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Important Dates for Enrolment

A reminder to students

If you need to amend your enrolment please remember the dates below:

2009 Amendments to Enrolments						
	Beginning of Term date	Last day a student can add a class	Last day to withdraw (Census date)	Withdraw No Fail (WNF) Date	Withdraw Fail (WF) date	Last day of Term
Term 1	30-Jan-09	9-Feb-09	13-Feb-09	14/02/09 – 22/03/09	23/03/09 – 11/04/09	12-Apr-09
Term 2	17-Apr-09	4-May-09	8-May-09	9/05/09 – 9/06/09	10/06/09 – 3/07/09	12-Jul-09
Term 3	17-Jul-09	27-Jul-09	31-Jul-09	1/08/09 – 1/09/09	2/09/09 – 25/09/09	27-Sep-09
Term 4	2-Oct-09	19-Oct-09	23-Oct-09	24/10/09 – 24/11/09	25/11/09 – 12/12/09	13-Dec-09

Glossary

Census date Courses removed before this date will not appear on your academic transcript.

Withdraw No Fail date If you withdraw between the dates shown above a "WNF" (Withdraw No Fail) will appear on your transcript.

Withdraw Fail date If you withdraw between the dates shown above a "WF" (Withdraw Fail) appear on your transcript.

Fail If you withdraw from a course after the End of Term date you will incur a Fail grade

Forfeiture of full course fees:

If a student withdraws from the course after the first class they will be charged the full course fee.

Forfeiture of S\$406.60(incl of 7% GST) of the course fee:

If a student withdraws from a course after collecting their course materials and before the date of the first class they will forfeit S\$406.60(incl of 7% GST) of the course fee.

NOTE: Course materials **MUST** be returned in good condition and contain no hand written notes in them.

- Terms consist of a 12-week teaching period that typically involves 2 teaching intensives according to the timetable.
- "Amendment to Enrolment" forms are available at the NAAEC Office.
- Please note all dates are established by the University. The Faculty and NAAEC are not able to rectify oversights in this regard.

Foreword

A project is a temporary organisation designed to achieve specific goals. A project team is usually disbanded when the goals have been achieved. By creating the specific team, responsibility is assigned to a specific group. Project organisation are different from normal organisation because they are short-term, they have been created for a specific purpose and different management structures are required.

Some examples of projects include NASA's Man on the Moon project in the 1960s, or the Sydney 2000 Olympic Games more recently. Project in the past include constructing the Great Wall of China or the D Day landing in the Second World War. All of these projects required a massive organisation to achieve their goals. Project can be large or small, for example organising the village sports is a project, or organising an overseas trip is another project.

There are many examples of project that have been created by companies in order to create a product to sell. Often a team is formed from members of various departments in the organisation, including manufacturing, marketing, sales, engineering and others. Such a project is driven by a vision that customers will purchase the manufactured product.

Organisations and companies create projects to achieve their goals. For example a construction company builds buildings for profit, and hence to satisfy their shareholders. Shipping companies commission new ships to attract passengers, and an individual decides to reorganise the garden in order to create a thing of peace and beauty.

Project management has been increasing in use by organisations. The Project Management Institute, a professional body which project managers can join, has had significant increases in membership in the last decade.

The Master of Project Management program was first offered by the University of Adelaide in 2003. Students who are enrolled in the program came from a good mix of industries such as services, IT, manufacturing, engineering, logistics and etc.

There is a strong emphasis on delivery of principles and subsequent application to the work situation of participants. As all students have work experience on entry, and members of the group of students are employed in a range of industries, there is significant learning from industries other than that of each student.

Students in the Program are currently employed by a range of organisations, including:

Industry	Student's Company
Airlines	Singapore Airlines, Qantas
Animal health	Novartis Animal Health
Architects	Cheeseman Architects
Banks	Adelaide Bank, Deutsche Bank AG
Construction	Kellogg Brown Root, Shimizu Corporation, Toh Teck Seng Engineering & Construction Pte Ltd, Transfield Construction Services, Plant Engineering Construction
Consulting engineering	SKM, Connell Wagner, CPG Consultants Pte Ltd, MWH
Defence	ADI, BAE Systems, Ball Solutions, DMO, DSTO, Jacobs Sverderup, Raytheon, Submarine Force Command, DSO National Laboratory
Energy	BP, Origin Energy, Schlumberger Oilfield, ExxonMobil Manufacturing Engineering Singapore, Keppel Fels,
Engineering	Eagle Services Asia, Sembcorp Industries
Futures Exchange	Sydney Futures Exchange
Government	Office of the Commissioner of Public Employment, Exmaco Township Management, Singapore National Employers Federation
Government research	DSTO Australia
IT	Dynix, EDS IBM, EMC, Hewlett-Parkard Singapore, W Concept Pte Ltd, Applera Holding, ST Microelectronic, Welcome Real-time, Convergys Asia Pacific, NCR Spore Pte Ltd, Sybase (S) Pte Ltd,
IT&T	Telstra, Motorola Electronics P/L, Acatel Singapore Pte Ltd, Phillips
Health	Royal Adelaide Hospital
Logistics	Schenker Singapore Pte Ltd
Manufacturing	Mitsubishi, GMH, Toyota Motor Asia Pacific Pte Ltd, Philips Electronic, Sumitomo Bakelite Singapore, Express Tech Manufacturing Co, Offshore Seals (Asia) Pte Ltd
Media	Morning Star Computers
Marine	Singapore Technologies Marine
Mining	Rio Tinto, National Minerals
Rail	RailCorp, Land Transport Authority,
Research	UniSearch
Robotics	Sage Automation
Shipping	CSL Asia Shipping P L
Social welfare	The Smith Family, Singapore National Employers Federation
TAFE	TAFE NSW
University	The University of Adelaide
Waste disposal	Jeffries (waste disposal)

The ECIC, The NAAEC and The MPM

The ECIC

The University of Adelaide's **Entrepreneurship, Commercialisation & Innovation Centre (ECIC)** faculty members are a combination of experienced practitioners and academics. They mainly come from industry to ensure that they are at the leading edge in their field and have broad commercialisation knowledge and expertise in the particular course that they teach. We will use visiting Academic Coordinators when possible to enhance the international learning experience.

The NAAEC

In 1997 the University of Adelaide combined with the Ngee Ann Kongsi, a major education and charitable foundation in Singapore, to establish high quality management education activities at the **Ngee Ann-Adelaide Education Centre (NAAEC)** in Singapore.

The MPM

The Master of Project Management program is ideal for professionals who:

- Have or want project management roles and responsibilities at best practice levels
- Work in areas such as information technology, construction, defence, product development, infrastructure, manufacturing, mining, energy, finance, social services or government
- Seek to advance their careers through a formal qualification in project management
- Want to deliver predicted outcomes through the application of project management to their work and organisation.

There are eight courses in the Masters program, consisting of 6 core modules and 2 electives.

The Graduate Certificate in Project Management requires the completion of four courses from the Masters program, and provides the benefits of a recognised postgraduate award.

General information about the programs can be found on the web site located at the following addresses: <http://www.ecic.adelaide.edu.au/>
<http://www.adelaide.edu.au/sg>

Program Content and Delivery

The ECIC award programs are non traditional in many aspects and embrace a flexible delivery style. They utilize the internet along with the more traditional textbooks and readings.

The majority of the material is delivered on-line with a series of intensive sessions delivered face-to-face to enhance the experience. All courses include assignments which are applicable to the work situation of participants.

The courses are delivered by experienced practitioners and academics in a peer-participant environment. This ensures that the material taught is kept current and is peppered with analogies and personal experiences from industry and government.

The intensive sessions provide the opportunity for discussion, networking, global and local teamwork, listening to prominent business people, and elaboration of on-line material.

ECIC Contact Information

USEFUL PHONE NUMBERS

ECIC Main Office +61 8 8222 9208
ECIC Sydney Office +61 2 9209 4111
Faculty ECMS +61 8 8303 4738

ECIC TEAM CONTACT NUMBERS

Professor Noel Lindsay Director of ECIC

Phone: +61 8 8222 9206
Email: noel.lindsay@adelaide.edu.au

Professor Vernon Ireland Academic Director, Project Management & Industry Programs

Phone: +61 2 9209 4113
Mobile: 0411 153 861
Email: vernon.ireland@adelaide.edu.au

Louise Watters Administrative Officer

Phone: +61 2 9209 4111
Fax: +61 2 9319 3088
Email: louise.watters@adelaide.edu.au

WEBSITE: <http://www.ecic.adelaide.edu.au/pg/project/>

For Enrolment / Forms: <http://www.adelaide.edu.au/ecms>

Enrolment Steps / Course Availability: <http://www.adelaide.edu.au/enrol>

Office hours: Monday to Friday 8.30 am – 5.00 pm

Core Academic Staff:

Professor Vernon Ireland	Email: vernon.ireland@adelaide.edu.au
Carlo Galeano	Email: carlo.galeano@adelaide.edu.au
Rob Mitchell	Email: rob.mitchell@adelaide.edu.au
John Twyford	Email: john.twyford@adelaide.edu.au
John Maclay	Email: john.maclay@adelaide.edu.au
Mike Salah	Email: mike.salah@adelaide.edu.au
Andrew Finegan	Email: andrew.finegan@adelaide.edu.au
Louis Wong	Email: louiskmwong@gmail.com
Hartmut W. Dongus	Email: hartmut24@hotmail.com

NAAEC Contact Information

Postal Address: Ngee Ann-Adelaide Education Centre
97 Tank Road, Level 4, Teochew Building
Singapore 238066

Telephone and Email:

Manager – Ms Lim Mei Mei

Email: meilim@naaec.com.sg

Programme Executive – Ms Yvonne Chan

Email: yvonnechan@naaec.com.sg

PHONE: +65 6738 2910
FAX: +65 6738 3314

WEBSITE: www.adelaide.edu.au/sq

Office hours: Monday to Friday 9.00 a.m. – 7.00 p.m.
Saturday 9.00 a.m. – 3.00 p.m.

Student Service Centre hours: Monday to Thursday 10.00 a.m. – 7.00 p.m.
Friday 9.00 a.m. – 10.00 p.m.
Saturday 9.00 a.m. – 8.00 p.m.
Sunday 9.00 a.m. – 5.00 p.m.

Interactive Learning in Singapore

Interactive learning is a key element of effective MPM programs. The ECIC's programs have a number of learning components. The Adelaide MPM in Singapore is offered in an open learning approach, to ensure ample opportunity for interactive learning. This involves combining high quality learning materials with intensive lecture sessions and face to face class meetings.

Course outline

For each course, a Course outline outlining the objectives of the course, assessment details and a reading guide is provided. This may be included in the course teaching pack or distributed separately. Given that the volume of course materials for most courses can be quite large, it is important to plan and manage your reading to meet the objectives set by the lecturer in charge of the course.

Intensive Lecture Sessions

The main lecture sessions will be held in a series of intensive sessions. These intensive lecture sessions are presented by lecturing staff from the University of Adelaide as well as from its global network of presenters. The lecture series generally provide for 10 three hours blocks held over two visits by staff and require students to invest some of their weekend time. The sessions are designed to enable the lecturer to present the core material and interact with the students. These sessions may also involve case studies, exercises and group discussion under the direct supervision of the lecturer in charge of the course.

Required Commitment by Participants

All award programs require a significant time commitment by participants. On average, participants will spend up to ten hours a week on an individual course. Many participants undertake the program on a part-time basis, doing a number of courses per term. This flexibility enables them to integrate study with their work, lifestyle and family situation. As a guide, the average requirements within all ECIC award programs is that in each course, each week, there will be:

- One book chapter or article to read and discuss within on-line forums;
- One case to be analysed, written up and discussed within on-line forums; and
- Continuing team and individual project work.

Recommended Computer Requirements and Knowledge

Although there is no minimum required knowledge of computers as a condition for admission to the programs, participants will be expected to come to the programs proficient in the fundamentals of using word-processing software such as Microsoft Word, spreadsheet programs like Microsoft Excel, and presentation software such as Microsoft PowerPoint. Participants are also expected to have access to and familiarity with the Internet.

Ngee Ann-Adelaide Scholarship

Ngee Ann – Adelaide Education Centre provides awards of scholarship to selected candidates of the University of Adelaide's Master of Business Administration, Master of Project Management, Master of Applied Finance and Bachelor of Computer Science programs conducted at the Singapore Campus.

Eligibility:

- Current Student of the University of Adelaide programs conducted at the Singapore Campus.
- Students should attain Distinction grades and above for at least 2 courses.
- Students who are currently not in receipt of, or seeking any sponsorship, bursary and scholarship from their employers or any other organisations.

