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| **Document:** | Programming II Course Administration | | | |
| **Revised:** | **October 25, 2021** | | | |
| **Course Title:** | Programming II | | | |
| **Course Number:** | CMSC 2613 | | | |
| **Section:** | CRN 10837 and IVE CRN 17546 Monday and Wednesday 5:45 – 7:00 p.m. MCS 111 | | | |
| **Instructor:** | Dr. Thomas R. Turner; Office: MCS 134; Work Phone: 974-5383, e-mail: trturner@uco.edu | | | |
| **Office Hours:** | **Time** | **Monday** | **Wednesday** | **Friday** |
| | 9:00 – 9:50 a.m. | MCS 134 | MCS 134 | MCS 134 |
| | 3:00 – 4:00 p.m. | MCS 134 | MCS 134 | |
| | **Time** | **Tuesday** | **Thursday** | |
| | 10:00 – 10:50 a.m. | MCS 134 | MCS 134 | |
| | Please make an appointment to visit me during my office hours. | | | |
| **Text:** | Horstman, Cay and Budd, Timothy Big C++ 2nd Ed. Wiley 2009 ISBN 978-0-470-38328-5 | | | |
| **References:** | 1. Kruse, R. L. and Ryba, A. J. Data Structures and Program Design in C++, Prentice-Hall, Inc. 1999 ISBN 0-13-768995-0<br>2. Stroustrup, B. *The C++ Programming Language* 3rd Ed.; Addison-Wesley 1997 ISBN 0-201-88954-4 | | | |
| **Prerequisites:** | 1. CMSC 1613, Programming I | | | |
| **Programming Projects:** | Ten programming projects and two reports are assigned. Projects and reports are due at the beginning of class on the date given in this document unless otherwise specified. Exams that are administered in class are due at the end of the class period. | | | |
| **Course Scoring:** | **Task** | **Date** | **Value** | |
| | **Test 1** | **9-27** | **150** | |
| | **Test 2** | **11-3** | **150** | |
| | **Final Test** | **12-15** | **300** | |
| | Programming Projects | Table 2 | 250 | |
| | Reports | Table 3 | 50 | |
| | **Total** | | **900** | |
| **Grading:** | **A**: 90% (810-900); **B**: 80-89% (720-809); **C**: 70-79% (630-719); **D**: 60-69% (540-629); **F**: 59% (0-539) and below. | | | |
| **Notice:** | Beepers and cellular phones are prohibited in class. | | | |
| **Caveat:** | This lecture schedule, programming projects and due dates, number and dates of tests are all subject to change. Changes are presented in class ***You*** are responsible for the material presented in class. | | | |
| **Class Web Page:** | The course administration and assignments can be found on URL **http://www.comsc.uco.edu/~trt/cs2613.html** | | | |
| **Course Directory** | The course directory is on the department computer (**cs.uco.edu**). You can find project test data files in the course directory. **~tt/cs2613/** | | | |
| **Student Disabilities:** | Students with disabilities who require accommodations may contact Disability Support Services. **http://bronze.uco.edu/disability_support/** | | | |

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| **Absences:** | 1. A **45-point bonus** is awarded to any student having no recorded absences. The attendance bonus will be denied to any student who is absent for ***any*** reason. The attendance bonus will not be granted to any student having an excused absence.<br>2. A student may be absent for up to **three (3)** classes without penalty: these three classes are counted as excused absences. No notification or documentation is required except when a test is given.<br>3. **Fifteen (15)** points will be deducted from the student's final score for the **fourth and every subsequent** class for which the student is recorded absent. A student will be marked absent if the student is not present when roll is called. A student will be marked absent if the student leaves before class is dismissed.<br>4. A student who is absent on the day of a test will receive a zero on an examination unless written justification is presented to the instructor. Acceptable justification includes university sanctioned travel, military obligation, serious illness or injury, or death or serious illness in the immediate family. Work-related conflicts are not acceptable excuses.<br>5. Please note that **roll is taken** for those students enrolled in the **Interactive Video** section at the time this class is scheduled to meet on campus. **No recording is available for later viewing.**<br>6. **All students are required to take examinations on campus in the classroom assigned for this class** on the dates given in the schedule. |
| **Academic Honesty and Collaboration:** | Students are encouraged to collaborate. However, each student must make a ***unique*** contribution to any joint effort and that unique contribution must be ***visible*** in the work submitted by the student. You may use the internet to find additional information or solutions related to this course. However, like collaboration, any material, whose origin is the internet, submitted as a requirement of this class, must contain your ***unique*** and ***substantial*** contribution. Partially or completely copied assignments shall be considered a prima facie case for academic dishonesty. |

