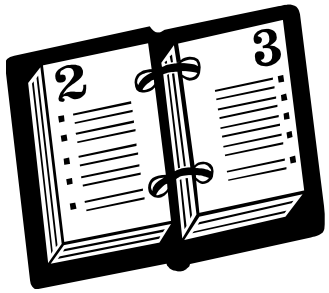
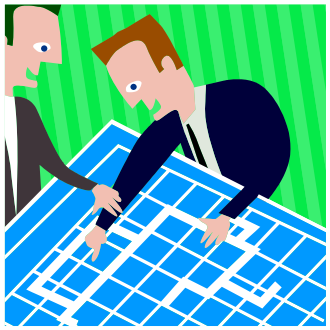
THE UNIVERSITY OF SYDNEY

INFO5990 Professional Practice in IT

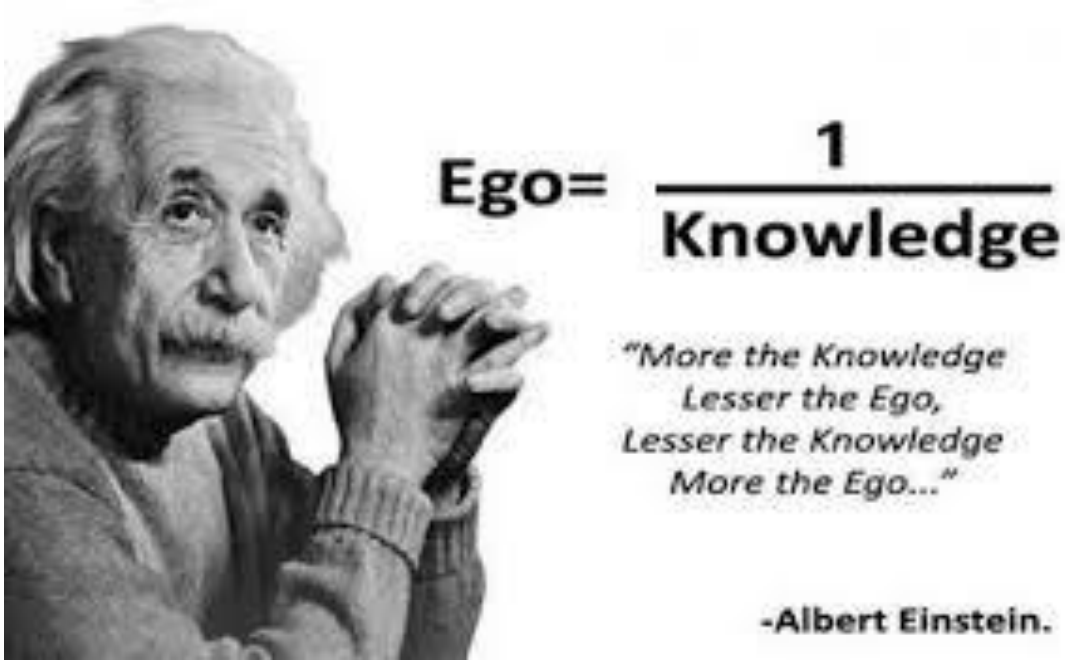
Lecture 1



Welcome from
Dr. Khimji Vaghjiani
Dorothy Luther
Lohitt Bangalore
Manpreet Sidhu
Pritesh Keshav



Do you have an ego ?



Then you will not learn anything !

Always 2-3 people who know more than the lecturer

Yet they are 15-20 years younger

Lecturer Background

Dr. Khimji Vaghjiani (Industry Scholar)

Have worked in : different industries :

- banking and finance, telco, renewable energy, not for profit, academia, manufacturing, Government, Research,
- Startups : 7 - in renewable energy, online mortgages, ad-technology, data analytics, spatial analytics, software services, recruit-Tech
- Taken company from 4 people revenue of $300K p/a to $28M p/a and 180 people.

Australian Innovator of the year 2010, Australian Design Award 2010, Australia's most innovative company award 2010

Commercialised the 1st ever A.I tool in government for the government

Ex: Head of Technology Accelerator at Harbour City Labs, a Tech Accelerator for international scale-ups

Lecture at Sydney Uni (info5990, info1111, info6012), Western Sydney (Ex MBA Innovation), UNSW (Data Analytics / IT in Business)

We will share experiences from the above during the course.
Check my LinkedIn profile – if you don't believe me !

The teaching team

Combined 90 years of experience

Do you have this ?

Have you worked in 12 different industries / started 7 businesses ?

No reason for an ego !

Lecturer & Coordinator
Dr Khimji Vaghjiani

Tutor
Dorothy

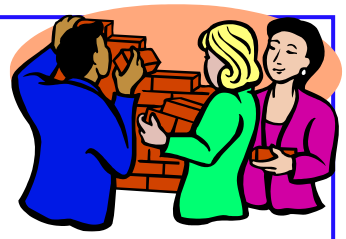
Tutor
Manpreet

Tutor
Lohitt

I think you're in safe hands !!

