

CIS 3340-115, 60148, Advanced C++ Programming

Summer 2023

Texas A&M University-Central Texas

COURSE DATES, MODALITY, AND LOCATION

Course Dates: Jun 5, 2023 – Jul 28, 2023

Modality: This is a 100% online course. The lecture recordings will be provided via Canvas. The supplemental materials will also be made available online through the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

Location: Online via Canvas

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Khaldoun Dhou, PhD

Office: FH 323

Phone: (254) 519-5437

Email: kdhou@tamuct.edu

Office Hours

My office hours will be on Monday and Tuesday from 8 AM to 11 AM. Because of the pandemic, I will hold my office hours virtually. You can email me and we can meet using Zoom, Skype, phone, or any way. If there is a need to meet face-to-face, please email me to arrange it. Please feel free to email me at anytime if you need any help. In other words, you are not limited to my office hours and you can always seek help.

Student-instructor interaction

I should respond to your emails within 24-48 hours and I do my best to answer very quickly. You can also email me to arrange an appointment with me. Because of the pandemic, I prefer to meet virtually, but I understand that there are times when a student needs to meet in person. So, I am open to either way while using a facial mask and maintaining a social distance in face-to-face meetings.

Emergency Warning System for Texas A&M University-Central Texas

SAFEZONE. SafeZone provides a public safety application that gives you the ability to call for help with the push of a button. It also provides Texas A&M University-Central Texas the ability to communicate emergency information quickly via push notifications, email, and text messages. All students automatically receive email and text messages via their myCT accounts.

Downloading SafeZone allows access to push notifications and enables you to connect directly for help through the app.

You can download SafeZone from the app store and use your myCT credentials to log in. If you would like more information, you can visit the [SafeZone](http://www.safezoneapp.com) website [www.safezoneapp.com].

To register SafeZone on your phone, please follow these 3 easy steps:

1. Download the SafeZone App from your phone store using the link below:
 - [iPhone/iPad](https://apps.apple.com/app/safezone/id533054756): [https://apps.apple.com/app/safezone/id533054756]
 - [Android Phone / Tablet](https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp)
[https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp]
2. Launch the app and enter your myCT email address (e.g. {name}@tamuct.edu)
3. Complete your profile and accept the terms of service

For updates on COVID information, please monitor the University [website](https://www.tamuct.edu/covid19/)
[https://www.tamuct.edu/covid19/]

COURSE INFORMATION

Course Overview and description

An advanced course in the C++ programming language. Covers the advanced features of C++ such as classes, friends, abstraction, operator overloading, inheritance, polymorphism, templates, and object-oriented programming techniques. Students will analyze and program several representative problems.

Prerequisite: CIS 3330 or approval of School Director

Course Objective or Goal

Student Learning Outcomes

- Understand and master syntax and features of the C++ Programming Language;
- Control structures;
- Using standard library functions and templates;
- Creating programmer-defined classes;
- Implementing programmer-defined data types;
- Exception handling;
- Operator overloading;
- Polymorphism and virtual functions; and
- The Linked-List data type as an exercise in class design.
- Apply principles of program design and logic:
- Functional abstraction;
- Modular design using functions;
- Encapsulation techniques;
- Class design incorporating all of the principles listed above.
- Apply principles of program logic to isolate errors:
- Debuggers included with the Integrated Development Environment;
- Setting breakpoints and watch variables;
- Using output to report program progress;
- Using “stubs” and “drivers” to test small, manageable components.
- “Learn-by-doing” problem solving methodologies that can be applied to various programming languages and other life situations.

Competency Goals Statements (certification or standards)

NA

Required Reading and Textbook(s)

C++ Programming: From Problem Analysis to Program Design, 8th Edition

D.S. Malik

Publisher: Cengage

ISBN-13: 978-1337102087

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer

COURSE REQUIREMENTS

Midterm Exam: There will be a midterm exam that is worth 20 points (20%). Details about the midterm in the class

Assignments: During the semester, you will get different assignments that measure your understanding to the material and help you gain programming skills. Multiple submissions before the deadline are allowed. You need to zip the files before submission if the assignment has multiple files. Before you submit any assignment, run it on your computer and make sure it works. In addition, you need to submit a screenshot to prove that your code works. Assignments are worth 60 points (60%)

Final Exam Project: There will be one term project that will count as your final exam and is worth 20 points (20%). The final exam project also includes an oral exam component. The details will be provided later in the class.

