Because 4 classes, COSC1436.Sec85420, COSC1436.Sec95000, and COSC1415.Sec85420, COSC1415.Sec95000 have the same course objectives and Learning Outcome, we are all together in the same class. Hopefully, we can have a wonderful semester together.

I. COURSE DESCRIPTION:
Coordinating Board Academic Approval Number 1102015207.
This introductory course is designed to meet the requirements for a four-year degree with a major or minor in computer science, mathematics, or a scientific field. This course will focus on problem-solving using modular design techniques implemented with a structured programming language (3 Lecture, 3 Lab.)
This course uses C++:
- introduces the fundamental concepts of structured and object-oriented programming
- provides a comprehensive introduction to programming for computer science and technology majors.
- Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging.
- This course assumes computer literacy. (This course is included in the Field of Study Curriculum for Computer Science.)

II. COURSE PREREQUISITES:
DREA0093 or ESOL0044 or have met the TSI standard for reading. Two years of high school algebra or equivalent and computer literacy or demonstrated competence approved by instructor.

III. COURSE OBJECTIVES:
- Learn techniques of top-down design of algorithms and structured programming
- Use the fundamentals of C++ programming using local rather than global variables
- Use if, if...else and nested if structures in programs
- Use looping structures, especially while loops in programs
- Design program using both value-returning and void functions
- Use value and reference parameters in void functions and value parameters in value-returning functions
- Perform basic manipulations with one-dimensional arrays
- Enhance your problem solving skills.
IV. LEARNING OUTCOMES:
Upon successful completion of this course, students will:
1. Describe how data are represented, manipulated, and stored in a computer.
2. Categorize different programming languages and their uses.
3. Understand and use the fundamental concepts of data types, structured programming, object-oriented programming, algorithmic design, and user interface design.
4. Demonstrate a fundamental understanding of software development methodologies, including modular design, pseudo code, flowcharting, structure charts, data types, control structures, functions, arrays, objects and classes, and event handling.
5. Develop projects exhibiting the ability to develop logical algorithms from specifications and requirements statements; demonstrate appropriate design, coding, testing, and documenting computer programs that implement the requirements.
6. Demonstrate an ability to apply computer programming concepts to new problems or situations.

V. ACADEMIC COURSE / WECM / SCANS COMPETENCIES: (if applicable)
- Reading: the ability to analyze and interpret a variety of printed materials - books, documents, and articles
- Writing: the ability to produce clear, correct and coherent prose adapted to purpose, occasion and audience
- Speaking: ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience
- Listening: analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing, reading
- Critical Thinking: think and analyze at a critical level
- Computer Literacy: understand our technological society, use computer based technology in communication, solving problems, acquiring information.

VI. DEVELOPMENTAL COURSE (if applicable)
The Texas Success Initiative (TSI) is a statewide program designed to ensure that students enrolled in Texas public colleges and universities have the basic academic skills needed to be successful in college-level course work. The TSI requires assessment, remediation (if necessary), and advising of students who attend a public college or university in the state of Texas. The program assesses a student’s basic academic skills in reading, writing, and math. Passing the assessment is a prerequisite for enrollment in many college-level classes such as English 1301/1302, History 1301/1302, Math 1414, etc. Students who do not meet assessment standards may complete prerequisite requirements by taking developmental courses in the deficient area and passing them with a grade of C or higher. In some cases retesting will also be required. It is up to each student to be aware and informed about requirements that are subject to change. Additional information is available from the TSI Office in T170T or T170S (phone no. 972-238-6115 or 972-238-3787) or at http://www.rlc.dcccd.edu/regi/resource/tsi.htm

VII. SPECIFIC COURSE LEARNING OUTCOMES: (if applicable)

VIII. REQUIRED / RECOMMENDED COURSE MATERIALS:
- USB flash drive to store your labs and assignments

IX. COURSE OUTLINE
# SUMMER ONLINE: COSC1415 – COSC1436 COURSE OUTLINE

<table>
<thead>
<tr>
<th>Week</th>
<th>LECTURE</th>
<th>LAB</th>
</tr>
</thead>
</table>
| Week 1 6/05 | Policy Quiz  
Chapter 1: An Overview of Computers and Programming Languages  
HOMEWORK 1 – due on 6/20 | 6/05 PRE-TEST  
LAB 1: due on 6/10 |
| Week 2 6/10 | Chapter +1: An Overview of Computers and Logic (in the back of the book)  
Chapter 2: Basic elements of C++  
HOMEWORK 2 – due on 6/20 | LAB 2: due on 6/17  
6/11 Last day to drop class without W |
| Week 3 6/17 | Chapter 3: Input / Output  
HOMEWORK 3 – due on 6/20  
Review for test 1 (chapter 1, +1, 2, 3) | LAB 3: due on 6/24  
FRIDAY 6/21 TEST 1: Chapter 1, +1, 2, 3 |
| Week 4 6/24 | Chapter +2: Understand Structure (in the back of the book)  
HOMEWORK 4 – due on 7/11  
Chapter 4: Control Structures (Selection)  
HOMEWORK 4 – due on 7/11 | LAB 4: due on 7/01  
PROJECT ASSIGNMENT due on 7/20 |
| Week 5 7/01 | Chapter 5: Control Structure (Repetition)  
HOMEWORK 5 – due on 7/11  
Chapter 6: User-Defined Functions  
HOMEWORK 6 – due on 7/11 | LAB 5: due on 7/08  
Working on the project, due on 7/20 |
| Week 6 7/08 | Review for test 2 (chapter +2, 4, 5, 6)  
Chapter 7: User-Defined Simple Data Types, Namespace and String  
HOMEWORK 7 – due on 7/21 | LAB 6: due on 7/15  
FRIDAY 7/22 TEST 2: Chapter +2, 4, 5, 6  
Last day to drop with a “W” on 7/13  
Working on the project, due on 7/20 |
| Week 7 7/15 | Chapter 8: Array and Strings  
HOMEWORK 8 – due on 7/21 | Working on the project, due on 7/20 |
| Week 8 7/22 | Review for final exam (cover all the lectures) | 7/22 FINAL EXAM |
X. EVALUATION PROCEDURES

