UNSW Course Outline

MGMT3004 Solving Complex Strategy and Policy Problems - 2024

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General Course Information

Course Code : MGMT3004
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : UNSW Business School
Academic Unit : School of Management and Governance
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

In an increasingly complex, uncertain and interconnected world, systems thinking and analysis

skills have become a key requirement for managers and policy makers. This course introduces leading edge systems thinking tools that we will apply to solve real business strategy and social policy problems. This includes working throughout the term on a live case with a senior manager from a local organisation (i.e., a not-for profit organisation, government agency or commercial business), culminating in presenting recommendations to the senior management team at the end of the term. Using systems thinking to communicate solutions to complex problems, working as an effective team member, and influencing others to provide innovative strategies and solutions will strengthen students' employability. Also, for BCom students MGMT3004 will satisfy your program requirements to complete a Final Year Synthesis course and also helps you earn myBCom points.

Relationship to Other Courses

Final year undergraduates from any School within the Business faculty and from any other faculty within UNSW are welcome to enrol in this course. For BCom students this course will satisfy your program requirements to complete a Final Year Synthesis course and also helps you earn myBCom points. In this course you will learn to apply systems thinking and analysis tools to solve complex problems. The course aims to help you:

- Develop skills to solve complex strategy and social policy problems using systems thinking and analysis tools;
- Apply systems thinking to map the structure of a complex system and identify the feedback loops that drive dynamics;
- Learn to build simple simulation models of business or social problems and explore what-if scenarios to test the consequences of alternative strategies and policies.

Companies, research institutes, non-profit organisations and government agencies increasingly apply systems thinking and modelling to analyse a wide range of complex problems and challenges. For example, one of the largest global resource companies is currently building a systems modelling group in Australia to develop solutions for some the most important challenges facing the company. Also, top policymakers and scientists worldwide use systems models to analyse the emissions reduction pledges countries make as part of the United Nations Framework Convention on Climate Change. In addition, many consulting companies, accounting firms and investment banks have systems modelling and analysis groups to tackle the most difficult and complex client issues. Developing systems thinking and analysis skills will improve your ability to diagnose, solve and communicate solutions to complex strategy and policy problems; all of which enhance your employability.

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Synthesise multi-disciplinary knowledge about complex business and social problems using a systems thinking perspective.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO2 : Apply systems thinking and modelling concepts and tools to analyse and develop recommendations to solve complex strategy and policy problems.	• PLO2 : Problem Solving
CLO3 : Communicate a compelling written report and presentation of the findings from a systems thinking and modelling analysis suitable for a managerial audience.	• PLO3 : Business Communication • PLO6 : Global and Cultural Competence
CLO4 : Collaborate and work in a team to apply systems thinking and modelling to identify and test recommended business strategies and/or social policies.	• PLO4 : Teamwork
CLO5 : Apply systems thinking and modelling tools to develop responsible business thinking, underpinned by sustainability considerations.	• PLO5 : Responsible Business Practice
CLO6 : Develop systems thinking skills to encourage forward thinking and identify innovative strategies, while effectively influencing others to achieve desired results.	• PLO7 : Leadership Development

Course Learning Outcomes	Assessment Item
CLO1 : Synthesise multi-disciplinary knowledge about complex business and social problems using a systems thinking perspective.	• Quizzes during class • Defining a complex problem and developing a dynamic hypothesis (Individual) • Systems thinking and analysis live case project report and presentation (Group)
CLO2 : Apply systems thinking and modelling concepts and tools to analyse and develop recommendations to solve complex strategy and policy problems.	• Defining a complex problem and developing a dynamic hypothesis (Individual) • Systems thinking and analysis live case project report and presentation (Group)
CLO3 : Communicate a compelling written report and presentation of the findings from a systems thinking and modelling analysis suitable for a managerial audience.	• Systems thinking and analysis live case project report and presentation (Group)
CLO4 : Collaborate and work in a team to apply systems thinking and modelling to identify and test recommended business strategies and/or social policies.	• Team member evaluations (Individual) • Systems thinking and analysis live case project report and presentation (Group)
CLO5 : Apply systems thinking and modelling tools to develop responsible business thinking, underpinned by sustainability considerations.	• Systems thinking and analysis live case project report and presentation (Group)
CLO6 : Develop systems thinking skills to encourage forward thinking and identify innovative strategies, while effectively influencing others to achieve desired results.	• Team member evaluations (Individual) • Systems thinking and analysis live case project report and presentation (Group)

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

The broad approach to learning and teaching in MGMT3004 includes:

1) Engaging Ideas and Experiences: Students are motivated to learn when they are engaged with exciting and stimulating ideas and experiences.