Grading Criteria Rubric and Conversion

The final grade for the course will be based upon the following:

| Item | Points | Percentage |
|--------------------|------------|-------------|
| Midterm | 20 | 20% |
| Assignments | 60 | 60% |
| Final Exam Project | 20 | 20% |
| Total | 100 | 100% |

| Grade | Percentage |
|----------|------------|
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | 0-59% |

Posting of Grades

All student grades will be posted on the Canvas Grade Book and students should monitor their grading status through this tool. Grades will be posted within 7 days after of the due date

Grading Policies

I do not accept late work. However, I firmly believe that there are situations where a student

cannot submit the work on time (i.e. sickness). If you believe you have a legitimate reason that did not allow you to finish the work and submit it by the deadline, please come and talk to me and depending on the situation, I can make an exception for you to make up the work. I always advise students to start working on the assignments as soon as they get them.

COURSE OUTLINE AND CALENDAR

Complete Course Calendar

| Week | Topics | Due (at end of week) |
|-----------------------------------|--------------------------------|-------------------------------------|
| Week 1 Jun 5 – Jun 11 | Syllabus, Chapter 10 | Discussion |
| Week 2 Jun 12 – Jun 18 | Chapters 11 and 12 | Chapter 10 Assignment |
| Week 3 Jun 19 – Jun 25 | Chapter 13 | Chapters 11 and 12 Assignment |
| Week 4 Jun 26 – Jul 2 | Chapter 14, Midterm | Chapter 13 Assignment |
| Week 5 Jul 3 – Jul 9 | Chapters 15 and 16 | Midterm, Chapter 14 Assignment |
| Week 6 Jul 10 – Jul 16 | Chapter 17, Final Exam Project | Chapters 15 and 16 Assignment |
| Week 7 Jul 17 – Jul 23 | Chapter 18 | Chapter 17 Assignment |
| Week 8 Jul 24 – Jul 28 | Revision | Chapter 18 Assignment Final Exam |

Important University Dates

| | |
|---------------|---|
| June 5, 2023 | Add, Drop, and Late Registration Begins for 10-, 8- and First 5-Week Classes. \$25 fee assessed for late registrants. |
| June 5, 2023 | Classes Begin for First 5-, 10-, and 8-Week Session |
| June 8, 2023 | Deadline to Drop First 5-Week Classes with No Record |
| June 12, 2023 | Deadline to Drop 8-Week Classes with No Record |
| June 19, 2023 | Juneteeth (University Closed) |

| | |
|----------------|--|
| June 21, 2023 | Deadline to Drop 10-Week Classes with No Record |
| June 23, 2023 | Deadline to Drop First 5-Week Classes with a Quit (Q) or Withdraw (W) |
| June 23, 2023 | Student End of Course Survey Opens (First 5-Week Classes) |
| June 30, 2023 | Deadline for Admissions Applications (Summer) |
| July 4, 2023 | Independence Day (University Closed) |
| July 7, 2023 | Classes End for First 5-Week Session |
| July 7, 2023 | Deadline for Graduation Application for Ceremony Participation |
| July 7, 2023 | Deadline to Withdraw from the University for First 5-Week Classes |
| July 10, 2023 | Add, Drop, and Late Registration Begins for Second 5-Week Classes. \$25 fee assessed for late registrants. |
| July 10, 2023 | Classes Begin Second 5-Week Session |
| July 11, 2023 | Deadline for Faculty Submission of First 5-Week Final Class Grades (due by 3pm) |
| July 11, 2023 | Student End of Course Survey Opens (First 5-Week Classes) |
| July 13, 2023 | Deadline to Drop Second 5-Week Classes with No Record |
| July 14, 2023 | Deadline to Drop 8-Week Classes with a Quit (Q) or Withdraw (W) |
| July 14, 2023 | Deadline for Final Committee-Edited Theses with Committee Approval Signatures |
| July 14, 2023 | Student End of Course Survey Opens (8-Week Classes) |
| July 21, 2023 | Deadline to Drop 10-Week Classes with a Quit (Q) or Withdraw (W) |
| July 28, 2023 | Classes End for 8-Week Session |
| July 28, 2023 | Deadline to Drop Second 5-Week Classes with a Quit (Q) or Withdraw (W) |
| July 28, 2023 | Deadline to Withdraw from the University for 8 -Week Classes |
| July 28, 2023 | Student End of Course Survey Opens (10- and Second 5-Week Classes) |
| August 1, 2023 | Deadline for GRE/GMAT Scores to Office of Graduate Studies |
| August 1, 2023 | Deadline for Faculty Submission of 8-Week Final Class Grades (due by 3pm) |
| August 1, 2023 | Student End of Course Survey Closes (8-Week Classes) |

