Pittsburg State University Department of Engineering Technology Electronics ET Program

(Prepared by: Donna Lenharth, Jan 2019)

COURSE TITLE: EET 247. Computer Programming for Electronic Systems

COURSE SCHEDULE: Lecture/Lab: Tuesday 6:00-9:20pm W213

INSTRUCTOR: Donna Lenharth (Adjunct) Office: None

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COURSE DESCRIPTION: EET 247 – Computer Programing for Electronic Systems:

3 hours. (2 hours lecture, 2 hours laboratory). Introduction to computer programming with a high-level language including, subroutines, arrays, functions, etc. Programming applied to technology including industrial applications and embedded processors. Prerequisites: MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus.

TEXTBOOK:

• Hanley & Koffman, <u>Problem Solving and Program Design in C</u>, **7th or 8th edition**.

MATERIALS REQUIRED:

- Internet Access
- PC Computer Access

COURSE OBJECTIVES:

- Understand fundamentals of programming such as variables, constants, functions, etc.
- Understand memory format of data types
- Understand logical and bitwise operators
- Demonstrate understanding of program flow structures (if-then, switch/case, for-loop, while-loop, etc.).
- Develop computer programs to solve specified engineering technology problems

COURSE TOPICS:

- 1. Binary, hexadecimal, two's complement, floating point encoding
- 2. Functions and Input/Output operations
- 3. Selection Structures (If-Then, Select/Case, etc.)
- 4. Repetition Structures (Do-, While-, For-loops, etc.)
- 5. User Defined Functions
- 6. Arrays and Matrices
- 7. Data Structures
- 8. Pointers
- 9. Introduction to SQL

TENTATIVE SCHEDULE OF TOPICS

Week # & Title	Chapter	Date	Lab Set
1 – Introduction & Overview of Computers	1	Jan 15	1
2 – Overview of C	2	Jan 22	1
3 – Overview of C (continued), functions	2	Jan 29	1
4 – If and Switch statements	3	5 Feb	1
5 – Review	4	12 Feb	1
6 – EXAM #1		19 Feb	
7 – Repetition and Loop statements	5	26 Feb	2
8 – Pointers	6	Mar 5	3
- SPRING BREAK (No Meeting)		Mar 12	3
9 – Arrays	7	Mar 19	
10 - Strings	8	Mar 27	3
11 – Recursion, Exam Review	9	Apr 2	3
12 – EXAM #2		Apr 9	
13 – Struct, Union, File I/O, Databases	10 & 11	Apr 16	3
14 – SQL		Apr 23	3
15 – Review		Apr 30	4
16 – FINAL EXAM		May 7	

GRADING

OVERVIEW

Labs:	32%	320 Points	90-100% 89-80%	A B
Exams:	60%	600 Points	79-70%	C
Quizzes	8%	80 Points	69-60%	D
Total	100%	1000 Points	<59%	F

Technology Policy: Technology problems are not an acceptable excuse for a late project. It is to your advantage to submit your labs early.

Late Policy: No late assignments will be accepted without prior approval and reasonable justification. I reserve the right to extend due dates for the entire class as deemed necessary.

There will be no makeup quizzes.

PSU SYLLABUS SUPPLEMENT