## Operations Research (PhD)

### Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Required Courses 17</td>
</tr>
<tr>
<td></td>
<td><strong>Requirement A Course</strong></td>
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<tr>
<td>OR 801</td>
<td>Seminar in Operations Research</td>
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<tr>
<td></td>
<td><strong>Requirement B Course</strong></td>
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<tr>
<td>OR 505</td>
<td>Linear Programming</td>
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<tr>
<td>OR 506</td>
<td>Algorithmic Methods in Nonlinear Programming</td>
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<tr>
<td>OR 709</td>
<td>Dynamic Programming</td>
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<td></td>
<td><strong>Requirement C Courses</strong></td>
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<tr>
<td>OR 501</td>
<td>Introduction to Operations Research</td>
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<td>OR 504</td>
<td>Introduction to Mathematical Programming 1</td>
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<tr>
<td>or OR 505</td>
<td>Linear Programming</td>
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<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
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<td>OR 506</td>
<td>Algorithmic Methods in Nonlinear Programming 1</td>
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<tr>
<td>ST 516</td>
<td>Experimental Statistics For Engineers II</td>
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<tr>
<td>OR 531</td>
<td>Dynamic Systems and Multivariable Control I</td>
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<tr>
<td>OR 537</td>
<td>Computer Methods and Applications</td>
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<tr>
<td>MA/ST 546</td>
<td>Probability and Stochastic Processes I</td>
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<tr>
<td>OR 560</td>
<td>Stochastic Models in Industrial Engineering</td>
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<td>OR 562</td>
<td>Simulation Modeling</td>
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<tr>
<td>OR 706</td>
<td>Nonlinear Programming</td>
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<td>OR 708</td>
<td>Integer Programming</td>
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<td>OR 709</td>
<td>Dynamic Programming 1</td>
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<tr>
<td>MA/ST 747</td>
<td>Probability and Stochastic Processes II</td>
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<tr>
<td>OR 760</td>
<td>Applied Stochastic Models in Industrial Engineering</td>
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<tr>
<td>OR 761</td>
<td>Queues and Stochastic Service Systems</td>
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<tr>
<td>OR 762</td>
<td>Computer Simulation Techniques</td>
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<tr>
<td>OR 772</td>
<td>Stochastic Simulation Design and Analysis</td>
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### Elective Courses

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>MA/ST 747</td>
<td>Probability and Stochastic Processes II</td>
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<tr>
<td>OR 760</td>
<td>Applied Stochastic Models in Industrial Engineering</td>
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<tr>
<td>OR 772</td>
<td>Stochastic Simulation Design and Analysis</td>
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</tbody>
</table>

“Elective Courses” are determined in conjunction with the academic committee to meet the 72 total credit hours.

### Total Hours

- Required Courses: 23-72
- Elective Courses: 6-55

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1. OR 505, OR 506, and OR 709 cannot be double counted toward "Requirement C" courses if already used toward "Requirement B" courses.
2. *Elective Courses” cannot be double counted if already used to fulfill requirements "A-C" courses.

John W. Baugh
Rada Yuryevna Chirkova
Huaiyu Dai
Do Young Eun
Shu-Cherng Fang
Yahya Fathi
Subhashis Ghoshal
Robert B. Handfield
Robert E. Hartwig
Christopher Graham Healey
Hans Sebastian Heese
Ilse Ipsen
Kazufumi Ito
Julie S. Ivy
Jeffrey A. Joines
Carl Timothy Kelley
Russell E. King
Zhilin Li
George F. List
Min Liu
Ning Lu
Louis A. Martin-Vega
Maria A. Mayorga
Negash G. Medhin
Rainer Mueller
Arne Nilsson
Tao Pang
Harry G. Perros
Ranji S. Ranjithan
Michael A. Rappa
Joseph P. Roise
George N. Rouskas
Nagiza F. Samatova
Carla D. Savage
Munindar P. Singh
Ralph C. Smith
Matthias F.M. Stallmann
Binil Starly
Julie LeAnne Swann
Hien T. Tran
Yannis Viniotis
Miaden Alan Vouk
Wenye Wang
Fen Wu
Zhaobang Zeng
Dmitry V. Zhenkov
Jacob James Adams
Kristin Anne Barletta
Joseph F. DeCarolis
Umut Dur
Arnav Harish Jhala
Min Jeong Kang
Michael G. Kay
Eda Kemahlioglu-Ziya
Yunan Liu
Osman Yalin Ozaltin
William Michael Rand
Thomas W. Reiland
Charles Eugene Smith
Hong Wan
Donald P. Warsing
Leila Hajibabai Dizaji
Xiaolei Fang
Jordan Kern
Timothy Charles Kraft
Andrew Papanicolaou
David Papp
Sara Shashaani
Mengmeng Zhu
Billy L. Edge
Daniela Sofia Jones
Semra Senem Ahiska King
David Lee Lubkeman
Brandon Mark McConnell
Javad Taheri
Peter Bloomfield
Stephen L. Campbell
Thom Hodgson
Brian Denton
Mihail Devetsikiotis
Patricia L. Hersh
Simon M. Hsiang
Anderson Rodrigo de Queiroz
Ting Yu
Associate Professors
Adolfo Raphael Escobedo
Zhishan Guo

Assistant Professor
Zhuoting Yu