Terms:

- This is a bond free scholarship.
- Scholarship quantum is half the tuition fees of enrolled program. Scholarship recipient is expected to pay the fees for the first half of the program. Remaining half of the program fees will be met by the scholarship, and recipient will not be required to pay tuition fees for the second half of the program.
- Satisfactory academic performance is expected of the Scholarship recipient. Poor performance in the program may result in withdrawal of the scholarship.
- The duration of the scholarship is for a maximum period of four years with effect from the date a student commences in the program. It is expected that the Scholarship recipient completes the program in a lesser period of time.
- If no suitable candidate can be determined, no award will be made.
- The Panel's decision is final.

Selection Criteria:

- Academic qualifications and performance.
- Professional career record.
- Financial position.
- Potential to contribute to the Singapore business community or society.

Selection Period:

- New students enrolled in the 1st and 2nd term of the academic year will be selected for the awards in October of the same year.
- New students enrolled in the 3rd and 4th term of the academic year will be selected for the awards in April of the following year.

Student Access to NAAEC Facilities

Office hours

The NAAEC occupies Level 4 of the Teochew Building at 97 Tank Road, Singapore. All classes are held in this building. The NAAEC Office is open from 9.00am - 7.00pm from Monday – Friday and 9.00am - 3.00pm on Saturday.

Student Service Centre hours

Monday-Thursday	10:00am – 7:00pm
Friday	9:00am – 10:00pm
Saturday	9:00am - 8:00pm
Sunday	9:00am – 5:00pm
Public Holiday	CLOSED

Student facilities

The student lounge at Level 3 & 4 are available during normal office and teaching times. Access to the student lounge and other workrooms at other times can be arranged through the Administrative staff (see below). Your cooperation in keeping the student lounge and teaching areas in a clean and tidy condition will ensure a pleasant working environment for all students.

After hours use of facilities

Rooms can be booked with minimum of 2 students for private group study or class discussion on weekdays, weekends and on public holidays from 9.00am to 10.00pm. Students must complete and submit their room booking form to the Student Service Administrator by fax at 67383314 or email studentservice@naaec.com.sg at least two working days in advance, up to a maximum of 2 weeks, prior to the day they require the room. Room Booking Form can be downloaded at our Singapore Campus website (<http://www.adelaide.edu.au/sg/current/>). Each study group is allowed to book up to a maximum of 2 slots per day. Common Study Room (#04-13 & #04-17) are available for self study. For access to computers, students can use the Student Lounge located at Level 4, no booking is required.

Journals and magazines

Students are welcome to read the journals and magazines located in the Student Lounge. In order that all students and staff may have equal access, journals and magazines are not to be removed. Your cooperation in returning them to their correct place would be appreciated.

Library Membership

Students may apply for membership at either the National University of Singapore Library or Nanyang Technological University Library. NAAEC will reimburse students for personal memberships during their course of study. Students should obtain a letter of recommendation from NAAEC before they approach either library for membership application.

Student name plates

Name plates for new students will be made available shortly after enrolment. They will be placed in the teaching room before each class. These plates **must be** displayed at each class in order that academic staff may acquaint themselves with students and in order for students to recognise other class participants.

Car Parking

Please be informed that there are public car parks along Tank Road, at Fort Canning Hill or nearby UE Square Car Park. Students can use these car parks at their own risk and the Management will not be responsible for any loss or damage to your vehicle. Within the Teochew Building premise, parking is available on first come first served basis, at a flat rate of \$21.40 (incl 7% G.S.T) per school term. Season Parking Pass is strictly non-transferable. Payment is non-refundable for any unused parking period. Students are to produce Student Pass / Welcome Letter to apply for Season Parking. Parking available only on every Friday (5.00pm – 10.30pm), Saturday (9.00am – 10.30pm) Sunday (1.00am – 10.30pm) and tutorial evenings (6.00pm to 10.30pm). All enquiries concerning the Car Park facilities should be directed to the administrative Staff at +65 6738-2910 or email studentservice@naaec.com.sg

Communication with the ECIC and the NAAEC

Email access

Most information from the ECIC and the NAAEC will be sent via email. It is essential that you have a current email address. Additionally, the personal details form you complete at enrolment will request your business email address. It is important that students update employment and private addresses and telephone/email details with the ECIC and the NAAEC at all times. This and other personal information will be kept strictly confidential.

All course participants are required to use their official student email account to send and receive email messages. The ECIC and central administration, including Student Records, will send notices to all students at their student account address. All information regarding student email accounts is contained on the following website, including information on Dial-up access from home:

<http://www.adelaide.edu.au>

Click on Current Students, then on Student Email

You will need to set a forward FROM your STUDENT account TO your preferred email account via the following link:

<http://mail.student.adelaide.edu.au:7282/bin/user/admin/bin/enduser>

Once you have logged in with your username and password do the following:

1. Click "Current Student" link
2. Click "Student Email" link
3. Log in using your Student ID and password
4. Locate and click the "accounts manager" icon near the top of the page
5. Locate and click the "Forward" option link on the left hand side
6. Choose "set/install a forward to:" enter the email address you would like your student email address to be diverted to.
7. Enter your password and click "submit"
8. Close the browser window

Mail will now not stay in your University student mail box, but will be forwarded to the address you set.

If you have any questions please contact the ITS Helpdesk on + 61 8 8303 3000

Submission and Return of Assignments

Deliverables are to be submitted to the My Uni digital drop box in MyUni.

Access to University of Adelaide Electronic Resources

University of Adelaide Online Access

Please find enclosed some guidelines to assist you access information on University of Adelaide websites. This includes library resource access and student information. Please note that any ECIC course support websites have their own individual access passwords.

Usernames & Passwords

The username for University of Adelaide resources is the student ID and must be prefixed by the letter 'a' (eg. a1071234). The password / PIN number for such resources is the number on your enrolment confirmation notice. If you have misplaced your enrolment confirmation notice, you may receive confirmation of your pin from the Student Centre if you contact them by telephone: +61 8 8303 5208. They will then post your PIN to you.

Online Enrolments

As of 2006, the University has moved towards an Online Enrolment System through an interface with Access Adelaide. You now have the ability to enrol and amend your enrolments wherever there is Internet access.

Before login on to Access Adelaide it is recommended that you plan your enrolments for the entire year, while planning your enrolments you will need to keep in mind the pre-requisites of particular courses.

Once logged on to Access Adelaide using your username and password you will be required to complete an Enrolment Checklist. This is a series of 7 steps ranging from checking and entering your address to entering your expected graduation year. All 7 steps must be completed before you can enrol.

When enrolling in to a particular class you will be required to enter a unique Class Number, this can be found on your timetable, if you do not have a copy of the timetable please contact your Program Executive (yvonnechan@naaec.com.sg). It is vital when enrolling online to SAVE the class that you have added; if you do not do this you have not been added to the class.

When amending your enrolments it is very important that you are fully aware of the census dates and the related penalties that apply. Census dates can be found on page 1 of this handbook or Academic Dates in <http://www.adelaide.edu.au/student/current>

An Offshore Online Enrolment Guide Book has been drafted to help you smoothly navigate your way through the online enrolment process. This booklet will be included in your Orientation Pack. Copies will also be available from the NAAEC Office.

Access to Results

If you ever require a copy of your unofficial transcript for reimbursement purposes etc, you can access this information online.

www.access.adelaide.edu.au

- Enter your Username and Password
- Select the link Academic Results
- You can then view and print your unofficial transcript for the year, and check any upcoming enrolment details.

Accessing Course Materials

www.myuni.adelaide.edu.au

The standard approach to teaching is that all Lecturers will use MyUni. Lecturers can place a variety of materials on MyUni ranging from Course Outlines and PowerPoint slides to articles of interest and additional readings. The Lecturer will, when new materials are placed on MyUni email students via their Student Email accounts.

Students must be currently enrolled into the course, having enrolled via Access Adelaide to have access to information on MyUni.

Student Cards

Students will be issued with student cards shortly after their enrolment forms have been processed. The student cards are valid for the calendar year they are issued. The student cards display the personalised student ID number which will be used in communication from the ECIC and NAAEC, particularly for the generation of results. Please take note of this number for future reference. The student card provides details that are essential for student access to online resources. The username for such resources is the student ID and must be prefixed by the letter "a" (eg. a1071234). The password / PIN number for such resources is the number on your enrolment confirmation notice.

If you lose or misplace your student card, Card Services charges AUST\$20 to replace your card.

Access to the University Library

All students enrolled at the ECIC are entitled to have access to electronic databases at the University Library. Access can be made by visiting the University of Adelaide's website at:

www.library.adelaide.edu.au

You will be connected to the Barr Smith Library home page. Steps for undertaking the search are illustrated in the diagram below, and you will be given more guidance on this during Orientation.

Library PINS

Please refer to the Student Card information listed previously for this information.

Access Problems?

If you encounter access problems, please email services@library.adelaide.edu.au.

Mention the difficulty you are having and provide all identity details including Student ID & password. An interchange of emails with services will then take place and the problem will be resolved.

Access to Electronic Resources: University of Adelaide Library (Barr Smith Library)

Electronic resources available from the University of Adelaide Library website may be found in two key areas.

Guides – Resources for Subjects at University of Adelaide

Access the library webpage: www.library.adelaide.edu.au

Click on the **Guides** button

Scroll down to the subject area of **Economics** and click on the **Management** link.

You will find seven links to internet and library resources to choose from:

Internet resources for management

Library electronic databases for management

Library electronic journals for management

Library electronic databases for marketing

Library electronic journals for marketing

Library reference tools for management

Library skills tutorial

Current library print journal subscriptions for management

Electronic Resources

Access the library webpage: www.library.adelaide.edu.au

Click on the **E-Resources** button

Here you will find information about Electronic Resources available through the University of Adelaide Library, including details of access to our collection of citation databases, journals and other electronic resources.

To start searching click "Catalogue" link on this page and follow the instructions.

How to find resources

To locate resources, browse by Title or Subject or enter one or more search terms in the search box.

Browsing by title

The list of titles is split into multiple pages, by letter of the alphabet. For example, click on the letter "C" at left to see a list of titles starting with "C".

The "A" list includes titles which start with a number rather than a letter.

Searching by Keyword

Use any combination of 'and', 'or' and 'not' -- 'and' is assumed between words separated by a space. Searches are on whole words, although you may search for partial words (truncation) by ending a word with '*', e.g. 'Australia*', 'history*'. Searches are NOT case sensitive. For example "MEDICINE" and "medicine" are treated as the same thing.

Planning and organising your MPM studies

It is important that you plan and organise your study program carefully. If you have any concerns you should contact the Program Executive, Singapore, at Ph: + 65 6738 2910, Email: yvonnechan@naaec.com.sg or Fax: +65 6738 3314.

In planning your enrolment, students should consult the Specific Course Rules that govern the University of Adelaide's MPM Program, reproduced in the last pages of this Handbook. (Specific Course Rules must be read in conjunction with the Specific Program Rules). The General Course Rules are contained in the University Calendar and up to date copies may be accessed via the University of Adelaide's website: <http://www.adelaide.edu.au/calendar/pg/eng>

The following notes, which are based on questions most frequently asked by MPM students, are designed to assist students in interpreting and following the General Course Rules and Specific Course Rules.

How many courses to enrol in

The School does not make a rigid distinction between "full-time" and "part-time" MPM students and allows students to determine their own study load. In most terms it is possible to complete three courses per term, although students who work during the day usually undertake one or two courses per term. Students should be reminded that the Specific Course Rules require the normal MPM (8) to be completed within three years.

Class attendance requirements

Attendance at class is critical in the educational experience of the Adelaide MPM. Students who miss more than 20% of the intensive classes for a course will be expected to give reasons for their continued enrolment in the course. Approval for absence must be sought in writing and obtained from the ECIC Academic Director. Acceptable reasons may include travel commitments required by the student's employer.

Applying for extensions for assignments

Extensions will only be given for medical or other serious reasons. Requests for extensions must be emailed to the lecturer in charge of the course, with a copy to the Program Executive, NAAEC, before the due date. Each request will be assessed on its merits. Late assignments (without prior arrangement) can be penalised at the lecturer's discretion. While the ECIC is sensitive to problems that might arise from time to time, everyone must submit their work at the designated time if we are to maintain a fair and equitable system.

Class size policy

Generally class sizes will range from a minimum of 15 to a maximum of 35. However in some circumstances, it may be necessary to go above these limits (e.g. because of staff constraints) or below (e.g. to ensure a viable study program for a particular intake). Where the timetable allows, students from different intakes may mix in classes.

NAAEC fees policy

The MPM is a professional postgraduate qualification for which full fees are charged. The tuition fee for the MPM course is S\$19,260.00 payable on a per course basis of S\$2,407.50, excluding a one time application fee of S\$107. Tuition fees for the following term must be paid at least two weeks before the commencement of the term. Students will receive their materials in the week prior to the start of teaching, provided that their fees have been paid. All prices are inclusive of 7% G.S.T.