2) Active Learning: Learning is an active process involving a conscious intention on a students part to make sense of new ideas or experiences. Learning involves action (the trying out of new ideas) and reflection (based on feedback).

3) Authentic Learning: Learning is situated and authentic when students develop their knowledge and capabilities in meaningful disciplinary, professional, and personal contexts.

4) Building connections: Learning experiences should connect new ideas with students' existing knowledge, skills and values, while extending and challenging their current ways of thinking and acting.

Additional Course Information

This course focuses on mapping and analysing the interconnections among elements of complex strategy and policy problems, and designing solutions that deliver successful outcomes. You will learn a flexible and powerful approach to structuring managerial problems and visualising the interconnectedness of business, social and environmental systems. You will develop systems thinking and modelling skills for mapping the causal relationships of an enterprise, enhancing your mental models and exploring the dynamic consequences of alternative solutions through simulating what-if scenarios. As the complexity and interdependence of our organisations, industries, and social institutions continues to increase, systems thinking and modelling skills have become crucial to identify key leverage points in the system.

The course is delivered in an innovative, active-learning lecture plus tutorial format. We will meet face-to-face each week on campus and all class sessions involve students applying and practicing the systems thinking and modelling tools we cover. The "lecture" sessions will be run more like a symposium and workshop rather than a traditional lecture. The weekly tutorials will all be hands-on workshops. We will also meet multiple times throughout the term with the senior manager from the live case organisation; these meetings will all be held within our normal class times but may involve meeting off campus at the live case organisation's premises.

You are expected to complete the assigned readings, videos and other course materials BEFORE each class session. All course materials will be posted ahead of time in the Moodle course site.

Systems thinking and modelling is not a spectator sport! To get the most out of this course, you have to practice the concepts and tools covered in the course repeatedly throughout the term to actually build these skills. The more effort you put in each week (both inside and outside of class sessions), the more you will enjoy and learn from the course.

I expect all students to be proactive learners. Successful completion of of the course requires about 10 hours per week of study time. By the end of this course, you will have learned a powerful approach to solving complex business, social, and environmental problems.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Quizzes during class Assessment Format: Individual	20%	Start Date: Weekly Due Date: Weekly of weeks 2 – 9	• PLO1 : Business Knowledge
Defining a complex problem and developing a dynamic hypothesis (Individual) Assessment Format: Individual	35%	Start Date: Week 2 Due Date: 14/03/2024 04:00 PM	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
Systems thinking and analysis live case project report and presentation (Group) Assessment Format: Group	30%	Due Date: 22/04/2024 04:00 PM	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
Team member evaluations (Individual) Assessment Format: Individual	15%	Start Date: Not Applicable Due Date: 24/04/2024 04:00 PM	• PLO4 : Teamwork • PLO7 : Leadership Development

Assessment Details

Quizzes during class

Assessment Overview

During each weekly class session of Weeks 2 – 9, a short quiz will be given that covers the main points from the previous class session and/or the required reading for the current class session.

Assess PLO1

Course Learning Outcomes

- CLO1 : Synthesise multi-disciplinary knowledge about complex business and social problems using a systems thinking perspective.

Detailed Assessment Description

The purpose of these quizzes is to motivate you to review your notes about the prior session

ahead of class and to undertake the required reading and other preparation for the current session. Each quiz will take 5-10 minutes. The instructor will determine the timing of the quiz during each class session. The weekly quizzes may be given in either the lecture session or tutorial session each week and you must be in attendance to complete the quiz. There are 7 quizzes throughout the term and each student's lowest quiz grade throughout the term will not be included (i.e., will be dropped) in determining the final course grade. In sum, all of the quizzes will add up to 20% of the marks for the course.

