FIT5159
IT for financial decisions

Unit Guide

Semester 2, 2013

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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Table of Contents

FIT5159 IT for financial decisions - Semester 2, 2013

- Mode of Delivery.................................................................1
- Contact Hours......................................................................1
- Workload requirements......................................................1
- Unit Relationships................................................................1
  - Prohibitions.....................................................................1
  - Prerequisites....................................................................1
- Chief Examiner....................................................................1
- Campus Lecturer...............................................................2
  - Caulfield..........................................................................2
- Tutors................................................................................2
  - Caulfield..........................................................................2

Academic Overview.............................................................3
- Learning Outcomes...........................................................3

Unit Schedule..........................................................................4
- Assessment Summary.......................................................4
- Teaching Approach...........................................................5

Assessment Requirements....................................................6
- Assessment Policy............................................................6
- Assessment Tasks..............................................................6
  - Participation....................................................................6
- Examinations......................................................................8
  - Examination 1...............................................................8
- Learning resources............................................................8
- Feedback to you...............................................................9
- Extensions and penalties....................................................9
- Returning assignments......................................................9
- Resubmission of assignments...........................................9
- Referencing requirements..................................................9
- Assignment submission....................................................9
- Online submission...........................................................9
  - Recommended text(s)........................................................10
- Examination material or equipment...................................10

Other Information...............................................................11
- Policies..............................................................................11
  - Graduate Attributes Policy............................................11
- Student services..............................................................11
- Monash University Library...............................................11
- Disability Liaison Unit.....................................................11
- Your feedback to Us.........................................................12
- Previous Student Evaluations of this Unit.........................12
- Other................................................................................12
FIT5159 IT for financial decisions - Semester 2, 2013

This unit provides students with an understanding of the development and use of IT tools and techniques for modelling and decision support in the field of finance. The unit is designed to give students a broad understanding of the financial subsystems confronting business enterprises. The main focus, besides the traditional modelling of finance decision making process using spreadsheet tools, will be IT tools and related techniques that can aid in the analysis and interpretation of real financial problems confronting an enterprise. This unit will look at business related financial issues in the context of specific case studies.

Mode of Delivery
Caulfield (Day)

Contact Hours
2 hrs lectures/wk, 2 hrs laboratory/wk

Workload requirements
Students will be expected to spend a total of 12 hours per week during semester on this unit as follows:

For on-campus students:

- Lectures: 2 hours per week
- Tutorials/Lab Sessions: 2 hours per week per tutorial
- and up to an additional 8 hours in some weeks for completing lab and project work, private study and revision.

Unit Relationships

Prohibitions
BUS5030

Prerequisites
FIT9004 or FIT9017 or CSE9000 or BUS9520
Basic descriptive and inferential statistics, some financial accounting and basic business finance knowledge.

Chief Examiner

Associate Professor Vincent Cheng-Siong Lee
Campus Lecturer

Caulfield

Vincent Lee

Consultation hours: Friday 2:00 to 4:00 pm

Tutors

Caulfield

Vincent Lee

Kevin Liao

Anwaar Ulhaq

Consultation hours: To be advised
Academic Overview

Learning Outcomes

At the completion of this unit students will:

• understand the core foundations of finance, as appropriate to key financial analysis and decision making;
• understand the core technologies that support financial analysis and decision making;
• understand quantitative techniques supporting financial analysis and decision making;
• be able to apply the technologies and techniques studied to solving financial issues;
• be able to analyse financial solution requirements and select appropriate technical and quantitative decision aids;
• be able to interpret outputs from quantitative and technology based finance tools to aid in decision making.
## Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Register for lab/tute</td>
<td>No formal assessment and activities are undertaken in week 0</td>
</tr>
<tr>
<td>1</td>
<td>Characteristics, components and functions of IT systems for financial decisions</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Firm financial health, financial information sources and financial markets.</td>
<td>Tutorials start Week 2</td>
</tr>
<tr>
<td>3</td>
<td>Analysis of firm financial health-computation of financial ratios and interpretation of financial statements</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Financial statement analysis and modelling</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Risk-return, and formation of financial asset portfolios</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Analysis and evaluation of firm’s cash flow - DCF Modelling</td>
<td>Assignment 1 due Friday 6 September 2013, 4pm</td>
</tr>
<tr>
<td>7</td>
<td>Trading and Transaction Comps Modelling</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Financial knowledge representation using fuzzy logic, expert system and application example</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Financial clustering/classifications methods (ANN-SOM)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Fuzzy-Neuro inference system for financial markets</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Intelligent multiagent-based techniques/tools for financial variable forecasting</td>
<td>Assignment 2 due Friday 18 October 2013, 4pm</td>
</tr>
<tr>
<td>12</td>
<td>Current issues on IT for financial decision and revision</td>
<td>No formal assessment is undertaken in SWOT VAC</td>
</tr>
<tr>
<td>SWOT VAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Unit Schedule details will be maintained and communicated to you via your learning system.

## Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 - Assessment of financial health with spreadsheet tool</td>
<td>15%</td>
<td>Friday 6 September 2013, 4pm</td>
</tr>
<tr>
<td>Assignment 2 - Financial Investment Analysis using AHP based Expert Choice 11.5 software</td>
<td>20%</td>
<td>Friday 18 October 2013, 4pm</td>
</tr>
</tbody>
</table>
Unit Schedule

Continual assessment during tutorial Participation 5% Weekly (starting Week 2)

Examination 1 60 % To be advised

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer-assisted learning.
Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at
http://lib.monash.edu/tutorials/citing/

Assessment Tasks

Participation

Tutorial Participation will attract a 5% weighting towards the overall unit grade.

• Assessment task 1

  Title: Assignment 1 - Assessment of financial health with spreadsheet tool

  Description: This is an individual assignment. Students are required to download from the annual
report of a set of selected firm in a given industry. Students will learn how financial ratios
given in the financial statement in a firm’s annual report are computed and should be
interpreted based on the text information given in the annual reports. The deliverables
include a report with a spreadsheet model (Microsoft Excel).

  Weighting:
  15%

  Criteria for assessment:
  A written report discussing the questions to be answered which will be assessed based on:

  ♦ Working demonstration of the spreadsheet/mathematical model (30%);
  ♦ Interpretation of the numerical results and sensitivity analysis (40%);
  ♦ Software system and financial model flexibility (ease of use, etc) (30%).

  Due date: Friday 6 September 2013, 4pm

  Remarks: Upload Assignment 1 with signed assignment coversheet of FIT assignment coversheet to
FIT5159 - unit Moodle Assignment 1 submission site.

• Assessment task 2

  Title: Assignment 2 - Financial Investment Analysis using AHP based Expert Choice 11.5
  software

  Description: This assignment will teach students how to design an empirical test of a "Decision
Support System", based on AHP framework, which can be used for the selection of stocks
(financial assets) and the associated investment decision analysis. At the completion of
this assignment, students should be able to:
Innovatively use Expert Choice 11.5 software for designing a decision support system of financial decision analysis.
Formulate the stock selection and investment analysis problem for a given industry in competitive financial capital markets.
Demonstrate on the use of financial analytics and the choice of associated criteria and justifications.

Preparation of a group report using the following headings:

1. Introduction (background and motivation).
3. Using Expert Choice software to establish the goals, sub-goals, weights for each intrinsic, extrinsic, and criteria and relative priorities.

Demonstrate the understanding of the limitations of AHP and the need to represent investment criteria using fuzzy logic and Analytic Network processing framework where applicable.

Scope:

Each group of students is to apply the Analytic Hierarchy Process (AHP) based decision support system to explore investor behaviour, extrinsic and intrinsic factors in the evaluation, and selection and ranking of three or four listed alternative stocks in ASX for one of five industries:

1. Telecommunication
2. Mining
3. Retail
4. Energy, oil and gas
5. Property

The evaluation framework facilitates the selection of stock/firm and their investment analysis using multi-criterion decision-making criteria discussed in lectures 6 to 8. The pair-wise comparison procedure should be based on appropriate criteria (at least two criteria for each class of investor behaviour/objectives, intrinsic and extrinsic factors).

