I. Faculty Contact Information
Professor: Nitin Bakshi
Office: SFEBB 8103
Phone: 801-581-6506
E-mail: nitin.bakshi@eccles.utah.edu

Teaching Assistants:
Bayley Seymour: bayleyseymour@gmail.com
Carly Ho: carly.ho@utah.edu

Faculty Office Hours:
By appointment, SFEBB 8103

TA Office Hours:
Bayley Seymour: Wednesdays, 3:30 PM – 5:00 PM, and by appointment
Carly Ho: Tuesdays, 4:00 PM – 5:30 PM, and by appointment

II. Faculty Bio

Nitin Bakshi
Associate Professor of Operations and Information Systems, David Eccles School of Business, University of Utah

Dr Nitin Bakshi focuses his research on the management of disruption risk in operations and supply-chain management, with an emphasis on “low-probability high-consequence” events. Topics he has studied include how to design and manage resilient supply chain networks; operational and communication policies in the face of terrorism risk; structuring incentives for after-sales service of new aircraft engines that incur rare but costly failures. He is currently investigating how to manage reporting of accident precursors to enhance safety in dangerous operations.

His work has been published in top academic journals such as Management Science, Operations Research and Production and Operations Management.

He holds a B. Tech. in Electrical Engineering from IIT Bombay; an M.S. in Management Science from Stanford University; and a Ph.D. in Applied Economics from the Wharton School, University of Pennsylvania.

Dr Bakshi has previously worked as a manager for Hindustan Unilever Ltd. and as an Algorithm Design Engineer for SmartOps Inc. Before joining the University of Utah he served on the faculty at the London Business School.
III. Course Overview
Matching supply with demand is an enormous challenge for firms: excess supply is too costly, inadequate supply irritates customers. In this course we will explore how firms can better organize their operations so that they can align their supply with the demand for their products (and services) more effectively. The course details different kinds of business processes, the impact of variability on business processes and explains how to measure key process parameters like capacity and lead time. The course also focuses on process improvement and examines classical ideas in quality management.

Throughout this course we illustrate how mathematical analysis can be applied to real operational challenges – the crux being to balance rigor and relevance. The aim is to provide both tactical knowledge and high-level insights needed by managers and management consultants. We will demonstrate that companies can use (and have used) the principles from this course to significantly enhance their competitiveness.

IV. Course Materials:
Custom textbook for OIS 3660. ISBN 9781121730618. Available at the university bookstore. (This custom textbook is a collection of selected chapters of Cachon and Terwiesch. Matching Supply with Demand: An Introduction to Operations Management, 3rd Edition, McGraw-Hill Irwin 2012. ISBN-13: 978-0073525204. If you plan to take OIS 5620 Global Supply Chain Management in the future, it may be worth buying the original textbook, but it is totally up to you. The custom textbook is sufficient for this course.)

V. Grading
Each student's final numerical score is based on the following items and weights:
Quiz (20%);
Final exam (35%);
Class Participation (15%);
Homework 1 (12.5%); Homework 2 (12.5%);
Bonus (5%).

Quiz (20%)
The quiz will be held in class towards the middle of the course (9th February). The quiz is closed book and closed notes. No laptops are allowed. However, you can use a calculator. Also, you are allowed to bring one 8.5x11 double-sided sheet of your own hand-written notes as a study guide, which I call a “cheat sheet”.

Final exam (35%)
- The final exam is *closed* books and notes. Moreover, no laptops are allowed. You are allowed one double-sided 8.5x11 “cheat sheet” with your own hand-written notes.
- The final exam is based on the contents of the entire course
- The final exam will be held in-class as per the class schedule (last class session).

You must take the quiz and the exam in your registered section. Note that taking the exam in a different section from your registered section will be treated as an attempt to cheat. If you expect to have a time conflict for the quiz or the exam, you must speak to the instructor at least a week in advance to set up a make-up exam. The option to write a make-up exam will be made available only under exceptional circumstances.

