Problem Solving and Programming Laboratory, CSC 1101, Section 3
Tuesdays and Thursdays, 1pm–2:15pm, Winter 2017

Contact information:
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Course Description:
This is a mandatory two-hour laboratory. It involves a discussion of lecture
materials and completion of hands-on and homework exercises using a structured,
general purpose programming language.

Credit Hours:
1

Prerequisites:
Familiarity with basic concepts from high school algebra, geometry, and
trigonometry.

Co-requisites:
CSC 1100 Problem Solving and Programming.

Textbook:
C++ Programming: From Problem Analysis to Program Design, Seventh Edition
DS Malik

Software:
Microsoft Visual Studio Express 2013

Course contents:
An Overview of Computers and Programming Languages
Basic Elements of C++
Input-output
Control Structures I (Selection)
Control Structures II (Repetition)
User-Defined Function
Namespaces, the class string, and User-Defined Simple Data Types
Arrays
Records (structs)
Pointers
Laboratory:
There are 22 lab assignments that cover the above topics. The goal is to illustrate the concepts discussed in lecture and to give students the opportunity to design a solution to a problem, and implement and test it.

Course Learning Objectives:
The course learning objectives are skills and abilities students should have acquired by the end of the course. Upon successful completion of this class, the student will be able to:

<table>
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<tr>
<th>#</th>
<th>CSC 1100 course learning objectives</th>
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<tbody>
<tr>
<td>1</td>
<td>Understand the history of programming languages.</td>
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<tr>
<td>2</td>
<td>Become familiar with the basics of C++.</td>
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<td>3</td>
<td>Learn to read from the keyboard and files, and write to the screen and files.</td>
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<td>4</td>
<td>Use control structures to alter the sequential flow of execution.</td>
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<td>5</td>
<td>Use predefined and user-defined functions.</td>
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<td>6</td>
<td>Understand the user-defined simple data type (enumeration type), the namespace mechanism of ANSI/ISO Standard C++, and strings (both string data type and C-String).</td>
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<td>7</td>
<td>Explore arrays (one- and two-dimensional) and records.</td>
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<td>8</td>
<td>Apply simple searching and sorting algorithms.</td>
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<td>9</td>
<td>Use pointers to manipulate arrays and to implement dynamic memory allocation.</td>
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<td>10</td>
<td>Apply problem-solving strategies to analyze, design, implement, document, and test a software application.</td>
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Assessment:
Labs 90%
Attendance 10%

Grading Scale:
93% and above  A
90-92%  A-
87-89%  B+
83-86%  B
80-82%  B-
77-79%  C+
73-76%  C
70-72%  C-
67-69%  D+
63-66%  D
60-62%  D-
59% and below  E

Grading Policies:
- This lab section is associated with the CSC 1100 lecture.
- The lecture and lab sections are graded separately.
- If either is failed, only the failed part must be repeated.

Sumukhi Chandrashekar
CSC 1101
Lab assignments and attendance make up your final CSC 1101 grade.

Lab assignments:
- There are 22 lab assignments.
- 12 lab assignments are completed during the lab session.
- 10 lab assignments are completed as homework before the next lab session.
- Each one is worth up to 25 points.
- The lowest four grades are dropped, so 18 of them count toward your final grade.
- Lab assignment files will be available on Blackboard.
- Completed lab assignment files will be submitted via Blackboard. Unless otherwise noted, this will involve submitting one Microsoft Word document with your name somewhere in the file name.
- On-time in-session lab assignment: an in-session lab assignment is on-time if it is submitted via Blackboard by the end of the session on the day it is due.
- On-time take-home lab assignment: a take-home lab assignment is on-time if it is submitted via Blackboard by the 11pm on the day it is due.
- Late lab assignments: no late lab assignments are accepted.
- Lab assignments will be graded in the following areas:

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<th>Area</th>
<th>Percent possible</th>
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<tr>
<td>Interface accuracy: does the program have correct keyboard inputs and console outputs?</td>
<td>30%</td>
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<tr>
<td>Operational accuracy: is the program flow correct and are the calculations correct?</td>
<td>30%</td>
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<tr>
<td>Code readability: does the program have a header comment, body comments, and proper spacing and indentation?</td>
<td>30%</td>
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<tr>
<td>Administrative: have the correct files (input, program, output) been submitted?</td>
<td>10%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Homework feedback: if your homework has corrections, they will be noted in your submitted files, and the files will be returned to you where you submitted it on Blackboard.

Attendance:
- Attendance is taken during the 23 lab sessions between Tuesday, January 17 and Tuesday, April 18 (there is no lab session on Tuesday, February 21, Thursday, February 23, and Thursday, March 9).
- If you miss fewer than five lab sessions, you earn 50 attendance points.
- If you miss more than four lab sessions, you earn no attendance points.

Religious Holidays:
Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Student Disabilities Services:
- If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic
accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

- Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student’s accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

**Academic Dishonesty - Plagiarism and Cheating:**
Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct ([http://www.doso.wayne.edu/student-conduct-services.html](http://www.doso.wayne.edu/student-conduct-services.html)). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- **Cheating:** Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student’s test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- **Fabrication:** Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
- **Plagiarism:** To take and use another’s words or ideas as one’s own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- **Other** forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student’s access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

**Course Drops and Withdrawals:**
In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation.
Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: http://reg.wayne.edu/pdf-policies/students.pdf

Student services:
- The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit www.success.wayne.edu for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).
- The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit http://clasweb.clas.wayne.edu/writing to obtain information on tutors, appointments, and the type of help they can provide.

Class recordings:
Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student’s personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.