

**Western University  
Faculty of Engineering  
Department of Civil and Environmental Engineering**

**ES4481B: Engineering Innovation IV: The Entrepreneurial Environment**

**Course Outline  
Winter 2017 - Wednesdays, 7-10pm  
Location: Ivey 2125**

**DESCRIPTION**

This course is designed for students who have an interest in entrepreneurship and strategy. While entrepreneurship involves understanding the challenges of starting, growing and managing a new venture, strategic management focuses on achieving and sustaining superior firm performance over time. The entrepreneurial environment course will provide you with practical strategy foundations that are needed to assess the internal and external environment that entrepreneurs will encounter and to formulate strategy.

Most traditional strategy courses focus on the interactions of a firm with customers, suppliers and other partners to create value and obtain a competitive advantage (market strategy). This course also considers the interaction of the firm with institutions outside of markets - such as media, activists, intellectual property, and regulations in domestic and international settings (non-market strategy). We will take into consideration the role of global economic, political, and social trends that may affect long-term entrepreneurial success of their venture, as well as the environmental, technological, and legal issues that need to be considered when starting a venture.

The course presents strategy frameworks and concepts that can be applied to analyze business issues through business cases, practical exercises, and readings from academic journals and business press. I expect that there will be different viewpoints on management in the classroom, and encourage you to share personal experiences related to the subject matter. Problem solving as a class and integrating and applying knowledge from multiple perspectives will help the class develop an overall general management perspective.

**INSTRUCTOR**

Maya Kumar, Ivey Business School, Western University  
mkumar@ivey.ca

Consultation hours: Wednesdays 6-7pm (before class) or by appointment.

**ACADEMIC CALENDAR COPY**

This course enables students to understand the economic environments in which they will operate as managers and develop focused strategies for an organization to achieve success. Sustainability of initiatives will receive special attention. The course is delivered through the case method, developed by the Ivey Business School to challenge students to learn by doing within an active class environment.

**CONTACT HOURS:** 3 lecture hours/week, 0.5 course

## ES4481B: Engineering Innovation IV: The Entrepreneurial Environment

### PREREQUISITES

None (previous requirements were Business Administration 2257 or BUS 2299).

### CEAB ACCREDITATION UNITS

Complementary Studies (Elective Course) = 100% or 39 AUs

### COURSE MATERIALS

1. Ivey Publishing Course Pack (print copy or digital download copy instructions will be provided in an e-mail before our first class and in our first class).
2. Other required reading materials: An explanation of how to access other resources will be posted on OWL and discussed in our first class.
3. There is no required course textbook for this course. For a detailed overview of strategic management, there are several good introductory strategy textbooks available in the library. One option you may reference is: Crossan, M.M., Rouse, M.J., Fry, J.N., Killing, J.P., 2013. Strategic Analysis and Action. (8<sup>th</sup> edition), Toronto: Pearson Prentice Hall.
4. Please check OWL regularly for updates to readings. Direction to access required readings will be posted minimally 1 week in advance of the related class session.

### GENERAL LEARNING OBJECTIVES (CEAB GRADUATE ATTRIBUTES)

|                  |     |                          |     |                                       |     |
|------------------|-----|--------------------------|-----|---------------------------------------|-----|
| Knowledge Base   |     | Use of Engineering Tools |     | Impact on Society and the Environment | 3/3 |
| Problem Analysis | 3/3 | Individual and Team Work | 3/3 | Ethics and Equity                     |     |
| Investigation    |     | Communication Skills     | 3/3 | Economics and Project Management      |     |
| Design           |     | Professionalism          |     | Life-Long Learning                    |     |

Notation:  $x/y$ , where  $x$  is the cognitive level (1: Remember, 2: Understand, 3: Apply) at which the attribute is assessed and  $y$  is the academic level (1: Beginner, 2: Intermediate, 3: Advanced) at which the attribute is assessed.

## **TOPICS AND SPECIFIC LEARNING OBJECTIVES**

At the end of the course, you will have achieved the following learning outcomes through the business cases, readings, class discussions, and course assignments. Additional issues may be discussed at the instructor's discretion.

