Department of Electrical and Computer Engineering

EEL 2880 – C Programming Embedded Systems
Fall 2022

Instructor	:	Dr. Herman Watson
Office Hours	:	by appointment with Zoom meeting
		Tuesday & Thursday 3:30 – 5:00 pm
Office	:	EC – 3951
Sec. Phone	:	305.348.2807
Email	:	watsonh_fiu@yahoo.com (Note underscore) <<<<<< use this email
Class	:	available through FIU Canvas
Web Page	:	https://web.eng.fiu.edu/watsonh/EEL2880/

Catalog Description:
Engineering problem solving process, overview of a generalized computing system,
software development, real-life engineering applications, computational implications.
(3 Credits)

Reference Textbook:
Deitel & Deitel
C How to Program
ISBN 0-13-299044-X

Course Objectives:
Through successful completion of the course, the student will:
> Understand the stages of the engineering problem solving process and
> their relationship to the development of software for its implementation.
> Learn the C programming language, as a vehicle for the solution of
> engineering problems.

Relationship of course to program outcomes:
1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences

Grading Scale:		
A	92-100	"Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook."
A-	90-92	
B+	88-90	
B	82-88	
B-	80-82	
C+	78-80	
C	70-78	
D	60-69	
F	< 60	

Department Regulations Concerning Incomplete Grades
To qualify for an Incomplete, a student:
1. Must contact (e.g., phone, email, etc.) the instructor or secretary before or during missed portion of class
2. Must be passing the course prior to that part of the course that is not completed
3. Must make up the incomplete work through the instructor of the course
4. Must see the Instructor. All missed work must be finished before last two weeks of the following term.

Policies:
1. **Academic Misconduct:** For work submitted, it is expected that each student will submit their own original work. Any evidence of duplication, cheating or plagiarism will result in at least a failing grade for the course.
2. **Absences:** Resolution of absences and materials missed are student responsibility
   a) **Unexcused Absences:** Two unexcused absences are permitted during the term. More than two will result in the loss of points from your final grade. (1 point per absence above two, 3 points per absence above 5).
   b) **Excused Absences:** Only emergency medical situations or extenuating circumstances are excused with proper documentation.
      i.   1. Review documentation with the lecturer,
      ii. 2. email as a written record to watsonh_fiu@yahoo. (Note underscore)
              1. Name, SID, class, section, description and date of the absence
3. **On Time:** As in the workplace, on time arrival and preparation are required. Two "lates" are equivalent to one absence. (Leaving class early is counted the same as tardy.)
4. **Deadlines: Work is due before midnight on the date specified.** Late submissions within one week will receive up to half credit. After one week, **late work will not be accepted.** Late submissions are graded after the final exam.
   Participation deadlines are absolute – no late completions or makeups
5. **Submissions:** ==**This class is paperless**. Submissions are made using the web form listed on the class web site (online and in class sections).== All submissions must be
   a) a <u>single</u> document
   b) **contain your name, date and time of completion within the document**
   c) accessible by **anyone** and readable with a browser
   d) with a single URL reference. - permission: 'anyone with the link can view'.
6. **DO NOT** submit work by email.
7. Instructor reserves right to change course materials or dates as necessary.

Grading Scale: NOTE: There are *no makeup exams* offered

Topic	Percentage
Exam 1 *no makeup*	20%
Exam 2 *no makeup*	25%
Final *no makeup*	25%
Project	15%
Homework	10%
Participation& Quiz	5%

Mod	Date (Mon)	2880 Weekly Topics Tuesday/Thursday topics	Homework: Due
1	08/22/22	Introduction, Flow Charts V1 – Dennis Richie, V2 - SFC	HW01 Flow Chart 08/30/21
2	08/29/22	Integrated Development Environments V3- Install C::B, V4 - IDE's	HW02 Install IDE 09/06/21
3	09/05/22	Objects / Expressions V5 - Data Types, ForIf, V6 – Scopes (09/05 Mon Labor Day)	HW03 Operators Review Quiz1 09/13/21
4	09/12/22	Expressions / Statements – Print Pi & Burglar Alarm V7 - PrintPi , V8 – Burglar Alarm (bitwise operators)	HW04 Binary Print 09/20/21
5	09/19/22	Statements – Switch/ While, For Loop Examples V9 McDucks , V10 For Examples, Thur PQBinary	Review Quiz2 09/27/21
6	09/26/22	Tue 09/27 V11 - Review Thur 09/29 Exam 1	
7	10/03/22	Project Assigned/ Arrays & Strings V12 -Hist, Project V13 - Array, String, Tires/Apples	HW05 10/11/21
8	10/10/22	Pointers Deck – V14, Card functions - V15	HW06 Shuffle Deck 10/18/21
9	10/17/22	Functions Exercise 1 (Due Fri 10/21) V16 - APF Summary, Hist ptr/value V17- BBB, Deck solution Thur PQ2Deck	HW07 Play 2 Hands Quiz3 10/25/21
10	10/24/22	Tue 10/25 Review / Thur 10/27 Exam 2 V18 Quiz 3 Review	
11	10/31/22	Structures, File I/O V19 – Structures, New, List V20 – Stdio.h, Text file I/O (10/31 - Last Drop)	HW08 Structures 11/08/21
12	11/07/22	Structures, File I/O / Exercise 2 (Due Tue 11/10) V21 – Text I/O, Hex Dump, Text EOL Tue PQ3Structures	HW09 File I/O 11/15/21
13	11/14/22	Structures, File I/O / Other Languages V22 – Matlab V23 – Alice Plumbing HW Thur PQ4FileIO	HW10 Plumbing Quiz4 (review guide) 11/22/21
14	11/21/22	Tue 11/22 Q/A Thur-Fri (11/24-25): Thanksgiving	
15	11/28/22	V24 Review Exercise 3 (Tuesday 11/29) Project Due Thursday, 12/01 Exam 3 Senior Design Day – 12/02	

| 16 | 12/05/22 | **Final Exam Week**
No final exam for this class | |