Rotman School of Management
UNIVERSITY OF TORONTO

Rotman

Course Outline

MGT 1292.HS
Integrative Thinking Practicum: Putting Your Inner Modeler to Work
Q4 2010

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Course Goals

1. Learn several new modeling tools
2. Develop skill in the practical use of these tools
3. Foster the ability to integrate and apply disciplinary content to real world problems

Course Scope and Mission

Rotman is recognized as a leading center in Integrative Thinking education. A tangible selling point of this education, from the perspective of recruiters, is that our MBAs graduate with a superior ability to use models to solve real-world problems. This course is designed to nurture and extend students' real-world modeling abilities. We introduce a number of new modeling tools, consider the purposes for which they excel, and develop students' abilities to use them through a series of in-class, individual homework and larger, team-based assignments. The good news about modeling is that it is a skill that improves with effort and practice.

Required Readings

North and Macal (2007), *Managing Business Complexity: Discovering Strategic Solutions with Agent-based Modeling and Simulation.*
There is no reading package other than the Lecture Notes, which will be posted on the course web page.

Instructor Division of Labor

Although Ryall and Bramson are coordinating all aspects of the course together, there will be specialization in how the course is delivered. Ryall will be primarily focused on lectures, in-class exercises and assigning participation grades. Bramson will design all simulation labs, will grade all assignments other than class participation and is, ultimately, responsible for your overall assessment. A TA will be assigned to each section.

Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

		Due Date
Class Participation	20%	Ongoing
Individual Homework	40%	*See following schedule*
Team Projects	40%	*See following schedule*

All assignments will be found in the Lecture notes and on the course web site.

Missed Assignments/Classes

Students may miss an assignment or class due to illness, domestic affliction, or in the case of Three-Year students, work commitments, without academic penalty providing the appropriate documentation is received and approved in a timely manner.

In such cases students must notify the MBA Program Services Office on the date of the missed assignment or class and a medical certificate, employer's letter or other supporting evidence must be submitted to the Director, MBA Program Services within 48 hours of the due date of the assignment or the class date.

Students with excused absences from class, as determined by the MBA Program Services Office, will not be penalized for such absences on the participation component of their grade. For missed homework and team project due dates, a resolution will be determined by the instructor and may take the form of a make-up assignment or a revised grade calculation. The decision as to how to handle the missed assignment is at the instructor's discretion. Students who do not notify the School of a missed assignment or class attendance will be given a grade of FZ (failing grade) for the assignment or class participation for that date, respectively.

Course Work & Academic Honesty

Submission of Assignments – Students are required to use the MBA Assignment Cover Sheet Template (see the Portal) for all submitted work which will be reviewed by the Professor. In the case of group assignments, all group members must sign the Assignment Cover Sheet. Late submissions will not be considered outside of the exceptions noted in the preceding section. All assignments should be submitted electronically prior to the start of class on the date due.

Academic Honesty - The University's Code of Behaviour on Academic Matters ("Code") applies to all Rotman students. The Code prohibits all forms of academic dishonesty including, but not limited to, cheating, plagiarism, and the use of unauthorized aids. Students violating the Code may be subject to penalties up to and including suspension or expulsion from the University. A copy of the Code may be found at: http://www.utoronto.ca/govcncl/pap/policies/behaveac.html

The Rotman Code of Integrity
Students are expected to conduct themselves with the utmost integrity during their time at Rotman and, without limiting the foregoing, will:

- Submit only original work, giving credit to others where appropriate;
- Neither give nor receive unauthorized aid in examinations or on assignments;
- Contribute substantially and proportionally to each group assignment;
- Ensure enough familiarity with the entire contents of group assignments so as to be able to sign off on them as original work;
- Accept and acknowledge that assignments found to be plagiarized in any way will be subject to sanctions under the University's Code of Behaviour on Academic Matters;
- Represent themselves honestly to members of the Rotman community and to outsiders; and
- Represent Rotman appropriately to the outside world.

Team Behaviours & Protocols
All students are expected to treat teamwork as they would in a business setting, ensuring professional behaviour at all times. Professional behaviour in group settings includes (but is not limited to) the following:

- Ensuring all team members voice their opinions, thoughts, and concerns;
- Taking personal responsibility to voice thoughts to benefit the team's learning;
- Contributing to the learning of the team by giving equal time and work quality as others in the group;
- Committing to a standard of work agreed upon by the group;
- Participating in team projects at a level agreed upon by the entire team.

Weekly Schedule (note: class dates by section)

Wk.Sessn	1292-03/04	1292-01/02	Topic	Due*
1.1	3/15	3/16	Introduction: Qualitative Causal Models	
1.2	3/18	3/19	Quantitative Causal Models	HW-1
2.1	3/22	3/23	Introduction to agent-based models and the Netlogo Simulation Tool	Team-1 & Install Netlogo**
2.2	3/25	3/26	Emergence, Management Performance ABMs	HW-2
3.1	3/29	3/30	Self-Organized Criticality & Social Networks	Team-2
3.2	4/1	4/2	Herding Behavior & Stock Market Bubbles	
4.1	4/5	4/6	Swarm Optimization	Team-3
4.2	4/8	4/9	Calibration	
5.1	4/15	4/16	The Wisdom of Groups	HW-3
6.1	4/19	4/20	Endogeneity	
6.2	4/22	4/23	Prediction	HW-4
Last Assgn	5/3	5/3		Team-4

* All assignments are worth 10% of your final score. The totals are: Individual HW (40%); Team Projects (40%); Class participation (20%). Specific assignments can be found in the Lecture Notes.
** To Install Netlogo visit http://ccl.northwestern.edu/netlogo/download.shtml and download Version 4.1 by following instructions appropriate for your computer.