

**EE 5390/7390**  
**Multimedia Signal Processing with OMAP**  
**Fall 2005**

*Course Description:* Embedded Linux systems have become increasingly important in the development of mobile internet devices and multimedia appliances. Linux is particularly well suited for implementation in embedded systems owing to its portability and high level of support. This course will explore the use of embedded Linux using the OMAP platform, which consists of an ARM and DSP processor along with various peripherals. Some previous exposure to Unix/Linux is recommended.

*Time:* TTH 9:30-10:50 AM

*Location:* Junkins 102

*Instructor:* Carlos E. Davila

*Recommended Texts:*

- C. Hollabaugh, "Embedded Linux: Hardware, Software, and Interfacing," Addison-Wesley Professional, ISBN: 0672322269, 2002.
- K. Yaghmour, "Building Embedded Linux Systems," O'Reilly, ISBN: 059600222X , 2003.
- J. Corbet, "Linux Device Drivers," 3rd Edition, O'Reilly, ISBN: 0596005903, 2005.

*Topics:*

- I. Introduction to Linux
- II. Compilers and Cross Compilers
- III. The OMAP Platform
- IV. Embedding/Porting Linux
- V. Linux Device Drivers
- VI. Interfacing
- VII. Real Time OS
- VIII. Programming the OMAP C55 DSP

*Grading Policy:* Module Projects 70%  
Online Journal 25%  
Course Participation 5%

The modules will be due on the date given on the course web page. Students in EE 7390 will be required to complete one additional module than students in EE 5390. Course participation includes but is not limited to class attendance, class participation, communications on course content via the course mailing list and other course communications tools. The online journal or blog will document your activities related to this course.

SMU Incomplete Grades Policy

An Incomplete (I) may be given if the majority of the course requirements have been completed with passing grades but for some justifiable reason, acceptable to the instructor, the student has been unable to complete the full requirements of the course. Before an (I) is given, then instructor should stipulate in writing to the student the requirements and completion date that are to be met and the grade that will be given if the requirements are not met by the completion date. The maximum period of time allowed to clear the Incomplete grade is 12 months (except for graduate thesis and dissertation courses). If the Incomplete grade is not cleared by the date set by the instructor or by the end of the 12-month deadline, the (I) may be changed to an F or to another grade specified by the instructor. The grade of (I) is not given in lieu of an F, WP, or other grade, each of which is prescribed for other specific circumstances. If the student's work is incomplete and the quality has not been passing, and F will be given. The grade of (I) does not authorize the student to attend the course during a later semester. Graduation candidates must clear all Incompletes prior to the deadline in the official University Calendar, which may allow less time than 12 months. Failure to do so can result in removal from the de-gree candidacy list and/or conversion of the (I) to the grade indicated by the instructor at the time the (I) was given.