



<http://www.dmacc.edu>

Campus Name: DMACC Ankeny Campus (Bldg. 8/Room 17)

Course Title: Advanced C++

Course Number: CIS 164

Section Number & CRN: WB1 & CRN 23484

Instructor Information

Name	Joe Struss
E-mail Address	jastruss@dmacc.edu
Phone Number	515-612-4869
Fax Number	N/A
Office Location	Ankeny Campus, Building 8/Room 1C
Office Hours	Monday and Wednesday Nights by appointment only but prefer to work with a student by e-mail first before an appointment is scheduled.

Instructor Introduction	Your instructor Joe Struss has taught Computer Applications for over twenty years at Iowa State. He has a B.S. in Computer Science and Psychology from Iowa State University and an M.S. in Curriculum and Instruction specializing in Computers and Video which was also from Iowa State. Joe prepared for college by attending Blackhawk Junior College in East Moline, IL when he was a Senior in High School. Currently Joe works during the day as the Distance Education Coordinator for the Iowa Valley Community College District.
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Instructor Web Page Address	http://www.itlearningpods.com/AdvC++/
Blackboard	https://dmacc.blackboard.com/webapps/portal/execute/tab/tabAction?tab_tab_group_id=1_1

Course Information

Semester & Year	Spring Semester 2016-17
Date Syllabus Created and/or Revised	January 9, 2017
Days & Time & Location	Thurs. Nights, 7:40-9pm (web blended)/Ankeny Bldg 8/Room 17
Course Description & Credits	https://www.dmacc.edu/Schedule/Pages/coursedescriptions.aspx
Prerequisites	CIS 161 – Intro. to C++ or a similar course
Course Competencies	https://www.dmacc.edu/competencies
Course Overview	More Adv. C++ programming topics with a group project

Study Tips	<p>To do well in this class, you must do the Chapter readings and complete all of the programming assignments. Students are expected to devote three hours of study time for each class contact hour. A programming class takes extra time to produce computer programs and at least six hours of study and programming practice per week will be required for this class.</p> <p>If you are going to miss any lecture, it is your responsibility to both contact the instructor beforehand (if possible) and also to obtain notes from a classmate as soon as possible. The content of this course builds on itself throughout the semester. Consequently, it is important that students master the early concepts, as they will become the building blocks for concepts and materials used later in the course. Students should seek extra help (tutoring or attending weekly chat sessions) as soon as possible if they feel they are getting left behind on course materials.</p>
How the Course Fits into the Curriculum	Part of the Programming Languages Curriculum
Textbooks & Materials	
Required Textbooks & ISBN	<p>Starting Out with C++ by Gaddis From Control Structures to Objects (8th Edition) by Tony Gaddis Published by: Addison-Wesley - ISBN: 9780133769395</p>
Required Materials	Microsoft Visual Studio 2010 or better (C++ setup; probably using Visual Studio 2013 in class) or Dev C++ or any other standard C++ Compiler
Optional or Recommended Books/Materials	C++ Programming in Easy Steps by Mike McGrath (ISBN: 9781840784329) or C++ Programming Language (4th Edition) by Bjarne Stroustrup.
Software Applications	Noted above- C++ Visual Studio Compiler or Dev C++ Compiler and Internet Access to Blackboard.
Software Notice	"All the software used in this class is copyrighted; therefore, it is not for distribution, copying, or personal use. This software is the property of Des Moines Area Community College.
Course Policies	
Attendance	<p>The class schedule includes classroom time for both the presentation and discussion of materials. Students are expected to have completed any assigned readings in preparation for the class and be prepared to discuss the assigned material. Attendance is encouraged and expected. You must attend at least half of the classroom & online sessions in order to get a passing grade in the class.</p>

