Western Washington University
Computer Science Department

CSCI 145 Computer Programming and Linear Data Structures
Syllabus – Winter 2012

About This Course

Instructors:	Dr Ahmed Awad
Room:	CF 485
Email:	Ahmed.Ahmed@wwu.edu

Office Hours:	WF 10:00-12:00
Class Times:	WF 8:30-9:50pm, CF 115

Lab: One of the following:
       T 12:00-01:50 pm,   CF 164
       W 02:00-03:50 pm,   CF 164
       R 12:00-01:50 pm,   CF 164

Credit hours:	4
Prerequisite:	CSCI 141

Description

This course is intended for students majoring in computer science. The course covers abstract data types, generics, access or pointer types, dynamic memory allocation, recursion, and linear data structures including stacks, lists and queues.

Programming is required in implementation of concepts.

Course Outcomes

On completion of this course, students will demonstrate:

1. Basic understanding of the concepts of abstract data types and generics and their implementation in a modern programming language.

2. Basic understanding of access or pointer types and dynamic memory allocation, as implemented in a modern programming language.

3. Basic understanding of the use of recursion in the definition and implementation of linear data structures, including stacks, lists and queues.

4. The use of a modern programming language for the implementation of abstract data types for linear data structures in the solution of problems.

5. The ability to use the Linux or UNIX operating system in laboratory exercises.

6. The ability to create test cases for problems involving linear data structures.

Text Book

There is no printed textbook 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.wwu.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 (Friday, February 3)	15%
Final Exam (Friday, March 9)	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 may be extra credit opportunities for the entire class, but **no extra credit opportunities will be offered to individual students**.

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.

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. Unscheduled extra credit items may be offered during lectures.

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.