

<b>Course name</b>	<b>ECE 26300 Introduction to Computing in Electrical Engineering</b>
<b>Credit and contact hours</b>	(3 cr.) Class 3
<b>Course coordinator's name</b>	Brian King
<b>Textbook</b>	<i>C Primer Plus</i> , 6 <sup>th</sup> Ed., by Stephen Prada, Pearson Publishing, 2014, ISBN: 9780321928429
<b>Course information</b>	<p>ECE 26300 Introduction to Computing in Electrical Engineering (3 cr.) P: Completion of a pre-calculus course or equivalent; completion of 12 credit hours. C: ECE 26100. Class 3. An introductory course in computing programming with an emphasis on program decomposition and program structure. The objective of the course is to introduce the student to problem solving using high-level languages. The students are also introduced to number concepts fundamental in electrical engineering. Programming will be in "C" in order to develop a structured approach to problem solving. Problems drawn from the field of electrical engineering will require no prior engineering knowledge.</p> <p><b>Prerequisites/ Co-Requisite</b>  P: Completion of a pre-calculus course or equivalent; completion of 12 credit hours. C: ECE 26100.</p> <p><b>Required, Elective, or Selected Elective:</b>  EE Required, CE Required</p>
<b>Goals for the course</b>	<p>Upon successful completion of the course, students should be able to</p> <ol style="list-style-type: none"> <li>1. Develop algorithms using a step-by-step process. [1]</li> <li>2. Use a standard C program development environment [1,2,6]</li> <li>3. Read and write C programs that use pointers [1,2,6]</li> <li>4. Read and write C programs that use structures [1,2,6]</li> <li>5. Read and write C programs that use files [1.2.6]</li> <li>6. Read and write C programs that use dynamic data structures [1,2,6]</li> </ol>
<b>List of topics to be covered</b>	<ol style="list-style-type: none"> <li>1. Overview of C</li> <li>2. Control Statements</li> <li>3. Conditional Statements</li> <li>4. Data types (simple and structured)</li> <li>5. Arrays</li> <li>6. Functions</li> <li>7. The use of pointers</li> <li>8. Dynamic memory management</li> <li>9. Linked lists and trees</li> <li>10. Recursion</li> <li>11. Binary I/O</li> </ol>

	12. Random number generation 13. Standard C Library
<b>Syllabi approved by</b>	Brian King
<b>Date of approval</b>	8/27/2021