**CIT163: Programming Practicum CRN: 2651
Course Syllabus – Spring 2018, TR 11-12:15 PM, ML 119**

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| **Instructor:** | David Cartwright | **Class Meets:** | T,R 11:00 – 12:15 PM |
| **Office:** | 112 Morrow Library   | **Classroom:** | Morrow Library 119 |
| **Phone Number:** | (304) 417-5227 | **Office Hours:** | T,W,R 9-11 AM or by appointment |
| **University Policies** | By enrolling in this course, you agree to the University Policies listed below.  Please read the full text of each policy be going to  <http://www.marshall.edu/academic-affairs> and clicking on “Marshall  University Policies.” Or, you can access the policies directly by going to  <http://www.marshall.edu/wpmu/academic-affairs/?page_id=802>Academic Dishonesty / Excused Absence Policy for Undergraduates /  Computing Services Acceptable Use / Inclement Weather / Dead Week /  Students with Disabilities / Academic Forgiveness / Academic Probation and  Suspension / Academic Rights and Responsibilities of Students / Affirmative  Action / Sexual Harassment |

**Textbooks:**
The following textbook is required for the course:

 ***Online C++ Zy-Book.***

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code

**MARSHALLCIT163CartwrightFall2017**

1. Subscribe

 ***The cost of the ZyBook is $48. Please sign up during the first week of classes.***

Supplementary Book (not required): **C++ Programming: From Problem Analysis to Program Design**, 6th edition, by D.S. Malik; Course Technology; ISBN: 978-1-133-62638-1, 2013. E-Book Available from CengageBrain.com

**Computer Requirements:**
Supplemental materials can be found within the Blackboard Learn environment (<http://www.marshall.edu/muonline/>). I will be sending class announcements, updates, etc. using your Blackboard account (will discuss during the first lecture if necessary). Access to a WWW browser is required, as is Adobe Acrobat Reader (<http://get.adobe.com/reader/>), and Microsoft Visual Studio 2012 .NET Professional (or higher). This software package is available for free to students in this course (see <http://www.marshall.edu/isat/software/> for specifics).

**Course Description:**
Concepts of software development and maintenance using C++, including syntax of the language, loops, functions, classes, decision structures, and file processing. Proper program design using object-oriented programming techniques are emphasized.

**Credit:**The course is three (3) credit hours. It includes classroom lectures, exams, and various programming projects assigned as homework assignments. Students will participate in various aspects of projects that illustrate the implementation of concepts in general applications.

**Pre/co-requisites:**
N/A

**Desired Objectives/Outcomes:**
By the end of this course, you should be able to:

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| **Course Student Learning Outcomes**  | **How Practiced in this Course** | **How Assessed in this Course** |
| Discuss Object-Oriented programming concepts | In-class examples, discussions, Chapter 7 examples | Final ProjectZybook Assignments |
| Demonstrate basic console programming skills using C++ | In-class examples, discussions, Chapters 2 through 7 examples | Projects 1 through 7Zybook Assignments |
| Develop software applications using Microsoft Visual Studio 2012 | In-class examples, discussions, Chapters 2 through 7 examples | Projects 1 through 7 |
| Demonstrate planning techniques for developing software applications | In-class examples, discussions, Chapters 1 through 7 examples | Projects 6 through 7Zybook Assignments |
| Work through programming logic | In-class examples, discussions, Chapters 1 through 7 examples | Projects 1 through 7Zybook Assignments |

**Instruction method:**
There will be 2.5 contact hours of classroom lecture per week. Projects covering major topics are part of the course with lectures kept to a minimum. Content from each of the chapters will be enforced through programming projects and examinations, including a comprehensive take-home final exam. Students may work on their assignments/projects in University computing facilities or from home with an Internet connection and Visual Studio .NET 2012 installed on their PC (or XCode on a Mac).

**Evaluation method:**
Evaluation of student's performance will be based on the quality of their performance on homework assignments (programming projects) and exams.