Format of tut's INFO5990

Tutorials : Time: (Tuesdays)



CHECK PERSONAL TIMETABLE FOR YOUR TUTORIAL

NO CHANGES AS IT IS HARD ONLINE TO CHANGE IF YOU ARE NOT WITH YOUR FRIEND - MAKE NEW FRIENDS – IT IS ONLY FOR 12 WEEKS

TUTORS WILL CREATE ONLINE CLASS / OR GO TO PHYSICAL CLASS ROOM

Lectures Online: Time: 7-9pm – Khimji

Week 1 and 12 is 6-9pm – All

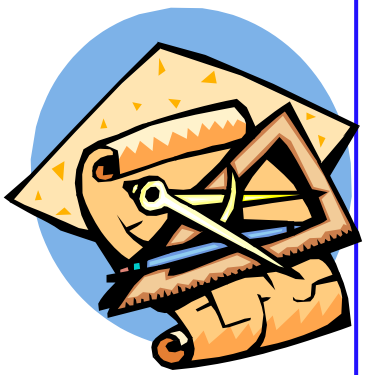
Week 2-11 – 5-6pm and 6-7pm tutorials

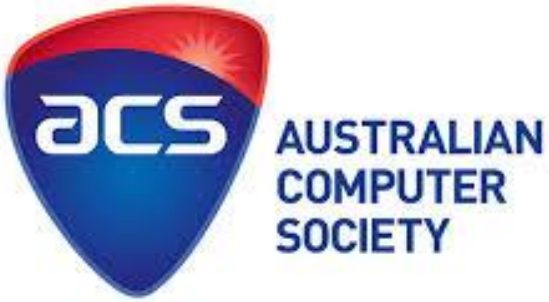
ONLINE AND IN-CLASS AS PER ALLOCATION

Class locations: On Timetable website for tutorial details

Today

- Course outline & Introductions
- What this course is all about – detailed look
- Expectations, yours and ours
- Assessments
- Important Dates
- Lectures / Tutorials, what, when, expectations
- Team set-up discussion
- Material information
- Special considerations
- Exam dates end of term
- Please don’t organise travel unless you have to
- Questions – anytime during lectures





This course is approved by the ACS

Because industry does not want just IT people – they want IT people who understand business.

Presentation from ACS later in the course
And Membership deal for you

Student Feedback previous term's

- Info5990 has won the Dean's award for teaching in 2014/15/16/17/18/19
- One of the best student feedback from 30+ course offered in the IT school
- Students enjoyed the **lectures / practical industry examples / engagement** during the lectures
- Students enjoyed both assignments because it gave **them a taste of the real world – for those working – gave them additional thoughts !**
- Students enjoyed the **tutorial / one-one team** and tutors
- Students enjoyed the **readings as a way of connecting to the real world**
- Tutorial's consulting is for tutor-student teams – one-one
- *One person **did not like the report writing** – welcome to the real IT world !*
- *2 students thought there was too many readings ! – You need to allocate 10 hrs / week for each subject – most students were happy !*
- *Some people **did not like working in teams** – welcome to the 21st century !*
- *Some thought the articles were old – wonder why*
- *Some thought the **articles were badly written** – guess why I put them there ?*
- ***2 student thought they knew everything** there was to know about this course, and did not learn anything in 13 weeks ! – That's fine*

Student Feedback

- INFO5990 has received the Pro-Vice Chancellor's teaching award 3 times for "outstanding teaching" / 1 of 3 in school of IT
- Consistently scoring between 4.2-4.4 out of 4.5 (school average is about 3.5-4.0)

By the end of this lecture you will:

- Know what you can expect from the unit of study INFO5990
- Know what is expected of you
- Have thought about what you want to get out of this course
- Know what assessed work is involved
- Understand how to get the most out of this course
- You can leave if you wish !! – you'll have to do it again anyway (student from 2014) !

Unit Objectives ?

What are YOUR objectives for this course? What do you expect to get out of it?

1._____

2._____

3. _____

What are our objectives?

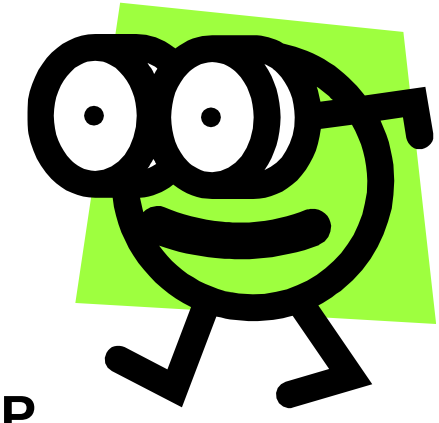
We want you to be able to do things ...

... that you couldn’t do before you took this unit of study.

So, what is INFO5590 about?

- Big issues facing IT professional
- Thought provoking readings to prepare you to be more effective in your work
- Useful skills and techniques that can help in your work
- Experience working on tasks **with a team** of like-minded colleagues
- **Practical work examples**
- **Case studies** to help the learning process
- **Assignments from the work place**
- Having fun and learning at the same time
- Where here to help !

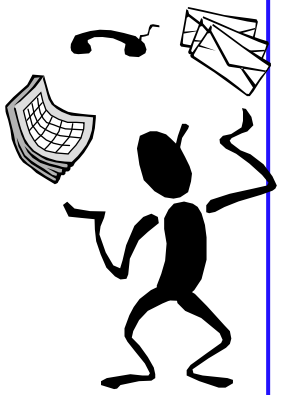
Course overview



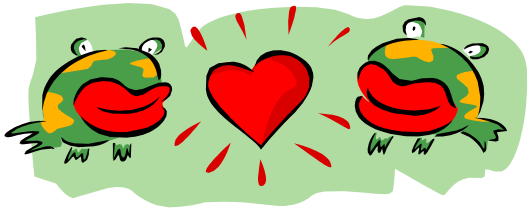
- **Working in teams**
  - team work
  - leadership
- **Communication**
  - written communication
  - oral presentations
- **Project Management**
  - concepts & processes
  - techniques and tools
- **Software Testing**
  - test design
  - testing large systems
- **Security and IP**
  - data under attack
  - intellectual property
- **Ethics**
  - ethical behaviour
  - the IT profession
  - Aust. Computer Soc.
- **Human Resources**
  - conflict resolution
  - health and safety issues
- **Quality Assurance**
  - system audit
  - decision tools

Learning outcomes (1) Useful Skills

1. Understanding role of IT in the work place
2. Analysing IT projects objectively
3. Written & Oral communication in IT
4. Project management in IT
5. Team building & leadership for success
6. Think about the learning's in your work environment