TECHNOLOGY REQUIREMENTS AND SUPPORT

Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. We strongly recommend the latest versions of Chrome, Firefox, Edge, or Safari

browsers. Canvas will run on Windows, Mac, Linux, iOS, android, or any other device with a modern web browser. **Canvas no longer supports any version of Internet Explorer.**

Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>] by clicking on the “TAMUCT Online Canvas” tile. You will then log in through our Microsoft portal.

Username: Your MyCT email address. Password: Your MyCT password

Canvas Support

Use the Canvas Help tab, located at the bottom of the left-hand menu, for issues with Canvas. You can search the support articles or use the Email, Call, or Chat buttons at the bottom of the support pop-up to contact the Canvas Help Desk.

For issues related to course content and requirements, contact your instructor.

Online Proctored Testing

A&M-Central Texas uses Proctorio for online identity verification and proctored testing. This service is provided at no direct cost to students. If the course requires identity verification or proctored testing, the technology requirements are: Any computer meeting the minimum computing requirements, plus web camera, speaker, and microphone (or headset). Proctorio requires use of the Chrome web browser with their custom plug in installed.

Other Technology Support

For log-in problems, students should contact Help Desk Central, 24 hours a day, 7 days a week

Email: helpdesk@tamu.edu

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

Please let the support technician know you are an A&M-Central Texas student.

UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

Academic Accommodations

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Warrior Center for Student Success, Equity and Inclusion is responsible for ensuring that students with a disability receive equal access to the university’s programs, services and activities. If you believe you have a disability requiring reasonable accommodations, please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information, please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required) [<https://tamuct.instructure.com/courses/717>]

Academic Integrity

Texas A&M University-Central Texas values the integrity of the academic enterprise and strives

for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. All academic misconduct concerns will be referred to the Office of Student Conduct. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the student conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html),
[https://www.tamuct.edu/student-affairs/student-conduct.html].

If you know of potential honor violations by other students, you may [submit a referral](https://cm.maxient.com/reporting.php?TAMUCentralTexas),
[https://cm.maxient.com/reporting.php?TAMUCentralTexas].

Drop Policy

If you discover that you need to drop this class, you must complete the [Drop Request](#) Dynamic Form through Warrior Web.

[https://federation.ngwebsolutions.com/sp/startSSO.ping?PartnerIdpld=https://eis-prod.ec.tamuct.edu:443/samlSso&SpSessionAuthnAdapterId=tamuctDF&TargetResource=https%3a%2f%2fdynamicforms.ngwebsolutions.com%2fSubmit%2fStart%2f53b8369e-0502-4f36-be43-f02a4202f612].

Faculty cannot drop students; this is always the responsibility of the student. The Records and Admissions Office will provide a deadline on the Academic Calendar for which the form must be completed. Once you submit the completed form to the Records and Admissions Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Records and Admissions Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

Pregnant and/or Parenting Students Rights and Accommodations

A&M-Central Texas supports students who are pregnant, experiencing pregnancy-related conditions, and/or parenting. In accordance with requirements of [Title IX and related guidance from US Department of Education's Office of Civil Rights](#), the Associate Dean in the Division of Student Affairs, (254) 501-5909, can assist students who are pregnant, experiencing pregnancy-related conditions, and/or parenting by provide flexible and individualized reasonable accommodations. Students should seek out assistance as early in the pregnancy as possible through the [Pregnancy & Parenting webpage](https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html) [https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html]. For more information, please visit [Student Affairs](https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html) [https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html]. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) online, please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

[Title IX of the Education Amendments Act of 1972](#) specifically prohibits discrimination against a student based on pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery

from any of these conditions
[<https://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.html>].

