**CSE 1342 – Programming Concepts – Spring 2019**

**Class Location:**Junkins 101

**Class Time:**MWF 9:00 – 9:50AM

**Instructor:**Erik Gabrielsen

**Office:**Caruth Suite 400

**E-Mail:**[egabrielsen@smu.edu](mailto:egabrielsen@smu.edu)

**Office Hours:**Office Hours by Appointment

**Course Co-requisites:**Each student must also be enrolled in one of the CSE 1342 labs.

**Textbooks:**C++ How to Program, 10th edition, by Deitel and Deitel, Prentice Hall. Access Code purchase not required. The 7th, 8th, or 9th editions also work and are cheaper. (Recommended)

CSE 1342: Programming Concepts in C++ online ZyBook. **(Required)**

1. Sign in or create an account **learn.zybooks.com**
2. Enter ZyBook code: **SMUCSE1342GabrielsenSpring2019**
3. Subscribe

**Software:**Most of the time you will want to develop your programs on your own laptop. There are plenty of free C++ compilers and integrated development environments (IDEs) such as QtCreator, NetBeans, Eclipse or CodeBlocks that can be downloaded. You may also use a text editor in place of a full IDE such as Sublime Text 2, Atom, or VSCode.  IDEs and Text Editors will not be discussed in class but there is plenty of help online.

No matter what environment you use to develop your programs, when you turn in your source code the TAs will recompile (using the g++ compiler) and run your code on the schools LINUX servers (referred to as genuse servers). That means before you turn in your programs you need to make sure your code compiles and runs properly on a LINUX server. To do this requires that you obtain a LINUX account. Go to http://lyle.smu.edu/support/contents/index.php/accounts to request an account if you do not already have one. More detail will be provided in class.

**As soon as you can**: Make sure that you can access Canvas (https://www.smu.edu/OIT/Services/Canvas) and that you are enrolled correctly in your course! Email your instructor immediately if you are not correctly enrolled. Login problems with Canvas should be directed to your instructor. Include your 8- digit SMU id in your email

**Topics and Assignments**(this schedule is subject to change so check back periodically)

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| --- | --- | --- | --- | --- |
| Week # | Dates | Lecture Topics | ZyBook Chapters | Deitel Chapters |
| **1** | **F      1/18** | CSE 1342 Overview; History of C++; C++ vs. Java  *No Labs this week* | **1,2** | **1,2** |
| **2** | **M     1/21**  **W     1/23**  **F      1/25** | **University Holiday**  Intro to C++ Programming, I/O and Operators  Variables/Assignments  *No Labs this week* | **1,2** | **1,2** |
| **3** | **M     1/28**  **W     1/30**  **F      2/01** | Branches and Loops  Branches and Loops  Branches and Loops | **3,4** | **4,5** |
| **4** | **M     2/04**  **W     2/06**  **F      2/08** | User-Defined Functions  User-Defined Functions  User-Defined Functions | **5** |  |
| **5** | **M     2/11**  **W     2/13**  **F      2/15** | Recursion  Recursion  Recursion | **6** | **8** |
| **6** | **M     2/18**  **W     2/20**  **F      2/22** | Exam 1 Review  **Exam 1 (ZyBook Chapters 1 – 6)**  Streams (including text file I/O) | **7** | **2,14** |
| **7** | **M     2/25**  **W     2/27**  **F      3/01** | STL Arrays / Vectors  STL Arrays / Vectors  Searching and Sorting Algorithms | **8,9** | **7,20** |
| **8** | **M     3/04**  **W     3/06**  **F      3/08** | Searching and Sorting Algorithms  Objects and Classes  Objects and Classes | **10** | **3,9** |
| **9** | **M     3/11**  **W     3/13**  **F      3/15** | **Spring Break**  **Spring Break**  **Spring Break** |  |  |
| **10** | **M     3/18**  **W     3/20**  **F      3/22** | Pointers, Dynamic Memory Allocation and Built-In Arrays  Pointers, Dynamic Memory Allocation and Built-In Arrays  Pointers, Dynamic Memory Allocation and Built-In Arrays | **11** | **8** |
| **11** | **M     3/25**  **W     3/27**  **F      3/29** | Lists, Stacks and Queues  Lists, Stacks and Queues  Lists, Stacks and Queues | **12** | **8** |
| **12** | **M     4/01**  **W     4/03**  **F      4/05** | Lists, Stacks and Queues  Exam 2 Review  **Exam 2 (ZyBook Chapters 7-12)** | **12** |  |
| **13** | **M     4/08**  **W     4/10**  **F      4/12** | Inheritance and Polymorphism  Inheritance and Polymorphism  Inheritance and Polymorphism | **13** | **11,12** |
| **14** | **M     4/15**  **W     4/17**  **F      4/19** | Exceptions  Exceptions  User-Defined Templates | **14** | **7,17** |
| **15** | **M     4/22**  **W     4/24**  **F      4/26** | User-Defined Templates  Standard Template Library Containers and Iterators  Standard Template Library Containers and Iterators | **15,16** | **15** |
| **16** | **M     4/29**  **W     5/1**  **F      5/3** | TBD  TBD  Exam 3 Review |  |  |
| **17** | **M     5/6** | **Exam 3 (ZyBook Chapters 13 – 16)** |  |  |

