Reedley College   **Spring 2020**

CSCI 40 – Programming Concepts and Methodology I
<div align="center">SYLLABUS</div>

Schedule No	50095
Class Hours Room No	Monday 2:00 p.m. – 4:15 p.m. FEM 3 (lecture) Wednesday 2:00 p.m. – 4:50 p.m. FEM 3 (lab)
Instructor	Elliot Gertner. Ph.D
Phone	638-0300 ex-3497
Office Hours	MTWTh 12:45pm – 2:pm (room: FEM 1D) or By appointment
Office	FEM 1D
E-mail	Elliot.gertner@reedleycollege.edu

Course Objectives:

In the process of completing this course, you will be able to:
1. Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions.
2. Use pseudocode or a programming language to implement, test, and debug algorithms for solving simple problems.
3. Summarize the evolution of programming languages illustrating how this history has led to the paradigms available today.
4. Demonstrate different forms of binding, visibility, scoping, and lifetime management.
5. Write computer programs using an object-oriented programming language C++.

Learning Outcomes:

Upon completion of this course, students will be able to:
1. Describe the software development life cycle.
2. Explain what an algorithm is and its importance in computer programming.
3. Formulate, represent, and solve problems using a high level programming language.
4. Demonstrate knowledge of high-level language syntax, control structures, looping, arrays, files, and records.
5. Demonstrate proper programming style, debugging and testing techniques.
6. Solve application problems in science and engineering.

Course Outline:
1. Introduction to Computers and Programming
2. Introduction to C++
3. Expressions and Interactivity
4. Making Decisions
5. Loops and Files
6. Functions
7. Arrays
8. Searching and sorting Arrays
9. Pointers
10. Characters, C-Strings, and the string Class
11. Structured Data
12. Introduction to Classes

Course Prerequisite:

MATH 4A - Trigonometry or MATH 4C - Trigonometry/Pre-calculus and eligibility for English 25 and English 26.

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<u>**Textbook:**</u>
   <u>Starting out with C++ From Control Structures through Objects</u>, 9th Ed, By Tony Gaddis, Pearson

<u>**Learning Management System: CANVAS:**</u>
   Canvas is used to post announcements, course information, programming assignments, and grade. You will submit your programming assignments on Canvas.
   To log-in Reedley College CANVAS:
      Username: Your 7-digit student ID number.
      Password: If you have not previously changed your password, it is:
            First name initial (upper case) + *last name initial* (lowercase) + *date of birth* (mmddyy)
         Example: John Smith born on July 9th of 1988   Password =Js070988

<u>**Computer Lab:**</u>
   FEM 3 computer lab is used. Visual C++ compiler is used for this class.

<u>**Homework Assignment:**</u>
   Homework is assigned for each chapter. Homework is due after the chapter is completed. Each assignment is worth 10 points and will be graded on **correctness, completeness, neatness**, and **effort** of the entire assignment. Points will be deducted for late homework.   Homework should be done on 8.5" by 11" lined paper, stapled on upper left hand corner, with your name and chapter/section number written on the upper right hand corner.

<u>**Classwork:**</u>
   There are assignments to be completed during the class time.

<u>**Lab Assignments:**</u>
   Lab assignments are assigned before each lab session. You will complete the lab assignment at end of the two-hour lab period. Turn in the lab assignment on LMS-Canvas at end of each lab. Submit your **program** (source code only, no executable file) and program input/output on LMS- Canvas. Programs are graded using following criteria: **documentation, readability, correctness,** and **test case results**.

<u>**Programming Projects:**</u>
   There will be additional programming assignments that will be completed outside the class lab sessions. Due dates will be indicated on the assignments.

<u>**Other Programming Applications:**</u>
   There are other software allow you to learn programming concepts. For examples: Alice, Processing, and Javascript. One of these software will be introduced and assignments will be given accordingly.

<u>**Tests:**</u>
   There is a written test every two or three chapters. Each test is 100 points. Early tests can be arranged with a very good reason. A more **difficult** late test can only be arranged if you have an excuse verified by an impartial party (i.e., a doctor or a court note).

<u>**Grading:**</u>
   50% of the final grade points are from the average score of all chapter tests.
   25% of the final grade points are from the average score of all lab assignments.
   05% of the final grade points are from the classwork.
   10% of the final grade points are from the average score of homework assignments.
   10% of the final grade points are from programming term projects.

   Final grade is assigned using following scale:

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90-100 points	A	60- 69 points	D
80- 89 points	B	< 60 points	F
70- 79 points	C		

If you have perfect attendance and your grade is within 1 point (or 1%) of the next higher letter grade, the instructor will award you the next higher letter grade.

Attendance (Also see Attendance Policy under Academic Regulations in Class Schedule):

Attendance will be taken at beginning of each class. Students who leave the class before the end of class counts as tardy. Two-tardiness count as one absence. Your classmates and I would greatly appreciate that you take care of your personal needs (i.e., using the restroom, getting a drink…etc.) before the class begins.

Students will be dropped from the class if they fail to attend the first class session of the semester. During the semester up to final drop date, any student who missed two weeks of class meetings (cumulative) will be dropped from this class (i.e. **6** classes).

Student Conduct (**Also see Student conduct under Campus Policies in Class Schedule):**

Students are expected to conduct themselves in a responsible manner in the classroom. Specific rules and regulations have been established in Board Policy 5410. A copy of this policy is available in the college library, the Admissions Office, the Vice President of Student Services, the Vice President of Instruction's Office, and in the Student Activities Office. Failure to adhere to the accepted standards will result in disciplinary action.

Accommodations for students with disabilities:

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Plagiarism and Cheating Policy (See Cheating and Plagiarism under Campus Policies):

Cheating and plagiarism is prohibited in the class. Incidents of cheating and plagiarism will result a failing grade on the particular examination or assignment in question.

Important Dates:

Class begin		Monday	01/13/2020
Last day to register		Friday	01/31/2020
Last day to drop this class to avoid a "W"		Friday	02/02/2020
Last date to drop this class		Friday	03/13/2020
Last Day of the Spring Semester ===================== No classes, campus is closed		05/22/2020	
	Martin Luther	Monday	01/20/2020
	Lincoln Day	Monday	02/14/2020
	Spring Recess	Mon - Fri	04/06/2020 – 04/10/2020
Final Exam			