**Class participation (15%)**

Please be prepared to contribute to class discussions. In an effort to encourage class contribution, I may also call on you and solicit contributions. You may be called upon to present how you would approach a decision, as well as to share your detailed analysis with the class. If you are by nature a quiet person, please talk to me and I will help bring you into the class discussions. Effective participation consists of not only responding to questions raised by the instructor – but also asking thoughtful questions and responding to contributions from your fellow students. *I will judge the value of your class contribution by the extent to which your comments enhance the learning experience of your classmates.*

Class participation includes punctuality in attendance. It is expected that you arrive, be seated, and be ready for class on time, and to stay in class for the entire session. I also ask that you use a name card to facilitate interaction.

**Homework (12.5% each)**

There will be two homework sets. The problems will be posted and graded on Canvas, and you will have two weeks to work on them. *You can work on the homework in groups of no more than two students.* Homework 1 is due on 30th January and Homework 2 is due on 6th March. The solutions will be posted right after the due date. No late submissions will be accepted.

**Bonus (5%)**

A bonus of 5% is added either to the weight on the quiz or to the final exam, depending on which has a higher score. For example, if a student’s final exam score is higher than her score on the quiz, then the 5% bonus is assigned to the final exam, i.e., the final exam then counts for 40% of the final grade (instead of 35%). Conversely, if the student has a higher score on the quiz, then the weight on the quiz is bumped up to 25% from 20%.

**VI. Updates:** The instructor reserves the right to update or modify this syllabus during the course.
University of Utah, David Eccles School of Business
OIS 3661-001  Operations Management

VII. Honor Code: All students must abide by the Honor System.

You may NOT reference solution sets or notes from students who took this course (or an equivalent course) in a previous semester.

No discussion, sharing of materials or consultation of any form is allowed between students on in-class exams. The professor will specify what materials, if any, may be accessed during an exam. Exams must be turned in promptly at the end of the designated time. Homework assignments can be done in pairs, however, no discussion/collaboration beyond your team is permitted.

This syllabus cannot identify all possible situations which represent honor code violations, and is not meant to be comprehensive in that regard. Students are expected to abide by the intent and letter of the honor code, and are requested to report any honor code violations that are observed. The professor will use turnitin.com as warranted.

### Class Sessions

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<thead>
<tr>
<th>Session #</th>
<th>Date</th>
<th>Homework</th>
<th>Topic and Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>1/09</td>
<td></td>
<td>Introduction and Little’s Law Textbook: Chapter 2</td>
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<tr>
<td>2</td>
<td>1/11</td>
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<tr>
<td>3</td>
<td>1/16</td>
<td>HW1 Posted</td>
<td>Process Capacity and Bottleneck Analysis Textbook: Chapter 3</td>
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<td>4</td>
<td>1/18</td>
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<td>5</td>
<td>1/23</td>
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<td>Increasing capacity by line balancing Textbook: Chapter 4</td>
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<td>6</td>
<td>1/25</td>
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<tr>
<td>7</td>
<td>1/30</td>
<td>HW1 Due</td>
<td>Impact of Setups/Batching/EOQ Textbook: Chapter 7</td>
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<td>8</td>
<td>2/1</td>
<td></td>
<td>Review Session</td>
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<td>9</td>
<td>2/6</td>
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<td>10</td>
<td>2/8</td>
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<td>11</td>
<td>2/13</td>
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<td>Managing Variability: Queuing Textbook: Chapter 8</td>
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<tr>
<td>12</td>
<td>2/15</td>
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<td>13</td>
<td>2/20</td>
<td>HW2 Posted</td>
<td>Managing Variability: Queuing Textbook: Chapter 9</td>
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<td>14</td>
<td>2/22</td>
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<tr>
<td>15</td>
<td>2/27</td>
<td></td>
<td>Managing Quality    Textbook: Chapter 10</td>
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<tr>
<td>16</td>
<td>3/1</td>
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<tr>
<td>17</td>
<td>3/6</td>
<td>HW2 Due</td>
<td>OM Careers and Business Model Innovation</td>
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<td>18</td>
<td>3/8</td>
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IMPORTANT COURSE INFORMATION

Americans with Disabilities Act: The University of Utah David Eccles School of Business seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, http://disability.utah.edu/, 160 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Student Responsibility: It is the student’s responsibility to contact instructors and submit necessary forms. If you have a problem with a course, please deal with it immediately.

