

materials fee is payable upon registration. Recommended Preparation: eligibility for ENGL 8368/848 and completion of MATH 110 or equivalent with a grade of C or higher. Credit/No Credit or letter grade option. (CSU)

6. **Student Learning Outcomes** (Identify 1-6 expected learner outcomes using active verbs.)

Upon successful completion of the course, the student will be able to:

- Analyze and explain the behavior of programs involving the fundamental program constructs
- Write short programs that use the fundamental program constructs including standard conditional and iterative control structures
- Identify and correct syntax and logic errors in short programs
- Write short programs that use arrays.
- Design and implement a class based on attributes and behaviors of objects
- Construct objects using a class and activate methods on them
- Use static and instance members of a class properly
- Identify and describe value, scope and lifetime of a variable
- Describe the parameter passing mechanisms and method overloading.
- Analyze and explain is-a relationships among objects using a class hierarchy and inheritance.

7. **Course Objectives** (Identify specific teaching objectives detailing course content and activities. *For some courses, the course objectives will be the same as the student learning outcomes. If this is the case, please simply indicate this in this section).*

See Student Learning Outcomes

8. **Course Content** (Brief but complete topical outline of the course that includes major subject areas [1-2 pages]. Should reflect all course objectives listed above. In addition, you may attach a sample course syllabus with a timeline.)

See attached Topical Outline

9. **Representative Instructional Methods** (Describe instructor-initiated teaching strategies that will assist students in meeting course objectives. Include examples of out-of-class assignments, required reading and writing assignments, and methods for teaching critical thinking skills.) **If hours by arrangement are required by this course, indicate the additional instructional activity which will be provided during this time.**

The course includes the following instructional methods as appropriate:

Lectures, to introduce new topics in design and code syntax;
Design development examples, illustrating process and good practice
Code development examples on board and live, illustrating process, problem solving techniques and debug strategy

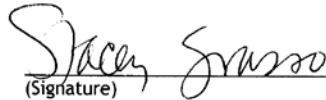
Class participatory problem solving, each person contributing a potential "next step";
Short in-class projects and solution presentation;
Q/A sessions where students both ask AND answer the questions
Student groups cooperating to solve significant programming assignments.

10. **Representative Methods of Evaluation** (Describe measurement of student progress toward course objectives. Courses with required writing component and/or problem-solving emphasis must reflect critical thinking component. If skills class, then applied skills.)

Quizzes to provide feedback to student and teacher on recently presented material
Assessment of student contributions during class discussion and laboratory time;
Individual programming assignments;
Midterm and Final exams - short answer, general problem solving, short program segments;
Assessment of group participation on course projects, including peer-assessment of participation and contribution to the group effort.

11. **Representative Text Materials** (With few exceptions, texts need to be current. Include publication dates.)

Prepared by:


(Signature)

Email address:

Submission Date:

