed by professors that lead to undergraduate research presentations at the annual Lamar Research Conference, and at external conferences. We want each of our faculty, including our instructors, to attend at least one workshop or conference per year. Also, all faculty will serve on departmental committees that study our curricula, assessment process, and retention and recruitment efforts. These committees will require cooperation and build collegiality among our faculty members.

During 2008, we met this goal. Our department committees worked hard to follow the ABET criteria for Assessment and Evaluation of our program. We made changes that we hope will improve curriculum, retention

and recruitment. These committees gave the faculty more power to determine the direction of our programs and to promote new initiatives with respect to retention and research. We did see more collegiality and

cooperation among the faculty than in the recent past. In particular, the faculty members are much more active in discussing assessment issues with one another.

**4b. To enhance the physical environment through efficient use of space and careful planning of renovations and expansion.**

  Department Goal 2008: Complete the renovation of space for labs in Maes 103-105, 104-106, 201, 210, 209, and 208 so that space that was previously used for storage, small offices, or utility rooms will be utilized by our active research faculty for the purpose of research and instruction. We began this renovation with the support of the College of Arts & Sciences in summer 2007, but we do not expect to have fully functional labs until the middle of 2008.

This goal was met during 2008. Next year we want to renovate the old Writing Center so that it can be a multi-function space for the department: a cool room for equipment, an area for a Linux lab, and area for some multimedia equipment including MAC computers, and a space for research for our new faculty member, Kami Makki.

**4c. To sustain participatory strategic planning involving faculty, staff, and students.**

Department Goal 2008: We have established a Retention and Recruitment Committee that has already met once in fall 2007. Our goal is to utilize this Committee to bring ideas for retention and recruitment to faculty meetings for discussion and possible adoption. All faculty members will serve on strategic planning committees in areas of curriculum, assessment, and recruitment/retention.

This goal is similar to the one under section 4.a. Certainly the Retention and Recruitment Committee was active especially in the spring of 2008. Among the results of this initiative are tutoring of freshmen, more

external speakers, pair programming among students, more discussions about assessing learning in faculty meetings, and increased attention to the needs of staff. For example, we continued to work toward improving

Frank Sun’s job description and salary, giving our Administrative Associate more input on her duties, and hiring a new full time technician, Mr. Jason Foster, to assist Mr. Sun. Our faculty came together on issues of

curriculum and workloads. Next year, we intend to continue to emphasize collegiality, cooperation, and faculty input in all strategic planning within the department.

**4d. To provide a technological infrastructure that supports university needs, including hardware, software, people and training.**

Department Goal 2008: We want to upgrade our server configuration for instructional needs by purchasing a rack from SUN Microsystems for organizing our many independent servers. The rack can be used for servers for other departments in the College of Arts & Sciences. In addition, we hope to work with IT and other academic departments to obtain high performance equipment for research and instruction at reduced cost through collaborative purchasing agreements with vendors.

We did purchase a Sun Microsystems rack and several Sun Blade  workstations which has made management of our network easier and more effective. It has also allowed us to move some of our servers out of Maes 214, so that that room can be used more effectively as an open lab for all students. We have not had occasion to work with other academic departments on system administration or collaborative purchasing. However, we are still interested in collaboration of this kind and want to do so in 2009.

**4e. To plan, execute and monitor institutional effectiveness assessments and improvements based on the assessment results,  including:**

Department Goal 2008: Our Assessment Committee consists of the department chair and four other faculty members. Each semester we collect and analyze the data that is collected from both direct and indirect measures of our educational objectives and learning outcomes. Each year the entire department looks at the data to determine whether changes that have previously been made to our curriculum and other activities have led to improved results and whether new changes need to be made. This process is consistent with ABET and SACS accreditation methods. We have been refining our assessment methods for several years, and we intend to do this in 2008. Each year we publish on our website an annual ABET report, and in the last 18 months we have been producing SACS plans and reports on our assessment activities.

Our faculty members attended ABET workshops during 2008, which made this process much more effective in the department. We continued to refine and improve our performance criteria for student learning

outcomes, and we modified those outcomes to include global as well as local awareness of the impact of technology on society. Perhaps more importantly, we have increased our documentation of the interpretation of

assessment data and the improvements that we made as a result of the evaluation of data. Next year, we want to learn even more about how we can use assessment and evaluation to improve our programs.

