

Appendix B: Research Area (Knowledge) and Skills Development Courses (Students must take two research area courses and two skills courses from one academic area.)

Communications and Signal Processing

Research Area : EE 521, EE 524, EE 527, EE 528, EE 547, EE 621, EE 622

Skills: EE 523, CprE 547, Stat 542, Stat 543, Stat 570

Computing and Networking Systems

Research Area: CprE 541, CprE 543, CprE 581, CprE 583

Skills: (at least two from different groups)

Group 1 (probability, statistics, etc.): EE 523, Stat 430, Stat 447, Stat 500, Stat 512

Group 2 (algorithms, modeling, etc.): CprE 528, CprE 582, ComS 511

Group 3 (optimization, graph theory, etc.): EE 570, IE 510, IE 519, IE 534

Electric Power and Energy Systems

Research Area: EE 553, EE 554, EE 653 (EE 590F from Spring 2008)

Skills: EE 547, EE 577, EE 578, CprE 558, CprE 588, ComS 561, Math 503, Math 525, Math 554, Math 557, IE 631, IE 632, Econ 500, Econ 502, Stat 447 Stat 451, Stat 500, Stat 537

Electromagnetic, Microwave, and Nondestructive Evaluation

Research Area: EE 512, EE 513, EE 514, EE 518, EE 558X

Skills: Math 426, Math 465, Math 471, Math 481, Math 502, Math 503, Math 510, Math 519, Math 520, Math 525, Stat 447, Stat 401

Microelectronics and Photonics

Research Area: EE 532, EE 535, EE 536, EE 538

Skills: Phys 480, Phys 481, Phys 511, MSE 510, MSE 552, Math 426, Math 481, Math 502, Stat 401, Stat 402

Secure and Reliable Computing

Research Area: CprE 530, CprE 531, CprE 532, CprE 536

Skills: CprE 528, CprE 582, Stat 401, Stat 402, Stat 430, Stat 551, Stat 554, ComS 511, ComS 531, ComS 540, IE 510, IE 519, IE 534, Math 547

Software Systems

Research Area: CprE 526, CprE 548, CprE 550, CprE 554, CprE 556, CprE 557, CprE 558

Skills: CprE 528X, CprE 582, EE 570, ComS 511, IE 510, IE 519, IE 534, Math 547

Systems and Controls

Research Area: EE 572, EE 575, EE 577, EE 578, EE 674

Skills: EE 523, EE 570, Math 414 or 515, Math 503, Math 525, Math 554, Math 557, IE 510 or Math 607, IE 534, IE 631, IE 632

VLSI

Research Area: CprE/EE 435, CprE/EE 465, CprE/EE 501, CprE/EE 505, CprE/EE 507, CprE 563, CprE 564, CprE 566

Skills: CprE 526, EE 570, ComS 511, IE 312*, IE 510, IE 534, Math 304*, Math 307*, Math 314*, Math 317*, Math 510, Math 547

*While 300-level coursework will fulfill this skills development Qualifying requirement, the credits may not be listed on the program of study.