

End of Course Memo

CS 101-E – Intro to Computing

Aaron Bloomfield (Fall 2004)

Course Objectives:

1. Understand common fundamentals of programming such as variables, conditional and iterative execution, functions, etc.
2. Understand fundamentals of object-oriented programming in Java, including defining classes, calling member functions, using class libraries, etc.
3. Have an appreciation of important topics and principles of software development and computer science.
4. Be able to write a computer program to solve a specified problem.
5. Have strong practical experience using the Java SDK environment to create, debug and run simple Java programs.

Assessment of Learning by Course-Objective:

Objective 1: Understand common fundamentals of programming such as variables, conditional and iterative execution, functions, etc.

Evidence that this objective was met can be seen through the lab programming quizzes and the homeworks. The last lab quiz was the most comprehensive, as it included the concepts taught throughout the entire course (iteration, conditional statements, OOP, defining classes, writing a computer program to solve a program, using the JDK, etc.). The average on the last lab quiz, which was the most comprehensive, was 92.0%. The homework average was 88.3%.

Objective 2: Understand fundamentals of object-oriented programming in Java, including defining classes, calling member functions, using class libraries, etc.

This objective was met, and the evidence is the same as that for objective 1.

Objective 3: Have an appreciation of important topics and principles of software development and computer science.

I do not feel we met this objective very well, and this is something I plan to change in the future. The only software development the students saw was for small Java programs, and that does not constitute this objective. In particular, I plan on bringing in faculty to discuss their research and software development. Quantitatively measuring these additions will be difficult, however.

Objective 4: Be able to write a computer program to solve a specified problem.

This objective was met, and the evidence is the same as that for objective 1.

Objective 5: Have strong practical experience using the Java SDK environment to create, debug and run simple Java programs.

This objective was met, and the evidence is the same as that for objective 1.

Assessment of Changes Made in the Course:

This was my first semester teaching the course, so I did not make any changes to the course.

Other Issues:

1. Do you have concerns regarding the background of students coming into the course?

No. The students are not assumed to have any background in any computer field for this course.

2. Are there other issues affecting student learning beyond what has been discussed elsewhere in this report? Include any other concerns you have about what students have or have not learned when they have completed the course.

Lots. The course is broken in so many ways. See my discussion in the spring '05 EOCM for this course (both were written at the same time).

3. If you know of changes being made or considered in the curriculum that might affect the course, briefly describe what these are and how the course might be affected.

None.

4. List any other comments you think the Committee that monitors our degree programs should know about this course this semester.

See my discussion in the spring '05 EOCM for this course.

Mapping of Course Objectives to BSCS Outcomes:

CS Degree Outcomes: Students who graduate with a BSCS will...	Course Obj. 1	Course Obj. 2	Course Obj. 3	Course Obj. 4	Course Obj. 5
(1: Math & DLD) Have demonstrated comprehension in relevant areas of mathematics (including calculus, discrete math, and probability), and in the area of logic design.					
(2: Fundamentals) Have demonstrated comprehension in fundamental topics of computing, including the intellectual core of computing, software design and development, algorithms, computer organization and architecture, and software systems.	D	D		D	D
(3: Analysis & Evaluation) Have applied knowledge of areas of computing to analyze and evaluate algorithms, designs, implementations, systems, or other computing artifacts or work-products. Application of this knowledge includes the ability to design, conduct and evaluate the results of experiments and testing activity.	D	D		D	
(4: Build Solutions) Have applied knowledge of areas of computing to create solutions to challenging problems, including specifying, designing, implementing and validating solutions for new problems.	D	D		D	
(5: Research Awareness) Be aware of current research activity in computing through activities including reading papers, hearing research presentations, and successfully planning and completing an individual research project in computing or its application.			F		
(6: Broadening) Have demonstrated comprehension of subjects in the humanities, social sciences, and the natural sciences in order to broaden a student's education beyond engineering and computing.					
(7: Social and Professional) Comprehend important social, ethical, and professional considerations related to computing practice and research, and be able to apply this knowledge when analyzing new situations.					
(8: Post-graduation) Be prepared to enter graduate programs in computing or related fields, and be prepared to begin a professional career in computing.					
(9: Life-long Learning) Have demonstrated a self-directed ability to acquire new knowledge in computing, including the ability to learn about new ideas and advances, techniques, tools, and languages, and to use them effectively; and to be motivated to engage in life-long learning.					
(10: Teamwork) Have demonstrated the ability to work effectively in a development team.					
(11: Communication) Have demonstrated the ability to communicate effectively (orally and in writing) about technical issues.					
(12: Professional development practices) Comprehend important issues related to the development of computer-based systems in a professional context using a well-defined process to guide development.					