

# Computer Science Third Year Review Assessment Report

Indiana University South Bend  
April 2006

New format based on Barbara Walvoord 2005 Assessment Workshop

**1) Assessment contact person, and person preparing the report, (if different):**

Hossein Hakimzadeh and William Knight

**2) Attachments:**

2004 and 2005 annual reports  
Departmental assessment plan

**3) Describe any changes to the program's educational goals since the last Third Year Review, and the rationale for those changes.**

The department's educational goals remain constant. Our primary goal is to prepare our graduates to understand the field of computing, both as an academic discipline and as a profession within the larger context of society. We try to achieve this goal in several ways. We provide a broad and coherent coverage of the discipline. We expose our students to the theory underlying the field. We expose our students to the ethical and societal issues associated with computers. We prepare our students to apply their knowledge to specific computing problems and to produce solutions, both independently and as members of teams. We structure the program in such a way that it supports and is supported by the educational goals of the University and the College of Liberal Arts and Sciences.

**4) Describe any assessment techniques used for measuring the Educational Goals that have been added or discontinued since the last Third Year Review, and the rationale for those changes. Attach any assessment instruments that have been used during the past three years, and the data collected, (or, summarized data, if that is more appropriate.) What analysis has been done with this data? What conclusions has your department drawn? What changes have**

**been made to the program as a result? (Curriculum, classes offered, classes discontinued, scheduling, advising, faculty education etc. . .) How did assessment data and analysis support these changes?**

For the most part, every year we continue to use the same assessment techniques and tools to measure our educational goals. In addition, we closely watch and try to follow the joint ACM/IEEE curriculum recommendations for computer science. Although we mostly used the same assessment instruments, we did change some of our tools. In addition, the department formed a task force for reviewing our course offerings for non-majors. These initiatives are described below.

- The department changed its tool for conducting course evaluations. For the past two years the department has been using a home grown electronic course evaluation system named (IU-EVAL). Initial results appear to be positive, however, the department is experimenting with methods by which one can increase student participation. Survey results seem to show that overwhelming majority of students are in favor using electronic course evaluations.
- The department changed its tool for conducting alumni survey. For the past two years the department has been using an electronic instrument for alumni survey. Last year, the results were quite good, as the chair tried to contact as many alumni and asked them to respond to the survey. This year, we are still waiting for the results to be collected.
- The department developed a task force to review our courses for non-majors. In particular, the task force (Dr. Surma, Dr. Hakimzadeh and Mrs. Judith Hoffacker) developed a series of recommendations for improving the A106 (introduction to computing) course. Approximately 1200 students per year take this course as part of their general education and computer literacy requirements.

**5) What changes does the department plan to make in the coming years to the program and to assessment techniques, and why?**

The computer science department developed its assessment plan in 1996. In 2004, the plan was slightly modified to more closely conform to the Campus Assessment Committee's guidelines, and The Assessment Culture Matrix used by the HLC Accreditation Team.

The core components of our assessment plan are fairly mature and are in line with the goals and objectives of the department. We continue to review our assessment plan in-light of the new ACM/IEEE recommendations and make the necessary modifications. The last major

curriculum review of our program was done in 2001 resulting in a number of course modifications and additions. However, the faculty did not see any reason to modify the assessment plan or techniques. We have adopted a new web based tool for conducting our faculty/course evaluations as well as alumni surveys. However, these new tools have not fundamentally changed our assessment procedures.

In the coming years, the department will be working to develop and refine an assessment plan for our newly implemented informatics program. We also hope to work with the department of Mathematics to develop an assessment plan for our newly created joint masters program in Applied Mathematics and Computer Science.

#### **6) How were faculty, students, administration, alumni and other groups involved in assessment?**

Faculty are involved in almost all aspects of assessment these include: Capstone course, Performance Review, Faculty Inventory and Internal Program Review, External Program Review and Instructor/course evaluations.

Students primarily provide their feedback via end of semester Instructor/course evaluations. On occasions, ACM student representatives are asked to survey their fellow students on a given topic or departmental initiative.

Department administrators are responsible for initiating the internal program reviews, developing new programs, conducting alumni surveys, and collecting faculty inventory results.

Alumni are primarily involved in providing feedback via the departmental alumni surveys. In addition, the department administration maintains professional relationships with a number of alumni who currently occupy management positions in their organizations. In the past, informal discussions with these individuals have yielded valuable information about employer expectations.

#### **7) How were assessment data and results shared with faculty, students, administration and alumni?**

The faculty are intimately involved with most aspects of our assessment, as they are often the source of such data. However, other assessment data and results are shared in departmental meetings as well as on our web site.

Students can have access to assessment data through our web site and newsletter.

Administrators are informed of our assessment results, through normal reporting channels as well as our web site and newsletter.

**8) In one paragraph, please summarize the most important impacts of the assessment of student learning on the program.**

*“If you measure it, it will improve..”* A quote taken from a discussion session, during the 2004 Assessment Conference in Indianapolis summarizes the importance of assessment. During the 1990's the computer science faculty developed a comprehensive assessment plan, and the department has been following this plan since 1996. As a result, faculty are intimately involved with most aspects of assessing our programs and evaluating our students. Perhaps the most tangible indicator of our success in assessing and improving student learning can be seen by examining the output of our work, *namely our students*. After finishing their degrees, our undergraduate students find excellent job opportunities (starting salaries in the region are in \$40k to \$50k), the companies which hire them find them to be competent and come back for more, every year many are pursuing graduate degrees in computer science, and a few are even pursuing Ph.D. programs in computer science and other related areas. We believe that it is only with continuous assessment and continuous refinement that we are able to deliver a high quality program in the computer and information sciences.

**9) Is there any other information that you would like included in this report?**

No.