New Mexico State University

C S 271 - Object-Oriented Programming
C S 462 - Object-Oriented Programming Transition
Fall 2019

Instructor: Dr. Esther Steiner
Email: esteiner@nmsu.edu
Office: Science Hall 157
Hours: Tuesday and Thursday (starting August 22nd) 1:30 - 2:30 pm

⊠ Use MyNMSU email to send email. I don't use Canvas email so please don't send me messages through Canvas.

Course Description

This course is designed to reinforce your understanding of programming concepts, to strengthen your programming skills, and to teach object-oriented programming methodology. We will use both C and C++. Topics will include structured programming, functions, pointers, file I/O, debugging techniques, class design and implementation, operator overloading, inheritance, polymorphism, and exception handling.

Prerequisite: You must have completed CS 172 or EE 161 or EE 112 (if taken Fall 2017 or later) with a grade of C- or higher.

Textbook

C HOW TO PROGRAM , DEITEL, 8TH Edition, 2016.

ISBN: 978-01339-7689-2

You may also use the 7th edition, ISBN 978-01329-9044-8

The international version is the same as the US version.

There are newer editions. Those are fine, too.

Course Goals and Objectives

By the end of the semester, students should be able to:

1. Develop an algorithm to solve a problem.
2. Implement an algorithm using the C++ language including imperative and object-oriented language features.
3. Demonstrate a noticeable increase in understanding of problem analysis and program design beyond what was learned in CS 172, EE 112, or EE 161.
4. Demonstrate proficiency in using control structures including if statements (single selection), switch (multiple selection), and loops (repetition).
5. Demonstrate proficiency in using basic data structures including arrays, vectors, and stacks.
6. Use UML drawing software to create UML activity, class, and relationship diagrams.
7. Design a class to model a real-world person, place, thing, or event.
8. Use editing and debugging software to create, debug, and test C++ programs.
9. Understand the basic terminology used in object-oriented programming.
10. Create a makefile to build an executable from a set of C++ source files.

Remind.com Signup

Announcements and reminders for this course will be sent to your cell phone using a web service called "Remind".   https://www.remind.com/apps Course code: cfheea

> When you signup for Remind, use your full name, just as it appears in your NMSU account.

If you don't want to receive text messages from Remind, you can choose to have the messages sent to your email instead.

Signup for remind.com is required.

NMSU - Important Dates for Fall 2019

Instruction Begins	Wednesday, August 21
Last Day to Add a Course without Instructor's Permission	Thursday, August 22
Deadline For Filing Degree Application	Friday, August 30
Last Day to add a Course (Instructor's Permission Required)	Friday, August 30
Labor Day Holiday	Monday, September 2
Last Day to Drop Course with "W"	Friday, October 18
Thanksgiving Holiday for Students	November 25 – 29
Last Day to Withdraw from the University (4:59 p.m.)	Friday, December 6
EXAM WEEK	December 9-13

How Your Grade Will Be Determined

1. Homework and Quizzes   20%
2. Lab Assignments   30%
3. Exams   50%

Letter Grades

Letter grades will be assigned as follows:

A   90.00 % and higher
B   80.00 % to 89.99 %
C   70.00 % to 79.99 %
D   60.00 % to 69.99 %
F   0.00% to 59.99 %

This class doesn't use fractional grading (no minus or plus on a letter). Letter grades are assigned exactly as shown above. There isn't a "curve" in this class.

Grades will be posted on Canvas after the first deliverable graded and you can check your grade there any time. Check your grade frequently. If you notice any missing or incorrect grades, notify the instructor immediately.

Six-Week Early Performance Grades

A Six-Week Early Performance Grade for this course will be posted. You will be able to access your grade through MyNMSU under the Student Tab: Click on Student Record, then click Midterm Grades.

In this class the Six-Week Early Performance Grade will reflect your performance on only a portion of the total graded work in this course. If you are doing well, congratulations on your success – but be mindful that there is still a significant portion of the graded work yet to be completed. If you are doing poorly, or not as well as you would like, please meet with me to discuss how you can improve. If you have concerns about your progress in multiple courses and need to consider a schedule change, meet with your academic advisor.

