Newcastle Business School

GSBS6382: Applied Economic Evaluation in Healthcare Online
2024

MISSION: To develop a unique business school identity which is distinctive in the marketplace and provides a clear value proposition for students. This will be achieved by embedding the themes of entrepreneurship and innovation, digitalisation and data within our programs and embracing sustainability, work integrated learning and a commitment to social justice.

OVERVIEW

Course Description

The study of economics introduces a unique perspective on healthcare service and system evaluation. Resources are finite for the range of a society's healthcare needs and wants. As a result, choices must be made about how available resources will be best used. This course will introduce participants to economic evaluation principles and their application to real life scenarios in healthcare.
The course is designed as an introduction to applied economic evaluation in healthcare. Students will gain knowledge of core economic principles before learning the necessary steps leading up to the conduct of an economic evaluation. The course provides students with the opportunity to apply practical experience in a range of economic evaluations used in front line healthcare. Students will gain an understanding of how economic evaluation can, and is used to inform health care decision-making.

Sustainable Development Goals

Contact Hours

Online Activity
Online
36 hour(s) per Term Full Term starting Week 1
online equivalent of 36 hrs face to face

Workshop
Face to Face On Campus
36 hour(s) per Term Full Term starting Week 1
Face to face 36 hours per term or online equivalent.

Unit Weighting
10 units

Workload
Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

Please refer to the course CANVAS site for details of teaching staff for ALL course offerings. The primary contact for courses is the Course Coordinator, whose details are listed on the course CANVAS site.

Student Consultation

A minimum of one (1) hour of consultation per week. Please see course CANVAS site for details of time and location.

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Explain the complexity of decision-making in healthcare and the role of economic evaluation in informing decisions and policy design.
2. Critically appraise a randomised controlled trial and a health economic evaluation and be familiar with a range of priority setting techniques.
3. Synthesis evidence to develop and strengthen an economic evaluation.
4. Understand the principles and perform steps of cost-effectiveness, cost-utility and cost-benefit analysis.
5. Use economic date to construct a Budget Impact Statement
6. Understand and use preference elicitation measures for a value-based approach to economic evaluation.

COURSE OUTLINE

www.newcastle.edu.au
CRICOS Provider 00109J

ASSESSMENTS

This course has **3** assessments. Each assessment is described in more detail in the sections below:

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Problem-Based Learning Assignment	Friday – Week 4 by 11:59 pm	Individual	30%	1, 3
2	Report Critique	Monday – Week 9 by 11:59 pm	Individual	30%	1, 2, 4
3	Evaluation Design	Friday – Week 13 by 11:59 pm	Individual	40%	4, 5, 6

Please note: students are advised that all assessments must be submitted in English. Assessments not submitted in English will receive a mark of zero.

Results of individual assessment items and final results, including those provided via the Learning Management System (LMS) are 'unofficial results' until they are confirmed as finalised by the School Assessment Body and the Head of School or delegate. Finalised results are released directly to students on the Fully Graded Date of the relevant Semester/Trimester.

Time referenced is time in Newcastle NSW

Late Submissions	The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. **Note**: this applies equally to week and weekend days.

Assessment 1 – Problem-Based Learning Assignment

Assessment Type Case Study/Problem Based Learning
Purpose To assess and evaluate knowledge and understanding of the role of economic evaluation in informing healthcare decisions and policy design; and to assess ability to synthesise evidence.
Description Students must answer open-ended questions on concepts reviewed in class and demonstrate their knowledge of the practical aspects of economic evaluation.
Weighting 30%
Length Maximum of 1500 words
Due Date Friday – Week 4 by 11:59 pm
Submission Method Online via course CANVAS site
Assessment Criteria The problem-based learning assignment will test your ability to synthesise evidence for real world problems and solutions and the clarity and justification of your argument based on the evidence.
Return Method Online via course CANVAS site
Feedback Provided General feedback will be provided in class for reflection and improvement.

Assessment 2 – Report Critique

Assessment Type Report
Purpose To assess and evaluate knowledge and application of the key steps in an economic evaluation framework.
Description Students must review and critically evaluate an economic evaluation conducted alongside a trial.
Weighting 30%
Length Maximum of 2000 words
Due Date Monday – Week 9 by 11:59 pm
Submission Method Online via course CANVAS site
Assessment Criteria The report critique assignment will test your understanding of the steps and features of an economic evaluation and your critical thinking and development of arguments around decision making in healthcare.
Return Method Online via course CANVAS site
Feedback Provided General feedback will be provided in class for reflection and improvement.

Assessment 3 – Evaluation Design

Assessment Type	Written Assessment – short answer
Purpose	To assess and evaluate understanding and application of the principles of economic evaluations, budget impact analyses and preference elicitation measures.
Description	Students must perform the steps of an economic evaluation of the described health intervention, including steps of decision analytic modelling and budget impact analysis.
Weighting	40%
Length	Refer to course CANVAS site
Due Date	Friday - Week 13 by 11:59 pm (week following last week of class)
Submission Method	Online via course CANVAS site
Assessment Criteria	The evaluation design assignment will test your ability to use data and perform the steps of economic evaluations, budget impact analyses and preference elicitation measures.
Return Method	Online via course CANVAS site
Feedback Provided	Feedback will be made available for review by students, upon request, in a controlled and monitored setting.

SYLLABUS

Course Content

Topics in the course include but are not limited to the following:

1. An introduction to economic evaluation principles and their application to health care decision making.
2. Costs and consequences.
3. The process and steps of performing a health economic evaluation
4. Using economic evaluation for decision making
5. Value based health economics and decision making

Course Materials

Required Text:

Drummond, Michael F., et al. *Methods for the economic evaluation of health care programmes*. Oxford university press, 2015.

ISBN: 9780191643583

Please refer to the course CANVAS site for details of additional recommended texts.

SCHEDULE

Week	Topic	Class Preparation	Workshop Activities
1	Introduction to course, decisions in healthcare, introduction to health economics	**Read:** chapter 1 and 2 of required text	
2	Frameworks of Health Technology Assessment (HTA) and economic evaluation	**Read:** chapter 8, section 8.1 and 8.2, of required text **Read:** Padwal, R. S., Majumdar, S. R., Klarenbach, S., Birch, D. W., Karmali, S., McCargar, L., ... & Sharma, A. M. (2010). The Alberta population-based prospective evaluation of the quality of life outcomes and economic impact of bariatric surgery (APPLES) study: background, design and rationale. *BMC Health Services Research*, *10*(1), 1-11.	
3	Measures of cost, Capital costs, inflation, exchange rates	**Read:** chapter 7 of required text	
4	Cost exercises and discounting of costs and benefits	**Read:** chapter 7 of required text **Read:** Multicentre Aneurysm Screening Study Group. (2002). Multicentre aneurysm screening study (MASS): cost effectiveness analysis of screening for abdominal aortic aneurysms based on four year results from randomised controlled trial. *BMJ: British Medical Journal*, *325*(7373), 1135.	Costing a pharmaceutical trial **Assessment 1 due**: Friday – Week 4 by 11:59 pm
5	Measuring health effects from clinical studies for cost-effectiveness analyses	**Read:** chapter 5, section 5.1 and 5.2 of required text **Read article for critical appraisal workshop activity:** Sabatine, M. S., Giugliano, R. P., Keech, A. C., Honarpour, N., Wiviott, S. D., Murphy, S. A., ... & Pedersen, T. R. (2017). Evolocumab and clinical outcomes in patients with cardiovascular disease. *New England Journal of Medicine*, *376*(18), 1713-1722.	Critical appraisal of randomised controlled trials (RCTs)
6	Direct and indirect (generic) utility measurement and contingent valuation for cost-utility and cost-benefit analyses	**Read:** chapter 5 and 6 of required text	
7	Types of economic evaluation and steps	**Read:** chapter 4 of required text	Performing a cost effectiveness analysis
8	Decision analytic modelling, decision trees, markov models and monte-carlo simulations	**Read:** chapter 8 and 9 of required text	Decision modelling exercises
9	Uncertainty and sensitivity analyses	**Read:** chapter 3 and 11 of required text **Read article for critical appraisal workshop activity:** Kuznik, A., Bégo-Le-Bagousse, G., Eckert, L., Gadkari, A., Simpson, E., Graham, C. N., ... & Sullivan, S. D. (2017). Economic evaluation of dupilumab for the treatment of moderate-to-severe atopic dermatitis in adults. *Dermatology and therapy*, *7*(4), 493-505.	Critical appraisal of economic evaluation **Assessment 2 due**: Monday – Week 9 by 11:59 pm

10	Budget Impact Assessment (BIA)	**Read the two articles for the BIA workshop activity:** Plunkett A, Merlin K, Gill D et al. The frequency of common non-malignant skin conditions in adults in central Victoria, Australia. International Journal of Dermatology (1999) 38, 901-908. Sullivan SD, Mauskopf JA, Augustovski F et al. Budget Impact Analysis – Principles of Good Practice: Report of the ISPOR 2012 Budget Impact Analysis Good Practice II Task Force. Value in Health 17 (2014): 5-14.	Budget Impact Assessment (BIA) exercises
11	Priority setting tools and methods; Value based healthcare and a value based approach to economic evaluation; regulatory and reimbursement bodies	**Read:** chapter 5 and 6 of required text	
12	Preference elicitation exercises, discrete choice experiments (DCEs) and their integration with economic evaluation	**Read the following two articles:** Soekhai, V., de Bekker-Grob, E. W., Ellis, A. R., & Vass, C. M. (2019). Discrete choice experiments in health economics: past, present and future. *Pharmacoeconomics*, *37*(2), 201-226. Soekhai, V., Whichello, C., Levitan, B., Veldwijk, J., Pinto, C. A., Donkers, B., ... & de Bekker-Grob, E. W. (2019). Methods for exploring and eliciting patient preferences in the medical product lifecycle: a literature review. *Drug discovery today*, *24*(7), 1324-1331. Watch additional video on DCEs.	
			Assessment 3 due: Friday of week 13 by 11:59 pm (week following last week of classes).
Please note: if a class/lecture is scheduled on a public holiday, a make-up lecture may be announced by the course coordinator on the course CANVAS site.			

CONTACTS

School Office

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Newcastle
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ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:

- CANVAS Course Site: Students will receive communications via the posting of content or announcements on the CANVAS course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the Student Conduct Rule.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.

Adverse Circumstances	The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: 1. the assessment item is a major assessment item; or 2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system; 3. you are requesting a change of placement; or 4. the course has a compulsory attendance requirement. Before applying you must refer to the Adverse Circumstances Affecting Assessment Items Procedure available at: https://policies.newcastle.edu.au/document/view-current.php?id=236
Important Policy Information	The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures that support a safe and respectful environment at the University.

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.