Department of Accounting, Operations, and Information Systems
University of Alberta School of Business

OM 701, Section A1: Introduction to Operations Management Research
Fall 2015, Course Outline

Offical Time: Tuesdays and Thursdays, 9-10:20.

Official Classroom: Business 4-5.

(The meeting times and places may vary from week to week.)

Instructor: Armann Ingolfsson (Armann.ingolfsson@ualberta.ca, BUS 4-30K, 780-492-7092)

Course description: This course provides a general introduction to the major research fields of operations management (OM). The focus will be on reading and evaluating current papers from prominent OM journals. The theory of science and the review process will be briefly discussed. Students are expected to have as mathematical background the equivalent of an upper-level undergraduate or first-year graduate courses in optimization and probability or stochastic modeling. This course may be appropriate for some graduate students in engineering or computing science. Prerequisite: A graduate or undergraduate course in operations management. Open to all doctoral students or with the written permission of the instructor. Approval of the Business PhD Program Director is also required for non-PhD students.

Structure: This course is a seminar to prepare doctoral students for pursuing academic research in the field of OM. A seminar relies on the active participation of everyone involved (students and instructors). There will be very few, if any, lectures in this course.

Content and Evaluation:

1. Read and discuss about 20 important OM papers
    a. Every student should read and be prepared to discuss every assigned paper. In addition, one student will be asked to present a summary of each assigned paper. The summary can be in the form of slides or a written report and it should focus on the research questions that are addressed in the paper, the paper's contributions, the methodology used, and any other noteworthy aspects of the paper.
    b. Weight: 20%, for presentation and discussion
2. Read and discuss the theory of science
    a. We will spend one or two weeks reading about and discussing the theory of science and how it is relevant to the research fields within operations management.
    b. Weight: 10%, for discussion.
3. Publishing OM research

a. In this module, students will be asked to write one referee report, to learn about the history of one published paper, and to read and discuss editorials and position statements from top OM journals.

b. Weight: 15%, for referee report and for discussion.

4. Attend at least five seminars in OM and possibly other fields

    a. The student should read the paper to be presented (if available) before the seminar, attend the seminar and attempt to participate in the discussion, and submit a one-page report that summarizes the research questions, contributions, and methodology of the paper—similar to Item 1. In addition, the student should identify at least one related research question that has yet to be addressed. Students are expected to attend all OM seminars. If necessary, students should select other seminars to attend, in order to be able to attend at least five seminars during the term.

    b. Weight: 15%, for one-page reports.

5. Prepare an inventory of recent papers in a particular area.

    a. The students will survey top OM journals for the last one to five years and list papers that fall under a particular area, for example, health care OM or analytics and OM. The students will summarize the research questions, contributions, and methodological approach for the papers. The inventory should include at least 10 papers per student.

    b. Weight: 10%

6. Final exam

    a. The final exam will be in December and it will cover all of the items above.

    b. Weight: 30%.

Schedule for Weeks 1 and 2

Week 1: First meeting Sep. 1, 9:30 am in BUS 4-5. Second meeting is cancelled.

Week 2: Assignment for Sep. 8 and 10: Read and be prepared to discuss Papers 1-3. Present one of the papers (students will be assigned to papers to present in Week 1). Write a short report (2-4 paragraphs) for Papers 4-5, that summarizes what you learned (did not know before) or found particularly interesting.

1. Holt, CC, F Modigliani, HA Simon. 1955. Linear Decision Rule for Production and Employment Scheduling. *Management Science* **2**(1) 1.
2. Clark, AJ, H Scarf. 1960. Optimal Policies for a Multi-echelon Inventory Problem. *Management Science* **6**(4) 475.
3. Wagner, HM, TM Whitin. 1958. Dynamic Version of the Economic Lot Size Model. *Management Science* **5**(1) 89-96.
4. Cachon, G. 2012. What is interesting, in operations management? *Manufacturing & Service Operations Management*. **14**(2). 166-169.

5. Ho, T. H. (2015). From the Editor—A Vision for Increasing Our Impact. *Management Science* **61**(1), 1-2.

Send information about at least three papers that you suggest we read during the term.

Please refer to the course uLearn site (log on at https://ulearn.ualberta.ca/) each week for information about readings and meeting times.