Any students who have not settled financial obligations with the NAAEC will have their enrolment cancelled.

If a student withdraws from a course after collecting their course materials and before the first class, they will forfeit the S\$406.60(incl of 7% GST) non-refundable component. If a student withdraws after the date of the first class of the course they will be charged the full course fee S\$2,407.50. See p.1 herein for relevant dates relating to amendments to enrolment. See also "How to amend your enrolment" in the Online Enrolment section.

Students who are subsidised by their employer

Students whose fees are subsidised by their employer must observe the above rules also. These students are required to pay their tuition fees at the commencement of each term, and seek reimbursement from their employer upon receipt of results. The NAAEC will be pleased to provide a letter of results on request. Please note that one week's notice is required for such letters.

Status or substitution for previous academic studies

Status may only be granted for previously completed *postgraduate* studies relevant to project management studies. **Substitution** is usually granted for previously completed undergraduate studies, relevant to project management studies.

Students must provide certified copies of all relevant documentation as to completion of these programmes before applications can be processed. In addition, submission of detailed course outlines are required stating topics covered, textbooks, duration of course and mode of assessment.

The status and substitution form as well as a list of approved courses can be obtained from the NAAEC Office.

Students, who have completed PMP, may also apply for transfer credit.

The maximum status that may be granted to any student is 12 points (4 courses) for the MPM for postgraduate studies undertaken at an institution equivalent to the University of Adelaide. No credit is granted for courses completed at the undergraduate level. However, students who have, in their undergraduate degree, studied project management, accounting, and other areas covered by the compulsory core of the MPM may apply, on the relevant application form, for permission to *substitute* elective courses for specific compulsory courses.

An "Application for Status" and "Application for Substitution" form may be obtained from the NAAEC Office. The completed form, together with the required documentary evidence stated therein, should be left at the Office for assessment by the relevant academic staff member/s within the ECIC. You will be initially be notified by telephone or email of the outcome of the result of your application. If you are successful you will subsequently receive official notification from the University, and an indication of status granted will appear on your official academic transcript.

Please review the checklist below to ensure that you have provided all the required items for an assessment to be made:

Check list for Status and Substitution

- Certified copy of Official Academic Transcript attached
- Qualification completed within 10 years from date of application (some Accounting qualifications may be exempted)
- Result/s are of a Pass Level or greater (i.e. 55% or more)
- Course outline reflects the course number and course name of that on transcript
- Academic Content is greater than 80% of ECIC course applied for
- Contact/work load hours are equivalent to ECIC (i.e. 30 hours or more)
- Assessment criteria is equivalent to ECIC
- Reputable textbook

Miscellaneous Administrative Issues

Interruption to MPM studies

For interruption involving one to three terms as long as students have completed at least one course in the particular calendar year, no formal action is necessary. Where you do not intend to enrol in any courses in a calendar year, approval for any proposed interruption needs to be sought in advance. Where the interruption involves more than four terms, a formal letter should be submitted to the ECIC, attention to the Program Executive, Singapore stating the dates for which interruption of studies is requested.

Deferment may not be granted for participants intending to undertake tertiary studies elsewhere. Leave from absence from your studies can be sought in the event of health, financial and personal difficulties. It is possible to be granted up to 12 months leave if a participant has good reason to be absent from studies, and if academic performance is of a standard sufficient to warrant a place in the program being reserved.

Leave is granted on the condition that participants undertake to inform the Faculty Office of their intentions to resume their program, one month before the end of the period of leave. Failure to do this is interpreted as termination of their program.

Discontinuance of MPM studies

Provision exists for students who have completed:

4 MPM courses (based on the program rules for courses required to complete) to be awarded a *Graduate Certificate in Project Management* if they exit the MPM program;

Students must seek approval in writing for the conferring of such awards, from the Program Executive, Singapore. Students may seek approval to re-enter the MPM program and surrender either the Graduate Certificate in Project Management before the MPM award is conferred.

Conditional Acceptance (Graduate Certificate in Project Management) (GCPM)

Applicants who do not meet the criteria for entry into the MPM may be made a conditional offer of study. This conditional offer limits the applicant to enrolment in 4 courses only, and they shall satisfactorily complete all 4, namely:

- Applied Project Management 1,
- Managing Risk,
- Project & Innovation Finance & Accounting, and
- 1 elective

GCPM students are encouraged to enrol in one course at a time (for the first four courses) unless they are confident of passing all the subjects by the end of their fourth course. Students who meet the requirement may apply to transfer to the MPM program immediately, counting all 4 courses towards the MPM. Transfer forms are available from NAAEC, and should be submitted before the final courses under the conditional arrangement are completed.

Application to Transfer

Graduate Certificate in Project Management students, who do not have an undergraduate degree, may transfer to the MPM with full status upon successful passing the 4 courses in the GCPM. Transfer forms are available from the NAAEC, and should be submitted to the Program Executive.

Program transfers are only relevant to students moving forward in their studies eg. GCPM - MPM. Students are unable to transfer down to another program.

If a student decides to further his/her studies, he/she will be required to surrender their certificate and the word "surrender" will appear on the degree parchment. They will also be required to pay the current tuition fee applicable to the program at the time of transfer.

All transfers are subject to approval by the Registrar to ensure that all requirements for the degree will be met.

Obtaining an official academic transcript

Students must apply for a transcript on an application form available from: www.adelaide.edu.au/student/current/student_services/transcript.html

The charges for transcripts are as follows:

One transcript	A\$10.00
Four transcripts	A\$20.00
Additional copies	
- produced simultaneously	A\$ 2.00
- produced at a later date	A\$20.00

"Academic transcripts may only be collected by someone else on production of a signed letter of permission from the student concerned naming the person to collect the transcript. "

Your transcript will contain a complete record of all academic study undertaken at the University of Adelaide. Please note that if you have completed all your subjects, your academic transcript will not record that you have been conferred with your degree until after your graduation ceremony.

Graduation with the lesser degree – GCPM

If you intent to graduate with the lesser degree (e.g. Graduate Certificate in Project Management) and is not active in this program, you may wish to complete the 9 steps at <http://www.adelaide.edu.au/student/graduations/steps/>

Please note that to select the GCPM program, you will need to click on the "Not Listed" options. A list of awards offered by the Faculty of Engineering, Computer and Mathematical Sciences will then appear, please select GCPM form here. If you enquire any problems when following the steps, you may call the Student Centre in Adelaide at +61 8 8303 5208.

Process for graduation - your responsibilities

If you believe you have completed the requirements of the degree, you should consult the MPM Specific Course Rules for the year in which you were first enrolled or for the year in which you are completing the degree to confirm the number of compulsory and elective courses that must be undertaken. In case of doubt, or if you wish the ECIC to confirm that you have qualified for the degree, you should consult the NAAEC Program Executive, telephone +65 6738 2910. If you would like to request a degree check, you may wish to submit your degree check form at <http://www.adelaide.edu.au/ecms/forms>

The next step is to submit an application to graduate ONLINE via the graduations website:

<http://www.adelaide.edu.au/student/graduations/>

You will need to check that all your personal details are correct, that your name appears in the proper order, and that you specify which degree you are to be awarded with.

Confirmation of your application and eligibility will be retained ONLINE or via access.adelaide.edu.au. Eligibility will not be confirmed until after the closing date for applications.

Details regarding the hiring of gowns and additional tickets can be found on the Graduations website.

There are two graduation ceremonies each year. The April ceremonies are held in Malaysia, Singapore and Hong Kong and one will be in mid-December in Adelaide.

In order to graduate you must have completed your studies, have had all your results recorded on your official academic transcript, and **lodged the ONLINE application to graduate.**

April ceremony (Singapore) : Studies must be completed by 4th Term of the previous year
August ceremony (Adelaide) : Studies must be completed by 1st Term

The only late applications that will be accepted are those where the University is at fault or those due to exceptional circumstances, of a serious nature, beyond the student's control. Exceptional circumstances may include, for example, serious illness or accident (medical certificate required), serious personal situations such as death in the immediate family, or administrative error on the part of the University.

The entire graduation process is managed by the Graduations Office of the University of Adelaide, NOT the ECIC. Any questions concerning graduation should be directed to that Office.

Alumni Membership

We warmly welcome your continuing connection with the University of Adelaide. To become a member of the alumni, please contact:

Mr. Chan Veng Seng, President
Adelaide University Alumni Association (Singapore)
c/o Ngee Ann – Adelaide Education Centre
97 Tank Road, Level 4, Teochew Building, Singapore 238066
Phone: +65 67382910
Fax: +65 6738 3314
Email: auaas@yahoo.com.sg

For more information, please review the alumni pages of the University of Adelaide website:
http://www.adelaide.edu.au/alumni/chapters/singapore_chap.html

Academic Performance Assessment System

Course Assessment

The curriculum is based on efforts to combine the most up-to-date research, theory, and practice in the commercialisation of technology. To best embody such leading edge knowledge in courses that provide meaningful and applicable outcomes for our participants, we engage in an ongoing process of course improvement.

This continuous improvement sometimes results in changes in course content and assignments during a semester. Faculty members act thoughtfully and responsibly in making these adjustments, and participants are expected to take responsibility for making adjustments that may be necessary.

The requirements and deliverables for courses are diverse. Faculty members create assignments that are best suited to achieving the specific learning outcomes of their courses, so you will experience differences between courses. Consequently the types of assignments that you receive in one course should not be the basis for setting expectations regarding assignments in other courses. In keeping with the program's goal of encouraging creativity and innovation, one aspect of completing course assignments successfully will be the process of defining the specific details of how your work will fulfil the requirements of the assignment. Assignments given will not always provide step-by-step instructions on how they are to be completed. This flexibility allows the development of work that has specific value and application for you as an individual.

Any questions that participants have regarding course requirements or the evaluation of assignments should be directed to faculty members in the first instance. The Academic Manager is only involved in such matters when a participant and faculty member has exhausted all appropriate means for achieving a mutually accepted outcome.

Assessment Components

There are generally both individual assessments and teamwork. A letter grade of High Distinction to Fail will be assigned to each of the projects and will account for designated percentages of each participant's final course grade. Additionally, peer evaluations provided by members of each team may be required for group assignments and these would be factored into the individual's team project grade.

In general, the split may be as follows:

Participation (forum activity, teamwork, activity in sessions)	10 - 20%
Assignments (Individual)	30 - 40%
Assignments (Team)	<u>40 - 50%</u>
	100%

Assignment and assessment information for each course is provided in the specific course handbook.

Participation

A grade of High Distinction to Fail might be assigned for class participation for each participant and will generally account for 10-20% of the participant's final course grade. The actual amount will be specified in each course handbook. The aspects of participation that will be observed and evaluated might involve:

- E-mail interactions with instructors and fellow participants in informal discussions outside of class
- Participation in forums and chats via MyUni
- Participation in discussions at the intensive sessions.

In all of these, the measure applied will be quality (thoughtfulness, pertinence, etc) not quantity.

Assessment Marking

A variety of techniques will be employed in the marking of assessment deliverables. In addition to the grading provided by the course academic coordinator, self-rated measures of assessment may be used.

Your interim assignment marks will be posted on the MyUni Gradebook throughout the term. These marks and your final grade will be checked for approval by the Academic Director before being published on your Academic Transcript (access via Access Adelaide).

Grades Used

For courses with graded assess

Grade	Notation	Notation %	Comments
High Distinction	HD	85 - 100	Very exceptional, brilliant quality.
Distinction	D	75 - 84	Excellent quality; complete in every way; demonstrated real understanding and shows great insight.
Credit	C	65 - 74	Very good, very thorough and demonstrates initiative and clear thought; shows some of the qualities of a D grade but lacks total completeness or shows no insight.
Pass	P	50 - 64	Good to satisfactory; all essential points covered plus some of the minor ones; reasonably thorough and well presented; logical manner.
Fail	F	Below 50	Unsatisfactory to very poor, some essential points not covered or expression of them unconvincing. May lack clear understanding of the subject.

Plagiarism

The University of Adelaide has a 'Policy on Plagiarism, Collusion and Related forms of Cheating' which includes the following:

Rule 3

1. No student will submit for assessment any piece of work that is not entirely the student's own, except where either:
 - (a) the use of the words, designs, computer code, creative works or ideas of others is appropriately and duly acknowledged, or
 - (b) the assessor has given prior permission for joint or collaborative work to be submitted.
2. No student will assist any candidate in any piece of assessed individual work, and no student shall accept assistance in such a piece of assessed individual work, except in accordance with approved study and assessment schemes.
3. No student will submit the same piece of work for assessment in two different courses, except in accordance with approved study and assessment schemes.

The University regards all plagiarism as unacceptable.