### **1. Strategy Foundations**

At the end of this course, students will be able to:

- a.** define the key components of strategy (including value proposition, core activities, and competitive advantage), differentiate firm strategy from functional strategies (e.g. HR, finance, marketing, operations strategies), and see how business strategy fits with broader dynamics in society.
- b.** understand the role of industry in shaping the environment that ventures compete in.
- c.** understand current business and corporate strategic problems domestically and globally.
- d.** be able to propose, justify and defend arguments, make and critically analyze strategic recommendations about strategic business issues.
- e.** take a general manager/informed entrepreneurial perspective to assess overall strategy and to take into account functional strategies of the organization.
- f.** assess the difference between what a firm needs to do to create a competitive advantage (based on market and non-market demands), what they can do with the resources and capabilities that they have, and what entrepreneurs/managers want to do. Consider how to effectively implement plans regardless of complex behaviour of individuals in the organization.

### **2. Tools for Analysis**

At the end of this course, students will be able to:

- a.** analyze complex strategic problems and situations that a firm may face, define its competitive position, and analyze the combination of activities, capabilities, and positioning to achieve a sustainable competitive advantage
- b.** apply fundamental tools of strategic analysis (e.g. Porter's five forces, resource analysis, and industry value chain) to assess the internal and external environment of a firm, including the competitive environment and the attractiveness of the industry.

### **3. Market Strategy and Competitive Dynamics**

At the end of this section, students will be able to:

- a.** understand how a firm strategically interacts with its customers, suppliers, competitors, etc.
- b.** understand how strategy formulation accounts for competitive interaction and anticipate competitors' reactions and actions.
- c.** differentiate the fundamentals of corporate strategy (e.g. M&A, takeovers and restructuring).
- d.** describe different cooperative strategies (strategic alliances, network alliances, business level and corporate level) and their role in creating shared value creation.
- e.** describe the motives and modes of international corporate strategy and how to conduct an environmental assessment in a transnational context.

## **ES4481B: Engineering Innovation IV: The Entrepreneurial Environment**

- f.** understand the motivation for strategic entrepreneurship and innovation.
- g.** describe the fundamentals of corporate governance.

### **4. Non-Market Strategy**

At the end of this section, students will be able to:

- a.** understand how a firm may strategically interact with non-market segments, including activists, legislators, government, media, the public, and courts, that may have non-profit maximizing goals.
- b.** assess domestic versus international non-market strategy.

### **PREPARING FOR CLASS**

There will be study questions and readings for each case posted on OWL at least one week before class. Please read any assigned readings before class. They are designed to guide and stimulate your analysis and preparation. I will assume you will have done the readings in class and you will be expected to apply the tools and concepts in the readings during the case analysis. Mini lectures and class exercises will supplement the case discussion.

### **Suggestions to Prepare for Case Discussion**

The cases we discuss involve real companies and often, real protagonists. This is meant to help you put yourselves into their shoes, and with select information, be able to analyze the case situation and make strategic decisions with the information available.

Note that the case is often set in a different time period than now, and that today, we may have knowledge about the company, other stakeholders, or the environment that may change the decisions the company would have made. While it is fine to share this information in class, it is important to focus on the context and knowledge available during the case events. Please refrain from searching online for information on what happened in the case as this will limit your ability to learn and engage with the cases and will not be counted toward active contribution.

As noted before, I encourage you to take risks, share your opinions, and be willing to make mistakes in class. This is how we learn from each other. Please show respect to your classmates and your instructor to create a safe learning environment.

## EVALUATION

| Course Component   | Weight |
|--|--------|
| Class Participation (Individual)                             | 35%    |
| Current Affairs Discussion (Individual)                      | 5%     |
| Case memos (Individual)                                      | 25%    |
| Venture Consulting Project – presentation and report (Group) | 35%    |
| Total  | 100%   |

**Class Participation (35%):** Class discussion is an integral aspect of full participation in this course. As we will be using Ivey's case method of teaching, students are expected to meaningfully contribute in class. This means placing yourself into the shoes of the manager/entrepreneur in the case, being present and prepared for every class, and not just talking or repeating case facts, but also listening to others, explaining or defending your point of view, and engaging with others' ideas. Your goal should be to help sort out the facts in a complex case and help build an analysis that moves the discussion forward. Grade weighting of this element of evaluation reflects this importance to the course. There are no alternatives to class contribution, such as written hand-ins. The evaluation rubric of class contributions will be discussed in class.

**Current Affairs Discussion (5%):** What's in the news? For one class session, bring in (or supply the reference for) a current news article *from the past week* on a company/industry issue related to this week's topic for class discussion. Choose a company that we have not yet discussed in class. Be able to discuss the major issues in the article and why the article is relevant to this week's class topic. Articles should come from major media sources at the calibre of: The Economist, The New York Times, The Globe and Mail, The Wall Street Journal, the Financial Times, CBC, CNN, etc. This is meant to spark a discussion, so no formal presentation (i.e. no slides) is needed. Sign up for sessions will be in the first class.