Assignment submission Turnitin type

This is not a Turnitin assignment

Defining a complex problem and developing a dynamic hypothesis (Individual)

Assessment Overview

In this assessment you will demonstrate that you can define a complex problem and apply systems thinking mapping and diagramming tools to develop a dynamic hypothesis to explain the problematic behaviour over time

Assess PL01, PL02, PL03

MyBCom Course points for PLO2.

Course Learning Outcomes

- CLO1 : Synthesise multi-disciplinary knowledge about complex business and social problems using a systems thinking perspective.
- CLO2 : Apply systems thinking and modelling concepts and tools to analyse and develop recommendations to solve complex strategy and policy problems.

Detailed Assessment Description

Detailed instructions for this assessment will be posted in Moodle early in the term.

Assessment Length

8 page report

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Systems thinking and analysis live case project report and presentation (Group)

Assessment Overview

In this assessment you will work in a team to apply systems thinking and analysis tools to solve a complex, dynamic business strategy or social policy issue from scratch.

Assesses PLO1, PLO2, PLO3, PLO4, PLO5, PLO7

BCom Students: MyBCom Course points for PLO4.

Course Learning Outcomes

- CLO1 : Synthesise multi-disciplinary knowledge about complex business and social problems using a systems thinking perspective.
- CLO2 : Apply systems thinking and modelling concepts and tools to analyse and develop recommendations to solve complex strategy and policy problems.
- CLO3 : Communicate a compelling written report and presentation of the findings from a systems thinking and modelling analysis suitable for a managerial audience.
- CLO4 : Collaborate and work in a team to apply systems thinking and modelling to identify and test recommended business strategies and/or social policies.
- CLO5 : Apply systems thinking and modelling tools to develop responsible business thinking, underpinned by sustainability considerations.
- CLO6 : Develop systems thinking skills to encourage forward thinking and identify innovative strategies, while effectively influencing others to achieve desired results.

Detailed Assessment Description

The purpose of this assessment is to allow you to work through the challenge of applying systems thinking and analysis to solve a complex problem facing senior managers or policymakers in a live case organisation. Your team will apply all the steps of systems thinking and analysis to develop recommendations that you will present to the senior manager(s). We will meet with the senior manager from the live case organisation multiple times throughout the term and work on the analysis in our weekly tutorials. At the end of the term, your team will present recommendations to the live case manager and also submit an accompanying report and fully documented system dynamics model. Further details for this assessment will be posted in Moodle early in the term.

Assessment Length

8 page report and a fully documented model file

Assessment information

We will schedule a meeting with the senior manager from the live case organisation in Week 11 for all teams to present your systems thinking and modelling analysis and recommendaitons.

The exact date and time for this meeting will be confirmed early in the term.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Team member evaluations (Individual)

Assessment Overview

Students are expected to proactively engage and consistently contribute to the learning experience. Team members will rate and provide feedback on the contributions of each member of their team, and each individual will reflect on the feedback they receive from their peers about how to develop their system thinking and analysis skills to encourage forward thinking and influence others.

Assesses PLO4, PLO7.

Course Learning Outcomes

- CLO4 : Collaborate and work in a team to apply systems thinking and modelling to identify and test recommended business strategies and/or social policies.
- CLO6 : Develop systems thinking skills to encourage forward thinking and identify innovative strategies, while effectively influencing others to achieve desired results.

Detailed Assessment Description

The live case project in assessment #3 involves an active collaboration among a small team of students. The expectation in the BCom program is that all students in a team contribute positively to the live case project and that students work together to overcome any challenges their team might face when trying to accomplish the task. In other words, self-awareness, proactivity and leadership when engaging in teamwork are expected from all students. In order to reward those students who meet these expectations, in this course all teammates will have the opportunity to assess whether each of their team members has met these expectations.

After the team presentations for assessment #3, you will receive a link to complete an online peer evaluation survey for each member of your team. When completing the online peer survey, please add in a brief comment for each team member on all questions to justify your rating. Your ratings and comments for each team member will be anonymous, but will be shared with them (along with the ratings and comments from every other team member).

Assessment information

Completing the surveys for all of your team members should take about 15 minutes.

Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

Short extensions are not available for the assessments in this course. Requests for extensions for all assessments must be applied through UNSW's special consideration unit (https://www.student.unsw.edu.au/special-consideration).

Grading Basis

Standard

Requirements to pass course

Your regular attendance and active engagement in all scheduled classes is expected in this course. We will have a quiz each week, in either the lecture or tutorial session, and there will be no make up quizzes.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Applying Systems Thinking and Modelling to Solve Complex Problems
Week 2 : 19 February - 25 February	Lecture	Defining and Framing Complex Problems Quiz 1 (in class)
Week 3 : 26 February - 3 March	Lecture	Developing a Dynamic Hypothesis for a Complex Problem Quiz 2 (in class)
Week 4 : 4 March - 10 March	Lecture	Mapping Stocks, Flows, and Feedback Loops Quiz 3 (in class)
Week 5 : 11 March - 17 March	Lecture	Building and Analyzing an Initial Model of a Complex Problem Quiz 4 (in class) Assignment 2 due on Thursday March 14 by 4pm
Week 6 : 18 March - 24 March	Other	Flexibility Week (No Lecture or Tutorial)
Week 7 : 25 March - 31 March	Lecture	Improving Models of Complex Problems through Multiple Iterations Quiz 5 (in class)
Week 8 : 1 April - 7 April	Lecture	Testing and Building Confidence in Models of Complex Problems Quiz 6 (in class)
Week 9 : 8 April - 14 April	Lecture	Designing and Evaluating Alternative Strategies and Policies Quiz 7 (in class)
Week 10 : 15 April - 21 April	Lecture	Avoiding Common Systems Modelling Pitfalls
Week 11 : 22 April - 28 April	Assessment	Assignment 3 Team Report due on Monday April 22 by 4pm Assignment 4 due on Wednesday April 24 by 4pm Team Presentations of Live Case Recommendations (to be scheduled in Week 11)

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

Each week includes a Lecture + Tutorial and the topics covered in Lecture will be built on and expanded in the weekly Tutorial workshops. There are no lectures or tutorials that fall on public holidays in Term 1 2024, so there will not be a need for any make up class sessions.

Course Resources

Prescribed Resources

All course resources will be posted in Moodle in advance, including readings, videos, and other materials.

Course Evaluation and Development

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the myExperience survey, which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

This was a new course in the BCom in 2023. However, Professor Shayne Gary taught a similar course previously at London Business School (in the UK) and also at Aarhus University (in Denmark). In addition, a similar course has run successfully for many years at the MIT Sloan School of Management (the business school of the Massachusetts Institute of Technology). The evaluations from 2023 were very positive, while also identifying some areas for improvement. For example, we have revised the course to cover the Week 1 content more quicky and move forward some content from Week 2. We have also moved the team presentations to Week 11 to provide more time for the team projects at the end of the term.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Facilitator in charge	Shayne Gary				Send an email to arrange a meeting at a mutually convenient time	No	Yes

Other Useful Information

Academic Information

COURSE POLICIES AND SUPPORT

The Business School expects that you are familiar with the contents of this course outline and the UNSW and Business School learning expectations, rules, policies and support services as listed below:

- Program Learning Outcomes
- Academic Integrity and Plagiarism
- Student Responsibilities and Conduct
- Special Consideration
- Protocol for Viewing Final Exam Scripts
- Student Learning Support Services

Further information is provided on the key policies and support page.

Students may not circulate or post online any course materials such as handouts, exams, syllabi or similar resources from their courses without the written permission of their instructor.

STUDENT LEARNING OUTCOMES

The Course Learning Outcomes (CLOs) – under the Outcomes tab – are what you should be able to demonstrate by the end of this course, if you participate fully in learning activities and successfully complete the assessment items.

CLOs also contribute to your achievement of the Program Learning Outcomes (PLOs), which are developed across the duration of a program. PLOs are, in turn, directly linked to UNSW graduate capabilities. More information on Coursework PLOs is available on the key policies and support page. For PG Research PLOs, including MPDBS, please refer to the UNSW HDR Learning Outcomes.