Rule 3.3.7 To use quotations, paraphrasing, referencing and attribution in accordance with accepted academic conventions and in accordance with any explicit instructions given by the assessor.

Rule 3.4 Types of plagiarism, collusion and other forms of cheating that will incur penalties

Plagiarism that will incur penalties can take several forms:

- i. Presenting work in any format, without appropriate attribution to the original source;
- ii. Paraphrasing sentences or whole paragraphs without due acknowledgement by references to the original work.

Rule 3.5 Procedures and consequences for Plagiarism and Collusion

All plagiarism is unacceptable.

Penalties may include revising and re-submitting assessment work, receiving a zero mark for the assessment work, failing the course, expulsion and / or imposition of a financial penalty.

Further information is provided on The University of Adelaide's web on <http://www.adelaide.edu.au/policies/?mode=dl;doc-237/AssessmentRulesMar04.pdf>.

Referencing

Referencing sources is necessary in assignments. A correct referencing method is 'Smith (1995:14) said... ..)', where Smith is referenced at the end of the assignment, 1995 is the year of the publication of Smith's paper and 14 is the page number.

Referencing at the end should be as follows:

Browne, P.,	2003	Project management is winning (title of article), The Management of projects, (title of book), Month of article, publisher, pages on which article occurred.
Smith, W.,	1995	The management of projects (title of book), Publisher, city (optional with large publishers)

If it is a direct quotation it should be indicated in inverted commas or italics, with the reference stated.

Second and subsequent offences

If a student is found to have committed a breach of any of the foregoing clauses a second or subsequent time (other than a marginal case of plagiarism the offence shall be reported to the Board of Conduct which, course to the provisions concerning mediation in Statute Chapter XII. - Of Conduct of Students in the University, shall hear the matter and may impose further penalty as provided for in that Statute."

ECIC Governance and Administration

Administration

Enrolment advice, such as choice of courses and sequence of enrolment is provided by the Program Executive (telephone +65 6738 2910). If your questions concern a particular course for which you are enrolled, you should first consult the lecturer concerned.

Questions of a general administrative nature and concerning tuition fee payments should also be addressed to the Program Executive.

If students have particular issues relating to their studies, there is a number of staff who is able to assist them. The correct procedure to follow if you are having problems relating to a particular course is to email or phone the Lecturer in charge of the course. If that person is unable to resolve the issue, the ECIC Head of School is available to deal with concerns.

MPM Degree Structure

To qualify for the MPM degree, a candidate shall satisfactory complete courses to the value of 24 units:

- 18 units of Compulsory Core Courses
- 6 units of Elective Courses

COMPULSORY CORE COURSES (all courses must be completed)
<ul style="list-style-type: none">• Applied Project Management 1 (3 Units)• Applied Project Management 2 (3 Units)• Project Management Technique (3 Units)• Managing Risk (3 Units)• Business and Contract Legal Studies (3 units)• Project & Innovation Finance & Accounting (3 units)
ELECTIVE COURSES (choose 2)
<ul style="list-style-type: none">• Quality Management (3 Units)• Business and Project Creation (3 Units)• Complex Project Management 1 (3 Units)• Marketing Management (3 Units)• Economics for Management (3 Units)• Quantitative Procedures (3 Units)• Introduction to Climate Change (3 Units)• Logistic and Supply Chain Management (3 Units)

Before planning your enrolment schedule please ensure that you have completed the necessary prerequisite courses.

If Students wish to take elective courses from another program, they must receive permission from the programme director and then apply through the NAAEC Office.

GCPM Degree Structure

To qualify for the GCPM, a candidate shall satisfactorily complete to the value of 12 units:

- 9 units of Compulsory Core Courses
- 3 units of Elective Courses

COMPULSORY CORE COURSES (all courses must be completed)
<ul style="list-style-type: none">• Applied Project Management 1 (3 Units)• Managing Risk (3 Units)• Project & Innovation Finance & Accounting (3 Units)
ELECTIVE COURSES (choose 1)
<ul style="list-style-type: none">• Business and Contract Legal Studies (3 Units)• Complex Project Management 1 (3 Units)• Project Management Technique (3 Units)• Business and Project Creation (3 Units)

Term System

The School operates its programs at the NAAEC on a term system. Terms are recorded as follows for 2009 by the Enrolments office (which has responsibility for the central recording of all student information):

1 st Term	2942
2 nd Term	2944
3 rd Term	2946
4 th Term	2948

Please note that students must use this method of designating terms when they enrol or make an amendment to enrolment in 2009. Term will have different numbers each calendar year.

Course Syllabuses

Applied Project Management 1 - 3 units

Overview of course

Applied Project Management 1 is the foundation course in the Master of Project Management degree.

Industry and government have been increasing their use of project management as a framework for managing the achievement of objectives and goals. Large projects which have been accomplished include NASA's Man on the Moon in the 1960s and the more recent Sydney 2000 Olympics. Smaller projects include the fête the local school is planning for later in the year, installation of a new process, or implementation of a training scheme. All of these projects have objectives which were designed to satisfy the objectives of the sponsoring organisation. They all had a special team assembled to deliver the project, and the delivery required careful monitoring as the project was delivered, to ensure goals were being achieved.

This course explores the overall scope of project management and its role in organisations to achieve corporate goals. The course also looks at how project management differs from general management, in terms of the short term nature of projects compared with the relatively enduring nature of organisations, the different reporting requirements for costs and the need for special contracts for projects, as well as many other aspects.

The objectives of projects are usually focussed on Performance, Cost and Time, although safety, quality improvements or an increase in sales, could be objectives.

The key models describing project management, and their detailed components, are outlined.

Objectives of course

The overall learning objectives of the course are:

1. Understanding of how projects support corporate objectives;
2. Understanding how to assess stakeholders' needs and satisfy these;
3. Understanding the concepts of Project Management and the models used to describe projects;
4. Understanding the stages of projects and the choice of an appropriate project delivery system
5. Developing skills in managing the key elements of scope, time, cost, quality, risk, procurement, human resources and communications, and the integration of these;
6. Understand PMBOK's Scope, Time, Cost and Quality
7. Management functions and develop skills to manage these;
8. Building a sound knowledge of project management practice and the techniques associated with planning and control;
9. Developing skills to question business and organisational goal achievement;
10. Develop understanding of ethics required of project managers.

Overview of content

1. Introduction
 - What is a project?
 - Examples of successful projects
 - How project management differs from general management
 - Project context and integrating projects with organisational goals
 - Typical goals of projects
 - Stakeholders
 - Phases of projects
 - Project management models: PMI, PRINCE2
 - Essentials of project management: planning and control

2. Project definition, scope and planning
 - PMI Scope Management
 - Work Breakdown Structures (WBS) and their use in planning
 - Satisfying requirements through the WBS
 - Interface coordination
 - Scope management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.
 - Rolling-wave planning
 - Concurrent engineering
 - Change Management
 - Avoiding a WBS to describe project requirements through Operational Concept Documents, Functional & Performance Specification and Test & Concept Documents

3. Assessing project feasibility and making a business case
 - Organisational objectives and market need
 - Project strategy
 - Market surveys
 - Project selection models
 - Feasibility studies
 - Sources of funds
 - Only one solution required for establishing feasibility
 - Assessing financial feasibility: NPV, IRR & DCF
 - Risk analysis
 - Raising funds
 - The Initiation & Concept phase of projects

4. Project time management
 - PMI Time Management
 - Use of WBS to identify activity definition, activity sequencing, duration estimating and developing schedules
 - Network tools: critical path methods; precedence diagrams, arrow diagrams; PERT; Gantt charts
 - Learning curves
 - Time management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.
 - Design for implementation (constructability)
 - PM software
 - Crashing time
 - Concurrent engineering
 - Change Management
 - Time control

5. Project cost management
 - PMI Cost Management
 - Use of WBS to develop a cost management plan
 - Estimating: analogous and parametric estimating; bottom-up; overheads
 - Estimating pitfalls
 - Chart of accounts
 - Cost control including earned value management
 - Use if EVM for payment
 - Life-cycle estimating
 - Logistic support estimating
 - Cost management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.

6. Project quality and procurement management
 - What is quality and the history of quality
 - PMI Quality Management
 - The quality shake-up in the automobile industry by the Japanese cars in the 1980s
 - Role of ISO 9000
 - The seven quality tools: cause and effect diagrams; benchmarking; flowcharting; Pareto Diagrams; statistical sampling; control charts; trend analysis.
 - Quality reinforced by processes
 - Quality management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.
 - Procurement management
 - Suppliers and contracts
 - Procurement management actions during Initiation & Concept phase, Planning and

Design Phase, Production Phase and Commissioning and Closeout Phases.

7. Project risk, human resources and communication management
 What is risk?
 Risk models and processes
 Risk management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.
 PMI Risk
 Safety;
 HRM processes
 PMI Human Resources
 HRM actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases.
 Human resources issues:
 Leadership
 Team building
 Emotional intelligence
 Role of communication
 Presentations
 PMI Communications Management
 Communication management processes
 Communication management actions during Initiation & Concept phase, Planning and Design Phase, Production Phase and Commissioning and Closeout Phases;
 Motivation of staff;
 Matrix organisations;
 Emotional Intelligence.
8. Project delivery systems
 Project organisations & the project manager
 Code of ethics
 Project delivery systems: Fully documented lump sum, design and construction, management contracting, BOOT (PFI) and alliance contracting.
 Organisational structures
 Code of ethics
9. PRINCE2
 Structure of PRINCE2: processes, components and techniques
 Initiating a project
 Business case
 Organisation
 Plans
 Controls
 Organisation
 Starting up a project
 Directing a project
 Controlling a stage
 Managing product delivery.
10. Project Integration, Project Delivery systems
 Project termination
 Project business systems
 Models of IT projects:
 • Waterfall model;
 • Spiral model;
 • Relationship between PMBOK and IT models. Project Integration management
 The use of project integration management to produce a project plan
 Project termination
 Project information systems
 Project business systems.

- | | |
|--------------------------|---|
| 11. Project Integration, | Project Integration management |
| Project Delivery systems | The use of project integration management to produce a project plan |
| Project termination | Project termination |
| Project business systems | Project information systems |
| | Project business systems |
| | Customers and quality |
| | Community concerns |
| | Sustainability. |

Texts

1. Meredith, Jack R and Mantel, Samuel, 2006, Project Management - A Managerial Approach, Wiley.

References

1. Bentley, Colin, 2002, „PRINCE2 a Practical Handbook, Butterworth Heinmann
2. Cleland, David, 1999, Project Management, - Strategic Design and Implementation, McGraw-Hill
3. Kerzner, Harold, 1995, Project Management - a systems Approach to Planning, Scheduling and Control, Van Nostrand Reinhold.
4. Lock, Dennis, 2000, Project Management , Gower
5. PMI, (2000), A Guide to the Project Management Body of Knowledge.
6. Turner, J. Rodney, 1999, Handbook of Project-Based Management, McGraw-Hill.
7. Nicholas, John N., 1990, Managing Business and Engineering Projects, Prentice Hall.

Assessment

Participants are required to:

1. Participate in the web-based bulletin-board sessions – 10%
2. Complete a 1000 word report every two weeks, on the questions set below, and submit it by email – 5 of these worth 10% each. These can be submitted under MyUni – see instructions below.
3. Develop a group project plan for an approved project of choice, for the project shown below – 40%. Groups should be of two people. If you want to vary the two, you need to seek special approval stating reasons.

The project plan should address the 9 areas of the PMBOK or follow the ECIC Planning Template as shown in the Powerpoint presentation.

As you may be using material in this report which was developed by others, it is important to note what was your contribution and what the contribution of others was.

Both an electronic AND A HARD COPY of this report are required. Preferably any documents created under Excel or Microsoft Project should be included in the Word version of the electronic copy. An introductory section should be included to outline your approach to the report, as well as to the project. The report should emphasise how you are managing this as a project. This course is not assessing the technology. A format could be the ECIC project Template.

Questions for completion approximately every two weeks

Given the word limit on these questions, assessment will reward content included. There will be penalties for exceeding the word limit.

- 2a What are the main reasons project management has developed as a discipline. Why do organisations employ it? Compare the two major project models, outlining advantages and disadvantages of each. Comment briefly on why models are useful.
- 2b Discuss scope and comment on its role in projects. How does it relate to other areas of work in the PMI model? Do you always require drawings to define scope?
- 2c Outline succinctly how you would assess feasibility of projects. Comment on its relation to scope, time and cost.
- 2d How would you plan and monitor scope, time and cost?

- 2e How would you plan and monitor quality, procurement, human resources and communications on projects OR Discuss how you would use the PRINCE2 model of project management.

While 1000 words is only few words to cover a topic, marks will be given for the comprehensiveness of the content, evidence of additional reading and application. Marks will be deducted for submissions which exceed the stipulated length.