The framework captures individual behaviour and perceptions in a changing environment, in the form of judgments of investment criteria and stock alternatives arising from experience. The present perceptive and intuitive evaluation approach has managerial implications because it represents a useful addition to asset selection and investment analysis.

The deliverable will be a group report comprising information that complies with the assessment criteria stated.

**Weighting:**

20%

**Criteria for assessment:**

This group assignment will be graded according to the following criteria:

- Introduction and related literature review (20%)
- Technical content (calculation and criteria selection; hierarchy construction, priorities ranking, consistency verification, result tables and graphs) (30%)
- Results discussion (justifications of results reported in tables and graphs in figures) (30%)
Assessment Requirements

- References (at least 6 to 10 related published papers/technical reports must be read and cited) (10%)
- Conclusion and articulation of issues for follow up investigation (10%)

Students must indicate their % contribution to the group work. This will be used to adjust individual student marks if necessary.

Due date:
Friday 18 October 2013, 4pm

• Assessment task 3

  Title:  
  Continual assessment during tutorial Participation
  Description:  
  Weekly class exercises and discussions in tutorials.
  Weighting:  
  5%
  Criteria for assessment:
  - Participation in tutorials
  - Completion of class exercises
  - Contribution to class discussions

  Hurdle requirements:
  Standard Faculty of IT hurdle requirements for postgraduate unit policy applies.
  Due date:
  Weekly (starting Week 2)

Examinations

• Examination 1

  Weighting:  
  60 %
  Length:  
  3 hours
  Type (open/closed book):  
  Closed book
  Electronic devices allowed in the exam:  
  Scientific and/or financial calculators without prior programming.
  Remarks:  
  Multiple choice questions plus computation and discussion questions. All materials (tutorials, readings, lecture notes/slides) are examinable.

Learning resources

Monash Library Unit Reading List
http://readinglists.lib.monash.edu/index.html
Feedback to you

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Interviews
- Quiz results
- Solutions to tutes, labs and assignments

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: http://www.monash.edu.au/exams/special-consideration.html

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Resubmission of assignments

Unless otherwise special permission is granted by the Lecturer, no resubmission after due date will be granted.

Referencing requirements

Please refer to the Library Guides for Citing and Referencing at http://guides.lib.monash.edu/content.php?pid=88267&sid=656564

Assignment submission

It is a University requirement (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html) for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at http://www.infotech.monash.edu.au/resources/student/forms/. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz). Please note that it is your responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.
Assessment Requirements

**Recommended text(s)**


**Examination material or equipment**

Scientific and/or financial calculators without prior programming.
Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and to provide advice on how they might uphold them. You can find Monash’s Education Policies at: www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Academic integrity; http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.html
- Special Consideration; http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html
- Grading Scale; http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html
- Discipline: Student Policy; http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html
- Academic Calendar and Semesters; http://www.monash.edu.au/students/dates/
- Orientation and Transition; http://intranet.monash.edu.au/infotech/resources/students/orientation/
- Graduate Attributes Policy
  http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.html

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at http://www.monash.edu.au/students. For Sunway see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in my.monash portal for more information. At Sunway, visit the Library and Learning Commons at http://www.lib.monash.edu.my/. At South Africa visit http://www.lib.monash.ac.za/.
Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

Website: http://www.monash.edu/equity-diversity/disability/index.html
Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway
Email: dlu@monash.edu
Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University’s student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash’s educational strategy, see:

www.monash.edu.au/about/monash-directions and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

Changes to assignment tasks have been introduced in accordance with student feedback.

If you wish to view how previous students rated this unit, please go to

Other

All reading materials, lecture slides and tutorial/assignment notes other than textbook chapters will be posted on the FIT5159-S2_2013 unit Moodle website prior to each week's lecture. Students are requested to do prior readings before the classes.