STAT321
Logistics and Project Management
S1 Day 2015
Dept of Statistics

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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
E4A 527
Tuesday 3pm to 5pm

Credit points
3

Prerequisites
6cp at 200 level including STAT279

Corequisites

Co-badged status

Unit description
Stat321 is a three credit point unit for Decisions Science Major offered by the Department of Statistics. It consists of the two modules – Project Management followed by Logistics. In the study of Project Management topics include Network Diagraming Techniques in Scheduling, Risk Analysis including Classic & Non-Classic PERT model, Time Limited Scheduling (Resource Levelling), Resource limited Scheduling, Goldratt’s Critical Chain Scheduling, Time-cost Tradeoffs and Project Selection. Practical applications will be undertaken using Microsoft Project. Also students will be introduced to new learning software developed by Jan Davos (former student of stat321) and Kj Byun (convenor of the unit), called AMUN. Logistics will include the following topics: Supply Chain Management, Push and Pull distributions, and Materials Management. Whilst it is open to any students having successfully completed Stat279, it is a compulsory unit for students majoring in the Decision Science. The combination of appropriate units will lead to a degree that will equip the graduate with the necessary skills required to solve practical real-world problems.

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 real life project and process
2. explain the meaning of common terms that are used in project management
3. apply a range of statistical techniques and logical thinking in project scheduling
4. use Microsoft Project 2010/2013 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

General Assessment Information

Academic Honesty

Each semester, many students receive a mark of 0 for their Assignment submission, due to plagiarism. You may discuss solution approaches with your fellow students, but you must not share any files, wording or text. Do the work alone, starting with a new empty document.

Please read the section on Academic Honesty Policy in the relevant university website specified under Policies and Procedures, very carefully.

Disruption to Studies

Disruption to Studies Notification for missed or impeded examinations will only be granted to students whose performance in all parts of the coursework is satisfactory.

Although the Exam is nominally worth 60%, as in all units in the Statistics Department, students must pass the final exam in order to pass the unit.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Assignment</td>
<td>10%</td>
<td>27th March (Week 5)</td>
</tr>
<tr>
<td>Class Test</td>
<td>15%</td>
<td>1st May (Week 8)</td>
</tr>
<tr>
<td>Major Assignment</td>
<td>15%</td>
<td>28th May (Week 12)</td>
</tr>
<tr>
<td>Final Examination</td>
<td>60%</td>
<td>9th June – Friday 26th June</td>
</tr>
</tbody>
</table>

First Assignment

Due: 27th March (Week 5)
Weighting: 10%

This assignment is to ensure that the students have mastered the initial stage of logical project planning using activity-on-arrow network diagram and Gantt Chart.
All assignments are COMPULSORY and late assignments will not be accepted for credit.

- Extensions may be given in exceptional circumstances. An extension will not be considered unless the student applies for Disruption to Studies Notification and is approved.
- 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, at the latest.*
- 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 applied for Disruption to Studies Notification and have it approved.

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

**Class Test**

**Due:** 1st May (Week 8)

**Weighting:** 15%

- The test will be held during the lecture time on **1st of May** (week 8) and will commence at **11:10am**.
- The test will cover all material up to and including the end of **Week 7**. 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 **handwrite** anything you like on **one side only**.

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

Major Assignment
Due: 28th May (Week 12)
Weighting: 15%

- Major Assignment is COMPULSORY and late assignments will not be accepted for credit.
- Extensions may be given in exceptional circumstances. An extension will not be considered unless the student applies for Disruption to Studies Notification and is approved.
- 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, at the latest.
- 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 applied for Disruption to Studies Notification and have it approved.

This Assessment Task relates to the following Learning Outcomes:
- understand the difference between real life project and process
- explain the meaning of common terms that are used in project management
- apply a range of statistical techniques and logical thinking in project scheduling
- use Microsoft Project 2010/2013 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

Final Examination
Due: 9th June – Friday 26th June
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 handwrite anything you like on both sides. No other notes or books are allowed.

The University Examination period in First Half Year 2015 is from Tuesday 9th June – Friday 26th June.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable and this includes Saturdays. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in final form approximately four weeks before the commencement of the examinations.

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider submitting a Disruption to Studies Notification. Information about unavoidable disruption and the Disruption to Studies Notification process is available at

http://students.mq.edu.au/student_admin/exams/disruption_to_studies/

If a Supplementary Examination is granted as a result of the Disruption to Studies Notification process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester that is the final day of the official examination period.

This Assessment Task relates to the following Learning Outcomes:

• understand the difference between real life project and process
• explain the meaning of common terms that are used in project management
• apply a range of statistical techniques and logical thinking in project scheduling
• use Microsoft Project 2010/2013 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**

**CO-REQUISITES**

*None*

**CLASSES**

Lectures:
Unit guide STAT321 Logistics and Project Management

- Length: One 3 hour beginning in Week 1
- Location: W6B 315
- Time: Friday 11am - 2pm

Tutorial:
- Length: One 1 hour beginning in Week 2
- Location: E4B 102
- Time: Friday 3pm or 4pm

The timetable for classes can be found on the University web site at:

http://www.timetables.mq.edu.au/

Attendance at the lectures and tutorial 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 applied for Disruption to Studies Notification process.