3. Preferred assignment

Develop a project plan for an approved project of your choice, or for the project shown below. In choosing your own project, the aim is to learn how to do a work related task, something that will benefit you and your employer, if you have one. The project plan should cover all of the elements of the PMBOK but can be stated in a form that you choose

Alternative assignment

Your company, city or town is planning running a Mini-Olympics, over 3 days in 2004, in parallel with the Athens 2004 Olympics. Funding needs to be raised for this, a site located and a program of events agreed. You have been appointed the PM for the preparation phase, up to the day before the event.

Making appropriate assumptions, develop a project plan for project management of the event.

Both versions of this assignment may preferably be completed by groups of two.

4. Complete the course evaluation.

Applied Project Management 2 – 3 units

Pre – requisite: Applied Project Management 1

Overview of course

This course is designed to be a top-level course in the Master of Project Management. It focuses on the management of organisations which deliver projects. Areas covered include development of strategy for business success, the identification of processes to achieve business goals and the broader use of enterprise architecture for delivery through information processes. The use of six sigma quality techniques to achieve consistent goals and the use of project management maturity model for developing project management capability of the organisations is also focused on. The values of project delivering organisations and the additional skills required for project directors are also examined.

Objectives

The objectives of Applied Project Management 2 are to:

1. Understand and develop skills in development of strategy for business success
2. Understand and develop skills in application of managing by process.
3. Understand and develop skills in the use of Quality Function Deployment to deliver customer value;
4. Understand and develop skills in the application of enterprise architecture;
5. Understand and develop skills in process redesign;
6. Understand and develop skills in application of six sigma;
7. Understand and develop skills in the role of project directors.
8. Understand and develop skills in application of the Project Management Maturity Model.
9. Understand and develop skills in developing values of project delivering organisations

Content

The content of Applied Project Management 2 includes the following:

1. Business strategy
 - 1.1 Revision of Porter's five forces
 - 1.2 The role of differentiation
 - 1.3 Core competencies
 - 1.4 Hamel's business innovation model
 - 1.5 Delivering value leaps
 - 1.6 Identifying processes which deliver customer value
2. Managing by process;
 - 2.1 Key aspects of process management from product development;
 - 2.2 Dividing a process into phases;
 - 2.3 Defining deliverables of each phase;
 - 2.4 Specifying stage gates;
 - 2.5 Defining documentation and work products required;
 - 2.6 The role of Quality Function Deployment;
 - 2.7 Identifying areas for process improvement;
 - 2.8 Identifying areas for program improvement

3. Quality Function deployment
 - 3.1 Customer requirements
 - 3.2 Product characteristics
 - 3.3 Customer attributes
 - 3.4 Evaluating competitive products
 - 3.5 Facilitating creativity
 - 3.6 Key process operations

4. Enterprise architecture
 - 4.1 What is Enterprise Architecture
 - 4.2 Interpreting an enterprise's strategic objectives in terms of project objectives and outcomes for projects;
 - 4.3 Interpreting the corporate objectives and outcomes into project business functions, rules, measures, and critical success factors;
 - 4.4 Enterprise architecture planning
 - 4.5 A business model
 - 4.6 Enterprise survey
 - 4.7 Current systems and technology architecture
 - 4.8 Building a data model to express enterprise architectures including models of enterprise infrastructure (policies, goals, measures, critical success factors, data elements, etc);
 - 4.9 Applications architecture
 - 4.10 Technology architecture
 - 4.11 Developing a strategic information warehouse

5. Process redesign
 1. The benefits of process re-engineering;
 2. Cultural reform in process redesign;
 3. Tools for process redesign;
 4. Stages of participant feelings and reactions;
 5. IT as a process enabler;
 6. Translating business strategy into outcomes.

6. Project Directors skills
 1. Distinction between level 5 (project manager) and level 6 (project director) competencies
 2. Detailed competencies at levels 5 and 6 for:
 - Scope
 - Time
 - Cost
 - Quality
 - Risk
 - Human resources management
 - Communications management
 - Procurement
 - Integration.

7. 6 Sigma project management
 1. The benefits of uniform outcomes in delivery of products and service
 2. When to seek uniform predictable outcomes and when to seek innovation
 3. Customer critical criteria
 4. Developing process capability
 5. Achieve consistent outcomes in products and service delivery
 6. Calculating the cost of poor quality

8. Project Management Maturity Models

1. Project Management Maturity from Armstrong's point of view
2. Project Management Maturity from Kerzner's's point of view
3. PMI's OPM3:
 - a. Portfolios, projects and programs
 - b. Best practices
 - c. Capabilities;
 - d. Project management processes;
 - e. Program management processes;
 - f. Portfolio management processes;
 - g. Integration of all 3.
 - h. Directory of best practice;
 - i. Directory of capabilities;
 - j. Representation of capabilities in Programs, Portfolios and Projects.

9. Corporate values

- 9.1 What are values?
- 9.2 Need for values
- 9.3 Commitment to excellence; Integrity and honesty, Passion for customers, partners and technology, Openness and respect to others, Willingness to take on big challenges and see them through, Commitment to personal excellence and self-improvement and Accountability to customers, shareholders, partners and employees; commitment to the community
- 9.4 Developing and maintaining values

Text

Thompson AA, Strickland, AJ & Gamble, JE 2007, *Crafting and Executing*, McGraw-Hill

References

1. Armstrong, Stephen, 2001, *Engineering and Product Development Management*, Cambridge University Press.
2. Brassard, Michael, Finn, Linda, Ginn, Dana, and Ritter, Diane, *Six Sigma Memory Jogger II, GOAL/QPC*, 2002
3. Hughes, Bob and Cotteral, Mike, 2002, *Software Project Management*, 3rd Edition, McGraw Hill.
4. Jalote, Pankaj, *Software Project Management in Practice*, 2002, Addison Wesley
5. Mandanis, Greg, *Software Project Management Kit for Dummies*, 2000, Wiley
6. Kerzner, Harold, 2001, *Project Management Using a Project Management Maturity Model*, Wiley.
7. Meredith, Jack R and Mantel, Samuel, 2003, *Project Management - A Managerial Approach*, Wiley.
8. PMI, 2003, *Organisational Project Management Maturity Model, (OPM3)*, Project Management Institute, USA.
9. Stevens, R., Brook, P., Jackson, K. and Arnold, S. 1998, *Systems Engineering*, Prentice Hall

Business and Contract Legal Studies - 3 units

Overview of course

This course integrates the issues of focusing the organization acting as project sponsor in order to be more effective in accommodating the projects, which they spawn, and the administration of these contracts. Key issues addressed in the organizational effectiveness sector are scenario planning, business strategy and identifying core competencies, understanding customers' requirements, leadership, managing the supply chain and process re-engineering the host organization.

Rarely are projects executed without some expertise or components being sourced externally or from other business units within an organisation. This course provides students with an overview of Contract Law, an understanding of the key processes in managing internal agreements and formal contracts, including procurement strategies and contract options, contract documentation, tendering, evaluating and selection, contract administration, claims management, negotiation and dispute resolution.

Objectives

The objectives of Business and Contract Legal Studies include:

Part A – Business strategy

The objectives of Part A are to:

1. Understand foresight processes;
2. Understand the process of identifying appropriate strategies for organisations;
3. Understand the needs of customers;
4. Understanding the design of appropriate structures for project based organisations;
5. Identify key processes of business and how these can be improved;
6. Understanding the role of quality in organisations;
7. Understanding the role of suppliers and the value chain;
8. Contribute to developing leadership, motivation and managing staff;
9. Reinforce the importance of ethics in management;
10. Consider triple bottom line management.

Part B - Contract law and administration

1. To familiarize the participants with the legal background to the procurement of goods and services;
2. To give the participants an understanding of the common law and statutory obligations of vendor and purchaser in a typical situation;
3. To enable the participants to understand how the common law and statutory obligations of the parties to a transaction might be varied by agreement;
4. To make the participants confident in operating in a legal milieu when dealing with legal principles of contract and tort (negligence);
5. To give an understanding of how the common law principles have modified by statute;
6. To give an understanding of the principles of modern dispute resolution.
7. To enable participants to use the legal knowledge to effectively manage project contracts;.
8. Understand PMBOK's Human Resource Management and Communication Management.

Content – Part A

1. Introduction;
2. Foresight and scenario planning;
3. Concepts of global strategy & why an organisation needs to be effective and efficient; the identification strategy and especially core competencies in organizations in order to ensure competitive success or sponsor satisfaction.; vision, mission;
4. The structure of organisations to achieve objectives;
5. Marketing and the role of customers and identifying and satisfying their needs and wants;

6. Process redesign: identifying key processes and designing KPIs
7. Managing quality;
8. Human resource management: staff development, leadership, motivation, PMBOK's Human Resource Management;
9. Role of suppliers and effective integration of them into a value chain;
10. Communication Management: PMBOK's Communication Management;
11. Ethics in management;
12. Triple bottom line issues.

Content – Part B

- Description of the common law process, theoretical basis of contracts.
- Contract formation including the requirements for intention on the part of the contracting parties, agreement, formalities and consideration, contractual capacity, consent and legality.
- Operation of contracts including rules for interpretation of written documents, express term and implied terms.
- Discharge of contracts by performance; express agreement, frustration, election after breach and operation of the law.
- Remedies for breach of contract including injunctions, decrees for specific performance and damages.
- Rules for assessment of the measure of damages.
- Variation of existing contracts including a discussion of the principles of promissory estoppel and recent developments in the law relating to the doctrine of consideration.
- Introduction to the law of torts.
- Historical development of the law relating to negligence.
- Extension of the law of negligence into situations involving negligent misstatement.
- The evolution of the concept of proximity and the likely future development in the law in this area.
- Standard of care, remoteness of damage and defences to actions for negligence.
- Actions for negligence based on a duty of care arising out of a contract.
- The statutory regulation of transactions for the provision of goods and services and the Trade Practices Act 1974, Fair Trading Act 1987 and the Contracts Review Act 1980 or the equivalent laws of the ACT.
- Dispute resolution including commercial arbitration, mediation and expert determination.
- Discussion of how the matters discussed in the course impact on the procurement procedures.
- Arbitration with the course participants assuming the roles of litigants, counsel, witnesses and the arbitrator.
- Implications for contract administration.

Readings and Questions – Part A

Week		Readings	Bulletin Board Questions
1.	Introduction		
2.	Foresight and scenario planning	Scenarios and Long-term Visioning: Critical Elements of Technology Strategy - <u>Prism Second Quarter 1996</u> – Arthur D. Little; Greenwald & Rudolph Cetron, Marvin J and Davies, Owen, Trends Shaping the Future, The Futurist, Jan-Feb 2003, p27-42,	a. Using the principles in this article, construct a vision and three different scenarios for your company for 2020. b. What actions should your organisation take to prepare for these?
3.	Concepts of global strategy & why an organisation needs to be effective and efficient; the identification strategy and especially core competencies in organizations in order to ensure competitive success or sponsor satisfaction.; vision, mission.	Strategy as Revolution – <u>Harvard Business Review</u> – Gary Hamel; July-August 1996 Chapter 8: Competence-based Competition: A Practical Toolkit – <u>The Measurement of a Competitor's Core Competence</u> – Jeremy A. Klein, Peter G. Hiscocks, 1994 John Wiley & Sons – Edited by G. Hamel & A. Heene	a. What are the 5 main points that Hamel and Prahalad are making in this chapter? b. Are any of these points relevant your organisation? c. What other important issues do you consider relevant for your company?
4.	The structure of organisations to achieve objectives	Mintzberg, Henry, and Quinn, James Brian, The Strategy Process, Prentice Hall, 1991, p330-358	a. What structural form is your organisation? b. Which other form would

			be the most relevant? c. Would this be more effective?
5.	Marketing & the role of customers and identifying and satisfying their needs and wants.	Staple Yourself to an Order – <u>Harvard Business Review</u> – Benson P. Shapiro; V.Kasturi Rangan; John J. Sviokla; July-August 1992	a. Why is winning work often more difficult than doing it? b. What are the main points about customers you get from this article? c. As a result of a, what actions will you take in the way you do your job?
6.	Process redesign: identifying key processes and designing KPIs	Oblensky, Nick, 1994, Practical Business Re-engineering, Kogan Page, Chapter 1, p15-36	a. What are the processes operating in your organisation? b. Do all of the processes pass through multi-sections or departments c. What are the most important processes? d. If process managers were appointed, how could they manage these processes?
7.	Managing quality.	Peach, Robert and Ritter, Diane, The Memory Jogger, 9000/2000, Goal/QPC Gavin Finn, Six Sigma in the Engineering Design Process, Prescient Technologies	a. What are the two key aspects of quality? b. Does higher quality cost more or less and why? c. Does your organisation achieve 3 sigma? d. Does your organisation achieve 6 sigma?
8.	Human resource management: staff development, leadership, motivation, PMBOK's Human Resource Management	PMBOK Chapters on Human Resource Management Ireland, Vernon, 2002, What is Leadership and is there a difference between leadership and management, Technology Business Review, August, Australian Graduate School of Engineering Innovation	a. Why do CEOs and General managers require a different focus for leadership? b. What is emotional intelligence? c. Why is emotional intelligence important? d. What are the advantages and disadvantage of matrix organisations?
9.	Role of suppliers and effective integration of them into a value chain		a. Why do project sponsors use external contractors to supply projects? b. Why do project contractors use subcontractors? c. What elements of sponsors, contractors and subcontractors systems should be integrated?
10.	Communication Management: PMBOK's Communication Management	PMBOK Chapter on Communications Management	a. What aspects should be included in a project communications plan?
11.	Ethics		
12.	Triple bottom line issues.	Designing for the environment and the community; Identifying community issues; Whole of life design,	