Accommodation Policy: The University's Accommodation Policy allows students to request a modification of class requirements if those requirements conflict with the students' sincerely held core beliefs. The burden is on the student to request the modification, and the instructor has full decision making power to deny or grant the request. Course content has been outlined in the syllabus, such that students have sufficient information from the beginning of the semester to decide whether or not the course contains any material that goes against their strongly held values. Please review the syllabus carefully to see if the course is one that you are committed to taking.

David Eccles School of Business
Statement of Professional and Ethical Conduct

Because of the importance of professional and ethical behavior in business, and its emphasis in our program, professional or academic misconduct is not tolerated in the David Eccles School of Business. Students are expected to adhere to the standards of behavior outlined in the University of Utah Code of Student Rights and Responsibilities (Policy 6-400). Students engaging in behavioral misconduct could be subject to suspension or dismissal from the University. Students involved in any form of academic misconduct, including but not limited to cheating on tests, plagiarism and collusion may, at the instructor's discretion, receive a failing grade in the course, examination, or academic assignment. In addition to or instead of this sanction, the instructor may refer the case to the Student Behavior Committee for hearing. If the instructor chooses not to do so, the Associate Dean for Academic Affairs, after appropriate investigation, may do so along with a recommendation to dismiss the student from the Business School. If, after hearing the evidence, the Committee determines that the student in question is guilty of the misconduct charged, the Committee may impose sanctions in addition to those taken by the professor.
If the academic dishonesty is not proven, the instructor must rescind any sanctions imposed and will be required to evaluate the student's performance with the assumption that there has been no misconduct. The School will treat the student likewise. If a student suspects another student of academic misconduct, he/she should refer the incident to the instructor, the appropriate department, the Associate Dean for Academic Affairs, or the Student Behavior Committee, administered by the Associate Dean of Students, 270 Union.

David Eccles School of Business
Statement of Grading Policy

Grading provides feedback to students on how well they have mastered the content and learning objectives of a particular course to allow students to capitalize on strengths and work to improve weaknesses through future courses of action. The DESB grading policy is intended to ensure grades offer reliable feedback regarding student performance, and to ensure fairness and consistency across the School. The faculty member is responsible for arriving at a grade for each student that the faculty member believes appropriately reflects the student's mastery of the course material and learning objectives. The faculty member will then consider the class' overall performance in terms of School guidelines. These guidelines are provided to ensure that grading, on average for the School as a whole, is sustained at a reasonable level over time. The guidelines are as follows:

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<tr>
<th>COURSE LEVEL</th>
<th>GUIDELINE</th>
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<tbody>
<tr>
<td>1000-2000</td>
<td>2.4-2.8</td>
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<tr>
<td>3000-3990</td>
<td>2.6-3.0</td>
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<tr>
<td>4000-5990</td>
<td>2.8-3.2</td>
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<tr>
<td>6000-6990</td>
<td>3.1-3.5</td>
</tr>
</tbody>
</table>

If students have a concern about their grade in a particular course, they should consider whether it reflects an accurate evaluation of their mastery of the course material and learning objectives, in terms of the above descriptors. If they need clarification of the instructor's evaluation, they should meet with the instructor to obtain additional information and feedback. If after doing so, they believe their grade was arrived at in an inappropriate manner, they may pursue an appeal through the School's appeals process as described in Section 5.15 of the University of Utah Code of Student Rights and Responsibilities (Policy 6-400).