



Fall 2010

ENEE 140 Introduction to Programming Concepts for Engineers

(Sections 10k, $k = 1, \dots, 6$ Lecture: Tuesday 3:30-4:45p.m.; CSI2117)

Required Textbook: A.E. Fischer, D.W. Eggert, & S M Ross, *Applied C: An Introduction and More*, McGraw-Hill, 2000, ISBN 0-07-021748-3.

Recommended Text: B. Gottfried, *Schaum's College Outline of Programming with C*, 2nd Ed., McGraw Hill, 1996, ISBN 0-07-024035-3.

Class URL: <https://bb.eng.umd.edu>

Instructor: Dr. Charles Silio (silio@umd.edu)

Office Hours: Tuesday 11:00a.m–1:00 p.m. in 1329 A.V. Williams Building (AVW1329)
 Thursday 11:00a.m–1:00 p.m. in 1329 A.V. Williams Building (AVW1329)

Grading Policy: (*dates, except for the final exam, are subject to change*)

Letter grade will be based on the total score in the following five categories:

Lab-work	20% (weekly recitation assignments)
Quizzes	20% (3–4 “small” in-recitation projects: Oct. 1, Oct. 29, Nov. 12, Dec. 3)
Projects	20% (3 take home programming projects; due: Oct. 5, Nov. 2, Nov. 30)
Midterm Exams	20% (I Tues. Oct. 12; II Tues. Nov. 23)
Final Exam	20% (comprehensive, Saturday, Dec. 18, 10:30a.m. – 12:30 p.m.)

Important Dates:

August	31	Tuesday	First lecture
September	1	Wednesday	First recitation period, AVW2446
September	3	Friday	Second recitation period, AVW2446
September	13	Monday	Last day of schedule adjustment
September	14	Tuesday	Last day to inform Dr. Silio about disability and exam/quiz conflict
November	8	Monday	Last day to drop with “W” mark
November	25–26	Thurs.–Fri	Thanksgiving Recess
December	7	Tuesday	Last lecture
December	10	Friday	Last day of class and last recitation
December	18	Saturday	Final Exam (10:30a.m.–12:30p.m.)

If you have a **documented disability** and wish to discuss academic accommodations with me, please contact me as soon as possible and **not later than Tuesday, September 14**.

If any midterm, quiz, or the final exam is scheduled on a **religious holiday** that you are compelled to observe, and you must make arrangements to take the exam/quiz on a different date, please see me about making these arrangements **not later than Tuesday, September 14**.

If you are experiencing difficulties in keeping up with the academic demands of this course, contact the Learning Assistance Service, 2201 Shoemaker Building, 301-314-7693. Their educational counselors can help with time management, reading, note-taking and exam preparation skills.

Dissection of the Syllabus:

Heavy Workload Warning:

You can expect a heavy workload in this course, especially if you have never done any kind of programming in the past. Most work will be done during the recitation where you can get help from the TA. The programming assignments are not necessarily difficult, but they do require lots of time and patience. **Due to the nature of the course, you may not start feeling this heavy workload in the first couple of weeks.**

Recitation:

- In order to learn C and UNIX, it is essential that you **practice** and you can never over-practice. Recitation sections and the associated TA office hours are designed to provide you the opportunity to practice programming with the TAs available to answer your questions on site.
- Given the large enrollment of the class, recitation sections are also the places that you pick up your **exam papers** and turn in your programming assignments (however, if arrangements are successful you will usually turn in programs electronically by the due date).
- **Be on time.** Late arrivals will disturb the class. More importantly, you may miss the instructions for the quizzes and assignments when they are given at the beginning of the recitation. If you have difficulty in getting to the recitation on time, contact your TA.
- For those who miss their recitation for whatever reason, you can (and you are welcome to) attend the next available recitation. We will try to make all the recitation sections synchronized so you will not miss much materials covered in your own recitation. However, it is your responsibility to notify your own recitation TA and make arrangement for the missed recitation material.

Office Hours:

- We have tried to spread the office hours so you will be able to find someone, either Dr. Silio or the TAs, everyday if you have questions.
- The TAs will try to hold their office hours in one of the labs, either AVW2446 or AVW1442. Check with your TA for details.
- Try to take advantage of these office hours.