Requests for "Incomplete" Grade ("I" grade)

Instructors may assign "I" grades only if the student meets these two criteria:

1) The student has a grade of C or higher as of the last day to withdraw with a "W".
2) The student is unable to complete the course due to circumstances beyond the student's control that develop after the last day to withdraw from the course.

In no case is an "I" grade to be used to avoid the assigning of D, F, U , or RR grades for marginal or failing work. Complete information regarding the use of an "I" Incomplete grade can be found in the NMSU catalog.

Exam Schedule

Exam 1:   Thursday, September 19
Exam 2:   Thursday, October 17
Exam 3:   Thursday, November 14
Final Exam: Thursday, December 12, 10:30 am

Early exams are permitted. See the instructor to schedule an early exam.   Late exams are not allowed.   Makeup exams are given only situations with extenuating circumstances. See the section on Late or Makeup Work below.

Lab Assignments

Lab assignments in this course will use the C and C++ programming languages. Each assignment will be available on Canvas one week before its due date. It's your responsibility to check Canvas frequently and keep up with assignments.

Submitting Lab Assignments on Canvas

Each of the lab assignments will require you to submit one or more "deliverables". Each deliverable will appear in Canvas on the Assignments page. Log in to Canvas every day to make sure you're staying on track with the assignments.

Deliverables may include documents, programs, or other types of files.   All of the files for the lab assignments must be uploaded to Canvas.   Please check your submission carefully to make sure you have uploaded the correct file(s).

Submitting an Assignment More Than Once

Canvas will allow you to submit an assignment more than once, as long as the due date hasn't passed. When an assignment requires multiple files, you must submit ALL files with EVERY submission.   Only your latest submission will be graded.

Homework Assignments and Quizzes

Quizzes: Weekly quizzes. They may be in class "pop" quizzes or scheduled on Canvas.   You are expected to attend all lectures during the semester.   If you are not present when a quiz is given, you won't receive credit for the assignment. There is no makeup for in-class quizzes.

Homework: Homework assignments will be posted on Canvas and must be turned in, by you, in-person, at the beginning of class. You may submit your homework early by taking it to the instructor's office. However, you may not turn in late homework without justication (see the section below on Late or Makeup Work) and you may not have another person submit your homework for you.

Late or Makeup Work

If you have an emergency, unplanned circumstance that causes you to miss turning in an assignment or taking an exam on time, you may request permission to submit late or makeup work.

Allowances for late work or makeup work require documentation. This can be doctor's note, hospital document, police report, or other document that explains when and why you were absent from school.

Requirements:

1) Notify the instructor within 7 days of the due date of a missed assignment or exam. Provide a detailed reason why the work was missed.
2) Provide documentation within 10 days of the due date of the missed assignment.
3) Submit the missed work (or makeup work if assigned) or take the missed exam within 10 days of the original due date.

If you wait longer than 7 days to notify the instructor or longer than 10 days to provide documentation and make up the work, your grade will be recorded as zero.

You are encouraged to complete assignments **early** to avoid missing a deadline.

Any scheduled or planned activity such as a family reunion, wedding, birthday party, court appearance, vacation, school trip, business trip, or work will not qualify as extenuating circumstances.   Assignments or exams that you have to do in other classes will not qualify as extenuating circumstances.

Computers, Software and Network Issues

Program editors and the necessary compilers will be available in the Computer Science Department's computing labs: Science Hall, room 118 and room 118B. You can work in SH 118B during your assigned lab time or work in SH 118 any time the room is open. Hours for SH 118 will be posted on the door.

If you want to set up an editor and compiler on your own computer, it's your responsiblity to obtain the correct software. The instructor or the TA may be able to provide some help if you have a laptop and can bring it in.

Any issues with your own computer, including software or hardware problems, home network, WiFi, firewall, etc. are your responsibility. Such issues are not acceptable reasons for missing work in this class.

I highly recommend that you backup your work every time you work on something for this class, either by making a copy onto a USB drive, by emailing the files to yourself, or by uploading the files to cloud storage.

Classroom Etiquette

- Professional, courteous behavior is expected at all times.

- All electronic devices (cell phones, computers, mp3 players, etc.) must be turned OFF and placed out of sight inside your purse, bag, or backpack while you are in the classroom. Headphones, ear buds, etc. must be removed and put away.