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| **Grading Policy:** |  |
| Zybook Assignments (chapters weighted equally) | 30% |
| Programming Projects (equally weighted) | 45% |
| Final | 20% |
| Attendance/Career Development | 5% |

**Assessment of Projects:**The grading of all homework assignments and projects will take into account:

1. Although the most important attribute of a program is correctness, grading will take into consideration such items as time and coding efficiency, **documentation**, etc.
2. Programs must have proper inline documentation and must be properly indented. Up to 20% will be deducted for poorly documented and/or poorly indented code.
3. All submitted code must compile to receive at least partial credit. Code that does not compile will receive 0 credit, **NO EXCEPTIONS**. This means you must debug your code before submitting.
4. When a method name and/or parameters are specified in an assignment’s description, you must use that name and/or parameters and ensure the function works for all possible inputs (test!!).
5. Although interactions with other students are encouraged, you **must** compose your own answers, unless otherwise noted.

Individuals who utilize other people’s thoughts or ideas must provide appropriate references to said resources, including any and all web resources consulted. Failure to provide such documentation will result in a failing grade for the assignment, and may result in a failing grade for the course.

Final letter grades are determined based on the following grading scale:

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| 90-100%  |  A |
| 80-89% |  B |
| 70-79%  |  C |
| 60-69% |  D |
| Below 60  |  F |

The instructor reserves the right to change these values depending on the overall class performance and/or extenuating circumstances.

**Policy Statement:** *My Academic Dishonesty Policy*

Academic Dishonesty is defined as any act of a dishonorable nature which gives the student engaged in it an unfair advantage over others engaged in the same or similar course of study and which, if known to the classroom instructor in such course of study, would be prohibited. Academic Dishonesty will not be tolerated as these actions are fundamentally opposed to "assuring the integrity of the curriculum through the maintenance of rigorous standards and high expectations for student learning and performance" as described in Marshall University's Statement of Philosophy.

**If you are found cheating on projects or plagiarizing answers from the Internet or other sources (among other things), there will be no second chance.** ***Your penalty is that you will receive a failing grade for the course.*** In those cases in which the offense is particularly flagrant or where there are other aggravating circumstances, additional, non-academic, sanctions may be pursued through the Office of Judicial Affairs. Notice of an act of academic dishonesty will be reported to the Department Chair, Dean of the College of Science, and to the Office of Academic Affairs. Please refer to the Marshall University Undergraduate Catalog for a full definition of academic dishonesty.

**Assignments***:* The course includes a number of assignments/projects. All assignments are due **BY THE BEGINNING OF CLASS** on their due date and must be submitted through the Blackboard Assignments tool. **NO LATE ASSIGNMENTS WILL BE ACCEPTED**.

The Final will be a project that is worth 20% of your grade. The final project will an exercise that will include all that you have learned throughout class, and possibly a group assignment. **No late assignments will be accepted.**

**Attendance Statement:**
As with previous semesters, I am NOT making class attendance mandatory. However, I will keep a record of who is attending and who is not. **If you miss class**, it is your responsibility to catch up on material missed, and it will **not** be the responsibility of the instructor to catch you up on material missed during office hours, or re-lecture to you.

**Withdrawal Policy:**
The University withdrawal policy is followed in this course. The last day to drop an individual course for the Spring Semester is March 16, 2018.

**University Holidays:**
The class is officially dismissed on the following dates:
MLK Day, January 15th , 2018.

Spring Break, March 19-24.

