# STAT321
## Logistics and Project Management

S1 Day 2013

Statistics

## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td>2</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>2</td>
</tr>
<tr>
<td>Assessment Tasks</td>
<td>3</td>
</tr>
<tr>
<td>Delivery and Resources</td>
<td>6</td>
</tr>
<tr>
<td>Unit Schedule</td>
<td>8</td>
</tr>
<tr>
<td>Learning and Teaching Activities</td>
<td>9</td>
</tr>
<tr>
<td>Policies and Procedures</td>
<td>9</td>
</tr>
<tr>
<td>Graduate Capabilities</td>
<td>10</td>
</tr>
<tr>
<td>Changes since First Published</td>
<td>18</td>
</tr>
</tbody>
</table>

## Disclaimer

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General Information

Unit convenor and teaching staff
Unit Convenor
Kj Byun
kj.byun@mq.edu.au
Contact via kj.byun@mq.edu.au

Credit points
3

Prerequisites

Corequisites
STAT379

Co-badged status

Unit description
This unit consists of two modules: project management, followed by logistics. In the study of project management topics include network diagrams, Gantt charts, resource allocation, resource levelling, critical path method, PERT analysis, Goldratt's critical chain scheduling, time-cost tradeoffs and project selection. Practical applications will be undertaken using Microsoft Project 2007. Also students will be introduced to new learning software developed by Jan Davos (former student of this unit) and Kj Byun, called AMUN. Logistics will include the following topics: supply chain management, Push and Pull distributions and materials management.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at http://students.mq.edu.au/student_admin/enrolmentguide/academicdates/

Learning Outcomes

1. understand the difference between project and process
2. explain the meaning of common terms that are used in project management
3. apply a range of statistical techniques in project scheduling
4. use Microsoft Project 2007 to plan, schedule and monitor large projects
5. communicate the results of planning and scheduling of a project clearly
6. appreciate the role of logistics in industry including project management and supply chain management
7. continue any future business decision analysis studies with increased confidence

**Assessment Tasks**

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial Participation</td>
<td>10%</td>
<td>weekly</td>
</tr>
<tr>
<td>Project Outline Due</td>
<td>5%</td>
<td>21st March (Wk 4)</td>
</tr>
<tr>
<td>Mid-Semester Test</td>
<td>13%</td>
<td>4th April (Wk 6)</td>
</tr>
<tr>
<td>Assignment</td>
<td>12%</td>
<td>23rd May (Wk 11)</td>
</tr>
<tr>
<td>Final Examination</td>
<td>60%</td>
<td>11/6/13 -28/6/13</td>
</tr>
</tbody>
</table>

**Tutorial Participation**

Due: **weekly**  
Weighting: **10%**

To obtain full marks you need to attend and participate in every tutorial. You may be asked to submit some week’s tutorial exercises.

This Assessment Task relates to the following Learning Outcomes:
- understand the difference between project and process
- explain the meaning of common terms that are used in project management
- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
- appreciate the role of logistics in industry including project management and supply chain management
- continue any future business decision analysis studies with increased confidence

**Project Outline Due**

Due: **21st March (Wk 4)**  
Weighting: **5%**

Students will discuss with other group members of their unique project ideas, write up the proposal and deliver it to the class for feedback.

This Assessment Task relates to the following Learning Outcomes:
• understand the difference between project and process
• explain the meaning of common terms that are used in project management
• appreciate the role of logistics in industry including project management and supply chain management
• continue any future business decision analysis studies with increased confidence

Mid-Semester Test
Due: 4th April (Wk 6)
Weighting: 13%

- The test will be held during the lecture time on 4th April (week 6) and will commence at 4:10pm.
- The test will cover all material up to and including the end of Week 5. It will be of 2 hours duration.
- In the test you will be provided with relevant tables but no formulae will be given. However, you will be able to bring into the test one piece of paper up to A4 size on which you may write anything you like on one side only.

This Assessment Task relates to the following Learning Outcomes:
• understand the difference between project and process
• explain the meaning of common terms that are used in project management
• apply a range of statistical techniques in project scheduling
• communicate the results of planning and scheduling of a project clearly
• continue any future business decision analysis studies with increased confidence

Assignment
Due: 23rd May (Wk 11)
Weighting: 12%

- Assignment is COMPULSORY and late assignments will not be accepted for credit.
- Extensions may be given in exceptional circumstances. Students need to apply for special consideration. An extension will not be considered unless the student applies for special consideration.
· Your assignment must be **word-processed** or it will automatically receive zero marks. The presentation of the layout of your assignment will have some bearing on the mark you receive.

· *You need to hand the assignment in at the beginning of the lecture on the due date,* and I will return marked assignments as soon as possible.

· In addition to being an assessment task, the assignment is meant to be a learning device so that marks will be awarded for the level of attempt made, presentation and logical answers.

