Pittsburg State University
Department of Engineering Technology
Electronics ET Program
Course Intended for Partial Fulfillment of the Pitt State Pathway Curriculum
(Prepared by: Clark D. Shaver, Feb 2019)


COURSE SCHEDULE: Lecture: TTH 1:00-1:50pm W213
Lab: Tuesday 2:00-3:50pm W213

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COURSE DESCRIPTION: EET 247 – Computer Programming for Electronic Systems: 3 hours. (2 hours lecture, 2 hours laboratory). 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/MATERIALS REQUIRED:
• Hanley & Koffman, Problem Solving and Program Design in C, sixth ed.
• Computer Access

COURSE OBJECTIVES:
• Understand fundamentals of programming such as variables, constants, functions, etc.
• Demonstrate understanding of memory format of data types
• Demonstrate understanding of 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

Pitt State Pathway Essential Studies Element:
○ Human Systems within a Global Context.
  ▪ Students will describe human organizational systems using a variety of disciplinary and interdisciplinary perspectives. For a detailed description, see the Pitt State Pathway documentation. Level of Student Learning = Benchmark

○ Methods of Assessment for this PSP Essential Studies Element:
  ▪ Students will list of the steps of the computer programming design process
  ▪ Students will describe their role in team based engineering design
  ▪ Students will describe programming practices that help ensure good interaction between human and computer-based systems

○ Tools used to Assess Student Learning:
  ▪ Students will describe human organizational systems via in written essay form
  ▪ A rubric will be used to asses this essay and the level of student learning.
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

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

Labs: 40% 90-100% -A
Exam 1: 20% 89-80% -B
Exam 2: 20% 79-70% -C
Final Exam: 20% 69-60% -D
<59% -F

Technology Policy: Your technology problems are not my problems. "My computer wouldn’t work" or other such statements will not qualify for an acceptable excuse for a late project.

Late Policy: Late assignments will be deducted 25% if it is late less than one week. If the assignment is more than one week late, 60% will be deducted from the score. No late work will be accepted during or after deaf week. I reserve the right to extend due dates for the entire class as deemed necessary. **There will be no makeup quizzes**, however, I generally drop 1 or more quizzes depending on the amount of quizzes taken throughout a semester.

PSU SYLLABUS SUPLEMENT
http://www.plttstate.edu/dotAsset/951abb38-06ee-4727-9356-fcdbf1bf497f.pdf

EET 244 – Logic Circuits