Computer Engineering Technical Electives

Core Electives
8 credits (2 courses) from the following list:
281  Algorithms and Data Structures  (pre-req. EECS 203, 280)
306  Signals and Systems II  (pre-req. EECS 206, 215, and MATH 215)
312  Digital Circuits  (pre-req. EECS 215, 320)
373  Microprocessor-Based Systems  (pre-req. EECS 270, 370)

EECS Elective
Other EECS courses (including some 498 offerings and 500-level classes) may be approved on a case-by-case basis by the Chief Program Advisor.

Flexible Technical Electives
7 credits from the following list: (Note that often one 4-credit course is sufficient, given one extra credit from a 4-credit EECS elective and two extra credits from three 4-credit upper-level electives.)
- Any EECS elective (includes upper-level electives)
- Any non-computing class at the 300 level (or higher) offered by an ABET-accredited engineering department
- AEROSP 225, 245, 285
- BIO 305, 310, 311, 390
- CEE 211, 212 260
- CHEM 300 level (or higher)
- CHEME 230
- ECON 401, 406
- EECS 250, 495, 498, 499  (max of 4 credits of 499)
- ENGR 450
- IOE 201/202
- MATH 354, 395, 396, 404, 412, 417, 419, 451, 452, 545, 462, 471, 475, 476, 490, 500+ level classes. Tutoring classes are excluded.
- ME 211, 230, 240, 250
- MSE 220, 242, 250
- NA 270
- NERS 211
- PHYS 300-level or above, excluding PHYS 333, 334 and 420. Tutoring classes are also excluded.
Upper Level CE Electives
10 credits (typically 3 courses) from the following list:

427  VLSI Design I (pre-req. EECS 270 & 312)  
452  Digital Signal Processing Design Laboratory (pre-req EECS 306 & 280)  
461  Embedded Control Systems (pre-req. EECS 306 or 373)  
470  Computer Architecture (pre-req. EECS 270 & 370)  
478  Logic Circuit Synthesis and Optimization (pre-req. EECS 203 & 270)  
482  Introduction to Operating Systems (pre-req. EECS 281 & 370)  
483  Compiler Construction (pre-req. EECS 281 & 370)  
489  Computer Networks (pre-req. EECS 482)  
527  Layout Synthesis and Optimization (pre-req. EECS 478)  
570  Parallel Computer Architecture (pre-req. EECS 470)  
578  Computer-Aided Design Verification of Digital Systems (pre-req. EECS 478)  
582  Advanced Operating Systems (pre-req. EECS 482)  
583  Advanced Compilers (pre-req. EECS 281 & 370)  
589  Advanced Computer Networks (pre-req. EECS 489)  
627  VLSI Design II (pre-req. EECS 427)

Major Design Experience
The major design experience in Computer Engineering has three parts which must be elected concurrently:

1. EECS 496, a 2 credit course covering non-technical aspects of design, such as large multidisciplinary project design principles, team strategies, ethics, entrepreneurial skills, and social and environmental awareness.
2. TechCom 496, a 2 credit technical communication course
3. an approved 400-level course in EECS that devotes the majority of the class to a large design and implementation project or a series of closely related projects.

Approved MDE courses for CE
EECS 427 VLSI Design I (prereq. EECS 270 and EECS 311 or 312)  
EECS 452 Digital Signal Processing Design Laboratory  
EECS 470 Computer Architecture (prereq. EECS270, 370)  
EECS 483 Compiler Construction (prereq. EECS 281 and EECS 370)

Additions and deletions may be made to this list at any time; check with the advising office before committing to a particular course.