

University of Massachusetts Dartmouth  
Department of Electrical and Computer Engineering

ECE 160 – Foundations of Computer Engineering I

Instructor/Ph: Prof. P. H. Viall ([pviall@umassd.edu](mailto:pviall@umassd.edu)) 508-999-8240

Office/Hours: Violette-217 or SENG-218/222. See website and by appointment

Web: <http://ece160.org>

All projects, labs, and handouts are posted on the web (generally before class). There are no fancy graphics, only files available for download. Most files are named according to the following format:

`xx-yyyy-zzzzzzzzzzz-zv.pdf` where:

`x` is the class number that the item is handed out;

`y` is hout (handout), `prjn` (project  $n$ ), or `labn` (lab  $n$ );

`z` is the description

`v` a version may be appended to the file name. If an error or omission is found in the assignment, I will post an updated handout (in addition to the original) with the suffix `Vn`, where  $n$  is 2, 3, 4...

If you miss class, please check the web to see if there were any handouts, and download them.

Due dates for all homework are also on the website under <http://ece160.org>. Check here if there is a question about due dates.

There are also hundreds of slides on the web. I seldom use these PowerPoint slides in this class, but they are available on the web as additional reference material.

Lastly, there is an "anonymous feedback" section on the website that allows you to provide feedback to me without giving your name. If you do wish a response, you have to include some way to contact you.

Textbook: Let Us C – Y. P. Kanetkar, ANY edition  
Infinity Science Press

Recommended:

Three ring binder 1" or 1.5" for handouts.

Classroom (lecture) protocol:

1. Feel free to ask the instructor questions (raise your hand).
2. Please do not talk to your fellow students during class. It makes it difficult for other students (especially those in the back of the room) to hear the instructor.
3. If you walk into class late, please try seat yourself quietly, so as not to disturb other students. If there were any handouts distributed, they will be on the front table.
4. Unless you are responsible for another person's welfare, please silence your cell phone when you come to class.
5. You are free to leave the room anytime you wish to. There is no need to ask permission. If you feel it necessary to converse with others (including on a cell phone) during a lecture, please move the conversation outside the room.
6. If lecture is held in a studio lab (with computers) the consumption of food/drink is not permitted.

Laboratory protocol:

1. Lab time is very informal (except for a possible lab intro talk)
2. The consumption of food and/or drink is not permitted (feel free to snack outside of the lab).
3. Students are certainly welcome to assist one another within certain parameters (see "working together (projects & labs)" below).
4. Feel free to ask the instructor or TA questions.
5. You are free to work on projects or labs pertinent to this course during your scheduled lab time. The choice is yours.

Notes on labs: Overall format of the labs and creation of lab handouts is my responsibility. Proctoring the labs and answering questions during the labs is the responsibility of the TA's. If you are repeating this course (or are being helped by someone who has taken the course previously), please note that while assignments may be named the same as previous semester, they may be different. You will be graded according to this semester's assignment.

Grading: (3) Exams: 75%; Labs and projects: 25%  
Labs and projects due on date specified  
"I" grades are only given in accordance with the University policy  
When possible (given constraints of room assignments), I will allow extra time for exams. Please plan work, etc. accordingly.

Exam Policy: Exams are given on dates specified in the syllabus. Even if other things "slide", exam dates will remain constant (except as outlined in "Cancelled classes and exams", below)

If you are more than 30 minutes late to an exam, you will be considered as having missed the exam. See the make-up policy below.

Makeup Exams: Makeup exams are not given for individual exams. A generic make up exam (the same exam for anyone who missed any exam) will be given on the last day of class.

emailing: You are welcome to email me about any concerns you have (pviall@umassd.edu). Please email from your umassd.edu account. Non-umassd.edu email accounts which contain code often are stopped by UMD's spam-catcher.

Working together (projects & labs) is acceptable to a point.

- \* Working together appropriately means:
  - Talking about a problem in general terms
  - Helping another person fix a specific error
- \* Working together inappropriately means
  - two people submitting the same program (except for the name)
- \* I may use software to compare submitted programs with those of other students from this semester or past semesters, or other sources, to determine possible incidents of plagiarism.

