A. Protocol

Course Name: Application Programming I  
Course Number: CIS 120  
Credits: Three (3)  
Prerequisites: High School Algebra or Equivalent  
Maximum Class Size (face-to-face): 35  
Maximum Class Size (online): 35  
*Justification for online class size is due to the highly-technical nature of the course.

B. Objectives of the Course:
Upon completion of this course the student will be able to do the following items using the presently adopted language for this course (Fall 2010: Java):

a) Analyze business case studies and discuss strengths and weaknesses of various potential solutions.

b) Recognize and use problem solving techniques and methods of abstract logical thinking to develop and implement structured solutions of given software design problems.

c) Apply problem solving techniques and design solutions to business problems and implement these solutions by writing computer programs.

d) Write well-structured business programs.

e) Evaluate and debug programs.

f) Work in collaborative groups.

C. Catalog Description:

This course provides students with an understanding of business problems that are typically solved by writing computer programs, problem solving techniques to enable students to design solutions and programming skills learned in a traditional CS1 course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs. Prerequisite: High School Algebra or Equivalent. Three credits.

D. Outline of the Course:

a) Problem Solving Techniques for Business Problems
   i) Business Case Studies
   ii) Problem Identification and Understanding
   iii) Solution Planning (flowcharts, pseudo-code, etc.)
   iv) Algorithm Development

b) Programming Concepts
   i) Structure of a Program (“Hello World”)
   ii) Constants, variables and data types
   iii) Arithmetic operators
   iv) Relational operators
   v) Logical operators
   vi) Assignment statements
   vii) Input and output
   viii) Selection (if/else and switch)
ix) Repetition (while, do/while, and for)

c) Strings

d) File Processing

e) Functions (in presently adopted language, “method”)

E. Teaching Methodology:

1) Traditional Classroom Methodology

This course will be taught using some lecture/discussion method followed with a majority of class time using hands-on lab activities on the presented concepts. Some cooperative group method will be employed during appropriate sections of the course.

2) Online Methodology

This course will be taught using a variety of methods including lecture videos, activities, group collaborative learning, and discussion boards. Quality Matters™ Statement – The online course follows the standards of the Quality Matters™ rubric. An online homework system is required in this course.

F. Text

A vast array of texts from a variety of publishers is available to teach this course. Some of these include:


G. Assessment Activities:

1) Traditional Classroom Assessment

Various assessment methods are used, at the discretion of the instructor, and can include exams, quizzes, tutorials, homework assignments, programs/projects/labs. An online homework submission system is used in this course.

2) Online Assessment

Various assessment methods are used, at the discretion of the instructor, and can include exams, quizzes, tutorials, homework assignments, programs/projects, wikis, online journals and labs. An online homework system is required in this course.
H. Accommodations for Students with Disabilities:

OSD
Revised December 2012

STUDENTS WITH DISABILITIES

Students with disabilities:

- Reserve the right to decide when to self-identify and when to request accommodations.
- Will register with the Office for Students with Disabilities (OSD) each semester to receive accommodations.
- Might be required to communicate with faculty for accommodations, which specifically involve the faculty.
- Will present the OSD Accommodation Approval Notice to faculty when requesting accommodations that involve the faculty.

Office for Students with Disabilities

Requests for approval for reasonable accommodations should be directed to the Office for Students with Disabilities (OSD). Approved accommodations will be recorded on the OSD Accommodation Approval notice and provided to the student. Students are expected to adhere to OSD procedures for self-identifying, providing documentation and requesting accommodations in a timely manner.

Contact Information:

- Location: Azorsky Building – Room 105
- Phone: (724) 938-5781
- Fax: (724) 938-4599
- Email: osdmail@calu.edu
- Web Site: www.calu.edu (search “disability”)

I. Supportive Instructional Materials, e.g. library materials, web sites, etc.

Library Materials:
Books located in the PILOT catalogs, library databases (Ebscohost, C IOS, Proquest, Lexis-Nexis) which include books, journals, magazines, and newspapers. Examples of holdings at the Louis L. Manderino Library are:


Additional Information for Course Proposals

J. Proposed Instructors: Dr. Gina Boff, Dr. Gary DeLorenzo, Dr. Lisa Kovalchick, Dr. Tony Rodi or any other tenure-track CIS faculty from the Department of Mathematics, Computer Science and Information Systems.

K. Rationale for Course: Course already exists and being updated for Global Online delivery.

L. Specialized Equipment or Supplies Needed: None

M. Answer the following questions using complete sentences:

1. Does the course require additional human resources? No, the course is already being taught.

2. Does the course require additional physical resources? No. The current physical resources on campus can accommodate the teaching of this course.

3. Does the course change the requirements in any particular major? No.

4. Does the course replace an existing course? No, this course does not replace any existing courses.

5. How often will the course be taught? This course will be taught twice every year.

6. Does the course duplicate an existing course in another Department or College? No.

7. What is the recommended maximum class size for this course? Recommended class size for this course is 35 for online sections, due to the highly-technical nature of the course.

N. If the proposed course includes substantial material that is traditionally taught in another discipline, you must request a statement of support from the department chair that houses that discipline. This course does not include substantial material from another discipline.

O. Please identify if you are proposing to have this course considered as a menu course for General Education. If yes, justify and demonstrate the reasons based on the categories for General Education. The General Education Committee must consider and approve the course proposal before consideration by the UCC. This course is already offered on the GenEd menu.