***Public Engagement.*  To build strong relationships with stakeholders through leadership in economic development, outreach, and public engagement with the region, the state, and the nation.**

**5a.** **To provide leadership in economic development.**

Department Goal 2008: To continue to work with the departmental Industrial Advisory Board to develop programs that enable our students to obtain good jobs or enter graduate school upon graduation. We also intend to continue to write and submit proposals for external funding of research and instructional projects.

Our department was very active in both of these goals in 2008. Thanks to the input of our Advisory Board we moved forward with our efforts to establish a Bioinformatics concentration at the bachelor’s level. We also

established a Hall of Honour to recognize outstanding computer science alumni. Certainly, our faculty was active in writing proposals for external funding. Eleven proposals were submitted according to the Office of

Sponsored Research. Several of the faculty were active in doing the work required to satisfy existing grants.    Our Advisory Board is enthusiastic about assisting the department, and our faculty are, if anything, more

inclined to write proposals than ever before. Thus, we intend to continue on our path next year with both the Advisory Board and the writing of external funding proposals.

**5b. To engage students, faculty, and staff in outreach.**

Department Goal 2008: The INSPIRED program led by Dr. Peggy Doerschuk and Dr. Jiangjiang Liu will do outreach to middle schools and high schools in this region, and we will have at least two summer camps

for these students at Lamar during summer the of 2008.

The department met its goal in this area. Drs. Doerschuk and Liu had three summer academies. Two of them were for middle school girls and one was for high school girls. In 2009, they have already had one academy

in March for middle school students, and there are plans for several more in the summer. In addition, with the new STAIRSTEP grant, there will be outreach efforts to community colleges in 2009.

***Resources.* To expand, enhance, and broaden Lamar University’s financial resources in order to enhance programs and services.**

**6a. To identify, pursue, and increase funding for the university.**

Department Goal 2008: Each tenured or tenure track faculty member will submit as a PI or CO-PI at least one external funding proposal each year. The department will also work with the Industrial Advisory Board

and our alumni to raise money for scholarships.

Only one tenured or tenure track faculty member did not submit as a PI or CO-PI an external funding proposal. That person was Professor Foreman who has not participated in research mostly because he does not have a

Ph.d. He is, however, fully capable of contributing to such efforts. Next year, I am going to renew efforts to find a suitable proposal on which he can collaborate with other people in the department. He has, however,

obtained two internal grants in the last year for developing online courses, and he is very good at doing that. In any case, other than Mr. Foreman, the department did meet our goal of external funding proposals by

everyone in 2008. Next year we intend to continue to be active in seeking external funding.

Regarding scholarships, our Advisory Board established the Bill Nylin Scholarship two years ago and endowed it with more than $40,000. For that reason, we did not make a strong effort to raise more money from the members of our Board for scholarships. We do want the Board next year to concentrate on helping us find more opportunities for internships and coops.

**6b. To utilize resources more efficiently.**

Department Goal 2008: We are in the process of renovating space on the second floor of Maes for research laboratories. These laboratories are needed if the faculty are going to continue to produce good

research and grant proposals that have a strong probability of receiving funding. We hope to complete the renovation of space for four labs in 2008. Another goal is to obtain a rack for servers that has terabytes of storage that will enhance our ability to provide reliable instructional services in our lab. It will also enable us to have more actual space devoted to equipment for students.

As mentioned previously, we did complete the renovating of four new areas for research labs. We also purchased a Sun rack. These actions in 2008 gave our researchers much more credibility in grant writing, and we now are able to devote more space to equipment for students. Our management of the network is easier and more reliable than before because of the additional storage space in the Sun rack. Next year, we need to upgrade the area where the Sun rack is located and to renovate Maes 208, the former site of the Writing Center.

3. ***Enrollment***—Review the enrollment (SCH + Student FTE) data for the past three years. Has your SCH/FTE’s increased/decreased or remained static? Please provide a rationale for your results.

