## **Concentration Areas of IE Graduate Courses**

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|---------|--|--------------|--------|-------|---------------------------|
| COURSE  | TITLE  | OR/PSL       | IMS    | IS    | Course offering           |
| IEE 505 | Information Systems Engineering (3)                  |              | X      |       |                           |
| IEE 506 | Web-Enabled Decision Support<br>Systems              |              | X      |       | Fall (P & OL)             |
| IEE 511 | Analysis of Decision Processes (3)                   | X            | X      | X     |                           |
| IEE 512 | Introduction to Financial Engineering (3)            | X            | X      |       | Fall (P & OL)             |
| IEE 520 | Statistical Learning for Data<br>Mining (3)          |              | X      | X     | Fall (P & OL)             |
| IEE 521 | Urban Operations Research                            | X            |        |       |                           |
| IEE 526 | Operations Research in<br>Healthcare                 | X            |        |       |                           |
| IEE 530 | Enterprise Modeling (3)                              |              | X      |       |                           |
| IEE 533 | Scheduling (3)                                       | X            |        |       |                           |
| IEE 534 | Supply Chain Modeling and Analysis (3)               | X            |        |       | Spring (P & OL)           |
| IEE 535 | Introduction to International Logistics Systems (3)  | X            |        |       | Fall (P, every two years) |
| IEE 541 | Engineering Administration (3)                       |              | X      |       | Spring (OL)               |
| IEE 545 | Advanced Simulating Stochastic Systems (3)           | X            |        |       | Fall (P & OL)             |
| IEE 552 | Strategic Technological Planning (3)                 |              | X      |       | Fall (P & OL)             |
| IEE 556 | Introduction to Systems Engineering                  |              | X      |       | Spring (P & OL)           |
| IEE 561 | Production Systems (3)                               | X            |        |       | Spring (P & OL)           |
| IEE 570 | Advanced Quality Control (3)                         |              | X      | X     | Fall (P & OL)             |
| IEE 571 | Quality Management (3)                               |              |        | X     | Fall (P & OL)             |
| IEE 572 | Design Engineering Experiments (3)                   |              |        | X     | Fall and Spring (P & OL)  |
| IEE 573 | Reliability Engineering (3)                          |              |        | X     | Spring (P) Summer (OL)    |
| IEE 574 | Applied Deterministic Operations research Models (3) | X            |        |       | Fall (P) Summer (OL)      |
| IEE 575 | Applied Stochastic Operations<br>Research Models (3) | X            |        |       | Spring (P & OL)           |
| IEE 576 | Network Optimization and Algorithms                  | X            |        |       |                           |
| IEE 577 | Data Science for Systems Decision Analytics          |              | X      | X     | Spring (P)                |
| IEE 578 | Regression Analysis (3)                              |              |        | X     | Summer (OL)               |
| IEE 579 | Time Series Analysis and Forecasting (3)             |              |        | X     |                           |

| IEE 581     | Six Sigma Methodology (3)                             |    |    | X  | Fall (P& OL)                |
|-------------|---|----|----|----|-----------------------------|
| IEE 502     |   | 37 | 37 | 37 | C ' (D 0 OI)                |
| IEE 582     | Response Surfaces and Process<br>Optimization (3)     | X  | X  | X  | Spring (P & OL)             |
| IEE 605     | Foundations of Information<br>Systems Engineering (3) |    | X  |    | Spring (P, every two years) |
| IEE 620     | Optimization I (3)                                    | X  |    |    | Fall (P)                    |
| IEE 622     | Optimization II (3)                                   | X  |    |    | Spring (P, every two years) |
| IEE 640     | Probability & Stochastic Model (3)                    | X  |    |    | Fall (P)                    |
| IEE 670     | Mathematical Statistics (3)                           |    |    | X  | Fall (P)                    |
| IEE 672     | Advanced Topics in Experimental Design (3)            |    |    | X  |                             |
| IEE 598     | Network Flows and Algorithms                          | X  |    |    | Spring (P every two years)  |
| IEE 598     | Computing for Data-Driven Optimization                | X  |    |    | Fall (P)                    |
| IEE 598     | Temporal Learning                                     |    | X  | X  | Spring (P & OL)             |
| IEE 598     | Bio-Inspired AI and<br>Optimization                   | X  |    |    |                             |
| BMI 501     | Intro to Biomedical Informatics                       |    |    | X  |                             |
| BMI 502     | Foundations of BMI Methods I                          |    |    | X  |                             |
| CSE 520     | Computer Architecture II (3)                          |    | X  |    |                             |
| CSE 534     | Advanced Computer Networks (3)                        |    | X  |    |                             |
| CSE 536     | Advanced Operating Systems (3)                        |    | X  |    |                             |
| CSE 550     | Combinatorial Algorithms and Intractability (3)       | X  | X  |    |                             |
| FSE 501     | Technology Entrepreneurship                           |    | X  |    |                             |
| FSE 502     | Strategic Enterprise Innovation                       |    | X  |    |                             |
| STP 526     | Theory of Statistical Linear Models (3)               |    |    | X  |                             |
| STP 532     | Applied Nonparametric Statistics (3)                  |    |    | X  |                             |
| STP 533     | Applied Multivariate Analysis (3)                     |    |    | X  |                             |
| STP 534     | Applied Discrete Data Analysis (3)                    |    |    | X  |                             |
| STP 540     | Computational Statistics                              |    |    | X  |                             |
| APM 523     | Numerical Optimization (3)                            | X  |    |    |                             |
| ECON<br>515 | Time Series Forecasting                               |    |    | X  |                             |

OR/PSL = Operations Research/Production Systems and Logistics IMS = Information Management and Systems IS = Industrial Statistics