**Table 1.** Lecture Schedule

| Lecture | Date | Topic | Reference |
|---|---|---|---|
| 1 | 8-23 | Course administration<br>Command line arguments<br>Structures and classes | Lecture notes<br>Lecture 1<br>Lecture 2 |
| 2 | 8-25 | Formatted output<br>References<br>Dynamic memory allocation | Lecture 3<br>Lecture 4<br>Lecture 5 |
| 3 | 8-30 | Program structure and ***makefiles***<br>Selection Sort<br>Project p01 class demonstration | Lecture 6<br>Lecture 7 |
| 4 | 9-1 | Stacks and Palindromes<br>**class** *Stack* (array implementation) | Lecture 8<br>Lecture 9 |
| 5 | 9-8 | **template class** *Stack* (array implementation)<br>Postfix evaluation<br>**Turn in p01: Median** | Lecture 10<br>Lecture 11 |
| 6 | 9-13 | class *Stack* (element implementation)<br>**template class** *Stack* (element implementation)<br>**Turn in p02: Bracket Matching** | Lecture 12<br>Lecture 13 |
| 7 | 9-15 | p03 in-class demonstration<br>**Turn in r01: Library research** | |
| 8 | 9-20 | Simulation<br>Simulation Mechanics<br>**Turn in p03: Postfix evaluation** | Lecture 14<br>Lecture 15 |
| 9 | 9-22 | **class** *Queue (array implementation)*<br>**template class** *Queue* (array implementation) | Lecture 16<br>Lecture 17 |
| ***10*** | ***9-27*** | ***Test 1*** | ***Lectures 1-13; Projects p01, p02, and p03.*** |
| 11 | 9-29 | Test 1 Reprise | |
| 12 | 10-4 | Intermediate Simulation<br>Intermediate Simulation Mechanics<br>**Turn in p04: Simple Simulation** | Lecture 18<br>Lecture 19 |
| 13 | 10-6 | **class** *Queue* (element implementation)<br>**template class** *Queue* (element implementation) | Lecture 20<br>Lecture 21 |
| 14 | 10-11 | class *List* (element implementation)<br>**Turn in p05: Checkout line simulation** | Lecture 22 |
| 15 | 10-13 | List iterators (element implementation)<br>**template class** *List* (element implementation) | Lecture 23<br>Lecture 24 |
| 16 | 10-18 | **class** *Set* (element implementation)<br>**template class** *Set* (element implementation) | Lecture 25<br>Lecture 26 |
| 17 | 10-20 | **class** *List* (array implementation)<br>Binary Search<br>**Turn in p06: Integer set 1** | Lecture 27<br>Lecture 28 |
| 18 | 10-25 | List iterators (array implementation)<br>**template class** *List* (array implementation)<br>**Turn in r02: Postfix evaluation** | Lecture 29<br>Lecture 30 |

**Table 1.** Lecture Schedule (continued)

| Lecture | Date | Topic | Reference |
|---|---|---|---|
| 19 | 10-27 | **class** *Set* (array implementation)<br>**template class** *Set* (array implementation)<br>Operator Overloading | Lecture 31<br>Lecture 32<br>Lecture 33 |
| 20 | 11-1 | Trees<br>**class** *Tree* (element implementation)<br>**template class** *Tree* (element implementation)<br>**Turn in p07: Integer set 2 and operator overloading** | Lecture 34<br>Lecture 35<br>Lecture 36 |
| ***21*** | ***11-3*** | ***Test 2*** | ***Lectures 14-33; Project p04, p05, p06, and p07*** |
| **22** | **11-8** | **ABET Visit – No class** | |
| 23 | 11-10 | Test 2 Reprise | |
| 24 | 11-15 | Time Complexity<br>Time Complexity Examples<br>**Turn in p08: Binary tree traversal** | Lecture 37<br>Lecture 38 |
| 25 | 11-17 | Project p09 Example<br>Binary Search Time Complexity | Lecture 39<br>Lecture 40 |
| 26 | 11-22 | Priority Queue (Heap)<br>**class** *Heap* | Lecture 41<br>Lecture 42 |
| 27 | **11-29** | **Margin**<br>**Turn in p09: Time complexity** | |
| **28** | **12-1** | **Margin** | |
| **29** | **12-6** | **Margin**<br>**Turn in p10: Heap sort** | |
| **30** | **12-8** | **Margin** | |
| ***31*** | ***12-15*** | ***Final Exam Wednesday, December 15, 2021 from 5:30 – 7:20 p.m.*** | ***Comprehensive*** |

**Table 2.** Programming Projects

| Project | Due | Value | Description |
|---|---|---|---|
| 1 | 9-8 | 25 | **p01**: Median |
| 2 | 9-13 | 25 | **p02**: Bracket Matching |
| 3 | 9-20 | 25 | **p03**: Postfix evaluation |
| 4 | 10-4 | 25 | **p04**: Simple simulation |
| 5 | 10-11 | 25 | **p05**: Checkout line simulation |
| 6 | 10-20 | 25 | **p06**: Integer set 1 |
| 7 | 11-1 | 25 | **p07**: Integer set 2 and operator overloading |
| 8 | 11-15 | 25 | **p08**: Binary tree traversal |
| 9 | 11-29 | 25 | **p09**: Time complexity |
| 10 | 12-6 | 25 | **p10**: Heap sort |
| Total | | 250 | |

**Table 3.** Reports

| Report | Due | Value | Description |
|---|---|---|---|
| 1 | 9-15 | 25 | **r01**: Library research |
| 2 | 10-25 | 25 | **r02**: Postfix evaluation |
| Total | | 50 | |