Data from the Office of Institutional Reporting and Research show the following enrollment data through fall 2008 for Computer Science:

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| **Computer Science** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  | **Spr 2004** | **Sum 2004** | **Fall 2004** | **Spr 2005** | **Sum 2005** | **Fall 2005** | **Spr 2006** | **Sum 2006** | **Fall 2006** | **Spr 2007** | **Sum 2007** | **Fall 2007** | **Spr 2008** | **Sum 2008** | **Fall 2008** |
| **Total On-Campus SCH - Computer Science** | | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 1,302 | 216 | 1,458 | 1,233 | 291 | 1,657 | 1,139 | 246 | 1,101 | 1,110 | 259 | 1,135 | 909 | 184 | 874 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 348 | 72 | 443 | 382 | 66 | 310 | 371 | 45 | 501 | 358 | 63 | 434 | 294 | 93 | 254 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 1,021 | 468 | 672 | 812 | 312 | 353 | 459 | 219 | 391 | 469 | 276 | 447 | 472 | 273 | 302 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Total On-Campus SCH - Computer Information Science** | | | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 6 | 0 | 0 | 0 | 0 | 3 | 6 | 0 | 3 | 0 | 0 | 3 | 6 | 0 | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 66 | 9 | 84 | 27 | 15 | 36 | 27 | 24 | 60 | 27 | 15 | 87 | 27 | 0 | 66 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 207 | 30 | 387 | 147 | 48 | 231 | 87 | 51 | 180 | 153 | 54 | 171 | 57 | 0 | 150 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Department Total On-Campus SCH** | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 1,308 | 216 | 1,458 | 1,233 | 291 | 1,660 | 1,145 | 246 | 1,104 | 1,110 | 259 | 1,138 | 915 | 184 | 877 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 414 | 81 | 527 | 409 | 81 | 346 | 398 | 69 | 561 | 385 | 78 | 521 | 321 | 93 | 320 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 1,228 | 498 | 1,059 | 959 | 360 | 584 | 546 | 270 | 571 | 622 | 330 | 618 | 529 | 273 | 452 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Average Class Size On Campus, Lab** | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 13.00 | 0.00 | 26.00 | 12.50 | 0.00 | 17.00 | 7.00 | 6.00 | 16.00 | 13.50 | 4.00 | 20.00 | 22.00 | 1.00 | 16.50 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 2.17 | 1.50 | 1.71 | 2.50 | 1.00 | 1.00 | 1.00 | 0.00 | 1.33 | 1.00 | 1.00 | 1.33 | 1.50 | 1.00 | 1.50 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Average Class Size On Campus, Lecture** | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 30.79 | 17.50 | 35.64 | 29.43 | 18.80 | 35.38 | 27.07 | 13.00 | 12.50 | 26.14 | 11.00 | 24.25 | 19.06 | 9.33 | 18.81 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 9.50 | 3.50 | 10.71 | 12.17 | 4.29 | 10.82 | 12.82 | 4.17 | 16.67 | 12.82 | 4.00 | 12.71 | 11.60 | 4.13 | 9.08 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 28.07 | 12.83 | 27.08 | 19.47 | 10.18 | 15.15 | 19.70 | 7.08 | 18.17 | 22.30 | 7.45 | 16.38 | 18.10 | 11.14 | 13.82 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Average Class Size On Campus, Other** | | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 2.50 | 3.33 | 3.00 | 3.00 | 2.00 | 2.00 | 0.00 | 5.00 | 3.00 | 1.50 | 3.00 | 1.50 | 0.00 | 1.50 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Degrees Awarded** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Associate** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Bachelor** | 4 | 0 | 8 | 6 | 1 | 1 | 5 | 0 | 6 | 2 | 0 | 1 | 7 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Masters** | 21 | 15 | 34 | 25 | 14 | 15 | 10 | 4 | 14 | 4 | 13 | 12 | 1 | 12 | 12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Doctoral** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Budgeted SCH** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 815 | 168 | 635 | 620 | 225 | 836 | 605 | 201 | 157 | 240 | 87 | 234 | 281 | 100 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 423 | 84 | 515 | 409 | 81 | 346 | 407 | 72 | 564 | 280 | 42 | 497 | 282 | 72 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 1,228 | 498 | 990 | 893 | 360 | 533 | 546 | 270 | 532 | 622 | 315 | 591 | 478 | 273 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Total SCH** | 2,466 | 750 | 2,140 | 1,922 | 666 | 1,715 | 1,558 | 543 | 1,253 | 1,142 | 444 | 1,322 | 1,041 | 445 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Fac FTE** | 9.50 | 0.00 | 9.25 | 9.00 | 0.00 | 10.00 | 8.58 | 3.75 | 8.00 | 8.00 | 4.25 | 8.75 | 8.00 | 6.08 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **SCH/Fac FTE** | 259.58 | 0.00 | 231.35 | 213.56 | 0.00 | 171.50 | 181.59 | 144.80 | 156.63 | 142.75 | 104.47 | 151.09 | 130.13 | 73.19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Stu SCH/Fac SCH** | 17.87 | 8.62 | 15.74 | 16.71 | 8.22 | 15.04 | 16.75 | 7.24 | 14.08 | 13.13 | 6.63 | 11.60 | 12.39 | 6.10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Stu/Fac Ratio** | 19.46 | 0.00 | 17.21 | 15.89 | 0.00 | 12.32 | 13.17 | 10.85 | 11.55 | 10.81 | 8.20 | 11.20 | 9.67 | 5.28 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Computer Science** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | **Spr 2004** | **Sum 2004** | **Fall 2004** | **Spr 2005** | **Sum 2005** | **Fall 2005** | **Spr 2006** | **Sum 2006** | **Fall 2006** | **Spr 2007** | **Sum 2007** | **Fall 2007** | **Spr 2008** | **Sum 2008** | **Fall 2008** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Non-Budgeted SCH** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 640 | 114 | 1,000 | 787 | 162 | 953 | 729 | 162 | 1,133 | 1,107 | 244 | 1159 | 844 | 135 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 0 | 0 | 15 | 0 | 6 | 45 | 33 | 0 | 60 | 204 | 57 | 159 | 138 | 63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 0 | 0 | 69 | 66 | 0 | 51 | 0 | 0 | 39 | 0 | 15 | 27 | 51 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Total SCH** | 640 | 114 | 1,084 | 853 | 168 | 1,049 | 762 | 162 | 1,232 | 1,311 | 316 | 1,345 | 1,033 | 198 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Fac FTE** | 1.25 | 0.00 | 1.33 | 1.48 | 0.00 | 1.48 | 2.00 | 0.58 | 3.07 | 2.80 | 2.58 | 2.60 | 2.60 | 2.50 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **SCH/Fac FTE** | 512.00 | 0.00 | 815.04 | 576.35 | 0.00 | 708.78 | 381.00 | 279.31 | 401.30 | 468.21 | 122.48 | 517.31 | 397.31 | 79.20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Stu SCH/Fac SCH** | 30.48 | 19.00 | 41.69 | 37.09 | 18.67 | 37.46 | 36.29 | 23.44 | 24.64 | 27.89 | 10.19 | 24.02 | 18.78 | 9.43 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Stu/Fac Ratio** | 34.13 | 0.00 | 55.20 | 39.17 | 0.00 | 47.83 | 25.40 | 18.62 | 26.97 | 31.21 | 8.26 | 34.66 | 26.81 | 5.63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Scheduled Classes Taught** | | | | | | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **On-Campus** | 56 | 30 | 57 | 49 | 28 | 50 | 40 | 27 | 49 | 44 | 32 | 54 | 43 | 28 | 48 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Off-Campus** | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 4 | 2 | 6 | 6 | 4 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Total** | 57 | 31 | 58 | 50 | 30 | 52 | 42 | 28 | 51 | 48 | 34 | 60 | 49 | 32 | 58 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Major Enrollment--** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CIS** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 0 | 0 | 3 | 5 | 3 | 18 | 14 | 5 | 13 | 16 | 2 | 18 | 20 | 1 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 6 | 3 | 3 | 2 | 2 | 7 | 9 | 4 | 6 | 7 | 6 | 19 | 13 | 8 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **CS** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 4 | 2 | 4 | 3 | 2 | 60 | 49 | 16 | 58 | 45 | 12 | 55 | 55 | 15 | 56 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 19 | 15 | 20 | 19 | 7 | 23 | 29 | 23 | 30 | 30 | 21 | 31 | 31 | 22 | 34 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MCS** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 180 | 110 | 172 | 145 | 83 | 100 | 95 | 65 | 113 | 106 | 87 | 113 | 85 | 59 | 75 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **PCIS** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 15 | 13 | 22 | 13 | 6 | 3 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 4 | 2 | 4 | 6 | 3 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **PCS** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Lower** | 37 | 11 | 66 | 46 | 15 | 12 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Upper** | 6 | 7 | 9 | 10 | 9 | 2 | 2 | 2 | 0 | 0 | 1 | 2 | 2 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Graduate** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Total Mjr Enrl** | | 272 | 163 | 304 | 251 | 132 | 228 | 206 | 117 | 224 | 205 | 130 | 239 | 206 | 105 | 192 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

