

Management Consulting For Engineers – This courses is offered inclass (10 day) and 100% online. Always Check the course web site in Quercus/Canvas for specific instructions and dates

100% Online – will be delivered as needed. Henceforth This course will be delivered 100% online due to COVID-19.

10 Day-Spring (9AM–Noon) Week 1 inclass, Week 2 No Class (project work), Week 3 Inclass, Week 4 No Class (work on Project).

Course Outline

Management Consulting will continue to be a significant career option for many graduate students, regardless of whether a student’s academic foundation is in business, engineering, humanities, medicine, law or the basic sciences. Careers in Management Consulting often provide individuals an opportunity for challenging work, continued self-development, access to important social and professional networks, and, over time, significant financial rewards. This course is designed to enable graduate engineers to explore, and **prepare for a career in the practice of management consulting**. The course is taught by a qualified fellow certified management consultant (FCMC), and state licensed professional engineer (P.Eng). The Management Consulting Industry has grown in size and complexity particularly since the early 1990’s. Although there are many very small firms, the industry is dominated by a relatively few very large global organizations that practice in a variety of business settings and business disciplines. In addition many businesses have developed internal consulting organizations to provide consulting related services within the organization and often in conjunction with consulting services offered by external third party firms. In this course we explore what it means to be a Management Consultant, and will introduce students to consulting frameworks and methods; simulate consulting project activities and situations using business cases; and network students with practicing consulting professionals from a variety of global and local firms. Within the context of this course, consulting is viewed broadly and is inclusive of a number of practice areas including Strategy Consulting, IT Consulting, Marketing Consulting, Human Capital Consulting, Operational / Business Process Consulting, Organizational Development Consulting, and the very specialized field of Engineering Management Consulting. We also explore emerging fields in Management Consulting. Course participants will be organized into teams and will have the opportunity to work on a project and collaborate with a tier one Consulting firm.

Course Objectives

1. Develop an understanding of the nature and rigor of management consulting and to develop skills in management consulting practice fundamentals.
2. Learn how to identify, analyze, and negotiate consulting opportunities – important in building a practice or progressing upward within an existing consulting organization.
3. Demonstrate problem solving, design, and other analytical skills and learn overall consulting

process and practice skills.

4. Practice and sharpen executive writing and presentation skills. A student who has successfully completed the coursework should be able to clearly articulate how consultants add value; how consulting practices are built and sustained; approaches to identifying and securing consulting opportunities; how client relationships can be managed and what to do in problem situations; and have demonstrated skills and the effective use of typical analytical frameworks used by consulting organizations today.

5. The primary objective of this course is to provide you with an opportunity to become familiar with the typical phases in a consulting project. These phases include: selling a project, entering the client firm, gathering data, diagnosing issues, implementing solutions and leaving. In addition to discussing these phases in class, we will discuss how similarly, and how differently, consultants work with their clients.

6. We will also study the functional specialty areas in which most consultants practice. We conclude the course with discussions of ethical issues, career concerns and critical success characteristics.

CORE READING LIST

- Block, Peter. *Flawless Consulting, 3rd Edition*. University Associates, La Jolla, 2011
- Cohen, William A. *How to Make it Big as a Consultant*, 2009
- Greiner, Larry E. and Metzger, Robert O. *Consulting to Management*, 1983
- Kubr, Milan. *Management Consulting-A Guide to the Profession*, 2002

OTHER READING

- Greiner, Larry E. and Poulfelt, Flemming. *The Contemporary Consultant – Insights from Experts*. Thomson South-Western Publishing. 2004.
- Greiner, Larry E., Olson, Thomas H. and Poulfelt, Flemming. *The Contemporary Consultant – Casebook*. Thomson South-Western Publishing, 2004.
- Brussalis, Chris W. (Ed.). *Management Consulting Class Reading Material*. Pittsburgh: Carnegie Mellon University, 2017.

There are no mandatory prerequisites but preference is given to students with previous work experience in a leadership or management capacity, innovation management, process management, project management, continuous improvement (six sigma, lean), strategic management, organizational change management, lean product development or operations management would be helpful.