Articles

1. Competing for the Future, Hamel & Prahalad, Harvard Business school Press, 1994, p27-49
2. Scenarios and Long Term Visioning: Critical Elements of Technology Strategy, Prism, 2nd Quarter 1996, Arthur D Little
3. Strategy as revolution – Hamel, HBR, July 96, p69-82
4. Competence based competition, Klein, from Hamel & Heene, 1994, Competence Based Competition, Wiley
5. The fall & rise of strategic planning – Mintzberg, HBR, Jan 94, p107-114
6. Crafting strategy – Mintzberg, HBR July 87 p66-74
7. Mintzberg, Henry, and Quinn, James Brian, The Strategy Process, Prentice Hall, 1991, p330-358.
8. Spend a day in the life of your customers, Gouillart, HBR, Jan 94, p116-125
9. Oblensky, Nick, 1994, Practical Business Re-engineering, Kogan Page, Chapter 1, p15-36
10. Gavin Finn, Six Sigma in the Engineering Design Process, Prescient Technologies
11. Ireland, Vernon, 2002, What is Leadership and is there a difference between leadership and management, Technology Business Review, August, Australian Graduate School of Engineering Innovation

REFERENCES Part A

1. Goleman. Daniel, 2002, Little, Brown, The New Leaders
2. Hamel; Gary, and C.K. Prahalad; 1994 Harvard Business School Press, Boston, Massachusetts
3. Kirkpatrick, Donald, 1998, Evaluating Training Programs, 2nd Edition, Berret-Kohler.
4. Klein, Jeremy A. and Peter G. Hiscocks, 1994, John Wiley & Sons – Edited by G. Hamel & A. Heene in Chapter 8: Competence-based Competition: A Practical Toolkit – The Measurement of a Competitor's Core Competence –
5. Mintzberg, Henry, 1991, The Strategy Process, Prentice Hall
6. Oblensky, Nick, 1994, Practical Business Re-engineering, Kogan Page.
7. Peach, Robert and Ritter, Diane, The Memory Jogger, 9000/2000, Goal/QPC
8. Whiteley, Richard, 1991, The Customer Driven Company, Century Business

Assessment - Part A

Participants are required to:

1. Participate in the web-based bulletin-board sessions - OR answer all of the questions for weeks 2, 5 and 9 and submit in an essay of up to 800 words - 10%
2. Complete four, 800 word reports on the questions set below, and submit these by email – 4 of these worth 10% each.

Questions for regular completion:

1. Why is competing for the future important and how can an organisation do so? What are key issues of strategy that a corporation should consider to be effective and succeed in their environment?
2. How is structure of a corporation determined and which processes are likely to be key ones? How should these be managed?
3. What aspects of quality would you focus on in your organisation? What would you do to ensure your suppliers supported this quality?
4. What human resource and communication programs (structures, processes and programs) would you implement in your organisation, or organisations you have worked in?

Marking

Higher marks will be given for referencing the papers supplied in your answers.

Text Part B

Tabalujan B.S. & Du Toit-Low, V., Singapore Business Law (4th ed.) Singapore, Business Lawasia, 2006

Assessment - Part B

Instructions:

The marks for each exercise are shown thereon. Marks will be awarded on the basis of the correct identification of the legal issues. Higher marks will be awarded for additional legal research, citing of relevant cases and insight into the problem. There is no objection to your expressing your own views on the legal principles that apply. The first and second assignments should be approximately 1,000 words in length and the final exercise approximately 2,000. Your work should be submitted to me by e-mail by the date shown at the following e-mail address by leaving it in the Digital Drop Box at My Uni.

Assignment 1 (20 marks)

Dick is a civil engineer who designs a bridge. He incorporated into the design XYZ bolts. Dick is a member of an engineering professional association that has warned its members against the use of XYZ bolts in bridges as the bolts were likely to fail. Dick was unaware of this warning as he did not read the warning in the association magazine. Some months after the bridge is completed the bolts fail causing the bridge to collapse. A driver of a vehicle that is on the bridge at the time suffered an injury and now wishes to sue both Dick and the local council that owns the bridge. Advise the driver of his chances of success against Dick explaining the nature of the duty of care owed by a professional person.

Assignment 2 (20 marks)

Justin is appointed an arbitrator in a building dispute between the University of Broadway and its builder Ace Building Company. The arbitration is conducted in Sydney according to the provisions of the Commercial Arbitration Act 1984 (NSW). The dispute concerns the quality of work in a new building recently completed by Ace Building Co. After hearing contradictory expert evidence as to the quality of the work Justin notices that he passes the building in the bus on his way home each day. On one such occasion he leaves the bus and enters the building. He makes a detailed inspection and concludes that the workmanship is very poor. When the arbitration resumes Justin hears the remainder of the evidence without mentioning his visit to the site to either party. In his written award Justin states that he has seen the building and from his observations concluded that no competent builder would hand over a building in such poor condition. Accordingly Justin finds in favour of the University. Must the Ace Building Co accept the award? Describe the steps that Ace Building Co should take and state your reasons.

Final Assignment (60 marks)

John is a wine merchant and the owner of Broadway Cellars. At a wine tasting he displayed a bottle of Grange Hermitage wine amongst other wines on a wine rack. Attached was a card which read: 'Special offer, Grange Hermitage for only \$50 per bottle, lodge your order form together with a cheque to purchase this rare wine.' Peter tasted the wine and decided to purchase a quantity. The next day he posts an order form together with a cheque for \$3,000 stating that he will purchase five cases (60) bottles. Grange Hermitage is a famous Australian wine and the true market price for the wine that Peter ordered was \$12,000. The order and the cheque arrived at the cellars the following day but by then all of John's stock had been sold. One week later John wrote to Peter saying that he could not fill the order and returned the cheque. Before receiving the letter Peter had invited his business associates to a luncheon where he proposed to serve the Grange Hermitage. He was highly embarrassed and before cancelling the luncheon Peter was offered five cases of the same Grange Hermitage by Mary for \$5,000. He angrily refuses the offer and cancelled the luncheon. Peter now wishes to take legal action against John for loss of the bargain. Give your opinion as to Peter's chances of success against John discussing the principles involved.

FORMAT OF ASSIGNMENT

The assignment should be prepared using the guidelines published by the University. The names of cases should be italicized and the reference given in a footnote. It is important to show in your work how the principles extracted from the cases are used in answering the assignment questions. There is no objection to quoting from previously published material but the quotation must be clearly identified by quotation marks and the source acknowledged. Your work should include a bibliography.

Criteria for marking exercises

Maximum mark 100.

Work that identifies substantially all of the issues but does not progress beyond class discussion and material handed out will be awarded 50%-60% depending on the accuracy of the detail.

Work that shows some independent research and discusses the issues with great clarity 65%.

Work that exhibits a high level of research and demonstrates some originality and insight of the issues involved 75%-84%.

Work that makes a contribution to the understanding of the subject and demonstrates what could be described as rare insight 85+%.

Business and Project Creation – 3 units

Overview of course

This course focuses on the entrepreneurial and innovative aspects of projects and product development. It will appeal to people who wish to use the Project Management knowledge to generate new business through new projects and products.

Objectives

The learning objectives of the course are to:

1. Develop an understanding of the role of innovation and entrepreneurship in the economy.
2. Develop skills in creativity and appreciate its role in innovation.
3. Develop skills in entrepreneurship and understand the difficulties in stages of the process.
4. Have an appreciation of creating future scenarios and technology forecasting.
5. Develop skills in taking creative ideas to successful businesses and projects.
6. Develop business proposals that are likely to succeed.

Content

1. The importance of innovation and entrepreneurship

Importance to national competitiveness and growth

Importance to corporate success

2. Industry and competitive analysis

Market attractiveness

Porters competitive analysis

Positioning within industries

Sources of competitive analysis

Analysing the market

Establishing the growth rate of the market

Establishing the structure of the industry

Porters five forces

Hamel's model of business success

3. Entrepreneurship & entrepreneurial strategy

The macro-environment for entrepreneurship

The entrepreneurial process

Opportunity creating, shaping, recognising and seizing

Screening opportunities

Identifying entrepreneurs and entrepreneurial strategy

The economic need for technology-based innovation and entrepreneurship.

What it takes to be an entrepreneur

The entrepreneurial mind

Entrepreneurs in action

4. Innovation

What is innovation

The innovation process and how it relates to entrepreneurship.

Technology forecasting and trends

Creation of new products and services, including property.

Hamel's model of business success

Creativity via SIMPLEX

Developing ideas into projects and products

5. Forecasting the future
Scenario planning and predicting the future
Processes for predicting the future
6. Market analysis and competitive advantage
Porter's industry analysis and five forces model of industry structure
Analysing the market: demand and supply
Supply chains
7. Business or project strategy
Value leaps in recent years
Competitive advantage and unique selling propositions
Entrepreneurial strategies
Industry opportunities: property, products, services
Customer understanding strategies
Delivering the product (business partners, supply chain, market and distribution); Partnering with customers.
8. Feasibility and Financing entrepreneurial ventures
Resource requirements
Establishing feasibility
The business plan and determining capital requirements
Sources of finance: business angels, debt capital and other equity sources; seed and start-up capital, expansion capital
Obtaining venture capital and growth capital
PMBOK issues re feasibility
9. Marketing the new venture
Identifying marketing opportunities
Sharpening the value propositions
Market intelligence
Designing a marketing mix
Acquiring and retaining customers
Designing and delivering customer value
10. Crossing the Chasm and managing growth
Crossing the chasm to domination of world markets
Moving from the early adopters to the pragmatic majority for new products.
Critically appraising marketing plans for of new projects and products.
Business structures that support innovation and entrepreneurship.
Establishing a new business
Managing growth
11. Legal and governance issues
Creating a company
Legal form of the organisation
Establishing a Board and auditors
Patent issues
Registering trade marks
Tax issues
Bankruptcy laws
Predictors of bankruptcy.

Assessment

Assessment will be by:

Contribution to bulletin board	10%
Brief assignments covering content	50%
Project on application of the material	40%

Texts:

Timmons, Jeffry, 2005, New Venture Creation-Entrepreneurship for the 21st Century, McGraw-Hill

References

Basadur, Min	1996	SIMPLEX: Creative Problem Solving	Centre for Research in Applied Creativity
Cooper, Robert	2001	Winning at New Products	Perseus Publishing
Deschamps, Jean-Philippe and Ranganath Nayak, P	1995	Product Juggernauts	Harvard Business School Press
Gollis, Christopher	2002	Enterprise and Venture Capital	Allen & Unwin
Kotler, Philip	1999	Kotler on Marketing	The Free Press
Mischlewski, Darryl	1995	Sustaining Competitive Advantage	Pitman
Moore, Geoffrey	1999	Crossing the Chasm	Capstone Publishing

Managing Risk - 3 units

Overview of course

This course addresses decision and risk analysis, methods for structuring and modelling project and product management decision problems, and application of methods to a variety of project and product development situations that involve risk and uncertainty related to the definition and production. Risk modelling approaches are examined, including the Australian and New Zealand Standard AS/NZS 4360 and triple bottom line risk management: risk treatments are developed and a plan for their implementation developed.

Objectives

On completion of this subject students should:

1. Understand risk concepts.
2. Be competent to identify Critical Success Factors for projects, products and service development
3. Be able to systematically identify the sources of risk in a project.
4. Be able to analyse, quantify and prioritise risks impacting on a project.
5. Acquire capabilities in developing strategies for treating risk in projects
6. Be competent to apply the concepts to risk management of financial, community and sustainability goals.