Students experiencing any form of discrimination due to any of these conditions are encouraged to reach out to the Title IX Coordinator, 254.519.5716, titleix@tamuct.edu, Founders Hall 317B, or the Associate Dean of Student Affairs, 254.501.5909, Warrior Hall 105.

Title IX Rights and Reporting Responsibilities

A&M-Central Texas is committed to creating a safe and open learning environment for all students. If you or another student has experienced any form of gender discrimination or sexual misconduct, including sexual harassment, sexual assault, dating/domestic violence, and/or sex-based stalking, help and support are available. Our university strongly encourages all members of our campus community to report incidents and seek support for gender discrimination and sexual misconduct through the Title IX Office. You may contact the Title IX Office at 254.519.5716, titleix@tamuct.edu, Founders Hall 317B, or learn more by visiting the [Title IX webpage](https://www.tamuct.edu/compliance/titleix.html) [<https://www.tamuct.edu/compliance/titleix.html>].

Please be aware that that under [Title IX](#), [Texas Senate Bill 212](#), and [System Regulation 08.01.01](#), [<https://policies.tamus.edu/08-01-01.pdf>] all university employees are mandated reporters and are required to disclose information about suspected or alleged violations as listed above and defined in System Regulation 08.01.01. If the Title IX Office receives information about an incident, they will reach out to offer information about resources, rights, and procedural options as a member of the campus community. Although I have an obligation to report, you will, in most cases, control how your case will be handled. When working with the Title IX Office you will have access to resources and accommodations but also have the opportunity to express if you wish to move forward with an investigation. Our goal is to make sure you are aware of the options available to you as a student. Community members are not required to respond to this outreach.

If you or another student wishes to speak to a confidential employee who does not have this reporting responsibility, you can contact the [Student Wellness & Counseling Center](#), [<https://www.tamuct.edu/student-affairs/student-counseling.html>], 254.501.5955, or swacc@tamuct.edu, located in Warrior Hall Room 207L or the Student Support Advocate, 254.501.5978 or ssa@tamuct.edu, located in founder Hall Room 317D.

Tutoring and Success Coaching

Tutoring and success coaching services are available to all A&M-Central Texas students, both virtually and in-person.

To schedule tutoring sessions or view tutor availability, please contact Warriorcenter@tamuct.edu or visit Warrior Hall, 111.

If you have questions about these or other academic support services or are interested in becoming a tutor, please contact the Warrior Center for Student Success, Equity and Inclusion at (254) 501-5836, email us at WarriorCenter@tamuct.edu. You are welcome to visit the Warrior Center at Warrior Hall, suite 212.

Chat live with a remote tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas except writing support. Access Tutor.com through Canvas.

University Library & Archives

The University Library & Archives provides many services in support of research across campus and at a distance. We offer over 350 electronic databases containing approximately 631,525 eBooks and 75,149 journals, in addition to the 97,443 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place virtually through WebEx, Microsoft Teams or in-person at the library. [Schedule an appointment here](https://tamuct.libcal.com/appointments) [https://tamuct.libcal.com/appointments]. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group workspaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](https://tamuct.libguides.com/index) [https://tamuct.libguides.com/index]

University Writing Center

University Writing Center: For the summer semesters, all University Writing Center (UWC) tutoring services are entirely online. The hours of operation are from 10:00 a.m.-4:00 p.m. Monday through Thursday with additional hours Monday through Thursday nights from 6:00-9:00 p.m. The UWC is also offering hours from 12:00-3:00 p.m. on Saturdays.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via [WOnline](https://tamuct.mywconline.com/) [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any questions about the UWC, need any assistance with scheduling, or would like to schedule a recurring appointment with your favorite tutor.

OTHER POLICY STATEMENTS

A Note about Sexual Violence at A&M-Central Texas

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Wellness and Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/compliance/titleix.html) [https://www.tamuct.edu/compliance/titleix.html].

Behavioral Intervention

Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the [referral](#) online

[https://cm.maxient.com/reporting.php?TAMUCentralTexas].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](#) website for more information [https://www.tamuct.edu/bit]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5805.

Copyright Notice

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