

## ENG SCI 9501 - Business and Management: A Global Perspective

### Course Outline, Summer 2020

#### Objectives:

Take a leadership role in your engineering career. Learn to ‘speak the language’ of top management. Discover what makes a business successful, and how to measure success. Through examples of private- and public-sector organizations, including for-profit and non-profit organizations, this course will help you prepare for a business career. This course will explain how to be innovative and deliver results, whether working for others, or creating and running your own business. Successful students will make a commitment to researching and writing about business. Successful students will resolve ambiguities, make decisions, lead and follow others.

#### Topics:

The course consists of three online modules, each including three ‘class sessions’ and a final assessment, scheduled over twelve calendar weeks. All students in all Sections complete each module in sequence. The course grade is based on a weighted average of the grades achieved in each module. Students are requested to submit assignments each week, to show they are keeping up with the topics. The following table summarizes each module; module topics and assessments are listed on the following three pages.

Module	Summary	Dates	Weight
Accounting	<ul style="list-style-type: none"> <li>Accounting</li> <li>Finance</li> </ul>	May 11 – June 5	1/3
Marketing	<ul style="list-style-type: none"> <li>Create products &amp; services</li> <li>Grow the business</li> </ul>	June 8 – July 3	1/3
Entrepreneurship	<ul style="list-style-type: none"> <li>Innovation</li> <li>Create &amp; run a business</li> </ul>	July 6 – July 31	1/3

#### Prerequisites:

This course is open to any M.Eng. student.

#### Course materials and textbook:

- Students must purchase a ‘casebook’ from Ivey Publishing for a nominal fee ~ \$25 - \$35. No required text.
- Other essential readings are provided in OWL, including publicly- available cases.
- Online materials include summary slides, concept models, recorded lectures, videos and examples.
- Instructors may hold office hours or request students to attend guest speaker sessions by videoconference.

**Topics by Module:****Module 1: Accounting and Finance****Instructor:**

Chris Sturby, CPA, CA, MBA, CFA; email: [csturby@ivey.ca](mailto:csturby@ivey.ca)

Office Hours: By appointment, video or phone meeting.

**Learning Objectives:**

- Understand and analyze financial statements and the environment in which they are prepared.
- Forecast cash flows and financial statements, and evaluate long-term investment decisions.
- Understand how companies are valued, including tax implications for entrepreneurs in Canada.

Session	Dates	Topics	Assessment	Weight
One	May 11 – 15	<ul style="list-style-type: none"><li>• Basic financial statements</li><li>• Financial statement analysis</li></ul>	<ul style="list-style-type: none"><li>• Hand-in exercises</li></ul>	7%
Two	May 18 – 22	<ul style="list-style-type: none"><li>• Cash budgets</li><li>• Projected financial statements</li><li>• Time value of money concepts</li></ul>	<ul style="list-style-type: none"><li>• Hand-in exercises</li></ul>	7%
Three	May 25 – 29	<ul style="list-style-type: none"><li>• Business valuation</li><li>• Organizational and tax structure</li></ul>	<ul style="list-style-type: none"><li>• Hand-in exercises</li></ul>	6%
Final	June 1 -5	<ul style="list-style-type: none"><li>• All topics</li></ul>	<ul style="list-style-type: none"><li>• Exam (format TBD)</li></ul>	80%

## Module 2: Marketing

**Instructor:**

David Sumpton, MBA, M.Eng., P.Eng., CISA; email [dsumpton@uwo.ca](mailto:dsumpton@uwo.ca)

Office Hours: By appointment, video or phone meeting.

**Learning Objectives:**

- Determine existing and new market opportunities, in context of business strategy and objectives.
- Develop and apply targeted marketing plans; improve company brand & financial position.
- Integrate Marketing with Finance, Operations, Procurement and Supply Chain activities.

Session	Dates	Topics	Assessment	Weight
One	June 8 -12	<ul style="list-style-type: none"> <li>• Economic value, social benefit &amp; ethics, environmental accountability</li> <li>• Industry &amp; market opportunities</li> <li>• Business success factors</li> <li>• Stakeholder analysis model</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainability: the business case</li> </ul>	20%
Two	June 15 – 19	<ul style="list-style-type: none"> <li>• Product lifecycle, risk reduction</li> <li>• Market segmentation</li> <li>• Marketing activities &amp; influencing others</li> <li>• Price, profits &amp; Finance integration</li> <li>• Brand, quality, customer experience</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing plan &amp; financial metrics</li> </ul>	20%
Three	June 22 - 26	<ul style="list-style-type: none"> <li>• Trade / value chains</li> <li>• Suppliers &amp; distributors</li> <li>• Tendering process, contracts, product &amp; professional liability, trade secrets</li> <li>• Marketing &amp; Operations integration</li> </ul>	<ul style="list-style-type: none"> <li>• Procurement, Supply Chain, Operations &amp; related metrics</li> </ul>	20%
Final	June 29 – July 3	<ul style="list-style-type: none"> <li>• All topics</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple choice exam</li> </ul>	40%

## Module 3: Entrepreneurship

### Instructor:

Mano Majumdar, BEng, MBA, EIT (APEGA); email: mmajumdar@ivey.ca

Office Hours: By appointment, video or phone meeting.