**Tests:**There will be three exams throughout the semester. All three exams are equally weighted. The thirsd exam will be held on the last regularly scheduled class of the semester. There will be no final exam during finals week. The tests are open book. Notes and electronic devices are not allowed. Make-up exams are only given in the event of an excused absence. Notify me as soon as you know you are going to miss a test. No test grades will be dropped.

**Programs:**To be on time, programs must be uploaded into the appropriate Canvas folder by 11:59 pm on the due date. Under special circumstances approved by your professor, a late folder can be requested for a program; the maximum late time is 48 hours after the program is due. Late programs will have 30 points deducted from their score. No program grades will be dropped.

**Lab Quizzes:**Each student must also be enrolled in one of the CSE 1342 labs. **Labs will start the week of 1/28**. At the start of each lab the TA will pass out a lab assignment (usually involving coding) that is to be completed during the lab period. The completed lab is to be uploaded into the appropriate Canvas folder by the end of the lab period or submitted via ZyBook Online. Partial credit is available for those who cannot complete the entire assignment. The lowest lab grade will be dropped at the end of the semester.

**Participation:**Your participation grade is based on your completion of the participation and challenge activities in the zyBook.  Your lowest Chapter Participation Grade will be dropped.

**Grade Distribution:**

Tests …………… 50%

Programs.............30%

Lab Quizzes ……10%

Participation …….10%

All tests, programs, labs and quizzes are graded on a scale of 0 – 100. There will be no extra credit assignments. Grades are not curved.

**Grading Scale:**

93 - 100 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-

00 - 59 F

**Attendance Policy:**Because of the nature of this class, attendance and participation in lecture is of the utmost importance. Therefore, students are expected to attend class regularly. 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:**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, tests, quizzes, etc.
* On-line sources can be used as references, however submitting material found online as part of your own work is unacceptable.

If you collaborate on any assignment for any reason, you will receive a 0 on the particular assignment. 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.

You may not collaborate with other students on programming assignments. The only assistance permitted is from the instructor, the CSE Teaching Assistances, the CSE help desk and your professor. You may choose to seek help from the ALEC, but in the past students have found that the CSE help desk is better prepared to help with the material taught in this class.

**Students who copy the work of another on an exam, program, homework or lab assignment will receive a failing grade and be subject to SMU’s honor council process. PLEASE DO NOT CHEAT.**

**Disability Accommodations**:  Students needing academic accommodations for a disability must first register with Disability Accommodations & Success Strategies (DASS).  Students can call 214-768-1470 or visit [http://www.smu.edu/Provost/ALEC/DASS (Links to an external site.)Links to an external site.](http://www.smu.edu/Provost/ALEC/DASS) to begin the process.  Once registered, students should then schedule an appointment with the professor as early in the semester as possible, present a DASS Accommodation Letter, and make appropriate arrangements.  Please note that accommodations are not retroactive and require advance notice to implement.

**Religious Observance**: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See “Religious Holidays” under [University Policy No. 7.22 (Links to an external site.)Links to an external site.](https://www.smu.edu/Policy/7-Human-Resources/7-22-University-Holidays))

**Excused Absences for University Extracurricular Activities**: Students participating in an officially sanctioned, scheduled University extracurricular activity should 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 the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (See [2018-2019 University Undergraduate Catalogue (Links to an external site.)Links to an external site.](https://catalog.smu.edu/content.php?catoid=33&navoid=2410))

**ABET Student Outcomes for Computer Science:**

* Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
* Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
* Apply computer science theory and software development fundamentals to produce computing-based solutions.

**ABET Student Outcomes for Computer Engineering:**

* An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
* An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to     draw conclusions.