General Skills Courses for Ph.D. Qualifying Process

(Last revised: 05/2016)

(Note: Students must take two academic area and two general skills courses from one academic area.)

Bioengineering

Choose at least two, and they must be from different groups:

- *Group 1: (Statistics, Probability, Optimization, Algorithms) Stat 401, Stat 402, EE 523, EE 571, ComS 511*
- *Group 2: (Materials and Devices) EE 530, EE 532, EE 535, EE 536, EE 519*
- *Group 3: (EM) EE 512, EE 514, EE 517, EE 518*
- *Group 4: (Circuits and VLSI) EE 501, EE 505, EE 507, EE 509*

Communications and Signal Processing

EE 523, EE 571, CprE 547, Stat 543, Stat 642, MATH 510

Computing and Networking Systems

Choose at least two, and they must be 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 571, IE 510, IE 519, IE 534

Electric Power and Energy Systems

EE 577, EE 578, EE 519, CprE 539, ComS 561, Math 501, Math/ComS/CprE 525, Math 557, IE 534, IE 510, IE 631, IE 632, Econ 501, Econ 502, Stat/IE 533, Stat 542, Stat 543, WESEP 501, WESEP 502, WESEP 511

Electromagnetic, Microwave, and Nondestructive Evaluation

Math 481, Math 510, Math 511, Math 517, Math 519, Math 520, Math 525, Math 561, Math 562, Stat 401, Stat 402, Stat 447

Microelectronics and Photonics

Choose one from each group:

- *Group 1:* Phys 480, Phys 481, Phys 511, MSE 510, MSE 552
- *Group 2:* Math 426, Math 481, Stat 401, Stat 402

Secure and Reliable Computing

CprE 528, CprE 533, 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

CprE 528, CprE 582, EE 571, ComS 511, ComS 512, ComS 531, ComS 572, IE 510, IE 519, IE 534, Math 547

Systems and Controls

EE 523, EE 527, EE 571, Math 414 or 501 or 515, Math 554, Math 557

VLSI

Any 400/500 level courses in algorithms, machine learning, optimization, math, statistics, controls, signal processing, and security that are intended for majors and approved by the faculty advisor. ECpE courses must be at 500 level.