Important Expectations of Online Students

Online learning is not home study. It requires as much or more effort than in class learning – the advantage being – you get to engage in the learning experience at a time you choose. The academic rigor and learning outcomes are identical to an in-class experience. **The online course will be administered via blackboard therefore use of blackboard is mandatory.** There are some baseline rules that online learning requires. Students:

- Must commit and engage in online discussion from the end of the first week. Marks for online discussion are included in the mid term and final critical review papers.
- Must read and understand the student performance evaluation rubric and demonstrate this by discussing how it works in blackboard by the end of the 2nd week.
- Provide (**optional**) a 2-minute background introduction video by the end of the 2nd week – just to demonstrate the use of video and drop box. **Written introduction mandatory.**
- Will be expected to produce one 4-6-minute video - to self assess the mid term critical review.
- Understand a lack of engagement in the discussion board evenly paced throughout the course will inhibit your ability to write the critical review papers. Each lecture and discussion board will be posted for 2 full weeks and then locked (can read but not write). This means online blackboard discussions on the lectures must be completed in an even flow through the course – you can't build them up. This would inhibit the learning experience

Course Structure and Content

Managing Consulting for Engineers is divided into four themes and 12 modules:

The first theme is: **Management Consulting in Context**

The second theme is: **Management Consulting Process and Stages**

The fourth theme is: **Management Consulting in Various Areas**

The fourth theme is: **Skills for Success for a career in Management Consulting**

Learning outcomes

1. Define management consulting and understand why and how consultants are utilized
2. Apply a consulting process framework to simulated client engagement
3. Understand the value of stakeholder engagement and how to apply it
4. Develop a proposal and work plan for a consulting project
5. Learn, practice, and refine skills for client engagement and project management
6. Learn and apply discovery techniques and qualitative/quantitative research skills
7. Make effective presentations
8. Develop a personal management consulting career blueprint, and/or business plan

Class Participation. This course will be offered over 10 days June (over 4 weeks). The course will be taught through a combination of video lectures (15-50 minutes), book chapter readings, critical review readings, and **in-Class activity and discussion.** In-class activity includes

presentations and discussions that will be delivered as teams each day. Team members will present answer to questions set against each module video (listed in discussion board).

Critical Review (CR) Papers (If Applicable). The requirements for **CR's change from year to year.** CR papers can be handed in and also posted on the discussion board for the online course. **All CR's will be written papers (800 – 1200 words).** Critical reviews will consist of reviewing an academic paper and / or **special interest topic** that is most likely career related. There are lots of choices for the critical reviews from the core management consulting books. The remainder of the critical review readings can be from scholarly academic papers listed on the course website (blackboard). There are lots of choices – students can also find and review the latest academic papers on management consulting.

Project Report. Students will form teams and produce a team report. Whether in a virtual team environment or inclass the level of effort is the same. For the final paper you are free to select a topic in management consulting that interests you. The goal of the project report is not to do original field research, but to demonstrate to me your ability to understand management consulting career concepts *in a situation of your choosing*. The project report should be double-spaced, 12 point font, (approximately 1200 – 1500 words per student). **A hard copy and a soft copy of the paper** (using Microsoft Word, NOT an Adobe Acrobat PDF!) must be delivered by email no later than **last Friday in June at 4pm** to my email address, stephenc.armstrong@utoronto.ca - the hard copy to be given to the FASE graduate office at 44 St George Street.

Please note: for guidance purposes summaries of the team project reports from the 2010 to Today classes are available at: <http://www.amgimanagement.com/founder/teaching.html>.

Course Grading: The components of the final course grade will be weighted as follows:

Final Team Report (5% Charter and Summary ppt 10%)	40%
In Class Team Participation (Individual presentations and discussions)	40%
Personal Report – Building Your Consulting Business Blueprint	20%

40% will be determined by the team project paper (includes 10% for summary ppt presentation and 5% charter). 40% of the grade will be determined by in-Class activity Participation – blackboard discussion board **is not required** for an inclass course but this is where readings and module discussion questions are located. 20% is a personal report that outlines your management consulting business practice blueprint (between 2,000 - 6,000 words).

