## 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>Required Courses</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td><strong>Requirement A Course</strong></td>
<td></td>
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<tr>
<td>OR 801</td>
<td>Seminar in Operations Research</td>
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<tr>
<td><strong>Requirement B Course</strong></td>
<td>Select one of the following:</td>
<td></td>
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<tr>
<td>OR 505</td>
<td>Linear Programming</td>
<td></td>
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<tr>
<td>OR 506</td>
<td>Algorithmic Methods in Nonlinear Programming</td>
<td></td>
<td></td>
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<tr>
<td>OR 709</td>
<td>Dynamic Programming</td>
<td></td>
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<tr>
<td><strong>Requirement C Courses</strong></td>
<td>Select four of the following:</td>
<td></td>
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<tr>
<td>OR 501</td>
<td>Introduction to Operations Research</td>
<td></td>
<td></td>
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<tr>
<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>
<td></td>
<td></td>
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<tr>
<td>CSC 505</td>
<td>Design and Analysis Of Algorithms</td>
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<tr>
<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>
<td></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>
<td></td>
<td></td>
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<tr>
<td>OR 560</td>
<td>Stochastic Models in Industrial Engineering</td>
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</tbody>
</table>

**OR 505, OR 506, and OR 709 cannot be double counted toward “Requirement C” courses if already used toward “Requirement B” courses.**

**“Elective Courses” cannot be double counted if already used to fulfill requirements "A-C" courses.**

### Elective Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR 562</td>
<td>Simulation Modeling</td>
</tr>
<tr>
<td>OR 706</td>
<td>Nonlinear Programming</td>
</tr>
<tr>
<td>OR 708</td>
<td>Integer Programming</td>
</tr>
<tr>
<td>OR 709</td>
<td>Dynamic Programming ¹</td>
</tr>
<tr>
<td>MA/ST 747</td>
<td>Probability and Stochastic Processes II</td>
</tr>
<tr>
<td>OR 760</td>
<td>Applied Stochastic Models in Industrial Engineering</td>
</tr>
<tr>
<td>OR 761</td>
<td>Queues and Stochastic Service Systems</td>
</tr>
<tr>
<td>OR 762</td>
<td>Computer Simulation Techniques</td>
</tr>
<tr>
<td>OR 772</td>
<td>Stochastic Simulation Design and Analysis</td>
</tr>
</tbody>
</table>

**Total Hours**

| 23-72 |

1. **Full Professors**

- John W. Baugh
- Rada Yuryevna Chirkova
- 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
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
Mladen Alan Vouk
Wenyue Wang
Fen Wu
Zhaobang Zeng
Dmitry V. Zenkov

Kristin Anne Barletta
Joseph F. DeCarolis
Umut Dur
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

Assistant Professors
Leila Hajibabai Dizaji
Xiaolei Fang
Jordan Kern
Timothy Charles Kraft
Andrew Papanicolaou
David Papp
Sara Shashaani
Mengmeng Zhu

Practice/Research/Teaching Professors
Billy L. Edge
Daniela Sofia Jones
David Lee Lubkeman
Brandon Mark McConnell
Javad Taheri

Emeritus Faculty
Peter Bloomfield
Stephen L. Campbell
Thom Hodgson
Adjunct Faculty

Brian Denton
Mihail Devetsikiotis
Patricia L. Hersh
Simon M. Hsiang
Anderson Rodrigo de Queiroz
Ting Yu