

Operations Research (PhD)

Degree Requirements

| Code | Title | Hours |
|---|--|-----------|
| Required Courses | | 5 |
| Operations Research Seminar Course | | |
| OR 801 | Seminar in Operations Research (two semesters required) | |
| Foundational Mathematical Modeling Course ¹ | | |
| Select one of the following: | | |
| OR 505 | Linear Programming | |
| or MA 505 | Linear Programming | |
| or ISE 505 | Linear Programming | |
| OR 506 | Algorithmic Methods in Nonlinear Programming | |
| OR 709 | Dynamic Programming | |
| or ISE 709 | Dynamic Programming | |
| Core Courses ¹ | | 12 |
| Choose four of the following: | | |
| BUS 790 | Special Topics In Business Management ³ | |
| CE 537 | Computer Methods and Applications | |
| CSC 505 | Design and Analysis Of Algorithms | |
| CSC 762 | Stochastic Simulation | |
| E 531 | Dynamic Systems and Multivariable Control I | |
| ISE 501 | Introduction to Operations Research | |
| ISE 505 | Linear Programming | |
| ISE 537 | Statistical Models for Systems Analytics in Industrial Engineering | |
| ISE 560 | Stochastic Models in Industrial Engineering | |
| ISE 562 | Simulation Modeling | |
| ISE 708 | Integer Programming | |
| ISE 709 | Dynamic Programming | |
| ISE 723 | Production Planning, Scheduling and Inventory Control | |
| ISE 754 | Logistics Engineering | |
| ISE 760 | Applied Stochastic Models in Industrial Engineering | |
| ISE 761 | Queues and Stochastic Service Systems | |
| ISE 762 | Stochastic Simulation | |
| ISE 772 | Simulation Optimization | |
| MA 504 | Introduction to Mathematical Programming | |
| MA 505 | Linear Programming | |
| MA 531 | Dynamic Systems and Multivariable Control I | |
| MA/ST 546 | Probability and Stochastic Processes I | |
| MA 706 | Nonlinear Programming | |
| MA 708 | Integer Programming | |
| MA/ST 747 | Probability and Stochastic Processes II | |
| OR 501 | Introduction to Operations Research | |
| OR 504 | Introduction to Mathematical Programming ¹ | |
| or OR 505 | Linear Programming | |
| OR 506 | Algorithmic Methods in Nonlinear Programming ¹ | |

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|--------|---|
| OR 531 | Dynamic Systems and Multivariable Control I |
| OR 537 | Computer Methods and Applications |
| OR 560 | Stochastic Models in Industrial Engineering |
| OR 562 | Simulation Modeling |
| OR 706 | Nonlinear Programming |
| OR 708 | Integer Programming |
| OR 709 | Dynamic Programming ¹ |
| OR 760 | Applied Stochastic Models in Industrial Engineering |
| OR 761 | Queues and Stochastic Service Systems |
| OR 762 | Stochastic Simulation |
| OR 766 | Network Flows |
| OR 772 | Simulation Optimization |
| ST 516 | Experimental Statistics For Engineers II |
| ST 546 | Probability and Stochastic Processes I |
| ST 706 | Nonlinear Programming |
| ST 747 | Probability and Stochastic Processes II |
| TE 562 | Simulation Modeling |

Elective Courses ² 55

"Elective Courses" are determined in conjunction with the academic committee to meet the 72 total credit hours required for the degree. Elective courses should include 27 letter graded credit hours. Up to 6 credit hours of OR 810 can count towards elective credit.

Total Hours 72

¹ OR 505, OR 506, and OR 709 cannot be double counted. They can only count toward either Required Courses or the Core Courses requirement.

² "Elective Courses" cannot be double counted if already used to fulfill the Required Courses or Core Courses requirements.

³ Students can earn a maximum of 6 core credits in BUS 790

Professors

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Associate Professors

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Assistant Professors

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