Office Hours. Because I am Adjunct faculty it will be difficult to meet all of you individually in a timely manner because of the class size but we will have lots of interaction in class

Important Milestones: See Course Web Site in Quercus for Dates

- First Seminar: Orientation on Course Content
- Team Charter Due- Submit physical copy in class
- Last Module and submission of personal report – your MC blueprint
- Last Day - Project team verbal presentations (Power point)
- Submission of final report (physical hardcopy and e-copy in word)

- Submission of Personal MC Career Blueprint / Business plan
- All coursework grades submitted

Part I – Management Consulting in Context

Mod 0 - Courses Introduction and Orientation

- Introduction and purpose of course
- Course Overview
- Review syllabus

The Transition from Engineer to Manager to Management Consultant

- Transferable skills from Engineer to Management to Management Consultant
- The Challenges and Barriers
- Critical Success Factors

Mod 1 - Introduction to the Profession

- Definition, roles, purpose of the management consulting profession
- Uses of consultants – public sector, private sector, and internal consulting
- Who Hires management consultants
- Introduce client projects
- Role of Consulting Partners - Collaborative Projects
- Management Consulting Careers
- <https://www.pwc.co.uk/careers/casestudy.html>
- <https://www2.deloitte.com/ca/en/pages/about-deloitte/articles/about-deloitte.html>

Mod 1 - History and Development of the Profession

- History and development of the profession
- Management Consulting Industry – Major Companies
- Consulting roles and culture
- Professionalization certification (CMC) and licensing
- Controversies in Management Consulting

Mod 2 - Consulting Types, Skills, Roles and Culture

- How to Get Clients
- Types of projects and project cycles
- First client meetings
- Assignment strategy and plan
- Proposal development
- Internal v External Consulting
- Consulting contract

- Service Quality
- Methodologies, Tools and Techniques

Mod 3 –Effective Consulting Client Relationships – Managing Expectations

- The client system- From transaction to trusted advisor
- Manage expectations
- Contract management
- Methods of Influencing-Customer Loyalty Staircase
- Stakeholder engagement and Consulting Flaws
- Getting Opportunities- the elevator pitch
- Building Rapport, listening, Probing

Part 2 – Management Consulting Process and Stages

Mod 4 -Consulting Process –Entry and Defining Client Needs

- Types of projects and project cycles
- First client meetings
- Assignment strategy and plan
- Proposal development (CSC and Others)
- Consulting contract
- Service Quality (E&W McAir)
- Assign client projects

Mod 5 -Consulting Process - Diagnoses and Action Planning

- Diagnosis – conceptual framework
- Data gathering techniques (Quantitative and Qualitative)
- Synthesis complex data Sources
- Client feedback
- On-site interaction

Mod 6 -Consulting Process – Engagement, Implementation, Termination

- Management of projects (Steering Committee, Organization and Governance)
- Presentations and communicating with clients
- Implementing your recommendations
- Ongoing client contact and service
- Team approach effectiveness
- Selling more work or Termination

Part 3 – Management Consulting In Various Areas

Mod 7-Management of Change and Unique Client Culture

- Managing Change is fundamental to all strategic consulting engagements
- Internal v External Consulting

- How Consultants Add Value Tailored to Client Culture
- Maintaining independence and objectivity
- The Cultural Imperative

Mod 8 - Consulting in the Functions of Management

- Strategic and General Management Services
- Operations and Production Management
- Supply Chain Management
- Marketing and Sales Management
- HRM Management
- Financial Management
- IT and Digital Management
- Advanced Manufacturing Systems
- Engineering Management- a highly specialized area of Management Consulting

Mod 9 -Consulting in Industry Sectors

- Industry Differences (Non Profit, Public, Government, etc)
- Private companies
- Family Businesses
- Aerospace and Defense
- Automotive
- Oil and Gas
- Consumer Goods
- Manufacturing and Industrial Equipment
- High Tech
- Public Sector and Government
- Banking and Finance
- Health Care and Hospitals
- Small Medium Enterprises
- Emerging Fields – Life Sciences, Cyber Security, Data Analytics

