



**University of Manitoba  
Faculty of Arts  
Department of Economics**

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**COURSE DETAILS**

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<b>Course Title &amp; Number:</b>	ECON 4010 A01 - Advanced Microeconomic Theory 2019W
<b>Number of Credit Hours:</b>	3.0
<b>Class Times &amp; Days of Week:</b>	1 pm - 2:15 pm, TR
<b>Location for classes:</b>	ST. PAUL'S COLLEGE Room: 258
<b>Pre-Requisites:</b>	A grade of "B" or better in ECON 3010 or ECON 2461 or the former ECON 2460 (018.246) or the former ECON 3700 (018.370)

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**Instructor Contact Information**

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<b>Instructor Name:</b>	Pinaki Bose
<b>Office Location:</b>	509 Fletcher Argue
<b>Office Hours:</b>	Wednesdays, 1:00 – 2:30 p.m., 509 FA, or by appointment.
<b>Office Phone No.</b>	204-474-9364
<b>Email:</b>	<b><i>Pinaki.Bose@umanitoba.ca</i></b> I usually respond to e-mails within 48 working hours.
<b>Contact:</b>	You are welcome to see me in person during my office hours. Outside class and office hours, the best way is to contact me is by e-mail or by calling my office phone. If necessary, you may also contact the Economics Department office, in person, or by phone (204-474-9207), to leave a message for me.

## Course Description

An intensive study of advanced microeconomic analysis using optimization techniques involving multivariate calculus. Topics include selections from consumer theory, producer theory, general equilibrium, intertemporal choice, risk and insurance markets, and asymmetric information (moral hazard and adverse selection).

**It is very important that the student be proficient in the use of multivariate calculus and the basic optimizing techniques in economics (the required Honours classes ECON 2030 & 3030 provide such proficiency). This is an honours-level rigorous course in Microeconomic Theory with a predominantly analytical and mathematical content.**

## General Course Information

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In the outline below, "Text" is the **required textbook**: Walter Nicholson and Christopher Snyder: MICROECONOMIC THEORY, BASIC PRINCIPLES AND EXTENSIONS, 11<sup>th</sup> (or 12<sup>th</sup>) edition, South-Western Cengage Learning.

### COURSE OUTLINE:

1. Brief review of Mathematical Applications and Techniques

Optimization, Chain Rule, comparative statics, and (if time permits) application of Matrices and Determinants to first and second order conditions.

Text: ch 2; my handout on comparative statics.

2. Consumer Behaviour and Choice

Brief review of utility functions and indifference curves, utility maximization, indirect utility, expenditure function.

Text: ch 3, 4

3. Consumer Demand

Derivation of demand functions, comparative statics.

Text: ch 5, 6

4. Selective coverage (if time permits): Production, Cost, Profit maximization, Competitive markets and supply functions Isoquants and cost minimization, cost

functions, elasticity of substitution, profit maximization, short and long run competitive equilibrium, comparative statics

Text: ch 9, 10, 11 and 12

5. General Equilibrium (if time permits)

Text: ch 13 and handout – we will focus on solving general equilibrium models

**Mid-Term I: in-class, 40% of grade**

6. Monopoly

Brief review of simple monopoly; price discrimination covered only if time permits.

Text: ch 14

7. Game Theory

Static Games, , Oligopoly, Mixed Strategy (if time permits)

Text: ch 8 and 15; my handout on game theory

**Mid-term II: in-class, 40% of grade**

8. Mixed Strategy

9. (if time permits) Sequential Games and Asymmetric Information

Text: ch 15 and 18

**Test/quiz: in-class, 20% of grade**

**WHAT TO EXPECT**

Tests are non-cumulative – each covers only the material taught after the previous test. I will not test you on topics not related to (or not covered by) the class lectures, problem sets and class exercises.

My lectures are very important. **I do not post lecture notes for everything taught in class.** If you have missed a class, you are responsible for acquiring comprehensive and accurate class notes from someone. It is very important that you study (and understand) not only my lectures, but also the coverage of the relevant, and similar, material in the text and my handouts. The other important items are my problem sets, and the exercises I often introduce and solve in class. You are not required to submit the answers to the problem sets; these are not assignments that count towards your grade. But it is very important that you do your best to think through and find solutions to the exercises as you will face similar (but not exactly the same) problems in the tests. Only by attempting to solve these problems *on your own* will you develop the understanding and expertise in solving the exercises that you will encounter in my tests. The same applies to exercises that I introduce in class.

Thus, a clear understanding of the material taught, and the capability to apply this understanding in solving microeconomic problems, is the learning that this course intends to impart. The slides provide only broad guidance, and are not supposed to be comprehensive.