Grading Criteria	<p>ASSIGNMENTS: There will be 3-6 assigned programming assignments which will have a specific DUE DATE when assigned. The DUE DATE will normally be 1pm on the day that the assignment is due. Programs are expected to compile and run on their own without error. Each programming assignment will be worth around 50 points each.</p> <p>There will be one or two group projects that each individual will participate in as a team member. The group project is normally worth 150-250 points and is scored in 50-100 point increments throughout parts of the semester. The project is scored both by the instructor and by the other members of your group.</p> <p>EXAMS: There will be 5-8 in-class quizzes normally at the start of class or online covering the previous week's material or current readings that will be worth about 15-30 points each. Additionally there will be 1-3 in-class exams worth 75-150 points which also includes a comprehensive final exam. No makeup quizzes/exams will be given without the prior approval of the instructor. A courtesy e-mail should be sent to the instructor if you are going to be absent from class.</p> <p>PAPER: A 75 point 5-10 page class paper may also be included as part of the advanced class along with discussion items worth 5-25 points per occurrence included throughout the class. An in-class presentation of course materials or an advanced programming assignment can also be substituted for the class paper. Essays (class paper), in-class presentations or advanced programming assignments will be offered to students throughout the semester- only one may be required for your course grade. Other items in this category can additionally be included for extra credit.</p> <p>FINAL COURSE GRADES: will be determined by combing your assignment, discussion, quiz and exam scores. The grading scale is as follows: 90% or above = A, 80 to 89% = B, 70 to 79% = C, 60 to 69% = D and 59% or below = F (Grades within 1.5% of the cutoff line to the top end (except for an A) may be given a + to the grade for the class. Grades within 1.5% of the cutoff line on the bottom end (except for an F) may be given a – to the grade for the class.)</p> <p>GRADING TIME I normally try to return quizzes, programming assignments and tests during the next in-person session after the due date is completed. This can be delayed if make-up quizzes or exams need to be taken.</p>
Classroom Conduct	https://www.dmac.edu/handbook

Missed Exams	With prior notice to the instructor will be given in the testing lab or during the following class
Late Assignments	Will not be accepted
Extra Credit	Will be available during some class periods
Study Expectations	See Study Tips (above)
Weather Policy	Individual circumstances such as health, childcare, rural roads, distance from the College, etc. can vary greatly among students and staff. It is always DMACC's goal to provide safe learning conditions, as well as provide the opportunity for students to attend classes when the vast majority is able to safely attend. The final decision to come to College can only be made by the individual student based on their specific extenuating circumstances that may make it unsafe for them to travel. During adverse weather, DMACC faculty is considerate of students who are unable to attend classes due to unique extenuating circumstances. Notification of Campus/College closures will be sent out through the DMACC RAVE Alert System, posted to the DMACC webpage at www.dmacc.edu , and where possible sent to the local media.
Class Cancellation Procedure	Will notify ahead of time via DMACC e-mail if a class is cancelled due to instructor illness or weather. But check the DMACC web site for information on class cancellation due to weather related issues
Academic Dishonesty/Plagiarism	Engaging in any form of cheating or plagiarism on an assignment, quiz or exam will result in a ZERO grade for that particular assignment. These acts are considered to be academic misconduct by the college and various disciplinary actions may be taken as well. The second ZERO grade for academic dishonesty/plagiarism will result in an F for the class as well. Students can get ideas about a program or an assignment from other students but their final work must be of their own creation. It is important for you to be familiar with and follow DMACC's Academic Misconduct policy. Students are encouraged to review DMACC's Academic Misconduct Policy on-line at https://go.dmacc.edu/handbook/polprocedures/pages/academic_misconduct.aspx or in the DMACC Student Handbook.
Course Specific (lab) Safety Procedures	N/A
DMACC Information	
Instructor Home Pages	http://www.dmacc.edu/instructors Class home page: http://www.itlearningpods.com/C++/
Add/Drop Dates	https://go.dmacc.edu/registration/pages/add_drop.aspx
Refund Policy	https://go.dmacc.edu/registration/Pages/refund.aspx
Support Services	