· In addition, your effort in this component together with your attendance at the lectures and tutorials will be used in deciding the grades of those students who are close to a grade borderline or who have requested special consideration.

This Assessment Task relates to the following Learning Outcomes:

- understand the difference between project and process
- explain the meaning of common terms that are used in project management
- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
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- continue any future business decision analysis studies with increased confidence

**Final Examination**

*Due: 11/6/13 - 28/6/13*

*Weighting: 60%*

· A 3 hour final examination for this unit will be held during the University Examination period.

· The final examination will cover all topics dealt within the unit.

· In this examination you will be provided with relevant tables but no formulae will be given. However, you will be able to bring into the examination one piece of paper up to A4 size on which you may write anything you like on both sides. No other notes or books are allowed.

The University Examination period in First Half Year 2013 is from Tuesday 11th June – Friday 28th June.

This Assessment Task relates to the following Learning Outcomes:

- understand the difference between project and process
explain the meaning of common terms that are used in project management
• apply a range of statistical techniques in project scheduling
• use Microsoft Project 2007 to plan, schedule and monitor large projects
• communicate the results of planning and scheduling of a project clearly
• appreciate the role of logistics in industry including project management and supply chain management
• continue any future business decision analysis studies with increased confidence

Delivery and Resources

Classes

You will have one 3-hour lecture time, and you will be enrolled in one 1-hour tutorial/Practical class. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/

Attendance at the lectures is optional but may be monitored to aid in deciding the grades of those students who are close to a grade borderline or who have requested special consideration.

Attendance at the practical is compulsory and will be monitored. Students should attend the practical they enrolled into during the enrolment period. An attendance means at least 50 minutes of attending and actively participating in practical exercises.

The standard of some of these exercises covered in practicals is similar to that required in the examinations. Also during practicals in which the marked assignments are handed back to the students, the full solutions will be covered during the practical. These solutions will not be available from anywhere else.

Teaching and Learning Strategy

• The lecture and tutorial handouts will be available at the website before the lecture/tutorial is given, but may be corrected after the lecture/tutorial.

• In each week, lectures will be conducted following the structure of the lecture handout. It will contain examples and exercises mostly without solution.

• The solution to these examples and exercises will be covered in the lecture.

• Some additional exercises may be discussed during the lecture time.

• Students are encouraged to participate in the lecture discussion and ask questions.

• In tutorial, you will work individually and in groups with your fellow students. We will cover additional and revision exercises as well as learning to use Microsoft Project 2007.

• We also expect that you will make a good attempt at the assignment, mid semester test and final exam.
Technology Used and Required

The web page for this unit can be found at:

www.stat.mq.edu.au/undergraduate_programs/stat_units/stat_units300/stat321/

Alternatively, you can get there conveniently from the Department of Statistics website www.stat.mq.edu.au/ by selecting Undergraduate Programs, then Statistics Units and then Stat321.

There is an iLearn page for the unit that contains notices, lecture handouts, weekly exercises, tutorial materials and some solutions. We will be using iLearn throughout the course. **Students** should check the site regularly to find the latest announcements, lecture notes, tutorial sheets, and assignments.

You can access this from [https://ilearn.mq.edu.au/login/MQ/](https://ilearn.mq.edu.au/login/MQ/) (or from the Stat321 web page)

You will be asked for your Macquarie OneID username and password. If you have any problem accessing this website, you should go to the Online Teaching Facility support web page at [http://online.mq.edu.au/docs/tecinf.html](http://online.mq.edu.au/docs/tecinf.html).

Required and Recommended Texts and/or Materials

Some useful references include:


# Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Date</th>
<th>Topic</th>
<th>Assessment due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28 Feb</td>
<td>Introduction to Project Management</td>
<td>(Thursday 2pm)</td>
</tr>
<tr>
<td>2</td>
<td>7 March</td>
<td>Creating a project schedule and network Scheduling</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>14 March</td>
<td>CPM and PERT</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>21 March</td>
<td>Time Limited Scheduling</td>
<td>Project Outline Due</td>
</tr>
<tr>
<td>5</td>
<td>28 March</td>
<td>Resources Limited Scheduling</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4 April</td>
<td>Mid-Semester Test</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>11 April</td>
<td>Time-cost trade analysis in a project environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid Semester Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2 May</td>
<td>Critical Chain Project Management</td>
<td></td>
</tr>
</tbody>
</table>
Learning and Teaching Activities

Lectures
presentation of new material and they include a tutorial component where students can practice the techniques and ask questions.

Tutorial/Practical
practical application of project scheduling and managing via Microsoft Project and Excel. Computer Simulation games for understanding supply chain management.

Weekly Practical Exercises
Some of these components will be done in tutorial/Practical session but there will some components where students will have to do them in their own time and submit for collection at random.

