

COMPUTER ENGINEERING (CMPE)

Courses

CMPE 5410. Digital VLSI Circuit Design. 0 or 3 Credits.

Covers the techniques for the design, analysis and layout of digital CMOS circuits and systems. Major topics include MOSFET basics (structure and behavior of a MOSFET, CMOS fabrication, and design rules), detailed analysis of the CMOS circuits and systems (static behavior, ratioed vs. ratioless design), noise margins, computing rise and fall times, delay models, resistance. Prerequisite: Electrical Engineering Graduate student, Computer Science Graduate student, or Instructor permission. Cross-listed with: EE 5410.

CMPE 5540. Real-Time Control Systems. 3 Credits.

Digital control systems analysis and design. Topics include: difference equations, the Z-transforms, discrete-time transfer functions, state-space models, sampled-data systems, discretization, real-time control, microprocessor implementation, and optimal control. Project-based final. Prerequisite: Electrical Engineering Graduate student, Computer Science Graduate student, or Instructor permission. Cross-listed with: EE 5540.

CMPE 5810. Digital Computer Design. 3 Credits.

To gain a solid understanding of digital computer operating mechanisms and reconfigurable computing, and advance into hands-on experiences to design and debug digital computer system and embedded system. Field programmable gate arrays (FPGAs) will be utilized as the development platform. Prerequisite: Electrical Engineering Graduate student, Computer Science Graduate student, or Instructor permission. Cross-listed with: EE 5810, CS 5810.

CMPE 5990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

CMPE 5991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

CMPE 5993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

CMPE 5994. Teaching Assistantship. 1-3 Credits.

Student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

CMPE 5995. Graduate Independent Research. 1-18 Credits.

Student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

CMPE 6391. Master's Thesis Research. 1-18 Credits.

Research for Master's Thesis.

CMPE 6392. Master's Project Research. 1-3 Credits.

Research for Master's Project.

CMPE 6990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

CMPE 6991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

CMPE 6993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

CMPE 6994. Teaching Assistantship. 1-3 Credits.

Student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

CMPE 6995. Graduate Independent Research. 1-18 Credits.

Student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

CMPE 7491. Doctoral Dissertation Research. 1-18 Credits.

Research for Doctoral Dissertation.

CMPE 7990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

CMPE 7991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

CMPE 7993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

CMPE 7994. Teaching Assistantship. 1-3 Credits.

Student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

CMPE 7995. Graduate Independent Research. 1-18 Credits.

Student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.