<p>Services for Students with Disabilities</p>	<p>https://go.dmacc.edu/student_services/disabilities Any student with a documented disability who requires reasonable accommodation should contact the Disability Services Coordinator at 515-964-6850 or the counseling & advising office on any campus to apply for services.</p>
<p>Early Alert Referrals</p>	<p>https://www.dmacc.edu/counseling/Pages/facultyreferrals.aspx DMACC faculty are encouraged to help connect students to available resources at the college, including academic advising, counseling, tutoring, and more. Early Alert Referrals result in direct outreach by phone and email to students who have been referred. Students are encouraged to respond to outreach efforts and take full advantage of available resources in support of their success. Questions about this process should be directed to Bobby Nalean at 515-964-6474 or earlyalert@dmacc.edu.</p>
<p>Course Syllabus</p>	

DISCLAIMER: “This syllabus is representative of materials that will be covered in this class; it is not a contract between the student and the institution. It is subject to change without notice. Any potential exceptions to stated policies and requirements will be addressed on an individual basis, and only for reasons that meet specific requirements. If you have any problems related to this class, please feel free to discuss them with me.”

NONDISCRIMINATION POLICY: Des Moines Area Community College shall not engage in nor allow discrimination covered by law against any person, group or organization. This includes in employment, hiring practices or the provision of services, and harassment or discrimination based on race, color, national origin, creed, religion, sex (including pregnancy and marital status), sexual orientation, gender identity, age, disability and genetic information. Veteran status in educational programs, activities, employment practices, or admission procedures is also included to the extent covered by law. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedure. Complaint forms may be obtained from the Campus Provost's office, the Academic Deans' office, the Judicial Officer, or the EEO/AA Officer, Human Resources. For information about the ADA, the Section 504/ADA Coordinator may be contacted at 515-964-6857. For Title IX questions and concerns contact 515-964-6850.

Students who wish additional information or assistance may refer to Student Services procedure ES 4645 located at https://www.dmacc.edu/student_services/int. Click Policies & Procedures.

Accommodations: The Program Development/Academic Support Services Director is the official Student Accommodation Officer/Section 504/ADA Coordinator for DMACC. The ADA Coordinator's office is located in Bldg. 6-10E on the Ankeny Campus and may be contacted by voice (515-964-6857). The ADA Coordinator is responsible for ensuring that the college complies with federal regulations that guarantee qualified students with disabilities equal access to all programs and services. Any student, faculty, or staff member may contact the ADA Coordinator's office for clarification of federal regulations, appeal of a grievance, or resolution of a disability-related problem.

Additional Information

To access additional information related to DMACC policies and procedures that impact the classroom (i.e. use of technology, weather-related cancellations, classroom conduct, etc.) please refer to the DMACC student handbook.

If you do not have access to a computer and need a printed version of any of the information described above, contact your instructor.

Course Schedule		
Week or Date	Assignment	Due Date
Week 1 – Jan. 12	Overview of C++ (Chapters 1-7); Browse Chapters 1 through 5 and read Chapters 6 & 7	
Week 2 – Jan. 19	Overview of C++ (Chap. 1-7) – Part two; Read Chapter 8	
Week 3 – Jan. 26	Searching and Sorting Arrays (Chap. 8); Read Chapter 9	
Week 4 – Feb. 2	Pointers (Chap. 9); Read Chapter 11	
Week 5 – Feb. 9	Structured Data (Chap. 11); Read Chapter 12	
Week 6 – Feb. 16	Adv. File I/O (Chap. 12); Read Chapter 13	
Week 7 – Feb. 23	Classes (Chap. 13);	
Week 8 – Mar. 2	Classes (Chap. 13) – Part Two and Test Review	
Week 9 – Mar. 9	Test 1 – in Class; Read Chapter 14	
Mar. 13-17	Spring Break	
Week 10 – Mar. 23	More About Classes & Visual Studio (SDK's) (Chap. 14); Read Chap 15	
Week 11 – Mar. 30	Polymorphism & Multithreading (Chap. 15); Read Chap. 16	
Week 12 – Apr. 6	Exceptions/Templates & Testing/Performance Enhancements (Chap. 16); Read Chap. 17	
Week 13 – Apr. 13	Linked Lists & SQL Connections (Chap. 17); Read Chap. 19	
Week 14 – Apr. 20	Recursion (Chap. 19); Recursion & Test Review	
Week 15 – Apr. 27	Presentations & Test 2	
Week 16 – May 4	Class Evaluation	