Mid Semester Test
In semester assessment task which will equip students for the final examination scenario and help them to study without getting behind and leaving things till last minute.

Assignment
Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

Policies and Procedures
Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://www.mq.edu.au/policy/docs/academic_honesty/policy.html
Student Support

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at: http://students.mq.edu.au/support/

**UniWISE provides:**

- Online learning resources and academic skills workshops
  http://www.students.mq.edu.au/support/learning_skills/
- Personal assistance with your learning & study related questions.
- The Learning Help Desk is located in the Library foyer (level 2).
- Online and on-campus orientation events run by Mentors@Macquarie.

Student Enquiry Service

Details of these services can be accessed at http://www.student.mq.edu.au/ses/.

Equity Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

IT Help

If you wish to receive IT help, we would be glad to assist you at http://informatics.mq.edu.au/help/.

When using the university's IT, you must adhere to the Acceptable Use Policy. The policy applies to all who connect to the MQ network including students and it outlines what can be done.

**Graduate Capabilities**

**Discipline Specific Knowledge and Skills**

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific
knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

**Learning outcomes**

- understand the difference between project and process
- explain the meaning of common terms that are used in project management
- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
- appreciate the role of logistics in industry including project management and supply chain management
- continue any future business decision analysis studies with increased confidence

**Assessment tasks**

- Tutorial Participation
- Project Outline Due
- Mid-Semester Test
- Assignment
- Final Examination

**Learning and teaching activities**

- presentation of new material and they include a tutorial component where students can practice the techniques and ask questions.
- practical application of project scheduling and managing via Microsoft Project and Excel. Computer Simulation games for understanding supply chain management.
- Some of these components will be done in tutorial/Practical session but there will some components where students will have to do them in their own time and submit for collection at random.
- In semester assessment task which will equip students for the final examination scenario and help them to study without getting behind and leaving things till last minute.
- Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

**Critical, Analytical and Integrative Thinking**

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to
critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

**Learning outcomes**

- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
- continue any future business decision analysis studies with increased confidence

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**Problem Solving and Research Capability**

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:
Learning outcomes

- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- continue any future business decision analysis studies with increased confidence

Assessment tasks

- Tutorial Participation
- Mid-Semester Test
- Assignment

Learning and teaching activities

- presentation of new material and they include a tutorial component where students can practice the techniques and ask questions.
- Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- explain the meaning of common terms that are used in project management
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
- continue any future business decision analysis studies with increased confidence

Assessment tasks

- Project Outline Due
- Assignment

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- practical application of project scheduling and managing via Microsoft Project and Excel. Computer Simulation games for understanding supply chain management.
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• Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

• understand the difference between project and process
• communicate the results of planning and scheduling of a project clearly
• appreciate the role of logistics in industry including project management and supply chain management
• continue any future business decision analysis studies with increased confidence

Assessment tasks

• Tutorial Participation
• Project Outline Due
• Mid-Semester Test
• Assignment
• Final Examination

Learning and teaching activities

• practical application of project scheduling and managing via Microsoft Project and Excel. Computer Simulation games for understanding supply chain management.
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Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

**Learning outcomes**

- apply a range of statistical techniques in project scheduling
- use Microsoft Project 2007 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
- appreciate the role of logistics in industry including project management and supply chain management
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**Assessment tasks**

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- Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

**Commitment to Continuous Learning**

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships...
with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

**Learning outcomes**

- appreciate the role of logistics in industry including project management and supply chain management
- continue any future business decision analysis studies with increased confidence

**Assessment tasks**

- Tutorial Participation
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**Engaged and Ethical Local and Global citizens**

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

**Learning outcomes**

- apply a range of statistical techniques in project scheduling
- communicate the results of planning and scheduling of a project clearly
• continue any future business decision analysis studies with increased confidence

**Assessment tasks**

• Tutorial Participation
• Project Outline Due
• Assignment
• Final Examination

**Learning and teaching activities**

• presentation of new material and they include a tutorial component where students can practice the techniques and ask questions.
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• Learning device (as well as being assessment tasks) where students can apply the statistical techniques and concepts learned in lectures and practicals in project management where group work is encouraged.

**Capable of Professional and Personal Judgement and Initiative**

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

**Learning outcomes**

• use Microsoft Project 2007 to plan, schedule and monitor large projects
• communicate the results of planning and scheduling of a project clearly
• appreciate the role of logistics in industry including project management and supply chain management
• continue any future business decision analysis studies with increased confidence

**Assessment tasks**

• Project Outline Due
• Assignment
Learning and teaching activities

- In semester assessment task which will equip students for the final examination scenario and help them to study without getting behind and leaving things till last minute.
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<th>Date</th>
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<tbody>
<tr>
<td>15/12/2012</td>
<td>The Prerequisites and Corequisites were updated.</td>
</tr>
</tbody>
</table>