

<b>COURSE TITLE BLACKBOARD SITE</b>	MCS2514 Computer Science 2 Fall 2012 – <a href="http://my.ltu.edu">http://my.ltu.edu</a> and select CRN 1958
<b>INSTRUCTOR</b>	Yin Wang Ph.D, Assistant Professor S116A <a href="mailto:ywang12@ltu.edu">ywang12@ltu.edu</a> Phone: 248-204-3525 Office hours by appointment, or WM 10:00am-12:00noon
<b>SCHEDULE</b>	August 29 – December 21, 2012  Refer to <a href="http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp">http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp</a> for the last date to withdraw and other important registration related information.
<b>LEVEL/HOURS PREREQUISITE</b>	Graduate or Undergraduate Degree / 4 credit hours Admission / prerequisite requirement: Computer Science 1
<b>REQUIRED TEXT</b>  (See Blackboard for additional resources)	Deitel, C++ How to Program, 8 <sup>th</sup> edition, Prentice Hall, ISBN-10:0-13-266236-1  Available for online purchase through LTU Bookstore at: <a href="http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489">http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489</a>
<b>ADDITIONAL RESOURCES</b>	LTU Online student resources: <a href="http://www.ltu.edu/ltuonline/">http://www.ltu.edu/ltuonline/</a>
<b>TECHNICAL SUPPORT</b>	Technical support for using Blackboard is provided by the Helpdesk, 248.204.2330 or <a href="mailto:helpdesk@ltu.edu">helpdesk@ltu.edu</a> . Send the Help Desk a form detailing any issues by clicking here <a href="http://tinyurl.com/3yqrvne">http://tinyurl.com/3yqrvne</a> .

### COURSE SCHEDULE FOR TRADITIONAL SEMESTER COURSES

This fully online course begins with a partial week online course orientation period to familiarize yourself with the online learning environment and to meet online or via the phone with your instructor. Each subsequent week starts on a Monday and ends on a Sunday.

Dates	Modules	Topics / Readings	Assignments Due
Prior to Semester Start and Aug 29 – Sep 2	Module 0	Overview of textbook Online Learning Orientation Course Orientation and group formation	Course orientation Instructor conversation
Week of Sep 3 – Sep 9	Module 1 (note: more than one module may be scheduled in a week)	Chapter 1-5. Review the Prerequisite: Topics from Computer Science I Lab1	Exam 0
Week of Sep 10 – Sep 16	Module 2	More about I/O and Array Lab 2	Lab1
Week of Sep 17 – Sep 23	Module 3	Structs Lab3, Project 1	Lab2
Week of Sep 24 – Sep 30	Module 4	Classes Lab4	Lab3
Week of Oct 1 – Oct 7	Module 5	Inheritance, Cstring Lab5, Project 2	Lab4 Project 1
Week of Oct 8 – Oct 14	Module 6	Review and practice for Exam 1	Exam 1 Lab 5
Week of Oct 15 – Oct 21	Module 7	Pointer, Dynamic Data Lab 6	Project 2
Week of Oct 22 – Oct 28	Module 8	Pointer, Dynamic Data Lab7 Project 3	Lab 6
Week of Oct 29 – Nov 4	Module 9	Linked List Lab 8, Project 3	Lab 7
Week of Nov 5 – Nov 11	Module 10	Linked List Lab 9, Project 3	Lab 8, Project 3
Week of Nov 12 – Nov 18	Module 11	Stack, queue, Exam 2 Project 4, Lab10	Lab 9

Dates	Modules	Topics / Readings	Assignments Due
Week of Nov 19 – Nov 25	Module 12	Stack, queue <b>Light Week – Thanksgiving Break</b>	
Week of Nov 26 – Dec 2	Module 13	Stack, queue Lab 11	Lab10
Week of Dec 3 – Dec 9	Module 14	Recursion, Sorting, Searching	Lab11
Week of Dec 10 – Dec 16	Module 15	Review	
Week of Dec 17 – Dec 21	Final Exams	Course Summary End of Course	

### STUDENT EVALUATION

The course has 15-20 assignments totaling 100 points. Letter grades are awarded based on the total number of points achieved. Points are deducted for late assignments.

