

# CSE 1341-Fall 2018

## Principles of Computer Science I

### Introduction

Welcome to CSE 1341. This course will provide an introduction to the fundamental concepts of computer science, programming and object-oriented design of reusable modules. The course covers basic object-oriented concepts like composition, inheritance, polymorphism and containers. To get the most out of this class and ultimately to be successful, you must be willing to work hard.

### Instructor Contact Information

Ken Howard  
Caruth 4th Floor CSE Department  
(972) 467-3001  
[kenhoward@lyle.smu.edu](mailto:kenhoward@lyle.smu.edu)

Office Hours: Monday 6:00-6:30pm and other times as announced in class. Schedule changes will be announced in class.

#### Lab instructors:

CSE Teaching Assistants (TA's) for Fall 2018	
Name	E-mail
Byreddy, Nikhila	<a href="mailto:nbyreddy@mail.smu.edu">nbyreddy@mail.smu.edu</a>
Panchmahalkar, Pritheesh	<a href="mailto:ppanchmahalkar@mail.smu.edu">ppanchmahalkar@mail.smu.edu</a>
Rao, Aditya	<a href="mailto:adityadathatrayr@mail.smu.edu">adityadathatrayr@mail.smu.edu</a>
Wang, Simin	<a href="mailto:siminw@mail.smu.edu">siminw@mail.smu.edu</a>
CSE Senior Mentors (SM's) for Fall 2018	
Name	E-mail
Asonye, Enyinnaya	<a href="mailto:easonye@mail.smu.edu">easonye@mail.smu.edu</a>
Mohammed, Muaz	<a href="mailto:mamohammed@mail.smu.edu">mamohammed@mail.smu.edu</a>

### Course Information

**Lecture:** Section 801: Monday 6:30PM – 9:20PM (Caruth 147)

#### Labs:

CSE Course Cat	Sec.#	Course Name	Days	Time	Room	TA
1341	N11	Principles of Computer Science	W	8:00am-9:50	Caruth 485	Panchmahalkar, Pritheesh
1341	N12	Principles of Computer Science	M	8:00am-9:50	Caruth 485	Panchmahalkar, Pritheesh
1341	N13	Principles of Computer Science	M	12:00pm-1:50	Embrey 123	Panchmahalkar, Pritheesh
1341	N14	Principles of Computer Science	Th	1:00pm-2:50	Junkins 102	Rao, Aditya
1341	N15	Principles of Computer Science	F	9:00am-10:50	Caruth 485	Byreddy, Nikhila
1341	N16	Principles of Computer Science	T	3:00pm-4:50	Junkins 102	Byreddy, Nikhila
1341	N17	Principles of Computer Science	W	10:00am-11:50	Caruth 485	Panchmahalkar, Pritheesh
1341	N18	Principles of Computer Science	Th	3:00pm-4:50	Caruth 485	Byreddy, Nikhila
1341	N19	Principles of Computer Science	F	3:00pm-4:50	Caruth 485	Byreddy, Nikhila
1341	N20	Principles of Computer Science	T	1:00pm-2:50	Junkins 102	Wang, Simin
1341	N21	Principles of Computer Science	T	3:00pm-4:50	Caruth 485	Wang, Simin

For further information, assignments and assignment submission see <http://courses.smu.edu> (Canvas)

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## Textbook

Principles of Computer Science: Java Edition, Kendall Hunt Publishing, First Edition, Ken Howard.  
ISBN# 13:978-1-4652-2252-7

## Course Work and Grading

The final course grade in CSE 1341 will be based upon performance on various assignments such as exams, quizzes and programming assignments. Additionally, your attendance and active participation in lecture will be reflected in your final grade. The percentage break-down is as follows:

Assignment	Percentage
Exams	50.00%
Quizzes	10.00%
Programming assignments (Lab)	35.00%
Attendance and active Participation	5.00%

It is expected that each student will keep up with the reading as outlined in the syllabus. Additional materials may be referenced in class as needed. Assignments and due dates will be available on Canvas. Final grades in this course are determined as follows:

93 - 100 A	80 - 82 B-	67 - 69 D+
90 - 92 A-	77 - 79 C+	63 - 66 D
87 - 89 B+	73 - 76 C	60 - 62 D-
83 - 86 B	70 - 72 C-	00 - 59 F

## Tests

This course will have no final exam, but there will be three tests during the semester. Each test will take approximately 60 minutes to complete and will focus on the topics discussed since the last test.