Content

1. Relationship of subject to project context, rationale, strategy and tactics.
2. Concepts of Risk as decision making under uncertainty
 - Risk taking in aspects of life
 - Industries in which risk is very relevant
3. Statistical concepts underpinning risk analysis
 - Concepts of mutually exclusive and collectively exhaustive
 - Risk averse and risk seeking decision making
4. Risk management process especially AS 4360
 - Outline and comparison of codes of practice
 - Details of AS 4360
5. Comparison of qualitative and quantitative techniques
6. Choice of Critical Success Factors, Key Performance Indicators, Targets and Tolerance.
7. Risk identification and quantification: allocation of drivers and assessment of controls
8. Eliciting probabilities for risk analysis
9. Risk aggregation and representation
10. Systematic risk management and reduction methods
11. Case studies
12. Workshop

Assessment:

Contribution to Bulletin Board	10%
Individual assignment	50%
Group submission of Risk Management Plan (major Assignment)	40%

Text:

Adrian Bowden, Malcolm Lane and Julia Martin, (2001), Triple Bottom Line Risk Management, Wiley.

Content material

See attached Powerpoint presentation for content.

Educational approach and tasks

The approach taken in this course is to require participants to:

- Engage in discussions of issues that will provide understanding via a bulletin board.
- Attend an optional intensive session of three days.
- Review some articles which will broaden participant's understanding of risk and feed these into the individual assignment.
- Complete a group assignment which will provide application of the principles covered in the course.

Individual assignment

From the list of articles a-k below, and taking account of Chapters 10-17 of Bowden, Lane and Martin, write a manual (of between 2500 and 3000 words) for yourself, or your staff, people on an approach to managing risks. This manual needs to state procedures to follow in conducting risk analyses and treatment.

Group assignment

Form groups of 2 or 3 people and complete a risk analysis and management plan for a project of one of the members of the group. You may use the approach of AS 4360, with the addition of Critical Success Factors, Targets and Tolerances, or Bowden, Lane and Martin's approach. Submit a Powerpoint presentation of 15-25 slides plus a Word report of at least 2000 – 2500 words outlining the study and the treatment plan.

Weekly task list

See schedule following for pace of topic and assignments for submission.

Articles for review

1. Managing risk – p 207-221 Preston Smith & Donald Reinertsen –
2. New products: Problems and Pitfalls, p 22-49, Cooper;
3. Managing risks – p123-129 Cooper;
4. To test or not to test p276-278 Cooper
5. Risks of differentiation – p 179-186 McGrath;
6. Risks of offensive pricing strategies; p196-202
7. Risks of timing strategies – p 232-234 McGrath
8. Opportunities and risks of cannibalisation – p 257-271 McGrath
9. Tooling up for risky decisions, Kiriakos Vlahos, p 47-52 Pickford
10. Gauging the power play in the new economy, Eric Clemons, in Pickford p229-236.
11. The impact of risk and uncertainties on financial institutions – Chorafas p3-24

Group application assignment – Complete a product or project risk management plan for one project initiated by a group member.

References

1. Chapman, Chris and Ward, Stephen 1997 Project Risk Management, Wiley
2. Chorafas, Dimitris 2001 Managing Risk in the New Economy, New York Institute of Finance
3. Clark, Kim & Wheelwright, Steven 1993 Managing new Product and Process Development, HBS
4. Cooper, Robert 2001 Winning at New Products, 3rd Edition, Perseus Publishing, Cambridge Massachusetts
5. Crawford, C Merle, and Di Benedetto, C Anthony 2000 New Products Management. Irwin McGraw-Hill
6. Deschamps, Jean-Philippe and Nayak, P Ranganath 1995 Product Juggernauts, Arthur D Little
7. Gray, Clifford & Larson, Erik 2000 Project Management, McGraw-Hill.
8. Jolly Vijay 1997 Commercialising New Technologies, Harvard Business School Press
9. McGrath, Michael 2001 Product Strategies for High Tech Companies, 2nd Edition, McGraw-Hill
10. Pickford, James 2001 Mastering Risk, Volume 1: Concepts, Financial Times
11. Smith, Preston G and Reinertsen, Donald 1995 Developing Products in Half the Time, Van Nostrand Reinhold
12. Van de Ven, Andrew, Polley, Douglas, Garud, Raghu, & Venkataraman, Sankataran 1999 The Innovation Journey, Oxford UP

Project & Innovation Finance & Accounting - 3 units

Overview of course

This course is designed to take managers through the essential knowledge and skills development in areas such as: accrual accounting concepts, understanding and analysing financial statements, cash flow, company accounting, budgeting and planning, and an introduction to management accounting and activity based costing.

This course introduces financial modelling and analysis of project proposals. Major topics include the time value of money and capital budgeting processes, depreciation, capitalisation and valuation, sensitivity analysis, and financial management.

Course Objectives

Completion of this course will achieve:

- A pragmatic approach to accrual accounting concepts and practice.
- Provision of a basic understanding and ability to understand accrual accounting and financial statements.
- Understanding of interpretation and use of financial and management accounting reports at a managerial level.
- Understanding of several internal management reporting concepts, such as costing systems, financial planning and budgeting, break-even, contribution margin and cost-volume-profit analysis.
- Appreciation of financial management including short term liquidity and management of working capital.
- Understanding the links between accounting and planning, control, accountability and decision making functions within organisations.
- Understanding of the decision making process for long term investments and projects.
- Understanding of the risks facing the enterprise and how these risks may be measured and controlled.
- Understanding the fundamentals of project finance.

Textbook

Atrill, Peter, Eddie McLaney, David Harvey, Maurice Jenner. 2006. *Accounting: an introduction*. 3rd edition. French Forest: Pearson Education Australia.

Note: There will not be a CourseCompass Course ID. If you want to make use of the Activebook and other online features, please register as a generic user. The CourseCompass contains under Course Documents also multiple choice and true/false questions with which you can check your learning progress for each chapter. The Activebook contains quizzes and checks as you go through the content and has highlighting and margin note capabilities. Research Navigator comes with four exclusive databases of source material.

Additional Readings (optional)

Hoggett, John Robert, Lew Edwards, John Medlin. 2006. *Accounting*. 6th edition. Milton: John Wiley & Sons Australia.

Kimmel, Paul D., Shirley Carlon, Janice Lofgus, Rosina Mladenovic, Donald E. Kieso, Jerry J. Weygandt. 2006. *Accounting: building business skills*. 2nd edition. Milton: John Wiley & Sons Australia.

Meredith, Jack R., Samuel J. Mantel, Jr. 2006. *Project Management – a Managerial Approach*. 6th ed. Hoboken: John Wiley & Sons. Inc.

PricewaterhouseCoopers. 2009. *Illustrative Annual Report*. 2008 edition
<http://www.pwc.com> – Singapore site – Publications – Illustrative Annual Report

Titman, Sheridan, John D. Martin. 2008. *Valuation: the art and science of corporate investment decisions*. Boston: Pearson Education.

Detail Course Outline

Part A: Basic Accounting Concepts and Financial Statements

TOPIC 1: The Nature of Accounting

The accounting context, accounting for decision making, various types of organisations, distinction between internal and external users of accounting reports, accounting principles/conventions, and an introduction to accounting concepts and the accrual accounting process.

References:

Atrill et al., Chapter 1 and 2
Hoggett et al., Chapter 1 and 2
Kimmel et al., Chapter 1 and 2
ACRA (www.acra.gov.sg)
IE Singapore (www.iesingapore.gov.sg)

TOPIC 2: Financial Statements

Balance sheet elements and classification, issues of reporting and disclosure, accrual accounting and provisions, incomes statement elements and classification, revenue and expense recognition, the relationship between external financial reports. Historical cost accounting framework, non-current assets, depreciation, inventory and bad debts are also examined. The accrual accounting process in practice is summarised.

References:

Atrill et al., Chapter 3 and 4
Hoggett et al., Chapter 3, 4, 17 to 22
Kimmel et al., Chapter 3 to 10 (except 6)
ASC (www.asc.gov.sg)
PWC Illustrative Annual Report 2007

TOPIC 3: Statement of Cash Flows

Differences between cash and accrual accounting, Statement of Cash Flows. The relationship between Income Statement (Statement of Financial Performance), Balance Sheet (Statement of Financial Position) and Cash Flow Statement.

References:

Atrill et al., Chapter 5
Hoggett et al., Chapter 24
Kimmel et al., Chapter 11
PWC Illustrative Annual Report 2007

Part B: Financial Statement Analysis and Related Issues

TOPIC 4: Analysis of Financial Statements

Analysis and interpretation of financial reports, common size comparisons; liquidity ratios, leverage and capital structure ratios, profitability ratios and trend analysis.

References:

Atrill et al., Chapter 6
Hoggett et al., Chapter 25
Kimmel et al., Chapter 12

TOPIC 5: Accounting for Companies

The statutory profit and loss, balance sheet and cash flow statement. Accounting standards, company formation and the prospectus. Accounting for projects.

References:

Atrill et al., Chapter 2
Hoggett et al., Chapter 15, 16
ACRA (www.acra.gov.sg)
PWC Illustrative Annual Report 2007

TOPIC 6: Working Capital Analysis

Becoming familiar with the concept of working capital and related management and analytical techniques. Inventories, Accounts Receivable, Accounts Payable.

Review of Annual Report Financial Statement Analysis (Group) assignment and In-Class Presentation (Group)

References:

Atrill et al., Chapter 13
Hoggett et al., Chapter 18, 19, 22
Kimmel et al., Chapter 4, 5, 7, 9

Part C: Internal Accounting – Cost Concepts

TOPIC 7: Management Accounting – Cost Concepts

Introduction to management accounting. Cost-volume-profit analysis, fixed and variable costs, break-even analysis, contribution margin. Marginal analysis, relevant costs, sunk costs, opportunity costs. Classification of costs, direct and indirect costs, process costing and job costing, cost centres, introduction to activity based costing (ABC).

References:

Atrill et al., Chapter 7, 8

Hogett et al., Chapter 8, 9, 11, 14

Kimmel et al., Chapter 13, 14, 15

TOPIC 8: Budgeting and Planning

Organisational goals and objectives, planning, budgets for planning and control, master budgets, flexible budgets, cash budgeting. Projected financial statements. Sensitivity and scenario analysis. Earned Value Management.

References:

Atrill et al., Chapter 9, 10

Hogett et al., Chapter 12

Kimmel et al., Chapter 16

Meredith Et al.

Part D: Project Finance

TOPIC 9: Capital Investment Decisions

Essential features of investment decisions, the time value of money and risk, NPV, IRR and other decision making methods. Financial modelling.

References:

Atrill et al., Chapter 11

Hogett et al., Chapter 14

Kimmel et al., Chapter 17

Titman et al.

TOPIC 10: Financing Projects

Methods of financing companies and individual projects. Costs of different sources of finance and valuation. The weighted average cost of capital. Project costs of capital.

Review of Project Evaluation Assignment (Individual).

References:

Atrill et al., Chapter 12, 14

(Hogett et al., Chapter 14)

(Kimmel et al., Chapter 17)

Titman et al.

Assessment

<i>Class Participation</i>	<i>20%</i>
<i>Annual Report Financial Statement Analysis (Group)</i>	<i>30%</i>
<i>In-Class Presentation (Group)</i>	<i>15%</i>
<i>Project Evaluation Assignment (Individual)</i>	<i><u>35%</u></i>
	<i><u>100%</u></i>

Class Participation

A grade will be assigned for class participation to each student and will account for 20% of the student's final course grade. The aspects of participation that will be observed and evaluated are:

- Participation in class
- Submission of answers to in-class assignments and tests
- Participation in discussions
- Other work as set

In all of these, the measure applied will be quality (thoughtfulness, pertinence, etc), and not quantity. Class attendance is expected and also is factored in the class participation grade.

Project Management Techniques – 3 units

Pre – requisite: Applied Project Management 1

Overview of course

This course is the intermediate core course between Applied Project Management 1 and Applied Project Management 2 in the Master of Project Management. It covers the management techniques required to achieve outcomes on projects in each of the areas of scope, time, cost, quality, procurement, human resources and communication. Further development of scenarios and the use of project management in various industries, including information technology, defence, construction, roll-out of government services, social, finance, medical, research and commercialisation occurs.

General objectives of course

1. Understanding and competence in the basic techniques of project management;
2. Identification of relevant information to respond to set questions;
3. Knowledge and understanding of how projects support corporate objectives;
4. Understanding and competence of how to assess stakeholders' needs and satisfy these;
5. Knowledge and understanding of the models used to describe projects;
6. Knowledge and understanding of the choice of an appropriate project delivery system
7. Understanding and competence in managing the key elements of scope, time, cost, quality, risk, procurement, human resources and communications, and the integration of these, including PMBOK's representation of these;
8. Developing skills to question business and organisational goal achievement;
9. Develop understanding of ethical, social and cultural issues and their importance for project managers.

Objectives – Unit 1 - Cope management

On completion of this course students should be competent to:

1. Identify and understanding of stakeholder needs;
2. Develop the scenario of use of a product;
3. Understand development of requirements for projects;
Understand tracing of requirements to ensure achievement, especially on IT dominated projects.