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 2010/2013.

· We also expect that you will make a good attempt at the assignments, class 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.
The i-Learn site for STAT321 and can be accessed at: https://ilearn.mq.edu.au/login/MQ/(or from the Stat321 web page). Students should check the site regularly to find the latest announcements, lecture notes, tutorial sheets, and assignments.

You will be asked for your Student ID number and myMQ Portal 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.

RECOMMENDED TEXTS AND/OR MATERIALS

Some useful references include:


TYNDALL G. “Supercharging Supply Chains”. [HD38.5.s895/1998]


Unit Schedule

STAT 321 SCHEDULE (D1 2015)

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Date</th>
<th>Topic</th>
<th>Assessment due (Friday 11am)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27 Feb</td>
<td>Introduction to Project Management</td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
<td></td>
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<tr>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>6 March</td>
<td>Creating a project schedule and network Scheduling</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>13 March</td>
<td>CPM and PERT</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>20 March</td>
<td>Time Limited Scheduling</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>27 March</td>
<td>Resources Limited Scheduling</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>First Assignment</strong></td>
<td></td>
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<tr>
<td></td>
<td>6</td>
<td>3 April</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Good Friday - no lecture</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Mid Semester Break</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>24 April</td>
<td>Time-cost trade analysis in a project environment</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1 May</td>
<td>Class Test</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Class Test</strong></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>8 May</td>
<td>Critical Chain Project Management</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Introduction to Logistics Systems</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>15 May</td>
<td>Development and Growth of Business Logistics</td>
<td></td>
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<tr>
<td>11</td>
<td>22 May</td>
<td>The Supply-Chain Concept – Demand Driven Logistics</td>
<td></td>
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<tr>
<td>12</td>
<td>29 May</td>
<td>Logistics of Information Systems</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>5 June</td>
<td>Revision</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Major Assignment</strong></td>
<td></td>
</tr>
</tbody>
</table>
**Learning and Teaching Activities**

**Lecture**
Presentation of new material via examples, discussion and hands-on exercises.

**Tutorial/Practical**
Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.

**Assignments**
Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

**Policies and Procedures**
Macquarie University policies and procedures are accessible from [Policy Central](http://mq.edu.au/policy/docs/policy.html). Students should be aware of the following policies in particular with regard to Learning and Teaching:


In addition, a number of other policies can be found in the [Learning and Teaching Category](http://mq.edu.au/policy/docs/policy.html) of Policy Central.

**Student Code of Conduct**
Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: [https://students.mq.edu.au/support/student_conduct/](https://students.mq.edu.au/support/student_conduct/)

**Results**
Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in *eStudent*. For more information visit [ask.mq.edu.au](http://ask.mq.edu.au).
Student Support

Macquarie University provides a range of support services for students. For details, visit [http://students.mq.edu.au/support/](http://students.mq.edu.au/support/)

Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Enquiry Service

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

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


When using the University’s IT, you must adhere to the [Acceptable Use Policy](http://informatics.mq.edu.au/help/). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

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 and logical thinking in project scheduling
- use Microsoft Project 2010/2013 to plan, schedule and monitor large projects
- communicate the results of planning and scheduling of a project clearly
Assessment tasks

- Class Test
- Major Assignment
- Final Examination

Learning and teaching activities

- Presentation of new material via examples, discussion and hands-on exercises.
- Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
- Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

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

- 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

- Class Test
- Major Assignment
- Final Examination

Learning and teaching activities

- Presentation of new material via examples, discussion and hands-on exercises.
- Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
• Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

**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 2010/2013 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 task**

- Major Assignment

**Learning and teaching activity**

- Presentation of new material via examples, discussion and hands-on exercises.
- Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
- Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

**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 real life project and process
• explain the meaning of common terms that are used in project management
• apply a range of statistical techniques and logical thinking in project scheduling
• use Microsoft Project 2010/2013 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

• Class Test
• Major Assignment
• Final Examination

Learning and teaching activities

• Presentation of new material via examples, discussion and hands-on exercises.
• Practical application of project scheduling and managing via Mocrosoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
• Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

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 and logical thinking in project scheduling
• use Microsoft Project 2010/2013 to plan, schedule and monitor large projects
• continue any future business decision analysis studies with increased confidence

Assessment tasks

• Class Test
Learning and teaching activities

- Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
- Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

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 2010/2013 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 task

- Major Assignment

Learning and teaching activity

- Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

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 and logical thinking 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**

• Major Assignment
• Final Examination

**Learning and teaching activities**

• Presentation of new material via examples, discussion and hands-on exercises.
• Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
• Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

**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 and logical thinking in project scheduling
• use Microsoft Project 2010/2013 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**

• Class Test
• Major Assignment
• Final Examination

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• Presentation of new material via examples, discussion and hands-on exercises.
• Practical application of project scheduling and managing via Microsoft Project 2010/2013, Amun and Microsoft Excel. Some computer simulation games for understanding supply chain management.
• Assessment tasks where students can apply the project scheduling concepts and techniques learned in practice as a team.

Changes from Previous Offering
Stat379 co-requisite requirement has been dropped.
No longer a capstone unit in Decision Science Major.