



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced C Programming

CSE 2451

Credit Hours:

2.00 - 2.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

Course Description:

Advanced C features for students with significant programming experience in another language.

Prerequisites and Co-requisites:

Prereq: 2221 or 222. Concur: 2231 or 321.

Course Goals / Objectives:

- Master programming with pointers in C
 - Be competent with application development and debugging in Unix environments
 - Be competent in using C string and I/O features, bit operations, and function pointers
 - Be competent with key data structures like linked lists, (multi-dimensional) arrays, trees, stacks, and queues
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Course Topics:

- Transitioning to C, Basic C syntax, working in Unix Environments
 - C pointers and memory (de)allocation. Programming dynamic data structures with C (linked lists, arrays, including multi-dimensional arrays accessed through pointers, trees, possibly queues and stacks), pointer casting and null and void pointers.
 - String manipulation and I/O in C
 - Other misc C features: function pointers, command line argument passing
 - Debugging in Unix with gdb/xgdb, Use of Makefile, Other Unix features
 - Bit operations and representative computer arithmetic algorithms
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Designation:

Elective