Working together (exams) is NOT ACCEPTABLE:

- \* Exams are definitely an individual endeavor. You may not work together during exams. You may not share any materials during exams
- \* In general the penalty for cheating on an exam or otherwise covertly attempting to raise your grade on an exam shall be a 'F' for the course
- \* For more information, please refer to the links given in the ECE 160 Academic Dishonesty Policy found on the last page of this handout.

Cancelled classes and exams:

- \* If class is cancelled the day an exam is scheduled, then the exam will be held the next time the class meets.
- \* If class is cancelled the session immediately prior to the exam (the day we would normally review), then the next time class meets we will have the "review day" and the meeting after that will be the exam.

Submitting labs and projects: Labs and projects must be submitted electronically in the specified manor, generally to the M: drive (more on this in a future handout). Each night at 12:01 am, a script is run which generates a snapshot of M:\ECE-160\\*. The date that the program file(s) are submitted to the M: drive will be considered the turn in date.

In the M:\ECE-160\public folder, there is a program (chksubmit.exe) which will check what you have submitted. You will be shown what you submitted, and can compare it with what you think you submitted. It also does some rudimentary error checking. While not required, it is suggested that you run this application immediately after submitting a program.

Unless you have received prior approval in writing (typically email), this is the only way labs and projects will be accepted. Emailing me a project or lab does not count as submitting it. No credit will be given for projects/labs submitted by email. However, if you have a problem with a lab or project, you may email your code to me with a question. This is NOT considered turning it in, however. A handout with more details will be distributed shortly.

Welcome to college life: You have a great deal of freedom. Attendance (while strongly encouraged) is not required. I am not going to chase you to hand in homework. There is no detention for failing to turn in an assignment, being late to class, cutting class, or sleeping during class. It is your responsibility to obtain/complete handouts/assignments if you miss class (see web above).

Facebook/Linked-in/Google+, etc: Because of possible negative perceptions, I ignore social website invitations from UMD students. After you graduate from the University, feel free to invite me as your friend.

Laptop/tablet computers and exams:

Many students have opted to both procure electronic versions of the textbook as well as take class notes using a laptop or tablet computer. This presents a bit of a problem when a test is open book and note (NOT all exams will be open book/note). If this is the method that you use for textbook and notes, and you wish to use your computer for open book/note exams, then the following procedures must be followed:

1. 24-48 hours prior to the exam you must send me an email from your umassd.edu email account saying you wish to use a laptop.
2. You must agree that you will only use the electronic version of the book, and notes that you took in class (no web surfing or programming tools).
3. You will be assigned a seat near the front of the room, such that your lap top screen faces toward the front of the room.

Course objectives:

1. To learn how a computer stores data, and conversion between various number bases.
2. To learn the fundamentals of using the C compiler and C preprocessor.
3. To learn how to use a modern environment to create, compile, execute and debug C programs.
4. To learn how to use procedures to modularize a program, and how to pass parameters by value and by reference.
5. To learn the syntax of the C language, including arrays, structures, and file access.
6. To learn how to use and manipulate strings using the C language.
7. To learn to use system libraries within a program.
8. To learn *how* to program, and how to design well written, maintainable programs.

Attendance:

I do not generally take attendance in class. You have the freedom to determine if attending class is a priority. However, if you "disappear"...that is stop turning in labs/projects, miss exams, and/or do not respond to emails, then you will likely be dropped from the course.