EXAMPLES:

Assignments	Points
Projects	20
Labs/Homeworks	30
Exam1+Exam2	30
Final Exam	20
Total Points	100

Class Points	Letter Grade
96 and above	A
90 – 95	A-
87 – 89	B+
83 – 86	B
80 – 82	B-
77 – 79	C+
73 – 76	C
70 – 72	C-
61 – 70	D (Undergrad Only)
60 and below	E

*Note: Grades lower than a “B” fall below the LTU graduate standard*

### EDUCATIONAL GOALS

This course is a continuation of Computer Science I. The fundamental goal of this course is to improve programming skills in the C/C++ high-level programming language. Emphasis will be placed on object-oriented programming covering classes, objects, inheritance, and some other topics like pointers, linked list, stack, queue, recursions, searching, sorting, etc.

#### **STUDENT LEARNING OBJECTIVES / OUTCOMES**

Upon completion of this course, a student in this class will be able to:

- demonstrate that they have refined their C++ programming skills
- Design efficient, top - down, and well documented C++ programs.
- Apply fundamental processing techniques utilizing data file access and manipulation approaches.
- comprehend various object - oriented programming concepts including:
  - File Processing
  - Two and Multidimensional Array
  - Application of Arrays - searching and sorting
  - Pointers
  - Classes
  - Operator overloading
  - Inheritance
  - Polymorphism
  - Templates
  - Link Lists
  - Introduction to Stack, Queue and Tree

#### **PREREQUISITE SKILLS**

*VS2010, good C++ background, at least C- from Computer Science I*

#### **INSTRUCTIONAL METHODS AND COURSE ORGANIZATION**

Lectures are given once or twice per week.

Labs and exercises are given once per week together to help you learn the concepts discussed in lecture.

**Blackboard Learning Environment** – Blackboard at my.ltu.edu contains the syllabus, all assignments, reading materials, streaming videos, narrated PowerPoint mini-lectures, podcasts, written lecture notes, chapter quizzes, links to Web resources, and discussion forums. You will submit all assignments via Blackboard, and are expected to participate regularly in discussion topics. Please take time to familiarize yourself with the organization of the Blackboard site. You will want to check the site frequently for announcements reminding you of new resources and upcoming assignments.

**Student/Instructor Conversations** – Students keep in touch with the instructor via e-mail messages, telephone conference calls, and IM conversations.

**Self-Assessments** – Pre- and post- self-assessment tools will help students measure their entering skills and progress during the course.

**Required Reading** – Textbook chapters should be read according to the schedule outlined in the syllabus. Chapters will be discussed online.

**Publisher Web Site** – A publisher web site at <http://www.deitel.com> includes instructional materials, PowerPoint slides, case studies, application exercises, and practice quizzes. You should make use of as many of these resources as you need to be successful.

**Assignments** – There are 4-5 projects and weekly labs.

#### CLASS POLICIES AND EXPECTATIONS

**(Please review to verify the information supports student expectations. Update as needed for alignment with your course policies, learning objectives, and student expectations.)**

*I plan to offer you a valuable learning experience, and expect us to work together to achieve this goal. Here are some general expectations regarding this course:*

Each student has a LTU email account. If you wish to use a different email address for this course, please **change your email address in Blackboard under “Blackboard Tools”, then “Personal Information”** and send an email to me to store your email address in my directory.

Readings, discussion forum participation, and written assignments must be completed according to the class schedule. It is important to contact the instructor as needed to discuss personal needs regarding course requirements and assignments.

It is essential that all students actively contribute to the course objectives through their experiences and working knowledge.

All assignments must be submitted on schedule, via Blackboard, and using Microsoft Office compatible software. If you need to submit an assignment via email, contact the instructor in advance.

Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment are detailed in this syllabus.

Be prepared to log into Blackboard at least once each day. Please focus your online correspondence within the appropriate Blackboard discussion forums, so that your colleagues may learn from you.

At midterm and at the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to the University, to LTU Online, and to me as an instructor, and I strongly encourage your participation in the evaluation process.

It is important for you as students to know what to expect from me as your instructor:

- I will be available to you via e-mail and phone, and will promptly reply to your messages.