Academic Honesty and Plagarism

As a student at UNSW you are expected to display academic integrity in your work and interactions. Where a student breaches the UNSW Student Code with respect to academic integrity, the University may take disciplinary action under the Student Misconduct Procedure. To assure academic integrity, you may be required to demonstrate reasoning, research and the

process of constructing work submitted for assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Student Code, it is strongly recommended that you complete the Working with Academic Integrity module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

Submission of Assessment Tasks

SPECIAL CONSIDERATION

You can apply for special consideration when illness or other circumstances beyond your control interfere with your performance in a specific assessment task or tasks, including online exams. Students studying remotely who have exams scheduled between 10pm and 7am local time, are also able to apply for special consideration to sit a supplementary exam at a time outside of these hours.

Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable. To apply, and for further information, see Special Consideration on the UNSW Current Students page.

Special consideration applications will be assessed centrally by the Case Review Team, who will update the online application with the outcome and add any relevant comments. The change to the status of the application immediately sends an email to the student and to the assessor with the outcome of the application.

Please note the following:

1. Applications can only be made through Online Services in myUNSW (see the UNSW Current Students page). Applications will not be accepted by teaching staff. The lecturer-in-charge/ course coordinator will be automatically notified when your application is processed.
2. Applying for special consideration does not automatically mean that you will be granted a supplementary exam or other concession.
3. If you experience illness or misadventure in the lead up to an exam or assessment, you must submit an application for special consideration, either prior to the examination taking place, or prior to the assessment submission deadline, except where illness or misadventure prevent you from doing so.
4. If your circumstances stop you from applying before your exam or assessment due date, you must apply within 3 working days of the assessment or the period covered by your supporting documentation.

5. Under the UNSW Fit To Sit/Submit rule, if you sit the exam/submit an assignment, you are declaring yourself well enough to do so and are cannot subsequently apply for special consideration.
6. If you become unwell on the day of – or during – an exam, you must stop working on your exam, advise your course coordinator or tutor and provide a medical certificate dated within 24 hours of the exam, with your special consideration application. For online exams, you must contact your course coordinator or tutor immediately via email, Moodle or chat and advise them you are unwell and submit screenshots of your conversation along with your medical certificate and application.
7. Special consideration requests do not allow the awarding of additional marks to students.

Further information on Business School policy and procedure can be found under "Special Consideration" on the key policies and support page.

LATE SUBMISSION PENALTIES

For assessments other than examinations, late submission will incur a penalty of 5% per day or part thereof (including weekends) from the due date and time. An assessment will not be accepted after 5 days (120 hours) of the original deadline unless special consideration has been approved. An assignment is considered late if the requested format, such as hard copy or electronic copy, has not been submitted on time or where the 'wrong' assignment has been submitted.

For assessments which account for 10% or less of the overall course grade, and where answers are immediately discussed or debriefed, the LIC may stipulate a different penalty. Details of such late penalties will be available on the course Moodle page.

FEEDBACK ON YOUR ASSESSMENT TASK PERFORMANCE

Feedback on student performance from formative and summative assessment tasks will be provided to students in a timely manner. Assessment tasks completed within the teaching period of a course, other than a final assessment, will be assessed and students provided with feedback, with or without a provisional result, within 10 working days of submission, under normal circumstances. Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Faculty-specific Information

PROTOCOL FOR VIEWING FINAL EXAM SCRIPTS

UNSW students have the right to view their final exam scripts, subject to a small number of very specific exemptions. The UNSW Business School has set a protocol under which students may view their final exam script. Individual schools within the Faculty may also set up additional local processes for viewing final exam scripts, so it is important that you check with your School.

If you are completing courses from the following schools, please note the additional school-specific information:

- Students in the **School of Accounting, Auditing & Taxation** who wish to view their final examination script should also refer to this page.
- Students in the **School of Banking & Finance** should also refer to this page.
- Students in the **School of Information Systems & Technology Management** should also refer to this page.

COURSE EVALUATION AND DEVELOPMENT

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the myExperience survey, which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

QUALITY ASSURANCE

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

TEACHING TIMES AND LOCATIONS

Please note that teaching times and locations are subject to change. Students are strongly advised to refer to the Class Timetable website for the most up-to-date teaching times and locations.