Other support:

- \* For tutorial help, the Engineering & Science Center is available to students at no charge. They are located in II-217. This is an excellent resource that is often ignored. Don't wait until you are in deep trouble to seek out the tutoring center. Seek it out sooner.
- \* For physically disabled students, there are support services provided through the Center for Access and Success. The center is located in Woodland Commons

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NAME: STUDENTS COPY [A copy for you to sign and return is attached]  
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University of Massachusetts Dartmouth  
Department of Electrical and Computer Engineering

ECE 160/161/263/264

Academic Dishonesty Policy

1. Academic dishonesty is not tolerated in this course. Academic dishonesty includes, but is not limited to:
  - representing the work of another person as your own without due credit;
  - cheating on an exam or otherwise covertly attempting to raise your grade on an exam;
  - covertly changing (or attempting to change) grades;
  - doctoring or attempting to doctor timestamps for submitted projects or labs.
2. Cheating on a lab or project is considered (at minimum) a Level 1 infraction. The penalty for any type of academic dishonesty involving a project or lab is a lowering of grade (to zero) for that assignment. In the event that academic dishonesty is found on a project or lab, the instructor may review previous assignments for evidence of academic dishonesty (possibly bringing the incident to a Level 2 infraction). If academic dishonesty is found in previous assignments, those grades may be changed as well.
3. Any type of academic dishonesty on an exam is considered (at minimum) a Level 2 infraction. The penalty for any type of academic dishonesty involving an exam is a 'F' for the course. If academic dishonesty is discovered and a grade of 'F' assigned, withdrawal from the course will not be allowed.
4. The office of the Dean of Engineering will be notified of the academic dishonesty incident, as it is the Dean's office coordinates incidents of academic dishonesty within the College of Engineering. Other University offices/persons responsible for overseeing academic dishonesty incidents may be notified as well.
5. If a student is academically dishonest, and it is discovered by the instructor, the instructor is not interested in how much stress the student was under, how their parents are going to react (to a failing grade), or how this affects any scholarships, or any other problems the student may suffer. This sounds cold and uncaring toward the person who was academically dishonest; BUT cheating hurts every other student in the course. Those are the students who the instructor cares about.
6. Any student has the right to appeal their grade informally to the Associate Dean of Engineering, or formally to the appropriate UMD entity, if they feel they have been unjustly charged with academic dishonesty. For details, refer to:  
<http://www.umassd.edu/policies/activepolicylist/academicaffairs/academicintegritypolicyandreportingform/>
7. Once the price has been paid (i.e. a lowering of an assignment grade or a 'F' for the course), the instructor will forget the incident, and the student may continue or retake the course without prejudice. If the instructor is the student's advisor, the student may continue to receive help and advice from him.

I have read and understand the instructor's policy on Academic Dishonesty.

STUDENTS COPY

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

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NAME: STUDENTS COPY – DO NOT RETURN

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University of Massachusetts Dartmouth  
Department of Electrical and Computer Engineering

ECE 160/161/263/264  
Info release sheet (OPTIONAL)

SECTION 1:

Based on university policy, disclosing personal information about you to other students in the class (or anyone) is not permitted. Some of you may wish your information be made available to other students for study group purposes, etc. You are free to initial the "decline" line (or leave this section blank), and no personal information will be made available to the rest of the class. Initial the blanks to the left of each item as you wish.

**Please be aware that once other students have your information, you cannot prevent them from disseminating it to other places.**

\_\_\_\_\_ I do not wish any personal information to be made available to other students in this course  
(initialing this item overrides all other items in this section;  
leaving this entire section blank defaults to this item).

\_\_\_\_\_ I wish my name to be made available to other students in the course.

\_\_\_\_\_ I wish my @umassd.edu email to be made available to other students in the course.

\_\_\_\_\_ I wish the following phone # be made available to other students:  
\_\_\_\_\_

\_\_\_\_\_ I wish my ID photo be made available to other students.

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SECTION 2:

Again, by University policy, I am not allowed to discuss an issue with you if I believe you may have an unidentified learning disability or other issue which might affect your performance on an exam. A few years ago, I strongly suspected a student had a learning disability, but was prevented from asking them about it. If you wish, you may allow me the opportunity to discuss the subject with you if I suspect you may have a learning disability or other issue. You are free to leave this section blank.

I specifically agree to allow Professor Viall to discuss a possibly learning disability or other similar issues with me:

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Signature (NOTE: there is no requirement to sign this)