From this data, it can be seen that budgeted scheduled credit hours and enrollment have declined in the last three years. In fact the SCH from fall 2006 to fall 2008 declined 21% among lower division students, and nearly 43% among upper division undergraduates. Among graduate students, the SCH decreased by 20%. The SCH/FTE ratio decreased about 4 % from fall 2006 to fall 2007. The ratio was not included in the statistics provided by IRR for fall 2008. In contrast, nonbudgeted SCH increased among lower division students almost 16% from the spring 2006 to spring 2008 (fall 2008 statistics were not reported). Among upper division undergraduates the increase over the same period of time was more than 400% and at the graduate level we generated 61 SCH in spring 2008 as opposed to none in spring 2006.

Regarding actual headcount, the numbers are as follows for fall 2006 and fall 2008, respectively: lower division 74 and 71; upper division 37 and 44; graduate students 113 and 75.

From these numbers, it can be readily understood why the departmental strategic goal 1a. was to increase the number of upper division undergraduate majors by 10% per year. One reason for the overall drop in SCH among our undergraduates is that fewer American students throughout the U.S. have been majoring in computer science since 2002 because of fears of outsourcing and a decline in interest in science and engineering. This trend seems to changing according to the latest statistics from the Computer Science Research Association which says that university enrollment in computer science increased about 6% in the last year. Another reason may be that more computer science students are taking longer to graduate because of course requirements and off-campus employment. For example, it is noteworthy, I believe, that the number of our upper division students actually increased by 7 between fall 2006 and fall 2008 while the number of SCH declined by more than 40%.

Another enrollment fact that is important for our department is that nonbudgeted SCH are increasing very rapidly. This is due to the fact that the Department made a commitment in 2007 to put all of our required courses for the B.S. in Computer Science online. We are in the process of doing that and expect to be able to meet that goal by the end of 2010.

We are, of course, very concerned about improving our retention rate, since we lose many of our freshmen in the first two courses. Our efforts center on the NSF funded INSPIRED and STAIRSTEP programs directed by Dr. Peggy Doerschuk and Dr. Jane Liu. The INSPIRED program involves not only research by the students, but also outreach to area middle schools and high schools. Here are some facts listed in Dr. Doerschuk’s f2.08 form for 2008:

Outreach activities

1. Members of the WIRED/INSPIRED team that I direct made a presentation on robotics to students at Westbrook High School Career Day in spring 2008.
2. Members of the WIRED /INSPIRED team that I direct participated in Weekend of Welcome in 2008.
3. Directed and participated with WIRED/INSPIRED team in robotics demonstration at MathFest in fall 2008
4. WIRED/INSPIRED students that I direct made presentation to prospective students at Fall Open House.
5. Directed and participated in INSPIRED 2008 summer computing academy for middle school students – 26 students participated in two one-day academies
6. Directed and participated in INSPIRED 2008 summer computing academy for high school students – seven students from six local high schools participated in the five-day academy.

Brag Facts from INSPIRED’s first year assessment:

* Eighty-six percent of INSPIRED students were retained as CS majors.
* The first INSPIRED graduating senior enrolled in graduate courses.
* INSPIRED students made higher grades in CS/CIS courses than their peers.
* INSPIRED students reported that participation in INSPIRED had a significant positive impact on their development towards attaining learning objectives of the department.
* Middle and high school students loved the academies and experienced significant learning.

In addition to these activities, we have instituted a number of curriculum changes, and we hold an International Day for our department that involves the active participation of our international students.

In the fall, we instituted a Research Seminar every week which has been very successful in getting more graduate students interested in research and doing a thesis. Several faculty members including Dr. Andrei and Dr. Sun worked with undergraduates and graduate students on independent research projects. Dr. Makki is doing that in spring 2009.

To increase our SCH/FTE, we want to continue to increase our online offerings and to participate in the programs that Higher Education Holdings have begun with Lamar. We also want more of our upper division undergraduates and graduate students to engage in research with the faculty. To do this, and to continually increase the amount of time our faculty can work with students on quality research that will lead to conference publications, we need more faculty. To continue on the multi-directional path we are following to increase SCH/FTE we will need continual support for hiring graduate students to work for the department as technicians and graders, and we also need the support of the University to renovate more space in the Maes Building for research and open labs.