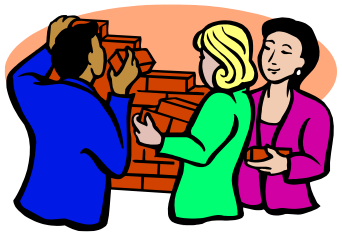
Learning outcomes (2) Professionalism



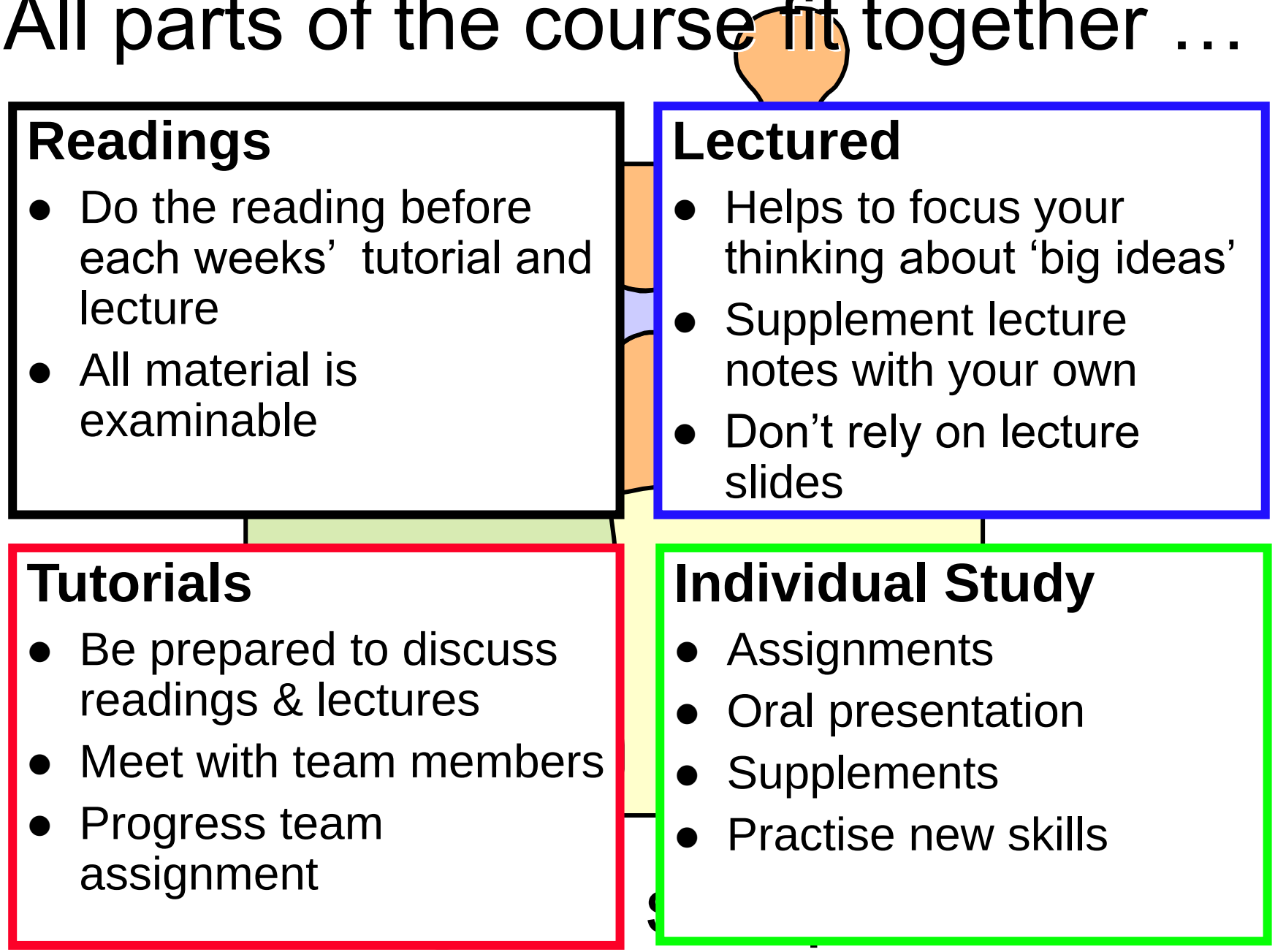
1. Being an effective team member
2. Being an effective team leader
3. Dealing with privacy and security, intellectual property and plagiarism
4. Having a safe and healthy workplace
5. Acting ‘ethically’ in all situations
6. Behaving ‘professionally’

Learning outcomes (3) Valuable Experiences

1. Producing a piece of quality writing
2. Conveying information by means of an oral presentation
3. Forming a network of colleagues



All parts of the course fit together …



Reading, Lecture, and Assessment Schedule

Reading: As per course outline

Supplement: As per course outline

Assignment Due: **As per course outline**

				ading/Assessment Tasks
				ke contact your team members adings: *Working in a Team*, and *m Development* pplement: Further readings
				am meeting. ading: *The Art of Good Writing* pplement: Clear As Mud
		templates		ading: *Oral Presentations*, pplement: Document preparation
4	Written and Oral	Problems of managing IT projects.	The PMBOK and the project management literature	Reading: *Project Management Tools & Techniques* Supplement: Network Exercises
5	Introduction to Project Management	Project estimation: techniques and tools**.**	Project management tools: an introduction to *MS Project*.	Reading: Supplement: Microsoft Project Exercises
6	Project Estimation			Reading: *Achieving a realistic project schedule* **Assignment 1** Due:

Assessment package

(See course outline for exact dates !!!)

