# 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)  

## Electromagnetic, Microwave, and Nondestructive Evaluation
Research Area: EE 512, EE 513, EE 514, EE 518, EE 519, EE 558X  

## Microelectronics and Photonics
Research Area: EE 532, EE 535, EE 536, EE 538  

## Secure and Reliable Computing
Research Area: CprE 530, CprE 531, CprE 532, CprE 536  

## 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 564, CprE 566  

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