

Form E-1-A for Boston College Undergraduate Programs

Program: **INFORMATION SYSTEMS**

1) Have formal learning outcomes been developed? What are they? (What specific sets of skills and knowledge does the department expect its majors to have acquired before they graduate?)

1. Understand how to analyze the linkages between information technology (IT), innovation, business strategy, and competitive advantage,
2. Possess the (a) technical skills (related to programming and databases) and (b) managerial concepts needed to effectively plan, develop, and implement IT,
3. Understand how to promote more effective use of IT in organizations, taking into how IT aligns with an organization's strategic focus, culture, business processes, etc.
4. Appreciate the broader ethical and societal implications of the burgeoning application of information technologies.

2) Where are these learning outcomes published? Be specific. (Where are the department's learning expectations accessible to potential majors: on the web or in the catalog or in your department's major handouts?)

1. Posted on the Department Website
2. In the Department brochure. This is distributed at events about the IS concentration such as Concentration Day, Admitted Students days.
3. In the University course catalog

3) Other than GPA, what data/evidence is used to determine whether graduates have achieved the stated outcomes for the degree? (What evidence and analytical approaches do you use to assess which of the student learning outcomes are being achieved more or less well?)

1. Beginning in the spring semester 2012, questions were added to:
 - a) the Systems Analysis and Design course evaluation requesting **feedback regarding the IS Concentration** on objectives 1 through 4 (see Attachment A),
 - b) two sections of the Computers for Management (IS portion) course regarding objectives 1, 3, and 4 as met in that course (see Attachment D),
 - c) the Social Media & Web 2.0 for Managers course regarding objectives 1 through 4 as met in that course (see Attachment D),
 - d) the Information Systems, Security Management, & Forensics course regarding objective 4 as met in that course (see Attachment D).

2. Beginning in the spring semester 2012, client evaluations directed at objectives 2 and 3 were requested for the Systems Analysis and Design Projects . (See Attachment B)
3. Beginning in the spring semester 2012, a question on the final exam addressed learnings related to *objectives 2 and 3, which were the main focus of the learning goals assessment for this year.* (see Attachment C)
4. Beginning in the spring semester 2012, materials and role plays addressing agile systems development were added to the Systems Analysis and Design curriculum.

4) Who interprets the evidence? What is the process? (Who in the department is responsible for interpreting the data and making recommendations for curriculum or assignment changes if appropriate? When does this occur?)

After the results of the surveys are available (summer), the Department Chair and 1-2 others in the department review and make recommendations for changes.

We will use the optional questions from the course evaluations for the spring 2012 semester as follows:

We will examine the absolute levels of the results and also look at the differences across questions. If a level is below 4.0, that would mean that that area will require relatively more emphasis. If the level exceeds 4.5, the assumption would be that emphasis and student learning in that area meets our objectives. Anything between 4.0 and 4.5 would be considered adequate but would be assessed for improvement to increase the level to 4.5 and above. (Note – Levels initially scored above 4.5 would, as a matter of course, be assessed for improvement to take into account advances in the IS field.) If most or all of the levels are significantly below 4.0, the department will assess the course for a possible redesign or, in the case of an elective, consider either a redesign or replacement of the elective with one that would better meet the learning goals.

As we collect course evaluation data from subsequent semesters, we will continue with the above procedure but then will add cross semester comparisons (controlling for instructor) to determine if changes made have improved the attainment of the learning goals.

We would also consider the relationship between the optional evaluation questions relating to learning objectives and Questions 8 (rating of instructor as a teacher), 13 (effort required), and 14 (overall rating of the course) on the standard University evaluation. Discrepancies would have to be carefully examined. For example, if the course is primarily aimed at the acquisition of technical skill and the course is rated as requiring less relative effort, then it would not be surprising that learning objective 2 would not reach the expected level. If it did happen to reach a high level that, too, would raise questions about the students' understanding of the knowledge and skill required to meet the objective.

In the case of Systems Analysis and Design, we have added an additional client project assessment instrument, which has simple face validity, a final exam question to get to some of the detail regarding objectives 2 and 3, and additional course content. This will allow us to compare the levels of the course evaluation questions that relate to objectives 2 and 3 to the client

impressions and to the students own narratively based understanding of their attainment of those two objectives. If the client impressions differ from the students' ratings (e.g. – the client ratings are noticeably lower than the student ratings on the same ordinal scale), then the course instructor would be required to investigate the reasons behind that discrepancy. If the student narratives show substance as determined by the course instructor, then the course evaluation levels would be expected to be high, and so on.