**Case Memos (25%):** Five case memos are required (5% each). Case memos involve answering questions on the cases in essay format. The length of the case memos should be between 1 to 2 pages maximum. Sign up for cases will be in the first class. A limited number of people may write a case memo on a given case. Memos should be uploaded to OWL *before* the start of the class in which the case is discussed.

## **ES4481B: Engineering Innovation IV: The Entrepreneurial Environment**

**Group Consulting Project (35%):** The final project will consist of a report and group presentation. In groups of 2 to 3 people, complete a full analysis of the strategy of a new venture that is less than 2 years old, has a focus on innovation, and has at least one employee. You are required to find this venture on your own.

*Proposal (5%):* Each team will upload to OWL a 1-page proposal about the company they would like to analyze (include a webpage address). In the proposal, explain why you think the venture is interesting to analyze, how you will develop your analysis, and what potential data you have available (primary and secondary). This proposal will be due on **Friday, February 3<sup>rd</sup>, 5pm EST.**

The goal of the project is to analyze a real business in depth, similar to how you may analyze a published business case. The precise content of the project is up to you, although thorough external and internal environmental analyses are expected and the conceptual material of the course should provide the basic structure for the analysis. The write-ups should be based on both qualitative and quantitative information available from the business (interviews, documents, etc.) and public sources (news articles, websites, etc.).

*Report (12.5%):* The report should be no longer than 15 pages, double-spaced, 12-pt font, Times New Roman, 1" margins and is due in hard copy in the final class and should be uploaded to OWL. **Due date: April 5<sup>th</sup>, 11:59pm.**

*Presentation (12.5%):* The group presentation will take place during the final class (**April 5<sup>th</sup>**). A 20-minute presentation on the new venture will take place during the final class. Non-presenting teams are expected to participate in a 5-10 minute discussion of projects after each presentation. Upload final presentation slides to OWL **before** your presentation.

Your final grade for the project will be based on your proposal (5%), presentation (12.5%), the report (12.5%), as well as how you handle the discussion after your group presentation (5%). (Note: If you are not presenting, this is your chance to ask good questions for class participation that day!). Each student in a group will normally receive the same grade for the term project. Along with the final report submission, each student will have the opportunity to submit an individual group evaluation and peer evaluations. This will inform the instructor if the students believe that differential grades should be assigned to group members. The student is expected to justify this with specific reasons. The instructor may or may not change the grade on the basis of these submissions. An important factor in this decision will be whether the group requested assistance in how to improve its function during the term and at least attempted to act on this advice.

Further details on the assessments (individual and group exercises) will be discussed during class hours. The assessments must be submitted for marking by the due dates discussed in class. Written assignments will be submitted electronically through OWL - see the provisions concerning plagiarism below.

## ADDITIONAL COURSE EXPECTATIONS

**Late Submission Policy:** Late submissions will be penalized 5% per day and will not be accepted beyond 5 days late. Presentations must be given on the assigned date.

**Use of English:** In accordance with Senate and Faculty Policy, students may be penalized up to 10% of the marks on all assignments, tests, and examinations for improper use of English. Additionally, poorly written work with the exception of the final examination may be returned without grading. If resubmission of the work is permitted, it may be graded with marks deducted for poor English and/or late submission.

**Use of Electronic Devices:** Students may use laptops, tablet computers, or smart phones (vibrate mode only) during class for course related activities only. Non-emergency phone calls or text during class are not permitted. Electronic devices may be used during the final project presentation only if part of the presentation itself.

**Attendance:** Any student who misses more than 25% (or 4 classes) will be reported to the Dean (after due warning has been given). On the recommendation of the department, and with the permission of the Dean, the student will be assigned a failing grade in the course.

**Tardiness to class:** Tardiness to class will result in your class participation being affected for the day. Please try to show up on time and notify the instructor of any known delays ahead of time.

**Absence Due to Illness or Other Circumstances:** Students should immediately consult with the instructor or department Chair if they have any problems that could affect their performance in the course. As a professional courtesy, you are expected to advise your instructor in advance of your absence and provide an explanation. Where appropriate, the problems should be documented (see the attached “Instructions for Students Unable to Write Tests or Examinations or Submit Assignments as Scheduled”). 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.