4. ***Graduation Rates***—Compare graduation rates for the past three years. Has the number increased/decreased or remained static? Graduation rates have been low given the number of our majors and they have been erratic. In 2006, eleven bachelors degrees were awarded, in 2007 only three, and in 2008 eight were awarded. During the same three years, twenty-eight, twenty-nine, and twenty-five M.S. degrees were given by Computer Science. Thus, our graduation rate among international students doing graduate work has been stable. However, we did not have a large new population of international students in fall 2008, so I expect the number of graduates to decline somewhat in 2009 and 2010.

To increase the number of graduates, the department is concentrating on three things: retaining students in the first three semesters, offering more online courses to help students with Associate degrees in computer science at community colleges to finish their work at Lamar, and hiring more students to do research in the junior, senior, and graduate years. To do these things, we need sufficient faculty, especially faculty who are active researchers, and we need our faculty to continue to have workloads and travel money available to them so that proposals for external funding for research can continue to be made successfully. Grounding all of this is the need for money to continue to hire student employees.

***Student Workers***

Please indicate how many students are currently employed and how they are utilized:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Numbers | Undergraduate Students | How Utilized? | Graduate Students | How Utilized? |
| 1-3 |  |  |  |  |
| 4-7 |  |  |  |  |
| 8-10 |  |  |  |  |
| 10-12 | X | Research/Outreach/Webmaster |  |  |
| More than 12 |  |  | X | Research, Teaching Assistants, Technicians, Webmaster, Department Office Assistant |

Is your budget sufficient for student workers? If not, provide a plan of action that indicates the needs of your department, estimated costs and benefits.

In 2008, we spent a total of $87,501.96 on student assistants, research assistants, technicians, webmasters, and graders from local and state accounts. We also spent approximately $45,000 from external funding sources on student workers. This amount of money was adequate for meeting the needs of the department during the year. In general, we have a large cohort of international graduate students who want and expect employment in the department as part of their education. To meet our faculty’s needs for research assistants and graders, our department’s need for technicians and office help, and our department’s need for 24/7 support of our network, we will continue to need many student employees in the future. External funding has helped us to pay for many of the students doing research, but those external funds come at the cost of reduced administrative work by the instructors. The biggest challenge we face in 2009 and beyond at this time regarding student costs is the increase in minimum wage which is now in excess of $7/hour. We are hoping that increased use of instructional technology will help to contain the cost of student workers in the department. I expect that by 2010, the department will need an increase of about 10% in funding for students in spite of our efforts to control student worker costs.

***Student Honors, Accomplishments, and Recognition***

Identify any honors or recognition that your students have achieved.

|  |  |
| --- | --- |
| **Student** | **Honors/Accomplishments** |
| Crystal Wettingfeld | “INSPIRED Instructional Materials for Engaging Middle School Students in Computing,” Crystal Wettingfeld, poster presented at the 44th Annual Conference of the Association for Computer Educators in Texas, Austin, October 3, 2008.  **Awarded third place** in student poster competition. |
| Iris Garcia and Valerie Juarez | “Instructional Materials for Engaging Middle School Students in Computing Using Animation,” Iris (Beltran) Garcia and Valerie Juarez, poster presented at the Grace Hopper Celebration 2008 international conference, Denver, Colorado, October, 2008. Thousands of participants from academia and industry participated in this conference. |
| Zack Henkel | “Research in Exploring Computer Science through Robotics,” Zachary Henkel, poster presented at the 44th Annual Conference of the Association for Computer Educators in Texas, Austin, October 3, 2008. **Awarded second place** in student poster competition. |
| Valerie Juarez | Valerie Juarez, “Analysis of Memory Performance for Chip Multiprocessors,” *44th Annual Conference of the Association for Computer Educators in Texas (ACET 2008),* Austin, TX, Oct. 2-4, 2008, received **Student Poster First Place Award**. |
| Valerie Juarez | Valerie Juarez received **scholarship** to participate in CompArch Summer School on Parallel Programming and Architectures sponsored by the Computing Research Association's Committee on the Status of Women (CRA-W) and the Coalition to Diversify Computing (CDC). |
| Richard Denson, Rick Guidry, Matthew Pinney, and Rafael Romero | The results have been communicated and published at the official website of LynxMotion Inc. <http://www.lynxmotion.com/ViewPage.aspx?ContentCode=projects&CategoryID=20#l5-6arm>. The results have also been published in an accepted paper at the Second International Workshop on Real Time and Embedded Systems, in conjunction with the 9th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timisoara, Romania, September 26-29, 2008. |
| Ricky Guidry | Ricky Guidry: “Investigation of SAT-based Scheduling Techniques in Comparison with Traditional Approaches”, Lamar University, Computer Science Department, Fall 2008 – The results have been published jointly by Dr. Andrei with Ricky Paul Guidry at the 19th Annual Symposium for Undergraduates in Science, Engineering, and Mathematics, Argonne National Laboratory, Chicago, Ilinois, November 7-8, 2008. Mr. Guidry gave the presentation at Argonne National Labs in November 2008. |