Lab-work: (20%)

- There will be weekly programming assignments, normally assigned during the lecture or the first recitation of the week and due at the end of the second recitation of the same week. You are supposed to work on most parts of such assignments during the recitation sessions with the help of your TA.
- Lab-work will be submitted either in hardcopy or electronically. Detailed electronic submission instructions will be posted soon.
- **Late lab-work will not be accepted.** If you must miss a recitation where the lab-work is due, it is your responsibility to contact your recitation TA before the due date.
- It is acceptable, and you are encouraged, to discuss lab-work assignments with others, but you have to prepare the final submission version by yourself. Both copying other's work and allowing others to copy your work will be considered as academic dishonesty (see below for more detail in the last item of the Exam section).

Quizzes: (20%)

- There will be 3-4 programming quizzes, each scheduled in the 2nd weekly recitation session.
- In each quiz, you will have one or several questions and be asked to write small C programs under UNIX to answer these questions. This includes typing, testing, debugging, executing the program and electronically submitting it to your recitation TA. Normally these quizzes are open book and open notes. However, you will find it hard to review the material and then complete the program in the given time slot (50 minutes).
- The quiz is for the individual student. Working in groups, copying other student's program, or allowing others to copy your work will be considered academic dishonesty (see below for more detail in the last item of the Exam section).

Projects: (20%)

- We will have 3 programming projects.
- The project will be posted on the course web page and announced in the lecture. Normally you will have two weeks to complete a project; nevertheless, it is recommended that you start early.
- The projects must be done under the GLUE UNIX system and submitted electronically. Electronic submission will be automatically time-stamped. Late submission will be accepted but subject to some non-trivial penalty. Detailed submission information will be available with the project assignment.
- It is acceptable to discuss project ideas with other students, but you have to code by yourself. Both copying a project and allowing others to copy your project will be considered academic dishonesty (see below for more detail in the last item of the Exam section).

Exams: (20%)

- All midterm and final exams will be closed book, closed notes, and no calculators, PDAs, or laptops. Please also turn off cell phones.
- **There will NOT be any make-up midterm exams.** If you must miss one of the midterm exams, you must get the permission from Dr. Silio at least 48 hours before the exam so that portion of the grade can go to the final exam. Otherwise, 0 (zero) will be counted as the score for each of the missed midterm exams.
- If you **dispute your score on any exam/project/quiz/lab-work**, you must contact Dr. Silio (for the exam) or your TA (for others) within one week from the date that the score is announced. After this period, no changes will be considered.
- **Academic dishonesty will not be tolerated.** The University Code of Academic Integrity, which can be found at <http://www.inform.umd.edu/CampusInfo/Departments/JPO/> prohibits students from committing the following acts of academic dishonesty: cheating, fabrication, facilitating academic dishonesty, and plagiarism. Academic dishonesty in this class includes outright copying on homework; however, discussing homework problems and exchanging tips is permissible and also encouraged. If there are any take-home exams, discussing the material with anyone, inside or outside of the class, is considered academic dishonesty. Instances of academic dishonesty will be referred to Office of Judicial Programs.

Main Topics:

- Programming environment in UNIX
- Data types and variable scopes
- Program selections (if, if-else, switch)
- Repetition (for, while, do-while)
- Functions
- Formatted input/output, file input/output
- Arrays
- Strings

Additional References

- L.H. Miller & A.E. Quilici, *The Joy of C*, John Wiley & Sons, Inc., 1997, ISBN 0-471-12933-X.
- B.W. Kernighan & D.M. Ritchie, *The C Programming Language*, 2nd Ed., Prentice Hall PTR, 1988, ISBN 0-13-110362-8.
- M. Loukides & A. Oram, *Programming with GNU Software*, O'Reilly & Associates, Inc., 1997, ISBN 1-56592-112-7.

Alternate Class URL

- An alternate **course ftp web site** will be available in AFS directory:
[/afs/glue.umd.edu/department/enee/public_html/courses/enee140.F2010](afs://glue.umd.edu/department/enee/public_html/courses/enee140.F2010),
 (URL), <http://www.ece.umd.edu/courses/enee140> under Fall 2010
 for quick access backup use if blackboard isn't working.

About ENEE 150:

ENEE 150: Intermediate Programming Concepts for Engineers, is required to satisfy the programming concepts requirement for the Electrical Engineering major. ENEE 140 is the prerequisite and does not count towards the degree.

ENEE 150 is intended for students who are comfortable with the fundamentals of procedural programming, in particular data types, variables, loops, conditional statements, and functions. It will cover intermediate topics in procedural programming and fundamentals of object-oriented programming (coding conventions and style; pointers; dynamic memory allocation and data structures; linked lists; graphs; abstract data types; object-oriented design, and more).

Contact Dr. Shuvra Bhattacharyya (ssn@usnd.edu), Dr. Qu (gangqu@umd.edu), or Dr. Yeung (yeung@umd.edu) for more information.