For more information concerning medical accommodations, see the relevant section of the Academic Handbook:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf)

For more information concerning accommodations for religious holidays, see the relevant section of the Academic Handbook:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_religious.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf)

**Cheating and Plagiarism:** Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. University policy states that cheating, including plagiarism, is a scholastic offence. The commission of a scholastic offence is attended by academic penalties, which might include expulsion from the program. If you are caught cheating, there will be no second warning.

## ES4481B: Engineering Innovation IV: The Entrepreneurial Environment

All required papers may be subject to submission for textual similarity review to commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents on 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>).

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, in the relevant section of the Academic Handbook:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

**Policy on Repeating All Components of a Course:** Students who are required to repeat an Engineering course must repeat all components of the course. No special permissions will be granted enabling a student to retain laboratory, assignment, or test marks from previous years. Previously completed assignments and laboratories cannot be resubmitted by the student for grading in subsequent years.

**Internet and Electronic Mail:** Students are responsible for regularly checking their Western e-mail and the course web site (<https://owl.uwo.ca/portal/>) and making themselves aware of any information that is posted about 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 519-661-2111 ext. 82147 for any specific question regarding an accommodation.

### Support Services:

Office of the Registrar, <http://www.registrar.uwo.ca/>

Student Development Centre, <http://www.sdc.uwo.ca/>

Engineering Undergraduate Services, <http://www.eng.uwo.ca/undergraduate/>

USC Student Support Services, <http://westernusc.ca/services/>

Students who are in emotional/mental distress should refer to Mental Health @ Western, [http://www.health.uwo.ca/mental\\_health/](http://www.health.uwo.ca/mental_health/), for a complete list of options about how to obtain help.





**INSTRUCTIONS FOR STUDENTS UNABLE TO WRITE TESTS  
OR EXAMINATIONS OR SUBMIT ASSIGNMENTS AS SCHEDULED**

If, on medical or compassionate grounds, you are unable to write term tests or final examinations or complete course work by the due date, you should follow the instructions listed below. You should understand that academic accommodation will not be granted automatically on request. You must demonstrate to your department (or the Undergraduate Services office if you are in first year) that there are compelling medical or compassionate grounds that can be documented before academic accommodation will be considered. Different regulations apply to term tests, final examinations and late assignments. Read the instructions carefully. (see the 2016 Western [Academic Calendar](#)).

**A. GENERAL REGULATIONS & PROCEDURES**

1. Check the course outline to see if the instructor has a policy for missed tests, examinations, late assignments or attendance.
2. Bring your request for academic accommodation to the attention of the Chair of the department (or the Undergraduate Services office if you are in first year) prior to the scheduled time of the test or final examination or due date of the assignment. If you are unable to contact the relevant person, leave a message with the appropriate department (or Undergraduate Services office, if you are in first year). The addresses, telephone and fax numbers are given at the end of these instructions. Documentation must be provided as soon as possible.
3. If you decide to write a test or an examination you should be prepared to accept the mark you earn. Rewriting tests or examinations or having the value of a test or exam reweighted on a retroactive basis is not permitted.

**B. TERM TESTS**

1. If you are unable to write a term test, inform your instructor and the Chair of your Department (or the Undergraduate Services Office if you are in first year) prior to the scheduled date of the test. If the instructor is not available, leave a message for him/her at the department office and inform the Chair of the Department (or the Undergraduate Services Office if you are in first year).
2. Be prepared to provide supporting documentation to the Chair and the Undergraduate Services Office (see next page for information on documentation).
3. Discuss with the instructor if and when the test can be rescheduled. **N.B.** The approval of the Chair (or the Undergraduate Services Office if you are in first year) is required when rescheduling term tests.

**C. FINAL EXAMINATIONS**

1. If you are unable to write a final examination, contact the Undergraduate Services Office **PRIOR TO THE SCHEDULED EXAMINATION TIME** to request permission to write a Special Final Examination. If no one is available in the Undergraduate Services Office, leave a message clearly stating your name & student number (please spell your full name).
2. Be prepared to provide the Undergraduate Services Office with supporting documentation (see next page for information on documentation) the next day, or as soon as possible (in cases where students are hospitalized). The following circumstances are not considered grounds for missing a final examination or requesting special examinations: common cold, sleeping in, misreading timetable and travel arrangements.
3. In order to receive permission to write a special examination, you must obtain the approval of the Chair of the Department **and** the Associate Dean and in order to apply you must sign a "Recommendation for a Special Examination Form" available in the Undergraduate Services Office. The Undergraduate Services Office will then notify the course instructor(s) and reschedule the examination on your behalf.