Does your Department have a Mirabeau Scholar? Yes

The Mirabeau Scholar is Valerie Juarez, who is one of the students that is mentioned in the table above for student honors in 2008. She came to Lamar in the fall of 2007 and has distinguished herself in every aspect of her work in the Department. She is now the President of the student chapter of the ACM, the student professional organization for our discipline. She has done outreach work and research for the INSPIRED program, and she has volunteered to work at university functions such as Open House the the Week of Welcome.

Describe any student mentoring activities undertaken by the faculty. The INSPIRED program currently has 10 undergraduates and 3 graduate students, and the STAIRSTEP program has 3 undergraduates and 1 graduate student. Both programs engage in extensive mentoring with the more experienced upper level students teaching and training the lower level students especially the freshmen. In addition, both Dr. Doerschuk and Dr. Liu spend much time helping the students individually. The students hear talks on the benefits of graduate school, career preparation, time management, and study habits. Dr. Andrei has mentored several undergraduates including Ricky Guidry who is a gifted student who is majoring in mathematics and computer science. Dr. Andrei has worked closely with him on exciting research projects as well as advising him on career choices.

***Faculty Productivity Measures***

1. Publications

\_\_13\_\_\_\_\_# of Manuscripts submitted not yet published

\_\_30\_\_\_\_\_# of Manuscripts published

\_\_\_30\_\_Refereed

\_\_\_\_0\_\_Non-refereed

2. Professional Presentations

\_\_\_0\_\_\_\_# Local presentations

\_\_\_1\_\_\_\_# State/Regional

\_\_\_0\_\_\_\_# National

\_\_17\_\_\_\_# International

\_\_18\_\_\_\_Total #

3. Describe professional development activities undertaken by you or the faculty in your area.

In 2008, I attended training as a Program Evaluator for ABET, the Process Education Seminar given by Pacific Crest at Lamar sponsored by Dean Nichols, and two weeklong supercomputing

educational Workshops, one at the University of Oklahoma and one in Austin, that were part of the Supercomputing 08 workshop series (SC08). I also attended one workshop by Johnny Jarrell on the

use of Blackboard.

Seven of our nine faculty members attended ABET Saturday workshops on assessment at various cities in the U.S. as part of the department’s efforts to improve upon its ABET assessment

practices. One of our faculty, Dr. Jan Liu went to a week-long ABET training program for assessment in August in order to assume a leadership position in the department with respect to assessment.

Nine members of the faculty attended workshops given by Johnny Jarrell in Distance Education to enable them to better prepare for presenting courses on Blackboard. Professor Foreman and Mr. Frank

Sun went to a weeklong seminar in Denver presented by UT-Austin to learn how to design distance education courses. Johnny Jarrell, one of our adjuncts as well as a instructional design staff member for

Distance Education, attended several national conferences on IT technology for education.

4. Faculty holding office in national/international professional organization—**Only**

|  |  |  |
| --- | --- | --- |
| **Faculty** | **Organization** | **Office** |
| **None** |  |  |
|  |  |  |

5. Faculty Honors---None

***Budget***

What were your major capital expenditures this year? Last year our biggest purchase was a SUN rack with six workstations and a terabyte of storage. The cost was $60,858.60. We also purchased 10 Lenovo computers for Maes 213 for $11,420. We also spent $16,706 for some Dell computers for Dr. Makki as part of his startup package at Lamar.

What are your immediate and longer term major capital needs?

Our main long term capital need is probably money to renovate the Writing Center. We need to put in a wall to separate the space for our servers from the space used for instruction and research. Of course, we also need to continue to rotate new equipment into our labs every three years. We hope to add tables in the common area (Maes 202) with power supplies so that students can sit in this area and use the Internet via the wireless connections in the building.

