



department was able to hire one new faculty member, Dr. Jiaofei Zhong, to teach Computer Science theory. We have also search this year for an applied computer scientist with knowledge in topical areas such as big data, application development, and cloud computing.

Our assessment plans have been moving forward. We have mapped institutional learning

### C. Program Changes and Needs

Since our last five year review, two new hybrid courses have been added to the Computer Networks curriculum: Security Mobile, Wireless, Grid and Pervasive Computing (CS 4526) and Security Management (CS 4527).

#### Faculty Data:

Name	Base
Billard, Ted	0.11 (FERP)
Brown, Kevin	1.0
Christianson, Leann	1.0
Daley, Jim	0.22 (FERP)
Ertaul, Levent	1.0
Grewe, Lynne	1.0
Johnson, Matt	1.0
Jurca, Dan	0.44 (FERP)
Reiter, Eddie	0.5 (FERP)
Roohparvar, Farzan	1.0
Simon, Steve	0.44 (FERP)
Thibault, William	1.0
Yang, David	1.0
Yu, Ytha	0.5 (FERP)
Zhong, Fay	1.0
Total:	11.21

#### Resources and Needs:

The Computer Science Department was critically impacted by IT Centralization several years back. Up until last year, we had only one small computing lab with less than a dozen machines -- despite the number of students in the majors -- and only one computer classroom. This year we were finally able to obtain at least primary usage to a second newly renovated computer classroom,

in VBT. CS is still SEVERELY underequipped. Students often try to make do with their own laptops and general purpose space (like the Cave of the Science building), but this often leads to difficulties from incompatibilities among their laptops. Many courses in the curriculum require dedicated servers that are isolated from the campus networks, as students write programs to interact or query these servers. Getting these configurations set up is difficult when IT centrally manages all systems on campus. Classroom space, retiring faculty, equipment and software shortages, and lack of dedicated IT support are all issues that impact the program's future growth.

## 2. SUMMARY OF ASSESSMENT (about 1 page)

### A. Program Student Learning Outcomes

Students graduating with a Bachelor of Science in Computer Science will be able to:

1. apply knowledge of mathematics and computer theory to appropriate problems in computer science
2. analyze a problem, and identify and define the resources and requirements needed for its solution
3. design and implement a program to meet stated needs
4. develop and maintain computer-based systems, processes, and platforms
5. recognize and distinguish the mechanisms, components and architecture of computing systems
6. employ current techniques, skills, and tools necessary for computing practice
7. identify professional, ethical, legal, and security issues and responsibilities and the impact of computing on individuals, organizations, and society
8. perform successfully on teams to accomplish a common goal, and communicate effectively in written and oral form

## B. Program Student Learning Outcome(s) Assessed

1. apply knowledge of mathematics and computer theory to appropriate problems in computer science
2. analyze a problem, and identify and define the resources and requirements needed for its solution

## C. Summary of Assessment Process

We created SLOs and PLOs for the B.S. Computer Science in the academic year 2012-2013. The Math and Computer Science Department which this degree is housed made the decision to use Blackboard as a means to provide students with an assessment tool that addresses the SLOs of each course which are aligned to the PLOs for each program and the ILOs of the university. We have these in place for 11 courses in the Computer Science program at this time. The results of these exams are being stored in a separate Blackboard shell repository for the department. Evaluating the results of these exams is challenging, as each assessment contains questions for multiple PLOs. We are currently looking at averages over the entire exam, which is suboptimal. Due to this, we are considering other options. The existing version of Blackboard unfortunately does not support aggregation or comparison of assessments across multiple courses.

We have also had a problem of oversubscribed courses. The university has limits on class sizes while students register for classes during specific scheduled time slots. Students have regularly signed up for many more courses than they intend to take, and drop courses at a later time. While this may seem like purely an administrative inconvenience, it does create concrete pedagogical problems. Because students join the program with varying backgrounds, incoming students in some sense compete with existing students for many of the same classes. Since incoming students register after existing students, they are the ones who are often shut out of the classes they should be taking. This increases the chance they end up trying to learn material that is beyond them. To handle this problem, the department has started to limit early registration for courses. Early indications are positive. New students have been able to sign up for courses with very few complaints.





Annual Data:

A. Student Headcount:

Computer Science B.S. and M.S.	Fall Quarter				
Headcount Enrollment	2009	2010	2011	2012	2013
1. Undergraduate	281	260	290	315	326
2. Postbaccalaureate	19	8	4	0	1
3. Graduate	183	184	148	105	152
4. Total Number of Majors	483	452	442	420	479

B. Degrees Awarded:

Computer Science B.S. and M.S.	College Years				
Degrees Awarded	08-09	09-10	10-11	11-12	12-13
1. Undergraduate	42	41	54	51	63
2. Graduate	38	62	102	89	57
3. Total Number of Majors	80	103	156	140	120

Accepted Applications for MS Computer Science (from Graduate Coordinator records):

- For the Winter 2014 quarter, there were 356 applicants, of whom 2 were accepted into the year Bridge program, 218 were accepted into the CS MS program, and 136 were rejected.
- For the Spring 2014 quarter, there were 250 applicants, of whom 1 was accepted into the year Bridge program, 115 were accepted into the CS MS program, and 134 were rejected.
- For the Fall 2014 quarter, there were 1150 applicants, of whom 3 were accepted into the year Bridge program, 142 were accepted into the CS MS program, and 1005 were rejected.



C. Faculty Information:

Please note that the university does not calculate... programs.  
Please see above (Program Needs) information

Computer Science, Computer Network, and Mathematics

Faculty

Tenured/TrackMr

D. Student Faculty Ratios:

Computer Science and Networks	Fall Quarter				
Student Faculty Ratios	2009	2010	2011	2012	2013
1. Tenured/Track	17.8	16.8	14.7	17.1	19.4
2. Lecturer	22.3	26.4	23.6	27.5	30.2
3. SFR By Level (All Faculty)	18.8	17.5	15.5	18.5	21.5
4. Lower Division	26.7	24.6	22.5	20.8	24.9
5. Upper Division	18.0	17.0	17.5	20.2	21.4
6. Graduate	16.6	15.9	10.1	14.5	19.8

E. Sections:

Computer Science and Networks	Fall Quarter				
Section Size	2009	2010	2011	2012	2013
1. Number of Sections Offered	47.0	39.7	47.8	37.0	45.8