Part 4 – Skills For Success in Management Consulting

Mod 10 - Legal and Ethical Issues

- Legal risks and management
- Bad Press in the Consulting Industry
- Client privilege issues
- Professional ethics
- Biting the hand that feeds you

Mod 11 - Creating Value for Yourself and the Firm

- Firm growth strategies, sales skills
- Managing a Firm

- Marketing Consulting Services
- Creating a Strong Brand
- Pricing, Cost and Fees
- Evaluation of performance
- Operational and Financial Control
- Structuring a Management Consulting Organization

Mod 12 - Managing Your Consulting Career

- Being an Authentic Leader
- Employee or Entrepreneur?
- Maintaining independence and objectivity
- Professional development and staying current
- Developing areas of unique deep expertise
- Big Firm Versus Boutique
- Dealing with Ignorance in Industry
- Managing your Image
- Mentoring, Coaching, Subject Matter Expert or what?

Mod 13 - Team Project Presentations – Last Day of Class

- Final presentations on consulting projects

Supplemental to the Core APS1049 course Strategic Organizational Design (12 Modules)

This Organizational Design course is knowledge students should have before even thinking about a career in management consulting. It is For students who have no management education exposure or experience. I am opening all modules from the start so you can access this knowledge (video lectures and material) as the APS1049 course progresses. It is optional viewing

Course Description:

Part 1 – Introduction to Organizations

Week 1- Mod 0 – Orientation

- Overview of the entire course - how we will cover course content in breadth and depth
- Course Value in Career Planning
- Mechanics of the Course including:
 - Project team formation and operation
 - Course Book - Assignment Planning and Requirements

- Grading structure (Critical Reviews, Book Review, Discussions, Projects)
- Web site layout and operation, Important Dates
- Purpose of Primers and Academic papers
- Critical Thinking and Performance Rubric

Week 1 -Mod 1 – Introduction to Organizations and Organizational Theory

- What is an Organization?
- Types of Organization
- Dimensions of Organization Design
- Evolution of Organization Theory
- Reflection & Practices - Air Canada, Ellis Don, Tim Hortons, Mackenzie Valley Gas Pipeline, Cementos Mexicanos, MOCCA
- Cases –Teleflex Canada

Part 2 – Organizational Purpose and Structural Design

Week 2- Mod 2 - Strategy, Organizational Design and Effectiveness

- Strategic Direction
- Organizational Purpose
- Strategy and Design
- Organizational Effectiveness
- Reflection & Practices - Tim Hortons, West Jet, Loblaws
- Cases –Jones Soda, Foldable Show Maker
- Applied Case Study Lecture – Strategy Directional Planning – Boeing Division

Week 3 Mod 3 – Organizational Structure

- Organizational Structure Overview
- Impact of Information Flow on Structure
- Org Design Alternatives
- Functional, Divisional and Geographic Designs
- Matrix Structure, Horizontal Structure, Virtual Networks, Hybrid Structures
- Applications of Structural Design
- Reflection & Practices - Desjardins Group, Ford Motors, Imagination Ltd, Medecins sans Frontiers, Englander Steel, Chemainus Sawmill, Microsoft Corp
- Cases – Aquarius Adverting Agency, Eva’s Phoenix Print Shop
- Applied Case Study Lecture – Messier –Dowty Landing Gear

Part 3 – Open System Design Elements

Week 4 -Mod 4 - External Environments

- Environmental Domain
- Environmental Uncertainty
- Adapting to Uncertainty
- Framework for Org Responses to Environmental Uncertainty
- Resource dependence

- Controlling Environmental Resource
- Reflection & Practices - Nokia, Ogilvy & Mather, Joe Fresh, Manitoba Telcom, Walmart, TSX Group, Montreal Exchange
- Cases – Nokia, Acme and Omega Electronics, Vancity

Week 5 - Mod 5 – Inter-organizational Relationships

- Organizational Ecosystem
- Resource Development and Power Strategies
- Collaborative networks - Partnering
- Population Ecology - Ecological change and survival strategies
- Institutionalism - Internal and external view
- Reflection & Practices - Toyota, Chapters, Indigo, Joe Fresh, Bombardier, Apotex, Walmart, Shazam
- Cases- Apple, Hugh Russel Inc