Days of Interest:
Dead Week, April 23-27, final project presentations

**Topics and Methodology:**
The following outline delineates the tentative class schedule with topics to be addressed during the course. Please note this is a tentative schedule and it may change upon class progress:

**Tentative Schedule**

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| Week of | Assignments |
| 1/9 | Overview of course, introduction to Blackboard, Zybooks, and how to create a C++ projectChapter 1 Assignment 1 Assigned |
| 1/16  | Chapter 1 |
| 1/23 | Chapter 2**Career Assessment Project Assigned** |
| 1/30 | Chapter 2 (ch3 notes)**Assignment 1 Due, *Final Assigned*Assignment 2 Assigned** |
| 2/6 | Chapter 2**Assignment 2 Due, Assignment 3 Assigned** |
| 2/13 | Chapter 3Chapter 3/ **Final Part 1 due Algorithm** |
| 2/20 | Chapter 3 **Assignment 3 Due, 4 Assigned**Chapter 4Midterm Grades Due |
| 2/27 | Chapter 4 Career Assignment 1 due. |
| 3/6 | Chapter 5 **Assignment 4 Due, 5 Assigned****Career Class** |
| 3/133/15 | Chapter 5Career Assignment 2 Introduced |
| 3/20 | Spring Break |
| 3/27 | Chapter 6 **Assignment 5 Due, 6 Assigned** |
| 4/3 | Chapter 6**,** **Final Revised Algorithm Due**  |
| 4/104/12 | **Assignment 6 Due/ Assignment 7 Assigned**Chapter 7**Career Assignment 2 Due** |
| 4/17 | Chapter 7, **Assignment 7 Due** |
| 4/24 | Dead Week, Final Projects Due |
| 5/1 | Final |
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For each topic discussed in the textbook, specific experiences of other students and the instructor will be discussed to enhance the content being covered. Hands-on projects for the course will be based on either real-world or fictitious requirements/needs. Additional material may also be covered in the class.

Every student is responsible for all material presented in class, including lectures, notes, and handouts. In case you are not present for a class, it is your responsibility to contact the instructor and receive information about the material presented in that class. Class attendance is very important.

**Effort Required:**
As a 100-level course, this course is provided as an introductory course, but there will still be a considerable amount of development and research effort required of the student. For every one hour in class, the student is expected to put in an effort of at least 3 hours outside the class for studying and programming. Because of background and preparedness, some students may have to put in additional effort.

**PLEASE DO NOT PROCRASTINATE.** Procrastination and the placing of blame on other factors than yourself is often a bad approach to life. Prioritize, schedule, and take responsibility for your actions and you should do very well in this class.

**Communication:**
The Discussion Tool within Blackboard and your MU E-mail Account will be used to make any general announcements, last minute changes, etc. It is **mandatory** that you monitor your Blackboard course messages and E-mails at least once a day.

**Note about cell phones in class:**
In compliance with Marshall University’s cell phone policy, please set your cell phone ringer to "Vibrate Only" mode (or turn it off) before you enter the classroom. If I hear it ring in class, I get to answer it -> no exceptions.

**COMPUTER AND INFORMATION TECHNOLOGY CAREER DEVELOPMENT**

**STUDENT ASSIGNMENT, Spring 2018**

**Student target group** – freshman to senior, approximately 90 students

**Objective** - prepare students to conduct effective internship/job search, including developing a resume, interviewing and negotiating compensation.

**Execution –** 2 class presentations, 2 assignments, individual student meetings with career counselors, feedback to students on their readiness, summary report to the instructor.

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**PRESENTATION 1**

Current job market for students and recent graduates, internship/job search strategies, resume.

**Date:** Tuesday, January 23

- Students will be provided sample resumes and cover letters.

**Assignment:**

1. Students will prepare resumes and cover letters and upload them to JobTrax: **Due before individual appointment time.**
2. \*Students take Focus2 and complete prior to the scheduled individual appointment.
3. Students will schedule individual 1 hour appointments with career counselors and will bring their documents (digital versions) to the meeting for review and feedback. **Due by:** Thursday, March 1

**\*Note:** All students will be asked to take Focus2

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**PRESENTATION 2**

Competitive interviewing, compensation negotiation

**Date:** Thursday, March 15

**Assignment:** Students will complete *the Big Interview* mock interview by: Thursday, April 12

**Career Services role:**

1. Prepare a CIT relevant set of interview questions
2. Review each mock interview and provide feedback to students by: Thursday, April 19