I do not distribute my slides ahead of time, and discourage excessive reliance on them as a learning tool.

I reserve my right of selective coverage of the material in each topic. I also reserve the right to reschedule, or carry over, all or part of a topic to the next test for the sake of better time management of its coverage. I may not be able to cover all topics due to lack of time. **Any such changes in scheduling of topics /readings will be announced in class.**

There is no final examination for this course.

## Course Goals

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This course aims to give the student a mature understanding of the material, and a “near-graduate” capability in using microeconomic theory and its mathematical tools to analyze economic phenomena. Consequently, the course will emphasize the development of the problem solving and “modeling” abilities of students using the concepts taught in class. The problem sets and class exercises are especially important in this respect.

This course is also useful for those intending to pursue further studies and research in economics.

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## Using Copyrighted Material

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Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the *Copyright Act* applies or written permission has been confirmed. For more information, see the University's Copyright Office website at

<http://umanitoba.ca/copyright/> or contact [um\\_copyright@umanitoba.ca](mailto:um_copyright@umanitoba.ca).

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## Recording Class Lectures

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The instructor, Dr. Pinaki Bose and the University of Manitoba hold copyright over the course materials, presentations and lectures which form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part, without written permission from Dr. Pinaki Bose. Course materials (both paper and digital) are for the participant's private study and research.

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## Textbook, Readings, Materials

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*Be aware of copyright laws when using readings.*

### Required textbook

Walter Nicholson and Christopher Snyder: MICROECONOMIC THEORY, BASIC PRINCIPLES AND EXTENSIONS, 11<sup>th</sup> (or 12<sup>th</sup>) edition, South-Western Cengage Learning. Copies available at the University Bookstore.

Supplementary/optional readings:

- (i) **Microeconomic Analysis** by Hal R. Varian (3<sup>rd</sup> ed.; Norton).
- (ii) **Microeconomics** by Hugh Gravelle and Ray Rees (3<sup>rd</sup> ed.; Prentice Hall)

These will be occasionally referred to. These supplementary texts are also in the library.

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## Course Technology

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It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. The student can use technology in classroom

setting only for educational purposes approved by instructor and/or the University of Manitoba Disability Services. Student should not participate in personal direct electronic messaging/posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline “gaming” during scheduled class time. If student is on call (emergency) the student should switch his/her cell phone on vibrate mode and leave the classroom before using it. Otherwise, cell phones should be switched off.

## Class Communication

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The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit:

[http://umanitoba.ca/admin/governance/media/Electronic Communication with Students Policy - 2014 06 05.pdf](http://umanitoba.ca/admin/governance/media/Electronic_Communication_with_Students_Policy_-_2014_06_05.pdf)

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy

[http://umanitoba.ca/admin/governance/governing\\_documents/community/electronic communication with students policy.html](http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html)). You are required to obtain and use your U of M email account for all communication between yourself and the university.

## My Expectations

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**I expect you to be attentive in class and participate in discussions.** You can use a laptop to take notes. Please behave in a way that does not disturb others during class. This includes not coming late to class, and not engaging any activity that may be disruptive to others.

**I expect you to be seated a few minutes before that start of my lectures.** I will treat you with respect and would appreciate the same in return.

### Academic Integrity:

I do not tolerate any violation of academic integrity and will strictly enforce the University's regulations regarding plagiarism, cheating and impersonation found in Section 8 of the General Academic Regulations in the online Academic Calendar and Catalog and the Faculty of Arts regulation. Students should acquaint themselves with the University's policy on plagiarism, cheating, exam impersonation, and duplicate submission by reading the documentation, and the penalties for academic dishonesty, available at the following at the following links:

[http://umanitoba.ca/faculties/arts/student/student\\_responsibilities.html](http://umanitoba.ca/faculties/arts/student/student_responsibilities.html)

[http://umanitoba.ca/admin/governance/governing\\_documents/students/student\\_discipline.html](http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html)

Ignorance of the regulations and policies regarding academic integrity is not a valid excuse for violating them.

**VW deadline:**

The VW deadline for Winter 2019 is March 20. Please also familiarize yourself with the **Important Dates and Deadlines** for Winter 2019, and for this course, at:

<http://umanitoba.ca/student/records/deadlines/>

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## Students Accessibility Services

**Student Accessibility Services**

If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.

*Student Accessibility Services* <http://umanitoba.ca/student/saa/accessibility/>

520 University Centre

204 474 7423

[Student\\_accessibility@umanitoba.ca](mailto:Student_accessibility@umanitoba.ca)

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## Course Evaluation Methods

In-class tests/quiz:

Date:	Assessment Tool	Value of Final Grade
1 pm, Thursday, February 14, 2019	Mid-Term I	40%
1 pm, Tuesday, March 12, 2019	Mid-term II	40%
1 pm, Tuesday, April 9, 2019	Test/quiz	20%

Each test will normally be marked within two weeks, and the answers may be briefly discussed in class.