- Homework: 10 home works
- Labs: 6 labs
- Project: 1 individual project
- Participate to Discussion Forum: at least 10 times

XI. EXAMS AND ASSIGNMENTS – GRADE SCALE

After the final grade is posted on the eConnect, you have 2 days to discuss about the grade with your instructor for any reasons. After 2 days, the grade will become permanent grade and any late concern is not acceptable.

Final Grades will be available through the touchtone telephone system at 972-613-1818 or on-line through eConnect at www.econnect.dcccd.edu. They will also be displayed on the Student Advising Report which is available in the Admissions and Student Records Office, T170.

<table>
<thead>
<tr>
<th>Homework Assignment</th>
<th>10 points x 10 home works</th>
<th>100</th>
<th>14.3%</th>
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<tbody>
<tr>
<td>Lab Assignment</td>
<td>30 points x 6 lab assignments</td>
<td>180</td>
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</tr>
<tr>
<td>Exam</td>
<td>100 points x 3 exams</td>
<td>300</td>
<td>42.9%</td>
</tr>
<tr>
<td>Project</td>
<td>1 Project</td>
<td>100</td>
<td>14.3%</td>
</tr>
<tr>
<td>Discussion</td>
<td>10 times participating</td>
<td>20</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>Total Final Scores</strong></td>
<td></td>
<td>700</td>
<td>points</td>
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<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>630 - 700</td>
<td>&gt;=90%</td>
</tr>
<tr>
<td>B</td>
<td>560 - 629</td>
<td>&gt;=80%</td>
</tr>
<tr>
<td>C</td>
<td>490 - 559</td>
<td>&gt;=70%</td>
</tr>
<tr>
<td>D</td>
<td>420 - 489</td>
<td>&gt;=60%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 420</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

XII. ATTENDANCE POLICY

This is the online class. You did not need to be in campus. However, in order to be successful you must have your own schedule with at least 6 hours per week and you need to register your schedule to the instructor on the first day when the class starts.

Also, you are requested to login to eCampus at least once per week

Full attendance can own extra credit points with maximum is 5 points

XIII. CLASSROOM POLICIES:

**Homework Assignments** – you have to do the homework after each chapter. The homework will have the test format that is created on eCampus. Each home work includes multiple choice questions or true/false questions based on the concept of the lecture. You can repeat the homework as many times as you want to study and practice for the test. Then on the due date, the largest scores will be your homework scores. The due date is shown on the Course Outline.

**Lab Assignments** – The labs will be posted on eCampus. These labs are individual assignments. Based on the requirement and the hint from the labs’ instruction, you can finish the lab based on your design. If you want to add more feature or better technique to your program, you are welcome to do that to improve yourself but at least you have to be qualified to the requirements that are listed on the rubric telling how to grade the labs.

You have to do the lab by yourself to study and gain experience. The labs will be turned in by submitting on eCampus by the due. You should start the lab early to have enough time to post questions and get response back (if it is necessary) to apply to the labs. You can study with or help your classmates but you should not allow anybody to copy your labs. If there are anyone having the copy of your lab, your lab will be 0.

**Project** – You have 1 project that is assigned on week 7\textsuperscript{th}. This is individual project. You should start the project early to have enough time to post questions and get response back (if it is necessary) to apply to the project. You can study with or help your classmates on the project but you should not allow anybody to copy your project. If there are anyone having the copy of your project, your project will be 0.

**Late works**: The late work cannot be accepted.
**Test** must be taken on the date given. The test will be available from 1:00am to 11:59pm on the test date. You should have the plan ahead to do the test on time.
-For an absence from a test to be excused: *if you have any reason that makes you cannot do the test on the test date, you should contact me before or on the test date. You can e-mail me or leave a message on my office phone at anytime if I am not available.*
-Anyone missing a test with an unexcused absence will receive a grade of zero on the test.

Anyone **SHARING OR COPPYING** the answers of the home works, labs, project or the tests will receive zero at the first time. At the second time will be failed for this class.

**XIV. ACADEMIC PROCESS**  
Students are encouraged to discuss academic goals and degree completion with their instructors. Specific advising is available throughout the semester. Check [www.richlandcollege.edu/admissions/process.php](http://www.richlandcollege.edu/admissions/process.php) for more details.

**XV. INSTITUTION POLICIES:**  
Refer to the Richland College website:  
[www.richlandcollege.edu](http://www.richlandcollege.edu) or to [www.richlandcollege.edu/syllabusinfo/syllabiinformation.pdf](http://www.richlandcollege.edu/syllabusinfo/syllabiinformation.pdf)

**XVI. QEP: LEARNING TO LEARN: DEVELOPING LEARNING POWER**  
"Richland’s Quality Enhancement Plan (QEP) aims to provide techniques, practices, and tools to help students develop the habits and dispositions needed to be effective lifelong learners. The goal is to help students succeed in college and in life."

**QEP Core Team Suggested Edits:**  
"Richland’s Quality Enhancement Plan (QEP) provides techniques, practices, and tools to help students develop the habits, traits or behaviors needed to be effective lifelong learners empowering success in college and in life."