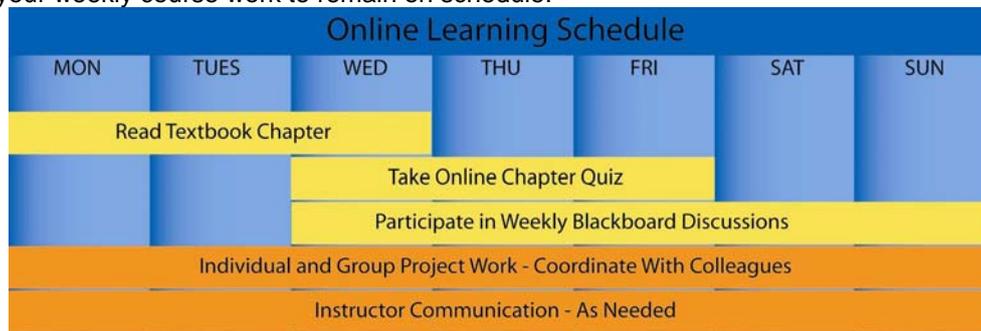
- I will be available to you for face-to-face appointments as requested.
- I will maintain the Blackboard web site with current materials, and will resolve any content-related problems promptly as they are reported to me.
- I will send out a weekly e-mail update to all class members to guide upcoming work and remind you of assignment due dates.
- I will return all assignments to you promptly, and will include individualized comments and suggestions with each assignment.
- I will hold our personal written or verbal communications in confidence. I will not post any of your assignments for viewing by the class without requesting your approval in advance.
- I will treat all members of the class fairly, and will do my best to accommodate individual learning styles and special needs.
- If any of these points need clarification, or should special circumstances arise that require my assistance, please contact me so that we may discuss and resolve the matter.

### PRACTICAL GUIDELINES FOR CLASS LOAD EXPECTATIONS

A three-credit course generally requires at least nine hours per week of time commitment. Here are some practical guidelines to help schedule your time commitments for this online course:

- A 14-week semester (the Summer semester is compressed into 10 weeks) would require at least 126 hours of time commitment to successfully complete all readings, activities, assignments, and texts as described in this syllabus.
- You should reserve at least 6 hours per week to read the required textbook chapters and resources, participate in online discussions, review presentation materials, and work through online quizzes. This effort will total at least 84 hours over the course of the semester.
- You should organize your remaining time to roughly correspond with the point value of each major assignment. This means that you should plan to spend at least:
  - 8-9 hours preparing your case study review;
  - 24-40 hours working with your group on the three parts of your semester-long project;
  - 8-9 hours working on the various components of your reflective consolidation (final exam).

These guidelines may not reflect the actual amount of outside time that you – as a unique individual with your own learning style – will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to insure that you schedule your academic, work, and personal time effectively. The following graphic may be used to guide you in planning your weekly course work to remain on schedule:



### ASSIGNMENT DETAILS

Course assignments and evaluation criteria are detailed below. Please review these requirements carefully. See the section Academic Resources / Assessment Guidelines for information about assessment of written and oral presentations.

Details for all assignments are shown below. Please note that you should not submit any assignments to the Blackboard “Digital Drop Box.” All assignments are submitted using the Blackboard “Assignments” or “SafeAssign” function. Some assignments are also posted to the Blackboard Discussion Forum for student comments.

### Assignment (505 Points)

**Overview** – There will be 4 to 5 projects and weekly labs, and 3 exams. Please follow the instructions for each assignment and submit your work through blackboard. Penalty for late submission is 5% per hour. The submission will not be accepted after 5 hours of deadline for each project and lab.

**Deliverables and Evaluation** – Please submit your work through blackboard.

**Describe in specific terms how the student's work will be evaluated. An example follows:**

For lab: you need to submit your code or report. Please follow the instruction for each individual lab.

For projects: please submit the source file that instructor wants.

### Quizzes and Online Participation (50 points)

Each student is expected to actively participate in online activities. Class participation is evaluated to a maximum of 10 points based on:

Up to 5 points – Reading the required text chapters and working through the online practice quizzes according to the class schedule; and

Up to 5 points – Actively participating in Blackboard discussion forums, responding to questions posted by the instructor, and interacting positively with other students.

### SYLLABUS ADDENDA

Please see the LTU Online “Current Students” web site <http://www.ltu.edu/ltuonline/> for comprehensive information about Lawrence Tech’s academic services, library services, student services, and academic integrity standards. The content of this web site is explicitly included in these syllabus requirements.

The LTU Online “Current Students” web site also includes grading rubrics used by your instructor to evaluate written assignments, discussion forum participation, and group assignments. Please note that the SafeAssign anti-plagiarism product will be used for written assignments submitted for this course. Please see the instructions included on the [eHelp web site](#) regarding the use of the SafeAssign product.

Undergraduates: Leadership Transcripts

The leadership transcript enables students to track co-curricular activities that are undertaken above and beyond the requirements of the LTU curriculum. The leadership transcript serves students by enhancing the leadership portfolio; providing the opportunity for a transcript of distinction; enhancing their resumes; and assisting in articulating leadership experience. It can be accessed by logging on to Banner Web and clicking the Student and Financial Aid tab. Leadership Activities is located at the bottom of the list. More information is available at <http://www.ltu.edu/leadership>.