Assessment component	Weight	Due Date (See course Outline)	Outcomes Assessed
Quiz 1 (60 questions)	10%	Week 6, @ 11pm	1-6
Group Assignment	20%	Week 10, @ 11pm	1-10
Group Oral presentation	10%	Weeks 11 - 12	1-10
Quiz 2 (60 questions)	10%	Week 13	1-9
Final Exam	50%	Exam period	All

Must pass exam (minimum 40%) and Assessments (minimum 40%)

Quiz 1: Units 1-6

1 hour on line quiz / 60 questions
Covers topics from lectures 1-6
One try only – do not go any where – complete in 1 go
Test your learnings from lectures mainly

Quiz 2: Whole course - refresher

1 hour on line quiz / 60 questions
Covers topics from lectures 1- 12
One try only – do not go any where – complete in 1 go
Test your learnings from lectures mainly
Nice refresher for the course and good prep for the exam !
Due week 13

Group Project Proposal

Based on areal world IT project proposal that brings to light the fundamentals of the course.
The report will be presented to Jack Ma and his Investment company, for investment.
Proposal would could include the following aspects:

•Project executive summary
•Project justification - business/operational/revenue/user benefits/stakeholders benefits etc.
•Project costing / budgeting for tasks to be carried out / in-house resource and outsourced resources, etc.
•Project Plan (including resources, timeline, work breakdown structure) using MS Project, etc.
•Examples of IT : see course outline
•Strictly 2000 Word proposal and Presentation

This term is different – about a government requesting a proposal for an emerging technology solution.

: Assessment

Report: - proposal

Length: Maximum *2000 words* ± *10%* (that is 7-9 pages) loss of marks for more than the allowed limit.
No more than 3 Appendix allowed
Appendix and executive summary exclusive of word count.
Teams of about 6-7 people MAX

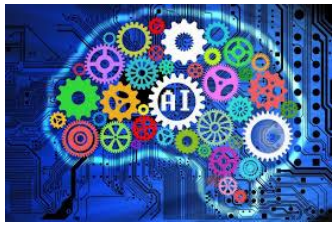
Oral presentation to investment committee

A total of 10 minutes maximum is allowed, at 8 minutes you will be given a gesture to conclude your presentation. Followed by 2 minutes of short questions either from the tutor or the class (assume this to be your senior management team who will approve or disapprove your investment proposal).

This is a formal presentation to the "Company Investment Committee" - Best suit/dress

Remember : you could end up with no job if the project does not get approved

Grp project: Emerging technology



Source: threatbox.com

Source: mexiconewsdaily.com

Source: financialexpress.com

- In teams, explore an emerging technology of your choice.
- Establish their product range by conducting an audit.
- Identify if the CEO asks you to develop the next new product/solution for the company to work on.
- Identify the market differentiator, and size of market / opportunity, value, etc.
- The new service proposed will include a technology solution, business rationale, and implementation/timeline approach with appropriate risks identified and financial cost vs benefit analysis.
- Then in your teams you need to conduct a high level financial cost-benefit analysis and benefit to your selected client and their customers. You are to use the content of this course to help with the proposal.
- Use can use the Lean Canvas to help design the solution. See at the back of the outline.

Lean Canvas to help

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
Top 3 problems Use data to provide consistent and repeatbale process to automate and replace Data driven value driving. Labour optimization, for under, over, staffing, incorrect timing. Manage performance of staff using staff data. Payrol going up and sales staying same. Business leverage is to reduce staff related cost.	Top 3 features	Single, clear, compelling message that states why you are different and worth paying attention	Can't be easily copied or bought	Target customers
	Key Metrics Key activities you measure		**Channels** Path to customers	
Cost Structure Customer Acquisition costs Distribution costs Hosting People, etc.		**Revenue Streams** Revenue Model Life Time Value Revenue Gross Margin		

PRODUCT MARKET

Supplementary materials

- All materials will be posted online
- Additional material will be posted as required
- Students are required to read tutorial material before class for discussion

Class Communication

- All communications typically via Blackboard
  - Announcements/reminders
  - Marks
  - Course material / reading (up a week before the class or earlier)
- Some information on School website (rarely)

Tutorial Format

1. Organise Teams for projects
2. About 6-7 people max. (teams in each tut's – approx)

5/6 members per team (no changes allowed for tut classes)

Tut's:

1. Readings based on "Additional Readings" as per Course Outline.
2. Discuss / critique article
3. Other exercises
4. Presentations, individual/group as part of learning

Next Week: check your course outline

The secret of success is in INFO5990...

... is keeping up with the play

Things to do for next week!

1. Study the **Course Outline** and plan your semester
2. Read tutorial material as per course outline
3. Make contact with your team – have some fun
4. What you put in, is what you get out !
5. **You will learn if you keep an open mind – remember Einstein !**

Stretch Break
Back in 10 min

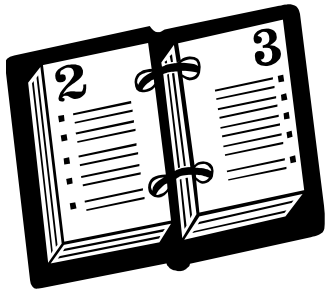
Followed by :

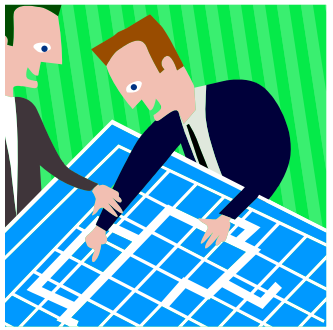
1. I.T Team working
2. Questions

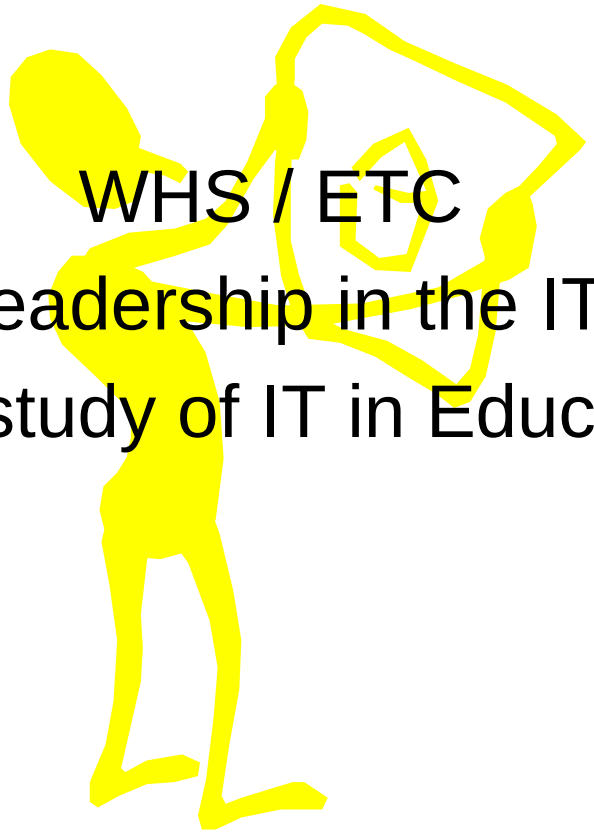
THE UNIVERSITY OF SYDNEY

INFO5990 Professional Practice in IT

Lecture 01B







WHS / ETC

Teamwork & Leadership in the IT environment

Case study of IT in Education

By the end of this lecture you will be able to:

- Reflect on pressures existing in the IT world
- Understand the importance of team work
- Be more aware of team dynamics
- Appreciate some key issues in teamwork
- Suggest an optimum team size
- Understand what makes an effective leader
- Apply ideas to your own work in a team

WHS INDUCTION

School of Information Technologies

General Housekeeping – Use of Labs

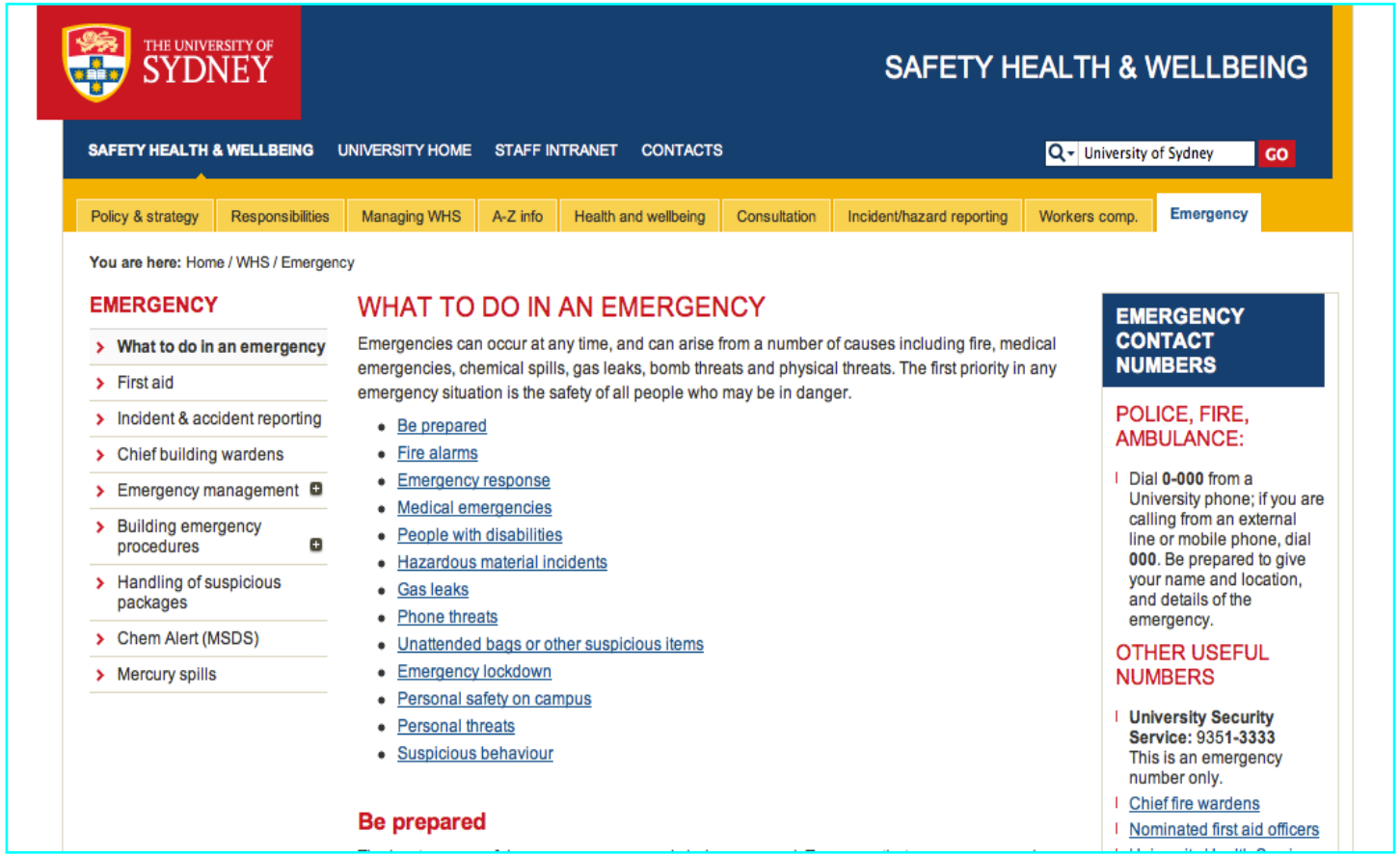
- Keep work area clean and orderly
- Remove trip hazards around desk area
- No food and drink near machines
- No smoking permitted within University buildings
- Do not unplug or move equipment without permission





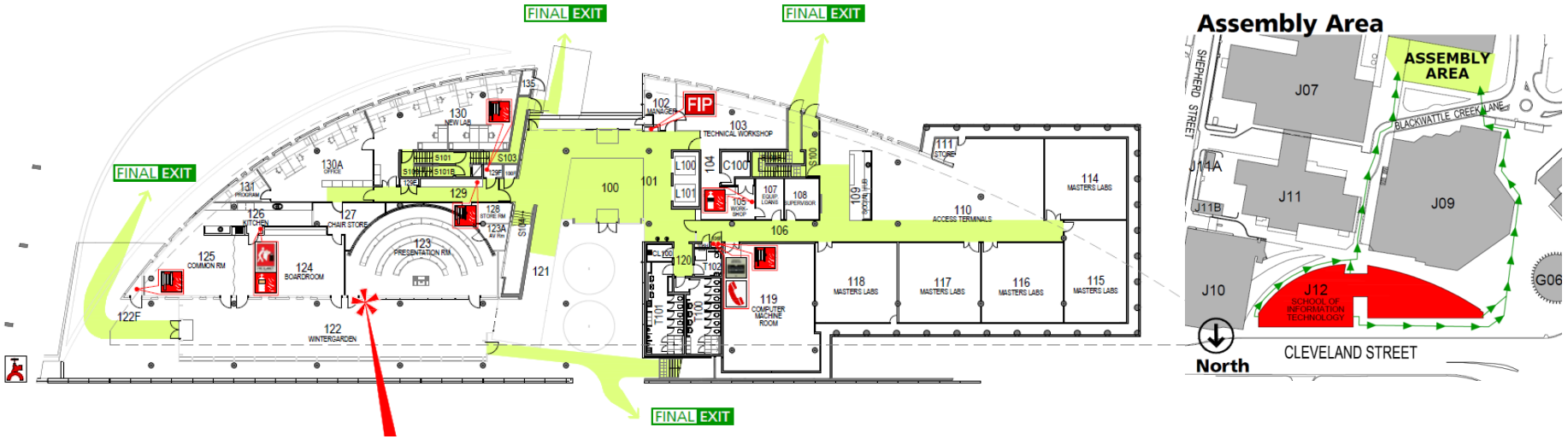
EMERGENCIES – Be prepared

www.sydney.edu.au/whs/emergency



EMERGENCIES

WHERE IS YOUR CLOSEST SAFE EXIT ?



EMERGENCIES

Evacuation Procedures

ALARMS

BEEP... BEEP... Prepare to evacuate

1. Check for any signs of immediate danger.
2. Shut Down equipment / processes.
3. Collect any nearby personal items.

WHOOP... WHOOP... Evacuate the building

1. Follow the EXIT exit signs.
2. Escort visitors & those who require assistance.
3. DO NOT use lifts.
4. Proceed to the assembly area.

EMERGENCY RESPONSE

1. Warn anyone in immediate danger.
2. Fight the fire or contain the emergency, if safe & trained to do so.

If necessary...

3. Close the door, if safe to do so.
4. Activate the "Break Glass" Alarm  or 
5. Evacuate via your closest safe exit. EXIT 
6. Report the emergency to 0-000 & 9351-3333

MEDICAL EMERGENCY

- If a person is seriously ill/injured:
  1. **call an ambulance 0-000**
  2. **notify the closest Nominated First Aid Officer**

     If unconscious– send for Automated External Defibrillator (AED)

     AED **locations**.

     NEAREST to SIT Building (J12)

     - Electrical Engineering Building, L2 (ground) near lifts
     - Seymour Centre, left of box office
     - Carried by all Security Patrol vehicles

  3. **call Security -** 9351-3333
  4. **Facilitate the arrival of Ambulance Staff (via Security)**

Nearest Medical Facility
University Health Service in Level 3, Wentworth Building

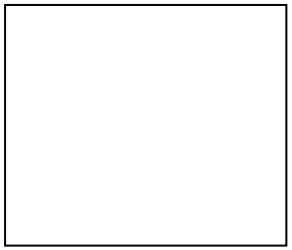
First Aid kit – SIT Building (J12)
kitchen area adjacent to Lab 110

School of IT Safety Contacts

CHIEF WARDEN
Name: Greg Ryan
Mobile:

FIRST AID OFFICERS

Name: Will Calleja
Location: 1 West
Phone: 9036 9706



Name: Katie Yang
Location: 2E-227
Phone: 9351 4918

Orally REPORT all INCIDENTS & HAZARDS to your SUPERVISOR

OR

Undergraduates:	to Katie Yang 9351 4918
Coursework Postgraduates:	to Cecille Faraizi 9351 6060

SIT School Manager: Shari Lee
9351 4158

Assistance

- There are a wide range of support services available for students
- Please make contact, and get help
- You are not required to tell anyone else about this
- If you are willing to inform the unit coordinator, they may be able to work with other support to reduce the impact on this unit
  - eg provide advice on which tasks are most significant

DISABILITY SERVICES

Do you have a disability?

- You may not think of yourself as having a 'disability' but the definition under the **Disability Discrimination Act** is broad and includes temporary or chronic medical conditions, physical or sensory disabilities, psychological conditions and learning disabilities.

The types of disabilities we see include:

- anxiety, arthritis, asthma, asperger's disorder, ADHD, bipolar disorder, broken bones, cancer, cerebral palsy, chronic fatigue syndrome, crohn's disease, cystic fibrosis, depression, diabetes, dyslexia, epilepsy, hearing impairment, learning disability, mobility impairment, multiple sclerosis, post traumatic stress, schizophrenia , vision impairment, and much more.

Students needing assistance must register with Disability Services –

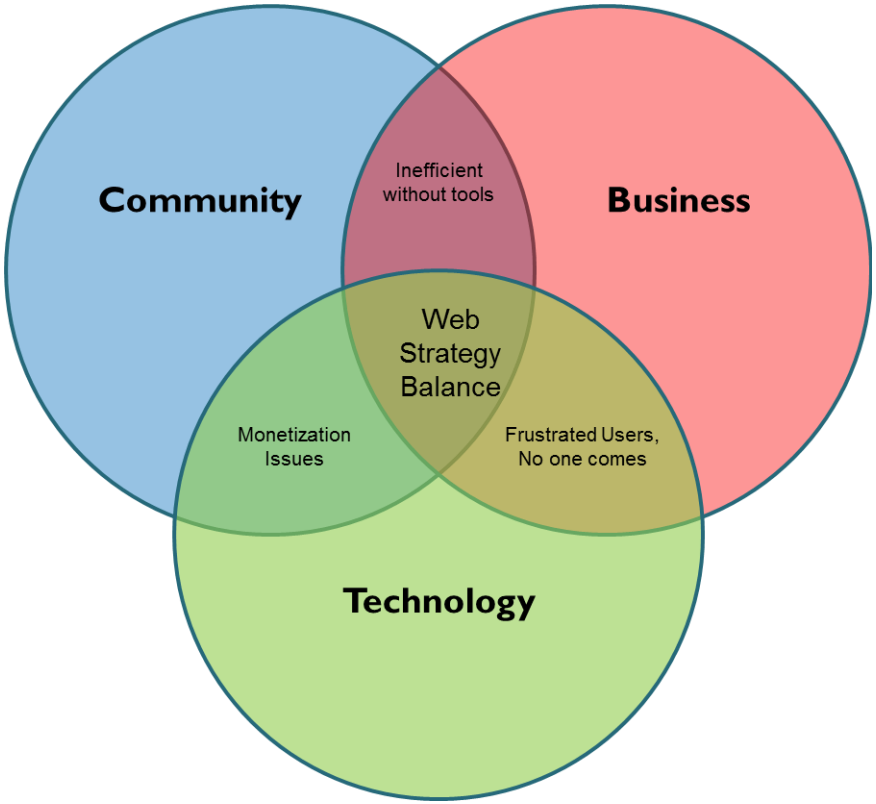
- it is advisable to do this as early as possible.

- http://sydney.edu.au/study/academic-support/disability-support.html

Other support

- Learning support
  - http://sydney.edu.au/study/academic-support/learning-support.html
- International students
  - http://sydney.edu.au/study/academic-support/support-for-international-students.html
- Aboriginal and Torres Strait Islanders
  - http://sydney.edu.au/study/academic-support/aboriginal-and-torres-strait-islander-support.html
- Student organization (can represent you in academic appeals etc)
  - http://srcusyd.net.au/ or http://www.supra.net.au/
- Please make contact, and get help
- You are not required to tell anyone else about this
- If you are willing to inform the unit coordinator, they may be able to work with other support to reduce the impact on this unit
  - eg provide advice on which tasks are most significant

Three Spheres of Tech Strategy



Role of ICT in Business

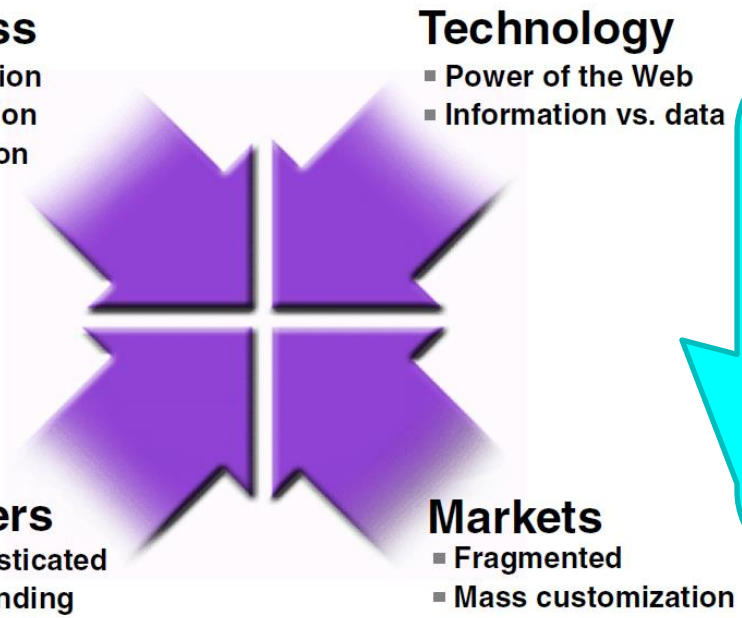
Why this course is important – because we have students who ask why they are learning about different I.T topics !

ICT in a business environment can be used for:

- Administration- Invoices, Communication, Emails
- Business, Finance and Accounting- Business Plans, Financial forecasting, Auditing, Market Analysis, Research, Recording Transactions
- Communications- email, instant messages, mobile phones
- Engineering and Creative Art- 2D and 3D Drawing, Modelling, Simulation
- Wildlife and Tourism and Hospitality- Animal Tracking, Hotel booking, GIS
- Book your flights to Sydney

Changing Business Landscape

The term “global” includes: global markets, global customers, global suppliers, global shareholders, and global opportunities.
Highly competitive with companies competing across national boundaries



Global reach of Internet Technology: mobile phones can handle Internet communications
Pervasive Computing- idea of putting powerful computer chips and functions into everyday things such as cars or household appliances. Fridges can now scan itself and inform you to procure goods online using GPS and location technologies

Why are IT systems so hard to deal with?

- "Software systems are complex compared with other human constructs of similar size"
- "Software systems are 'invisible and unvisualisable' compared with architectural & engineering constructs"

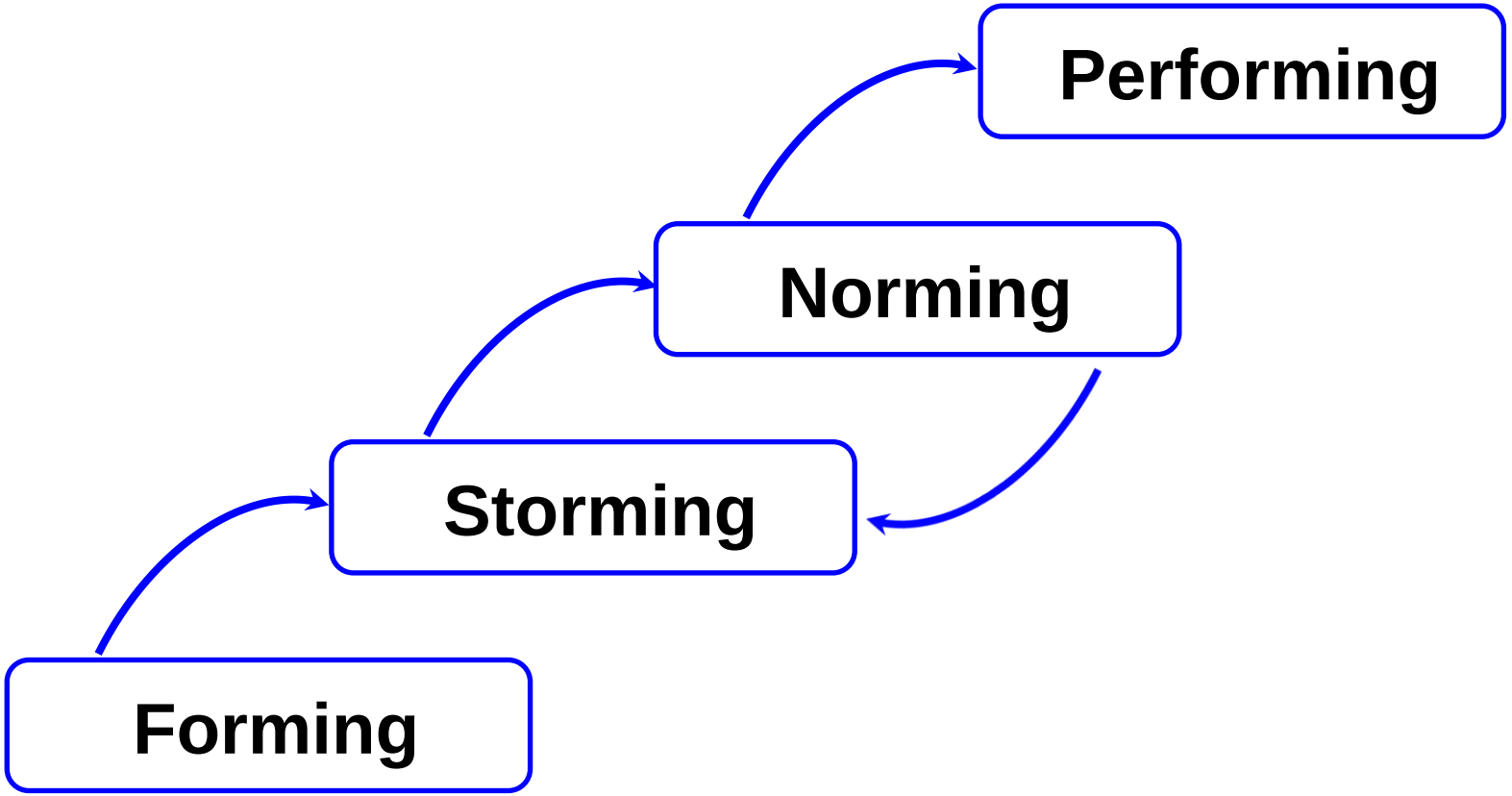
A teamwork approach is often employed in IT projects. Why?

- To cope with the sheer magnitude of IT projects
- To accomplish bigger and better things than is possible for an individual
- To exploit the special talents of individuals
- Because it is not feasible for individuals to have a sufficient range of skills

Benefits of team work?

- More cost-effective work processes
- Better use of workers' time and talents
- Improved decision making
- Improved communication process
- Reinforces technical and cooperative skills of members
- The team can achieve more than any one individual!
- Blame or glory shared by team?

Stages of team development



The Forming – Storming – Norming – Performing model of group development

- first proposed by Bruce Tuckman in 1965
- he maintained that these phases are all necessary and inevitable
- for the team to grow, to face up to challenges, to tackle problems, to find solutions, to plan work, and to deliver results.

Stage One: Forming

- Transition from individual to team status.
  Exploring the boundaries group behaviour.
  Time spent off task and some confusion.
- Team focus:
  - establish the norms of acceptable group behaviour
  - determine individual roles;
  - define the task and decide how it will be accomplished;
  - decide what information needs to be gathered;
  - communicate openly about individual likes and dislikes; and,
  - engage in team activities that build trust and communication.

Stage Two: Storming

- Members realize that the task is more difficult than imagined. Some members may reject the task. Fluctuations in attitude about team and chance of success. Communication poor - little listening. Disunity, tension and conflict. Minimal collaboration. Cliques appear.
- Team focus:
  - ensure forming stage issues are answered;
  - re-establish, clarify, or modify ground rules (norms);
  - negotiate roles and responsibilities; and,
  - listen, listen, listen.

Stage Three: Norming

- Members accept the team ground rules, roles. Relationships become more cooperative. Willingness to confront issues and solve problems. Members avoid conflict by negotiation. Evidence of sharing and team spirit. More time and energy to spend on the project . Significant progress is made.
- Team focus:
  - do detailed planning;
  - develop criteria for completion of goals;
  - build on positive norms and change unhealthy norms; and
  - encourage continued team spirit.

Stage Four: Performing

- Members have gained insight into personal and team processes. Understand each other's strengths and weaknesses. