Contents

Learning Outcome		EA Stage 1 Competencies
2.	Understand cost concepts, cash flows, their estimation and interest formulae. Also, to understand various depreciation methods and learn about the effect of income tax on economy studies	PE1.2, PE1.3, PE3.4
3.	Be familiar with various methods for economy studies and comparing alternative investments	PE 2.3, PE 2.4, PE3.4
4.	Understand the role of probability analysis in decision making and decision tree analysis	PE1.1, PE 1.2, PE 1.3, PE2.4, PE3.4
5.	Value information	PE 2.1, PE 2.2, PE 2.3, PE3.1 - PE 3.6
6.	Carry out Monte Carlo simulations	PE 2.1, PE 2.2, PE 2.3, PE2.4

4. Teaching strategies

Readings and lectures will be used to introduce and explain the theoretical foundations of various economic analysis principles. Problem solving exercises f66.3 841.92 reW*ses4(use04 Tf12ID 19/La

Course schedule

Module A

Week	Topic	Text reference	Demonstration exercises
1	Engineering economic decisions, cost concepts, time value of money, interest formulae	1,4	4.1, 5,6, 8, 31 ,36, 57, 65, 66, 68, 70, 71, 73, 77, 79, 80, 81, 82, 85, 91, 111, 115
2	Present worth(NPV)analysis, future worth, annual worth	5	5.3, 4, 21, 23, 24, 27, 32
3	Internal rate of return, payback period method		

6. Assessment

The assessment will be through class tests and a final examination. The various parts of the course contributing to the overall grade are as follows:

Assessment overview

Assessment	**Group Project?** (# Students per group)	**Length**	**Weight**	**Learning outcomes assessed**	**Assessment criteria**	**Due date and submission requirements**	**Deadline for absolute fail**	**Marks returned**
Module A class test	No	1.25 hrs	20%	1-3	Correct descriptions, correct calculations, logical conclusions	Week 4	N/A	Two weeks after submission
Module B class test	No	1.25 hrs	20%	4	Correct descriptions, correct calculations, logical conclusions	Week 9	N/A	Two weeks after submission
Final exam	No	2 hrs	60% overall: (30% Module A) (30% Module B)	1-6	Correct descriptions, correct calculations, logical conclusions	Exam period, date TBC	N/A	During results period

Examinations

The class test consists of short questions that require short descriptive answers and/or short calculations.

The final examination for the course is a written end-of-session examination of two hours duration and will include material covered in the whole course (Sections 1 and 2). The final exam has questions that require more substantial descriptive answers and/or calculations.

You must be available for all tests and examinations. Final examinations for each course are held during the University examination periods: February for Summer Term, May for T1, August for T2, and November/December for T3.

Please visit myUNSW for Provisional Examination timetable publish dates.

For further information on exams, please see the Exams webpage.

Calculators

You will need to provide your own calculator, of a make and model approved by UNSW, for the examinations. The list of approved calculators is shown at https://student.unsw.edu.au/exam-approved-calculators-and-computers

It is your responsibility to ensure that your calculator is of an approved make and model, and

allowed into the examination room.

resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first year, such as stealing another stude or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:
www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

10. Administrative matters

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Computing Facilities
- (a)175.32clTQ85gaes/MCI2 reW*nEBTmam(en-GB)>BDC q0.000008871 0 595.32 841.92 reW*nBT/F

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-