**N.B. It is the student's responsibility to check the date, time and location of the special examination.**

**D. LATE ASSIGNMENTS**

1. Advise the instructor if you are having problems completing the assignment on time (**prior** to the due date of the assignment).
2. Be prepared to provide documentation if requested by the instructor (see reverse side for information on documentation).
3. If you are granted an extension, establish a due date. The approval of the Chair of your Department (or the Associate Dean if you are in first year) is not required if assignments will be completed prior to the last day of classes.
4.
  - i) Extensions beyond the end of classes must have the consent of the instructor, the department Chair and the Associate Dean. Documentation is mandatory.
  - ii) A Recommendation of Incomplete Form must be filled out indicating the work to be completed and the date by which it is due. This form must be signed by the student, the instructor, the department Chair and the Associate Dean.

## SHORT ABSENCES

If you miss a class due to a minor illness or other problems, check your course outlines for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate.

## EXTENDED ABSENCES

If you are absent more than one week or if you get too far behind to catch up, you should consider reducing your workload by dropping one or more courses. (Note drop deadlines listed below). You may want to seek advice from the academic counsellor in your Department or the counsellors in the Undergraduate Services Office if you are in first year.

## DOCUMENTATION

If you consulted an off-campus doctor or Student Health Services regarding your illness or personal problem, you must provide the doctor with a Student Medical Certificate to complete at the time of your visit and then bring it to the Department (or the Undergraduate Services Office if you are in first year). **This note must contain the following information: severity of illness, effect on academic studies and duration of absence.**

**In Case of Serious Illness of a Family Member:** Provide a Student Medical Certificate to your family member's physician to complete and bring it to the Department (or the Undergraduate Services Office if you are in first year).

**In Case of a Death:** Obtain a copy of the death certificate or the notice provided by the funeral director's office. You must include your relationship to the deceased and bring it to the Department (or the Undergraduate Services Office if you are in first year).

**For Other Extenuating Circumstances:** If you are not sure what documentation to provide, ask the Departmental Office (or the Undergraduate Services Office if you are in first year) for direction.

**Note:** Forged notes and certificates will be dealt with severely. To submit a forged document is a scholastic offence (see below).

## ACADEMIC CONCERNS

You need to know if your instructors have a policy on late penalties, missed tests, etc. This information may be included on the course outlines. If not, ask your instructor(s).

**You should also be aware of attendance requirements in some courses. You can be debarred from writing the final examination if your attendance is not satisfactory.**

If you are in academic difficulty, check out the minimum requirements for progression in the calendar. If in doubt, see your academic counsellor.

**Calendar References:** Check these regulations in your 2016 Western Academic Calendar available at [www.westerncalendar.uwo.ca](http://www.westerncalendar.uwo.ca).

[Absences Due to Illness](#) - page 117

[Academic Accommodations for Students with Disabilities](#) - page 118

[Academic Accommodations for Religious Holidays](#) - page 119

[Incomplete Standing](#) - page 104

[Scheduling of Term Assignments](#) – page 97

[Scholastic Offences](#) - page 113

[Special Examinations](#) - page 132

**Note:** These instructions apply to all students registered in the Faculty of Engineering regardless of whether the courses are offered by the Faculty of Engineering or other faculties in the University.

|                               |   |                   |
|-------------------------------|---|-------------------|
| <b><u>Drop Deadlines:</u></b> | First term half course (i.e. "A" or "F"):                             | November 5, 2016  |
|                               | Full courses and full-year half courses (i.e. "E", "Y" or no suffix): | November 30, 2016 |
|                               | Second term half or second term full course (i.e. "B" or "G"):        | March 7, 2017     |

|  |          |                           |                     |
|--|----------|---------------------------|---------------------|
| Undergraduate Services Office:   | SEB 2097 | telephone: (519) 661-2130 | fax: (519) 661-3757 |
| Dept. of Chemical and Biochemical Engineering:   | TEB 477  | telephone: (519) 661-2131 | fax: (519) 661-3498 |
| Dept. of Civil and Environmental Engineering:  | SEB 3005 | telephone: (519) 661-2139 | fax: (519) 661-3779 |
| Dept. of Electrical and Computer Engineering, Software Engineering<br>Mechatronics Engineering | TEB 279  | telephone: (519) 661-3758 | fax: (519) 850-2436 |
| Dept. of Mechanical and Materials Engineering:   | SEB 3002 | telephone: (519) 661-4122 | fax: (519) 661-3020 |