### Learning Objectives:

- Understand the basics of the entrepreneurial (and intrapreneurial) process
- Integrate learnings from the Accounting and Marketing course modules, and personal research, to formulate a plan using a Business Model Canvas
- Produce and pitch a business model with a BMC, learning the process from start to finish

Session	Dates	Topics	Assessment	Weight
One	July 6 - 10	<ul style="list-style-type: none"> <li>• Introduction to BMC</li> <li>• Ideation and pitching</li> <li>• The nature of knowledge</li> <li>• Pivoting and dynamism</li> <li>• Strategic Tension Model</li> <li>• Mapping and opportunity</li> </ul>	<ul style="list-style-type: none"> <li>• Profile and video pitch <b>DUE</b></li> <li>• BMC exercise <b>ASSIGNED</b></li> </ul>	15%
Two	July 13 - 17	<ul style="list-style-type: none"> <li>• Infrastructure components of BMC</li> <li>• Value Proposition</li> <li>• Competitive Advantage</li> <li>• Platforms, networks, Channels and Relationships</li> </ul>	<ul style="list-style-type: none"> <li>• Team charter <b>DUE</b></li> <li>• BMC exercise <b>DUE</b></li> </ul>	15%
Three	July 20 - 24	<ul style="list-style-type: none"> <li>• Risk reduction</li> <li>• Cost structure</li> <li>• Customer segments, revenue streams</li> <li>• Entrepreneurship as a lifestyle choice, Barbell approach, hero myths</li> <li>• Intrapreneurship</li> <li>• Personal finance, potential guests</li> </ul>	<ul style="list-style-type: none"> <li>• Shortlisted ideas <b>DUE</b></li> </ul>	0
Final	July 27 -31	<ul style="list-style-type: none"> <li>• Buffer and questions</li> <li>• Student requests</li> </ul>	<ul style="list-style-type: none"> <li>• Final BMC <b>DUE</b></li> <li>• Team video <b>DUE</b></li> <li>• Student review of videos</li> </ul>	45% 15% 10%

## **Grading Standards:**

### **General Expectations**

- Student's work and class contributions are evaluated on what would reasonably be expected of a Masters-level student who, upon graduation from their program, would demonstrate the skills shown in the Ontario Qualifications Framework <http://www.tcu.gov.on.ca/pepg/programs/oqf/certificate12.html>
- A detailed rubric for reports, presentations, and class contributions is provided in OWL.

### **Team Project Grades**

- When working on team projects, all individuals will normally receive the same grade.
- In the event students feel that another team member is not a positive contributor, students are requested to respectfully resolve matters with the team member. If after drawing someone's attention to their ineffective contribution and their behaviour continues, students may discuss concerns with the instructor at the earliest opportunity.
- After consulting the students concerned and considering whether a student's behaviour likely affected a team's performance, the instructor may adjust course grades for any or all individuals in the team.

### **Penalties - Written Reports and Presentations**

- Late reports or presentations are subject to penalties of 25% of assignment grade weight per calendar day. Reports or presentations which are five calendar days late or more, may receive a zero grade.
- Penalties are waived for legitimate and documented reasons such as illness.

### **Penalties - Contributions**

- Interactions with others must be professional, or the student's contribution grade may be reduced.
- There is no penalty for disagreement or difference of opinion.
- Each instructor will outline criteria for how contribution will be assessed.

## **Scholastic Offences:**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_grad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf)

## **Plagiarism:**

University policy states that plagiarism, defined as the “act or an instance of copying or stealing another’s words or ideas and attributing them as one’s own.” (excerpted from Black’s Law Dictionary, West Group, 1999, 7th ed., p. 1170) is a scholastic offence. In submitting any written work as part of the requirements for this course, students must ensure that this work is written in their own words. Whenever students take an idea or a passage of text from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Any student who is suspected of a scholastic offence in respect of any work submitted as part of the coursework requirements for this course will be dealt with according to the University policies. For the purposes of this course, the University official for handling the case will be the Director, Centre of Engineering Leadership and Innovation. A common penalty for a first-time offence is a grade of zero in the relevant assignment. A serious incident or repeated offences (at any time at Western) may result in suspension or expulsion from the University.

## **Attendance:**

Any student who, in the opinion of the instructor, is absent too frequently from class, laboratory, or tutorial periods will be reported to the Dean (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean, the student will be debarred from taking the regular final examination in the course.

## **Accessibility:**

Please contact the course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation.

<http://www.sdc.uwo.ca/ssd/>

**Conduct:**

Students are expected to arrive at lectures (including online sessions) on time, and to conduct themselves during class in a professional and respectful manner that is not disruptive to others. Late comers may be asked to wait outside the classroom until being invited in by the Instructor. Please turn off your cell phone before coming to a class, tutorial, quiz or exam.

On the premises of the University or at a University-sponsored program, students must abide by the Student Code of Conduct: <https://www.uwo.ca/univsec/pdf/board/code.pdf>

**Sickness and Other Problems:**

Students should immediately consult with the Instructor or Department Chair if they have any problems that could affect their performance in the course. Where appropriate, the problems should be documented. The student should seek advice from the Instructor or Department Chair regarding how best to deal with the problem. Failure to notify the Instructor or Department Chair immediately (or as soon as possible thereafter) will have a negative effect on any appeal.

**Notice:**

Students are responsible for regularly checking their Western email, and the course OWL site for notices related to the course.