Students who miss a test will be allowed a make-up only if there is a significant, and well-documented, medical or compassionate reason that justifies this exception.

## Grading

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Grading scale:

Letter Grade	Percentage out of 100	Final Grade Point
A+	93-100	4.5
A	82-92.9	4.0
B+	72-81.9	3.5
B	65-71.9	3.0
C+	60-64.9	2.5
C	55-59.9	2.0
D	45-54.9	1.0
F	Less than 45	0

Students who wish to appeal a grade given for term work must do so within 10 working days after the grade for the term work has been made available to them. Uncollected term work will become the property of the Faculty of Arts and will be held for four (4) months from the end of the final examination period for the term in which the work was assigned. At the conclusion of this time, all unclaimed term work will be destroyed according to FIPPA guidelines.

For appeal of FINAL GRADES, please visit the following link:

<http://umanitoba.ca/student/records/grades/691.html>

**FURTHER INFORMATION (Please be familiar with the information below)**

## Schedule "A"

A list of academic supports available to Students, such as the Academic Learning Centre, Libraries, and other supports as may be appropriate:

## Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at:

<http://umanitoba.ca/student/academiclearning/>

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

## University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A complete list of liaison librarians can be found by subject: <http://bit.ly/WcEbA1> or name: <http://bit.ly/1tJ0bB4>. In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: [www.umanitoba.ca/libraries](http://www.umanitoba.ca/libraries).

Section (b) A statement regarding mental health that includes referral information:

For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.

#### Student Counselling Centre

Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. *Student Counselling Centre:*

<http://umanitoba.ca/student/counselling/index.html>

474 University Centre or S207 Medical Services

(204) 474-8592

#### Student Support Case Management

Contact the Student Support Case Management team if you are concerned about yourself or another student and don't know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.

*Student Support Intake Assistant* <http://umanitoba.ca/student/case-manager/index.html>

520 University Centre

(204) 474-7423

#### University Health Service

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation.

*University Health Service* <http://umanitoba.ca/student/health/>

104 University Centre, Fort Garry Campus

(204) 474-8411 (Business hours or after hours/urgent calls)

#### Health and Wellness

Contact our Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

*Health and Wellness Educator* <http://umanitoba.ca/student/health-wellness/welcome.html>

[Katie.Kutryk@umanitoba.ca](mailto:Katie.Kutryk@umanitoba.ca)

469 University Centre

(204) 295-9032

#### Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

<http://umanitoba.ca/student/livewell/index.html>

Section (c) A notice with respect to copyright:

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community.

Visit <http://umanitoba.ca/copyright> for more information.

Section (d) A statement directing the student to University and Unit policies, procedures, and supplemental information available on-line:

Your rights and responsibilities

As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final grade appeals. Note that you have the right to access your final examination scripts. See the Registrar's Office website for more information including appeal deadline dates and the appeal form <http://umanitoba.ca/registrar/>
- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the Academic Integrity regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the Student Academic Misconduct procedure for more information.
- The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected conduct yourself in an appropriate respectful manner. Policies governing behavior include the:

## Respectful Work and Learning Environment

[http://umanitoba.ca/admin/governance/governing\\_documents/community/230.html](http://umanitoba.ca/admin/governance/governing_documents/community/230.html)

## Student Discipline

[http://umanitoba.ca/admin/governance/governing\\_documents/students/student\\_discipline.html](http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html) and,

## Violent or Threatening Behaviour

[http://umanitoba.ca/admin/governance/governing\\_documents/community/669.html](http://umanitoba.ca/admin/governance/governing_documents/community/669.html)

- If you experience Sexual Assault or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The Sexual Assault policy may be found at:  
[http://umanitoba.ca/admin/governance/governing\\_documents/community/230.html](http://umanitoba.ca/admin/governance/governing_documents/community/230.html)  
More information and resources can be found by reviewing the Sexual Assault site  
<http://umanitoba.ca/student/sexual-assault/>
- For information about rights and responsibilities regarding Intellectual Property view the policy  
[http://umanitoba.ca/admin/governance/media/Intellectual\\_Property\\_Policy\\_-\\_2013\\_10\\_01.pdf](http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf)

For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective faculty/college/school web site

<http://umanitoba.ca/faculties/>

Contact an Academic Advisor within our faculty/college or school for questions about your academic program and regulations <http://umanitoba.ca/academic-advisors/>

## Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

204 474 7423

[student\\_advocacy@umanitoba.ca](mailto:student_advocacy@umanitoba.ca)