## Quizzes

In class, we will have 5 scheduled quizzes (see the syllabus for dates). Additionally, surprise unscheduled quizzes may also be given in class. Each quiz will last 10-15 minutes, held at the *end* of class and covers the reading material indicated in the course outline. There are no makeups for missed quizzes. Instead, each student will be permitted to **drop one quiz grade at the end of the semester**. The dropped quiz grade may be used if you miss a quiz due to tardiness or an absence. For those who don't miss a quiz, the lowest quiz grade will be dropped automatically.

## Programming Assignments and Labs

Almost every week on Friday you will be given a programming assignment which is usually due two weeks later. The lab assignments consist of two parts, a pre-lab and the lab.

You must have the pre-lab and part of your programming assignment finished before you go to lab. You have to submit a printout of the completed pre-lab to the TA at the beginning of the lab session. If you submit the pre-lab during the lab session you will get 50% credit. After the lab you cannot submit the pre-lab. Lab is designed for you to get clarifications and explanations as needed. Outside lab hours you can ask questions at the help desk. You need to come prepared to the help desk and ask specific questions and present written code/pseudocode/UML diagrams. Help desk hours will be posted in the department (Caruth Hall, 4th floor) and on Canvas.

The lab assignments (not pre-labs) must be submitted to Canvas before the due date. There is usually an automatic 2 calendar day extension, however you will lose 25% of your grade for the lab. After this time, Canvas will not allow any submissions. **Make sure that you can access Canvas (<http://canvas.smu.edu>) and that you are enrolled correctly in your course!** Email your instructor immediately if you are not correctly enrolled.

Please email [help@engr.smu.edu](mailto:help@engr.smu.edu) with any login problems you are having with Windows or Unix. Login problems with Canvas should be directed to your instructor. Include your 8-digit SMU id in your email. **All login problems must be resolved in the first week of labs.**

Attendance is taken at each lab. You will **not be counted** if you come late or leave early unless you can demonstrate to the TA that you have completed that week's programming assignment correctly and understand the topic.

A typical week looks like this:

- Friday: New programming assignment is given.
- Monday: Lecture. Sometimes a quiz.
- (day varies): Lab session. Pre-labs have to be submitted to the TA (printout).
- Saturday 6am: Programming assignment from two weeks ago is due and points for the assignments for the week before are available (both on Canvas)

**One lab assignment grade will be dropped at the end of the semester.** The dropped lab grade may be used if you miss a lab due to tardiness or an absence.

## Covered Topics and Class Outline

Session	Date	Lecture	Reading	Lab	Quiz
Week 1	8/20	Introduction to lecture and lab Introduction to computers, languages, and Java	Ch 1, App A, App B		
Week 2	8/27	"Hello World", variables, arithmetic Control structures I	Ch. 2 Ch. 3	<b>Lab 1</b> assigned Fri 8/24	
Week 3	9/3	<b>Labor Day – No Class</b>			
Week 4	9/10	Hex/Binary/Decimal Conversion; More Control structures  Methods	App. C  Ch. 4	<b>Lab 2</b> Assigned Fri 9/7	<b>Quiz 1</b>
Week 5	9/17	Methods  Exam Review	Ch. 4	<b>Lab 3</b> Assigned Fri 9/14	<b>Quiz 2</b>
Week 6	9/24	Arrays & Strings	Ch. 5		
<b>EXAM 1</b>					
Week 7	10/1	OO Concepts, Eclipse Object Oriented Programming	Ch. 6 thru pg 80	<b>Lab 4</b> Assigned Fri 9/28	
Week 8	10/8	<b>Fall Break – No Class</b>			
Week 9	10/15	Object Oriented Programming Classes	Ch. 6 pp 80-92	<b>Lab 5</b> Assigned Fri 10/12	
Week 10	10/22	Classes ArrayList	Ch. 6 pp 80-92 Ch. 7	<b>Lab 6</b> Assigned Fri 10/19	<b>Quiz 3</b>
Week 11	10/29	Exceptions, File I/O Exam Review	Ch. 9	<b>Lab 7</b> Assigned Fri 10/26	<b>Quiz 4</b>
Week 12	11/5	Inheritance	Ch. 8		
<b>EXAM 2</b>					
Week 13	11/12	Inheritance/GUI	Ch. 9	<b>Lab 8</b> Assigned Fri 11/9	
Week 14	11/19	GUI/Applets Interfaces/Inner Classes	Ch. 10 thru pg139		<b>Quiz 5</b>
<b>Thanksgiving break Wed 11/22 – Fri 11/24</b>					
Week 15	11/26	GUI/Applets Interfaces/Inner Classes Exam Review	Ch. 10 pp 140-151		
Week 16	12/3	<b>EXAM 3</b>			