Week 6- Mod 6 - Designing Organization for International business

- Entering the Global Arena
- Designing Structure to Fit Global strategy
- Building Global Capabilities
- Cultural Differences in Coordination and Control
- The Transnational Model of Organization
- Reflection & Practices – Alcan, Brandaid, ABB, McCain Foods, Sony
- Cases –Ivanhoe Mines, The “Pianistic Other” in Shnezhn

Part 4 – Internal Design Elements

Week 7 - Mod 7 - Manufacturing & Service Technologies

- Core Business Process- Manufacturing Technology Strategy
- Advanced Manufacturing Systems - CIM, FMS, Lean, etc
- Service Technology
- Support Technology
- Department Design
- Workflow Across the Enterprise
- Impact of Technology on Job Design (Socio Technical Systems)
- Reflection & Practices - General Electric Quebec, Maple Leaf Foods, Doepker, Garrison Guitars, Dell, Home Depot, Aravind Eye Hospital, Sports Teams, Pret a Manager
- Cases –Bistro Technology, Metropolitan College

Week 8 - Mod 8 - IT and E Business Information Technology Evolution

- IT technology Evolution
- IT for decision for making and control
- Adding Strategic Value: Strengthening Internal Coordination
- Adding Strategic Value: Strengthening external relationship
- IT impact on Organizational Design

- Reflection & Practices - “Mr Fix- it”, Brampton Hospital, eBay, Ontario Hospital Assoc, Reflection & Buy, Montgomery Watson Harza, Northern Blue Publishing
- Cases –e-Bay, Product X

Week 9- Mod 9 - Org Size Lifecycle & Decline

- Organizational Size - is bigger better
- Organizational Life Cycle
- Organizational Bureaucracy
- Bureaucracy in Changing World
- Organizational Control Strategies
- Organizational Decline and Downsizing
- Reflection & Practices - Interpol, Grackle Coffee Group, United Parcel Service, Imperial Oil, Dofasco, Labatt Brewing, Eatons
- Cases –Daily Grind Coffee Inc, I Love Rewards Inc

Part 5 – Managing Dynamic Processes

Week 10- Mod 10 - Organizational Culture & Ethics

- What is Organizational Culture?
- Organizational Design and Culture
- Organizational Culture, Learning and Performance
- Ethical Values and Social Responsibility
- Sources of Ethical Values
- How Leaders Shape Culture and Ethics
- Organizational Culture and Ethics in a Global Environment
- Reflection & Practices - Birks & Mayors Inc, Sandvine, Mountain Equipment, West Jet, Lululemon, Telus,
- Cases –Gap Healthcare Group, Queens University Canada

Week 11 - Mod 11 - Innovation and Change Management

- The Strategic Role of Change and Innovation
- Elements for Successful Change
- New Products and Services
- Strategy and Structural Change
- Cultural Change
- Strategies for Implementing and Managing Change
- Reflection & Practices – Toyota, Google, Cirque du Soleil, Pratt & Whitney Canada, Procter & Gamble, West Jet Airlines Ltd
- Cases – Toyota Motors, Defense Research development, Osoyoos Band

Week 12- Mod 12 - Decision Making Process

- Individual Decision Making
- Organizational Decision Making
- The Learning Organization
- Contingency Decision Making

- Decision Making in Complex Environments (high velocity, mistakes, escalation)
- Reflection & Practices - Anishinabek Nation, Alberta Consulting, Paramount Pictures, Gillette, Encyclopedia Britannica, Huckabees, Bombardier, Carnegie Mellon University Model
- Cases –The Big Carrot, Nackawic Community

Week 12 - Mod 13 – Conflict Power and Politics

- Socio Political Management
- Intergroup Conflict in Organizations
- Power and Organization Development
- Political Processes in Organizations
- Using Power, Politics and Collaborative Strategies
- Reflection & Practices - Toronto Maple Leafs, Apotex, Liberal Party of Canada, Brotherhood of Locomotive “Engineers”, Canadian Pacific Railway, Yahoo
- Cases –Irving Dynasty, National Hockey League