- No food in the classroom. Drinks are okay. There are 2 rules:

  1) If you bring it in to the classroom, you take it out.

  2) If you make a mess, you clean it up.

- Use of tobacco/nicotine products, including chewing, smoking, and vaping is prohibited.

- No pets in the classroom. Service dogs are permitted in the classroom if documentation is provided from Student Accessibility Services.

- No children or other visitors. They are a distraction to you and to students around you. If you must miss a class because you need to care for your child, let me know and I will arrange for you to get the information you missed.

- If you are ill, stay home. It's not good for you to be spreading whatever you have to your classmates. If you must miss a class because you're ill, let me know and I will arrange for you to get the information you missed.

- Any student whose behavior or appearance is disruptive to the class or to the instructor will be asked to leave. Repeated occurrences may result in expulsion from the class.

- Audio or video recording of the lectures is prohibited unless explicitly requested as a disabilities accommodation.

Policy on Cheating

Discussion among students about the assignments is encouraged. However, all files that you submit must be YOUR OWN INDIVIDUAL WORK.

It is impossible to describe every situation that is considered cheating. Some obvious situations are:

- Don't copy code from web sites or books.

- Don't copy someone else's work.

- Don't allow someone else to copy your work.

- Don't allow someone else (a friend, tutor, lab assistant, etc.) to help you so much that you can't understand and explain the finished work.

- Don't post any portion of an assignment, or any portion of your solutions to an assignment on any website. That includes social media sites, tech support sites, blogs, etc.

Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct and are subject to disciplinary action such as failure on the assignment, failure of the course or dismissal from the university. The NMSU Library has more information and help on how to avoid plagiarism at http://lib.nmsu.edu/plagiarism/

Academic Misconduct

When the instructor believes that cheating has occurred, the instructor will follow university policy to assess the situation and apply penalties. University policies on academic misconduct can be found in the NMSU Student Handbook online: http://studenthandbook.nmsu.edu/

Computer Use Policy

All students who use campus computer labs or who connect to the campus network by any means must comply with the University Computer Use Policy.

Students with Disabilities

If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the coordinator of Student Accessibility Services (SAS), located at Corbett Center, Room 244, Phone: (575) 646-6840. Appropriate accommodations may then be provided for you.

The instructor will receive specific written guidelines for appropriate accommodations for individual students from the SAS office. Students will be given accommodations for disabilities as requested by the director of SAS.

Discrimination and Disability Accommodation

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADA) covers issues relating to disability and accommodations.

If you have questions or need an accommodation in the classroom (all medical information is treated confidentially), contact:

Main Campus
Student Accessibility Services (SAS)
Corbett Center Student Union Room 208
Trudy Luken, Director
575-646-6840
sas@nmsu.edu

New Mexico State University, in compliance with applicable laws and in furtherance of its commitment to fostering an environment that welcomes and embraces diversity, does not discriminate on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex (including pregnancy), sexual orientation, spousal affiliation, or protected veteran status in its programs and activities, including employment, admissions, and educational programs and activities. Inquiries may be directed to the Laura Castille, Executive Director, Title IX and Section 504 Coordinator, Office of Institutional Equity, P.O. Box 30001, E. 1130 University Avenue, Las Cruces, NM 88003; 575.646.3635; 575-646-7802 (TTY); equity@nmsu.edu.

Title IX prohibits sexual harassment, sexual assault, intimate partner violence, stalking and retaliation. For more information on discrimination or Title IX, or to file a complaint contact:

Laura Castille, Executive Director and Title IX Coordinator
Office of Institutional Equity (OIE) – O'Loughlin House, 1130 University Avenue
Phone: (575) 646-3635
E-mail: equity@nmsu.edu
Website: http://equity.nmsu.edu/

Other NMSU Resources:

NMSU Police Department: (575) 646-3311   www.nmsupolice.com
NMSU Police Victim Services: (575) 646-3424
NMSU Counseling Center: (575) 646-2731
NMSU Dean of Students: (575) 646-1722
For Any On-campus Emergencies: 911

Disclaimer

The information in this syllabus is provided on a good-faith basis. If in my judgment things need to be changed, they will be changed. Notice will be given in class and on Canvas if and when such changes occur.