Objectives – Unit 2 – Time management

On completion of this course students should be competent to:

1. Use the work breakdown structure to manage project schedules;
2. Define activities;
3. Sequence activities;
4. Estimate duration of activities;
5. Develop the schedule;
6. Control the schedule;
7. Use Microsoft Project and a more mature scheduling package (eg Suretrack).

Objectives – Unit 3 – Cost management

On completion of this course the students should be competent to:

1. Use the work breakdown structure to manage project costs;
2. Plan resources;
2. Estimate costs;
3. Budget costs;
4. Control costs;
5. Use Excel and a mature cost management system such as Cobra.

Objectives – Unit 4 – Software development

On completion of this course students should understand some aspects of the role of project management in software projects.

Objectives – Unit 5 – Quality management

On completion of this course students should be competent to:

1. Understand the role of quality in providing solutions to satisfy customer's needs with consistency;
2. Plan quality;
3. Assure quality;
4. Control quality
5. Contribute to the establishment of ISO 9000 in an organisation.

Objectives – Unit 6 - Procurement

On completion of this course students should be competent to:

1. Manage the procurement of project components;
2. Plan procurement;
3. Plan solicitation;
4. Conduct solicitation;
5. Source selection;
6. Administer contracts;
7. Close-out contracts.

Objectives – Unit 7 – Human resource management

On completion of this course students should be competent to:

1. Understanding of staffing needs
2. Understand staff acquisition
3. Understand motivation of individuals
4. Understand development of teams

Objectives – Unit 8- Communications management

On completion of this course students should be competent to:

1. Understand communications planning
2. Understand information distribution
3. Understand performance reporting
4. Understand administrative closure.

Objectives – Unit 9 – Integration management

On completion of this course students should be competent to:

1. Understand the coordination of various elements of a project;
2. Understand project plan development;
3. Understand project plan execution;
4. Understand overall change control.

Content – Unit 1– Scope management

1. Understanding scenarios of projects;;
2. Development of requirements especially for IT dominated projects;

Content – Unit 2– Time management

1. Identifying activities from work breakdown structure;
2. Defining activities;
3. Sequencing activities;
4. Estimating duration of activities;
5. Developing the schedule;
6. Controlling the schedule;
7. Using Microsoft Project and a more mature scheduling package (eg Suretrack).

Content - Unit 3– Cost management

1. Plan resources by use of the work breakdown structure;
2. Estimate costs and use of a cost database;
2. Budgeting costs for project control;
3. Role of accrual accounting in cost control;
4. Controlling costs via regular reporting ;
5. Using Excel and a mature cost management system such as Cobra.

Content – Unit 4 - Software management

1. Reminder of the PMBOK model of projects;
2. The PMBOK spiral model;
3. The waterfall model including detailed activities within it;
4. The 'V' process model;
5. The Infosys model of Jalote;
6. Problems with software development projects;
7. Examples of ROI analysis;
8. Estimating work;
9. Software quality;
10. Measurement and tracking;
11. Project plans

Content – Unit 5 – Quality

1. The role of quality in providing solutions to satisfy customer's needs with consistency;
2. History of quality and how quality reduces costs;
3. Planning quality;
- 4; Quality assurance systems;
5. Controlling quality;
6. The establishment of ISO 9000 in an organisation;
7. Quality procedures and innovation.

Content – Unit 6 – Procurement management

1. Procurement systems;
2. Plan the whole procurement process;
3. Solicitation processes;
4. Sourcing suppliers;
5. Administering contracts;
6. Closing-out contracts.

Content – Unit 7 – Human resource management

1. Organisational planning
2. Staff acquisition
3. Motivation and understanding of individuals
4. Team development

Content – Unit 8 – Communication management

1. Communications planning
2. Information distribution
3. Performance reporting
4. Administrative closure

Content - Unit 9 - Integration management

1. Coordination of various elements of a project;
2. Project plan development;
3. Project plan execution;
4. Overall change control.

Text

PMBOK: A Guide to the Project Management Body of Knowledge, 2004, Project Management Institute, USA.

References

1. Gray, Clifford & Larson, Erik, 2000, Project Management, McGraw-Hill.
2. Meredith, Jack R and Mantel, Samuel, 2003, Project Management - A Managerial Approach, Wiley.
3. Armstrong, Stephen, 2001, Engineering and Product Development Management, Cambridge University Press
4. Hughes, Bob and Cotteral, Mike, 2002, Software Project Management, 3rd Edition, McGraw Hill
5. Jalote, Pankaj, Software Project Management in Practice, 2002, Addison Wesley
6. Mandanis, Greg, Software Project Management Kit for Dummies, 2000, Wiley
7. Meredith, Jack R and Mantel, Samuel, 2003, Project Management - A Managerial Approach, Wiley.
8. Stevens, R., Brook, P., Jackson, K. and Arnold, S. 1998, Systems Engineering, Prentice Hall

Assessment

Participants are required to:

1. Participate in the web-based bulletin-board sessions – 10%
2. Submit 4 individual assignment testing knowledge of content – 40%
3. Submit a group assignment testing application of knowledge – 50%.

References

- Gray, Clifford & Larson, Erik, 2000, Project Management, McGraw-Hill.
Meredith, Jack R and Mantel, Samuel, 2003, Project Management - A Managerial Approach, Wiley.
Armstrong, Stephen, 2001, Engineering and Product Development Management, Cambridge University Press
Hughes, Bob and Cotteral, Mike, 2002, Software Project Management, 3rd Edition, McGraw Hill
Jalote, Pankaj, Software Project Management in Practice, 2002, Addison Wesley
Mandanis, Greg, Software Project Management Kit for Dummies, 2000, Wiley
Meredith, Jack R and Mantel, Samuel, 2003, Project Management - A Managerial Approach, Wiley.
Stevens, R., Brook, P., Jackson, K. and Arnold, S. 1998, Systems Engineering, Prentice Hall

Quality Management – 3 Units

Overview of course

In today's global and competitive market, quality of a product / service is no longer a selling point but a prerequisite for business survival. The challenge for any business organization is its ability to delight its customers and achieve customer loyalty. Quality Management becomes an essential function that leads to customer satisfactions and ultimately customer loyalty. This course explores the Quality Management, its functions and contributions to the business and especially its role in Project Management. It also looks at the specific skills and knowledge required for good Quality Management System, professional disciplines, good practices and their key indicators for success.

Objectives of course

The overall objectives of the course are to develop:

Part 1: History of Quality Management

1. The concept of Quality;
2. Why Quality Management;
3. Evolution of Quality Management;

Part 2: Quality Essentials

4. The knowledge and understanding of Supplier Quality;
5. The Knowledge and understanding of Manufacturing Quality;
6. The knowledge and understanding of Customer Quality;
7. The knowledge and understanding of Services Quality;
8. The knowledge and understanding of Quality Engineering;
9. The knowledge and understanding of Design Quality;
10. The knowledge and understanding of Quality Audits;
11. The knowledge and understanding of Quality Information System (QIS);

Part 3: Quality Systems

12. The knowledge and understanding of ISO 9000/ QS 9000;
13. The knowledge and understanding of Total Quality Management (TQM);
14. The knowledge and understanding of Malcolm Baldrige Quality Award (USA);
15. The knowledge and understanding of European Quality Award (EQA);
16. The knowledge and understanding of Deming Quality Award (Japan);
17. The knowledge and understanding of Singapore Quality Award (SQA);

Part 4: Value-added Quality

18. The knowledge and understanding of Cost of Quality (COQ);
19. The knowledge and understanding of Quality Improvement Process (P-D-C-A);
20. The knowledge and understanding of Kaizen / Gemba Kaizen;
21. The knowledge and understanding of Six Sigma;
22. The knowledge and understanding of Lean Manufacturing / JIT / Kanban;

Part 5: Project Quality Management

23. The knowledge and understanding of Project Quality requirement in PMBOK;
24. The knowledge and understanding of Quality Audit in Project;
25. The knowledge and understanding of Quality Management in software Development, CMM, Waterfall Model, The V-Process Model, Spiral Model and CMMI.

Marketing Management – 3 Units

Marketing lies at the core of *all* business. Whatever the character or size of your entity, its profit can come from only one place; the marketplace. All businesses are dependent on the income they earn from their customers, clients or buyers. In most larger businesses it is *marketing* managers who are primarily responsible for keeping their company close to its customers. In any case, all those who have a direct responsibility for identifying, reaching and satisfying customers are engaged in marketing and everybody in a business needs to understand its marketplace activities. This course offers a complete introduction to professional marketing thought and action.

The course explains the nature and purpose of marketing, followed by the fundamentals of each of the most important marketing tasks. It analyses the business need for customer orientation, the evaluation of markets and the targeting of market opportunities. There is then

assessment of buyer behaviour and the role of market information. In addition, the course explains how to integrate product and service decisions with those on pricing, distribution and promotion – and why this is necessary.

Economics for Management – 3 Units

This course provides an introduction to economic thinking and its relevance and application to managing organisations. The first part of the course deals with the structure of markets, including perfect competition, monopoly and oligopoly, and the competitive regulatory environment. The second part deals with the determinants of the aggregate level of output and employment, and elements in the determination of macroeconomic policy including interest rates, inflation and foreign trade and capital flows. The focus of the course is on current issues and their implications for managers and competitive organisations.

Quantitative Procedures – 3 Units

This purpose of this course is to provide students with basic mathematical and statistical concepts to analyse, value and manage investment portfolios. Students are also exposed to more advanced topics of data analysis. Emphasis is placed on the extensive use of computer statistical packages, e.g. SAS, SPSS, to perform data analysis. Students are expected to have hands-on experience in application of quantitative methods to problems of investment.

Complex Project Management 1 - 3 Units

Pre – requisite: Applied Project Management 1

The objectives of this course are to recognise, understand and manage complex adaptive system-of-systems, that is, the integration of multiple independent systems. These include roll-out of government programs, ICT, defence, climate change, transport, power delivery, infrastructure, projects developed by the World Bank and the United Nations, and others. System-of-systems include the recognition and integration of political, legal, financial and government provision and control, as well as the technology, including ICT. These systems have emergent properties, both desirable and undesirable.

Managing such projects requires developing requirements in a top-down approach, developing an integrated multi-level project architecture, which integrates the multiple systems, including legacy systems. Usually there is high levels of emergence, high internal and external system complexity and usually large life cycle costs. Such projects require the project team to learn during the life of the project in order to clarify what is required and consequently how to deliver it.

The course recognises the skills of Systems Engineering however it contrasts these with the Soft System Methods required to define projects addressing 'wicked problems'. These include soft system skills such as developing rich pictures, root definition and CATWOE, cognitive mapping or mind maps, Strategic Assumption Surface Testing, scenario planning, Delphi methods and Critical Systems Thinking.

Case studies are examined in:

- Implementation of government policy;
- Defence;
- Airport management;
- Climate change;
- Power grid management;
- Health care

Text

Mo Jamshidi, 'System of Systems – Innovations for the 21st Century, 2009, Hoboken, John Wiley

Logistics and Supply Chain Management – 3 Units

The objectives of this course are to develop understanding of maintenance and support planning and competence in ILS techniques, such that ILS concerns are effectively considered in the system acquisition and development cycle; and, understand the implications of an extended supply chain and design systems and provide competence to address it.

The course content introduces participants to the issues and basic principles of Integrated Logistics Support of complex equipment and field systems. Principles for describing and specifying ILS requirements are addressed so that they can be "designed into" a system. This course provides managers or participants involved in management, development, acquisition and support of systems with the understanding of the key issues required to effectively specify and manage acquisition and operational support.

Content includes the role of the various components of logistics, Measures of logistic effectiveness, Logistics issues in the design and development phases, including design for maintainability, reliability modelling, FMEA and FMECA, Fault tree analysis and Reliability centred maintenance. Also includes are Logistic issues in the production/construction phases, Logistics in the utilisation and support phases, Human factors in ILS.

Finally integration of the supply chain is addressed including flow of information, materials, services, manpower and money across the supply chain, coordinating technology across tiered suppliers, creation of trust, Enterprise Architecture in the supply chain, purchasing issues, issues of the customer's customer integrated with the supplier's supplier, and, waste and minimising transaction costs.

Introduction to Climate Change – 3 Units

The objectives of this course are to have a general understanding of the science of climate change. Content describes the carbon cycle, the scientific basis of Climate Change and the predictions of what the physical effects of Climate Change will be, the cause of CO₂ emissions, and where they occur in the supply/distribution chain, the broader impact of Climate Change for key industries, including corporate reputation, market forces, regulation and physical assets. The role of carbon trading and tax schemes. Examples of domestic and international responses to Climate Change.