

**Electrical Engineering & Computer Science
University of Kansas**

**EECS 541 - Computer Systems Design
Tuesday and Thursday, 9:30 to 10:50 AM
3017 Learned Hall**

Dr. Joseph B. Evans

544 Snow Hall, 864-8808

Office Hours: Tuesday and Thursday, 11 AM – 12 noon, Snow Hall

Otherwise by appointment

evans@itc.ukans.edu

204 Nichols Hall, 864-4830

EECS 541/542 Topics

- Introduction and Overview
- System Design and Specifications
- Review of Software Engineering using Unix Tools
 - shell programming, compilers, lint, make, lex/yacc
- Unix Network Programming
 - sockets, TCP/IP networking
 - multicast IP and ATM
 - security issues
- Graphical User Interface Design
 - Tcl/Tk package
 - interfacing with TCP/IP sockets
- Microcontroller/Peripheral Subsystems
 - hardware interfacing
 - radio subsystem issues
 - HC11 programming
 - Unix device drivers
- System Prototyping
 - hardware/software co-design
 - PCB layout and fabrication
 - testing and debugging
- Engineering Ethics
- Project Reviews

Texts/References:

Class Notes

Anticipated Schedule

<u>Date</u>	<u>Topic</u>
August 21	Course Organization Overview of System Design
August 26	System Design and Specifications
August 28	System Design and Specifications
September 2	Software Engineering Tools - shell programming
September 4	Software Engineering Tools - cc/gcc, lint
September 9	Software Engineering Tools - make
September 11	Software Engineering Tools - lex/yacc
September 16	Software Engineering Tools - lex/yacc
September 18	Unix Network Programming - TCP/IP basics
September 23	Unix Network Programming - TCP/IP and Unix
September 25	Unix Network Programming - TCP/IP and Unix
September 30	Unix Network Programming - socket basics
October 2	Unix Network Programming - advanced sockets
October 7	Unix Network Programming - socket options
October 9	Unix Network Programming - sockets and signals
October 14	Unix Network Programming - miscellaneous
October 16	Midterm Exam
October 21	Graphical User Interface Design - Tcl/Tk
October 23	Graphical User Interface Design - Tcl/Tk
October 28	Graphical User Interface Design - Tcl/Tk
October 30	Graphical User Interface Design - Tcl/Tk & sockets
November 4	Graphical User Interface Design - Tcl/Tk & sockets
November 6	Peripheral Subsystems - radios & protocols
November 11	Peripheral Subsystems - radios & protocols
November 13	Peripheral Subsystems - radios & protocols
November 18	Peripheral Subsystems - radios & protocols
November 20	Microcontroller/Peripheral Subsystems - HC11
November 25	Microcontroller/Peripheral Subsystems - HC11
December 2	Microcontroller/Peripheral Subsystems - HC11
December 4	Project Reviews - Prototype Systems
December 9	Project Reviews - Prototype Systems
December 11	Final Exam, 7:30-10:30 AM, 3017 Learned

Note that this schedule may be modified in order to adapt to currently unforeseen circumstances.

Grading Policy

The class will be graded competitively according to the percentages listed below. Each assignment within a category will be weighted equally. The course grade thresholds (that is, the numerical grade required to get a particular letter grade) will be set by the instructor to reflect the relative performance of the students. Class attendance is expected unless otherwise indicated.

Midterm Exam	10%
Final Exam	10%
Project	40%
Homework, Miscellaneous Projects	40%

Note: failure to complete the "Project" portions of the course will result in a grade of F for the course.

3% per day will be subtracted from assignments turned in late, except under extraordinary circumstances and with adequate prior notification of the instructor.

The student must notify the instructor within 48 hours of a missed exam and present adequate justification. If illness is the justification, a doctor's note must be provided to the instructor.

An appeal on grades for individual assignments must be within 14 days of the date the assignment is returned.

Further details of the project grading procedure may be announced in class or via e-mail as required.