## Learning Outcomes

After successful completion of this course, you should be able to:

### *1.0 – DEMONSTRATE COMPETENCY IN PROGRAM DESIGN*

- 1.1 Follow a detailed process for analyzing a program's requirements
- 1.2 Use UML or other graphical process to design a solution to a problem.
- 1.3 Design, code and document a team programming project.

### *2.0 – DEMONSTRATE COMPETENCY IN ALGORITHMIC DEVELOPMENT*

- 2.1 Understand memory management and dynamic allocation.
- 2.2 Develop a complex algorithm using selection and iteration
- 2.3 Solve a problem iteratively and recursively, explaining the advantages and disadvantages of each
- 2.4 Use one and two-dimensional arrays in a programming project.
- 2.5 Implement a variety of File I/O techniques
- 2.6 Use a variety of searching and sorting techniques

### *3.0 – DEMONSTRATE COMPETENCY IN PROGRAM CODE TESTING AND MAINTENANCE.*

- 3.1 Use a text editor and object-oriented language compiler on several platforms
- 3.2 Locate and explain syntax errors in a program.
- 3.3 Use techniques for debugging programs.
- 3.4 Use a variety of exception handling techniques

### *4.0 – DEMONSTRATE COMPETENCY IN OBJECT-ORIENTED PROGRAMMING*

- 4.1 Create programmer-defined objects
- 4.2 Use existing class libraries to develop collections of objects
- 4.3 Use composition in a programming project.
- 4.4 Use inheritance in a programming project.
- 4.5 Explain the ideas behind object reusability.

## Attendance Policy

Because of the nature of this class, attendance of and participation in lecture is of the utmost importance. Therefore, students are expected to attend class regularly. Any assignments that will be missed (including those due to university-sanctioned events) must be completed before the due date. This includes lecture exams and homework assignments. Note that five percent of the semester grade is based upon class attendance and active participation. This attendance score will be determined based attendance and active participation in both lecture and lab. **Should a student be absent from a course lecture, it is the student's responsibility to make alternative arrangements to obtain any missed lecture notes, etc.**

## Academic Ethics and Collaboration

You are expected to create, edit and print your own assignments and take tests without outside assistance. All work is expected to be your own. In particular:

- You should never give or receive solutions/answers to any questions or projects or any parts or questions or projects. This includes but is not limited to source code, design documents, homework, etc.

- On-line sources can be used as references, however submitting material found online as part of your own work is considered plagiarism.

**PLEASE READ:**

**Lab assignments must be completed on your own without the assistance of other people in person, by email, text or any other form of communication. You may use the textbook, course notes, lecture slides, and online reference material to learn how to complete a lab, but you may not include code written by another person in part or in whole as part of a lab submission. Any plagiarism will be subject to the consequences of the SMU Honor Council. *The only exception to this is that you may receive assistance from TA's, Senior Mentors, CSE Help Desk, ALEC tutors, and/or the course instructor.***

If you collaborate on any quiz, exam or lab assignment for any reason, you will receive a 0. In severe cases, you will receive an F in the course and may be brought in front of the SMU Honor Council. It is your responsibility to know and understand the University's Honor Code and the expectations for collaboration in this course. The instructor of this course reserves the right to impose less severe penalties as seen fit.

## **Additional Information**

**Disability Accommodations:** Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or visit <http://www.smu.edu/alec/dass> to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements.

**Religious Observance:** Religiously observant students wishing to be absent on holidays that require missing class should notify me in writing at the beginning of the semester, and should discuss with her, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

**Excused Absences for University Extracurricular Activities:** Students participating in an officially sanctioned, scheduled University extracurricular activity will be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with me prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)