

Summary of changes made from continuous improvement and faculty input (2016-2021)

1. In academic year 2016-17 student outcome 1 in Com S 331 was attained at a level less than satisfactory (52%) as depicted in Table 4-4. In the following academic year (2017-18) this outcome was attained at a level of satisfactory or better (66%) as depicted in Table 4-5. The instructor moved the lectures to earlier in the semester and this improved the attainment of the outcome.
2. In academic year 2017-18 student outcome 1 in Com S 311 was attained at a level less than satisfactory (59%) as depicted in Table 4-5. In the following academic year (2018-19), more examples were covered in lecture and this improved the attainment of the outcome to a level of satisfactory or better (63%) as depicted in Table 4-6.
3. In academic year 2016-17 student outcomes 2 and 3 in Com S 309 were attained at a level of satisfactory or better (90%) as depicted in Table 4-4. The instructor wanted to improve the attainment of these outcomes by giving more lectures on design block diagrams. In the following academic year (2017-18) by giving more lectures these outcomes were attained at a level of 98% as depicted in Table 4-5.
4. To keep up with changes in the discipline and ABET requirements, courses are continually updated to cover new concepts and to improve students' abilities in programming. These include courses such as Algorithms for Large Data Sets (Com S 435), Foundations and Applications of Program Analysis (Com S 413), and Computer Science Senior Project (Com S 402 C).
5. The course Com S 402 C was introduced in response to the ABET curriculum requirement in Criterion 5 that requires a major project. Although every student completes a major team project in the required course Com S 309, Com S 402 C gives students additional experience in working and completing a major project. No more than six credits of 402 A, 402 B, and 402 C may be used toward graduation.
6. Based on enrollment data gathered, especially the number of female students, and feedback from our assessment surveys, alumni feedback, and the External Advisory Council, the department has offered students some flexibility in the curriculum by introducing a few selected electives to specialize in a chosen area. Students take a set of core courses and then are given choices depending on which area they want to specialize in. For example, if students want to specialize in the area of gaming they take the core set of courses and the advisors help them select electives to specialize in gaming.
7. Student feedback over the years has indicated that at least 30% of our students would have liked a course prior to Com S 227 to better prepare them for 227. However, these are students who graduated from the program and were asked this question in their senior year. The department's retention committee conducted a broader survey of students who left the program and found that a significant number of those students would have benefited from such a course prior to Com S 227. We now offer a course Com S 127 to address this need.

8. Starting in Fall 2021 the department will offer two new courses, Com S 192X and Com S 292X, Explorations in Computing Research I and II, respectively. These courses aim to give first-year students and sophomores exposure to the research process and impact of computing research on society via concrete examples. Students will practice essential research skills via class activities and projects with faculty mentors and their graduate students. The goals for the courses are to (1) show undergraduates that their computing career potentially has a broader impact on society, improving the quality of lives, (2) better prepare our undergraduates for research-based senior design projects, and (3) shorten training time for individual faculty members to involve undergraduates for graduate research.
9. A Certificate in Computing Applications was introduced and approved. The Certificate in Computing Applications is a cross-disciplinary course of study in the Colleges of Liberal Arts and Sciences, Engineering, and Business. It is designed for undergraduates not already enrolled in majors in Computer Science, Software Engineering, or Computer Engineering who wish to enhance their degree and employment possibilities by adding expertise in computing applications.
10. Com S 101 (a required orientation course with R credit) is now being coordinated by a faculty member instead of academic advisors.
11. We revised the natural science electives to offer some flexibility to students. The intention was that students would take some breadth in their natural science electives.
12. A number of changes were made to the catalog in terms of pre-requisites and minor changes to the catalog descriptions. Care was exercised to see that the catalog description was consistent with the degree audit form.
13. Interaction with industry: Faculty constantly interact with industry professionals either when they come to recruit students or when they come to give presentations on campus. In recent years the department has proactively visited with companies in close proximity to establish various linkages including more scholarship opportunities, infrastructure enhancement, support for learning communities, and career shadowing for undergraduate students to gain a real-world picture of their future career as IT professionals. Through these industrial exposures both faculty and students have gained knowledge on the need for combining computing fundamentals with practical programming experiences and the need for software engineering skills, which are developed adequately in Computer Science and the Software Engineering program.
14. The LAS College has recognized and supported our need to maintain a respectable student/TA ratio. We have been maintaining total TA hours in a consistent manner in recent years.
15. The institution is keenly aware of the critical space needs of the Department of Computer Science and is doing everything within its power to improve it. Several new areas of

Atanasoff Hall were converted into Computer Science space. The department acquired new space for its instructional laboratories in Pearson Hall and consequently, many research laboratories are now utilizing space in Atanasoff Hall. Space has also been opened up in the Communications Building for academic advisors, a few faculty offices, and a help room for students with a lot of collaborative spaces. Plans to pursue additional space (perhaps a new building) are being discussed with the LAS College and the College of Engineering to accommodate the departments of Computer Science and Electrical and Computer Engineering.