<table>
<thead>
<tr>
<th>Course name</th>
<th>ECE 26400 Advance C Programming</th>
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<tbody>
<tr>
<td>Credit and contact hours</td>
<td>(3 cr.) Class 3</td>
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<tr>
<td>Course coordinator’s name</td>
<td>Brian King</td>
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**Course information**

**2014-16 IUPUI Campus Bulletin description:**
ECE 26400 Advanced C Programming (3 cr.) Class 3. Continuation of a first programming course. Topics include files, structures, pointers, and the proper use of dynamic data structures. Basic knowledge of the UNIX operating system and an introductory C programming course. C programming knowledge should include basic syntax, control structures, and file I/O, as well as experience in declaring and using functions.

**Prerequisites/ Co-Requisite**
P: basic knowledge of the UNIX operating system and introductory to C programming course.

**Required, Elective, or Selected Elective:**
EE Elective, CE Elective

**Goals for the course**

Upon successful completion of the course, students should be able to
1. Read and write C programs that use pointers [a, c, e, k]
2. Read and write C programs that use structures [a, c, e, k]
3. Read and write C programs that use files [a, c, e, k]
4. Read and write C programs that use dynamic data structures [a, c, e, k]

**List of topics to be covered**

1. Overview of C
2. Data types (simple and structured)
3. The use of pointers
4. Dynamic memory management
5. Linked lists and trees
6. Recursion
7. Binary I/O
8. Random number generation

**Syllabi approved by**
Brian King

**Date of approval**
12/31/2015