It should also be noted that we promised Dr. Makki about $25,000 for each of the first three years at Lamar to buy equipment. So, in fall 2009, we should buy more equipment for his lab if he requests that we do so.

***Centers/Endowed Chairs or Distinguished Faculty***

Report on the Center(s) in your department (goals accomplished, problems, and major goals for next year). Howe does the Center promote the goals of the department, College or University?

Computer Science does not have any Centers, nor any Endowed Chairs or Distinguished Faculty

***Departmental Analysis***

Report any initiatives or special projects undertaken this year by your unit.

Maes 208 and Maes 209 were renovated for lab space for Drs. Stefan Andrei and Bo Sun, respectively. Also, Maes 105-107 and Maes 104-106 were modified so that Drs. Tran and Liu were able to house their clusters. The Writing Center began preparations to leave for the Library in 2008, and the Computer Science faculty began to plan how the space in the Writing Center could be reallocated, and which space should be given to English and/or Criminal Justice.

Identify special projects or initiatives you plan for next year?

In 2009, we want to divide the space in Maes 208 (the former Writing Center) into four parts. One part at the back of the room will be used to house our new SUN server rack and the clusters of Drs. Tran and Liu.

The reason for doing this is that there are two extra air conditioners there, and the equipment generates a lot of heat and noise. Thus, we want to put a wall between that area of high performance equipment and the rest of the room. In the center of the room, we want to move the equipment now in Room 211 to make an open Linux lab. On the side of the room next to the hallway, we intend to put multimedia equipment including MAC computers, scanners, and one or two graphics workstations. Finally, on the section of the room on the other side of the office wall where tutoring used to be done, we want to put a research lab for Dr. Kami Makki. He has equipment and funds to support at least 10 students. Currently, he is in Maes 210, which is so small that he cannot even take some of his computers out of their original boxes.

Other initiatives that we are undertaking in 2009 is to put at least one of our courses into the format of the Academic Partners company for the BAAS program and COSC 1336 in the Academic Partners format for high school students. COSC 1336 is our Fundamentals of Programming I where we teach Java programming. Also, during 2009, we want to add COSC 4310 (Computer Architiecture), COSC 4302 (Operating Systems), COSC 3304 (Design and Analysis of Algorithms) to our inventory of online classes.

What are the major challenges to your department?

The major challenge for Computer Science is to maintain the number of graduate students, while increasing the number of upper division undergraduates. To do this, we must continue to pursue our efforts to engage all students beginning in the freshman year to engage in research and to continue to try to make our courses as interesting as possible. A related challenge is to retain and recruit freshmen, since we lose about three fourths of all incoming freshmen in the first two courses. In that regard, the NSF funded programs for women, minorities and low income students are essential to the department’s efforts. These programs allow us to reach out to area public and private K-12 schools as well as involve our undergraduates in exciting projects and community service.

Another challenge for us is to cover all of our required courses as well as offer enough electives to give depth to our program while at the same time trying to increase our online offerings and to begin working with Academic Partners. It takes the equivalent of one course in a faculty member’s workload to develop an online class or a class in the Academic Partners format. We definitely need to add at least one or two faculty members to our department in order to carry out our plans.

What are the major strengths of the department?

1. An extremely active faculty: our faculty of only nine tenured or tenure-track members all participate in writing grant proposals, publishing, and engaging in faculty development.

2. High potential graduate students: our graduate students have at least a 650 quantitative GRE scores. This means that they are all capable of earning an M.S. in computer science at any university in the U.S.

3. Highly motivated undergraduate students: students who finish the first 3 courses in computer science almost never leave the department after that.

4. A dedicated Advisory Board consisting of more than twenty representatives of industry and government, most of whom are alumni, and all of whom have many years of professional experience.

5. Outstanding Staff members: Mr. Frank Sun is our System Administrator. He has two master’s degrees including one in computer science, many years of experience in industry, and a wonderful attitude toward his work. He likes to work at Lamar even though he has certainly never been compensated at the level he deserves. Our new technician, Mr. Jason Foster, is very energetic, hard working, and knowledgeable. He is currently interested in obtaining CCNA certification. We have a new Administrative Associate, Ms. Robin Cathey, with nearly 30 years of experience. She is already making our Office practices more professional and effective. Our faculty is very pleased without exception with the work of these people.

6. Sufficient lab space for both instruction and research.

7. Adequate equipment for both instruction and research.