

**Western Washington University  
Computer Science Department**

**CSCI 141 Computer Programming I  
Syllabus – Fall 2011**

**About This Course**

*Instructors:* Dr David Bover

*Room:* CF 469

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*Phone:* 650-4894

*Office Hours:* MWF 2:00-4:00

*Class Times:* Lecture: MWF 10:00-10:50pm, FR 2

Lab: One of the following:

CRN 40814: M 3:00-4:50, CF 162

CRN 40815: T 8:00-9:50, CF 164

CRN 40816: R 12:00-1:50, CF 164

CRN 42014: R 9:00-10:50, CF 164

CRN 43653: R 2:00-3:50, CF 164

*Credit hours:* 4

*Prerequisite:* One of: MATH 112, MATH 114, MATH 115,  
MATH 118, MATH 124, MATH 125, MATH 128, MATH 156

**Description**

This course is intended for students majoring in computer science. The course covers basic concepts of computer programming using an object-oriented programming language. Topics covered include:

- Introduction to the software development environment,
- Introduction to computer architecture,
- Elements of a programming language, including data types, control structures, functions, basic I/O, one-dimensional and parallel arrays, text file I/O,
- Algorithm development, problem solving and software engineering concepts.

Programming is required in implementation of concepts.

## Course Outcomes

On completion of this course, students will demonstrate:

1. Basic understanding of the concepts of the use of a programming language in problem solving, including language control structures, functions, basic input and output operations and one-dimensional arrays.
2. Basic understanding of algorithm development and problem solving techniques.
3. The use of a modern programming language for simple problem solving in the imperative execution model.
4. The ability to use the Linux or UNIX operating system in laboratory exercises.
5. The ability to create test cases for simple programming problems.

## Text Book

There is no printed textbook is prescribed for this course. Instead, a free on-line textbook is used. Students can access the textbook on the course web site and are urged to access it through a web browser and **not** print a paper copy.

“Ada 95: The Craft of Object-Oriented Programming”, John English, 2001.

## Course Web Site

The course web site is accessible through the course web site ([moodle.cs.wvu.edu](http://moodle.cs.wvu.edu)).

## Assessment

Assessment for the course will comprise a midterm exam, a final exam, weekly laboratory exercises and three program development assignments. The contribution of each assessment item to the final grade is as shown below:

Midterm Exam (Wednesday, October 19)	15%
Final Exam (Tuesday, December 6)	25%
Weekly laboratory exercises	15%
Assignment 1	15%
Assignment 2	15%
Assignment 3	15%

**Note:**

1. These assessment items constitute the entire assessment for the course. **There will be no extra credit opportunities.**
2. As stated in the University Bulletin, “A student who fails to take a final examination without making prior arrangements acceptable to the instructor receives a failing grade for the class”.

**Laboratory Exercises**

There are 6 laboratory exercises scheduled during the course. Each exercise will require students to complete some task, following clear instructions, and submit their work for assessment. On completion of each lab exercise, students will take a short, multiple-choice quiz on aspects of programming that should be learned from the exercise.

**Assignments**

There are 3 assignments scheduled during the course. Each assignment will require students to develop a program according to provided specifications. Although it is expected that students will do most of their work on the assignments outside scheduled lab sessions, the course schedule provides for one lab session to be devoted to each assignment.

**Examinations**

There is one mid-term and one final examination in the course. Each is an open-book, multiple-choice quiz. The final examination covers the entire content of the course.

**Grading Policy**

Grades will be assigned on the total of the assessment items according to the following:

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

The use of '+' or '-' discriminators is completely at the discretion of the instructor.

## **Attendance Policy**

Attendance at lectures is not compulsory. However, students are responsible for ensuring that they keep up with course material and that they keep informed on class information, as presented in class or advised via the course web site.

## **Academic Dishonesty**

Academic dishonesty is defined in the University Catalog as misrepresentation by deception or by other fraudulent means which compromises an instructor's ability to fairly evaluate a student's work or achievement. It is the instructor's responsibility to confront a student and to take appropriate action if academic dishonesty, in the instructor's judgment, has occurred. Please refer to the University Catalog for further information.

Any student who violates the University policy on academic dishonesty will receive an F for the course.

## Schedule

Week	Date	Lecture Topic	Textbook	Lab exercise	
1	9/21 - 9/23	Course introduction Programming concepts	Chapt 1	No lab session	
2	9/26 – 9/30	Data types Input and output Arithmetic	Chapt 2	Lab 1: the development environment	
3	10/3 - 10/7	Control structures Boolean expressions Loops	Chapt 3	Lab 2: Input and output	
4	10/10 - 10/14	Built-in functions Programmer-defined functions Parameters	Chapt 4	Lab 3: Control structures	<---Assignment 1----->
5	10/17 - 10/21	Procedures <b>Mid-term examination</b> Local variables, scope	Chapt 5	No lab exercise. The session will be spent on Assg 1	
6	10/24- 10/28	Pre- and post-conditions Exception handling Subtypes	Chapt 5, 7	Lab 4: Functions and procedures	<-----Assignment 2----->
7	10/31 - 11/4	Packages Files File I/O	Chapt 7	Lab 5: Exception handling	
8	11/7 – 11/11	Arrays Searching <b>Public holiday</b>	Chapt 6	No lab exercise. The session will be spent on Assg 2	
9	11/14- 11/18	Sorting Strings Records	Chapt 6	Lab 6: Arrays	<-----Assignment 3----->
10	11/21-11/25	Arrays of records <b>Public Holiday</b> <b>Public Holiday</b>	Chapt 8	No lab session	
11	11/28 - 12/2	Modular decomposition Course review	Chapt 8	No lab exercise. The session will be spent on Assg 3	

**Final Examination: Tuesday, December 6, 10:30 – 12:30pm**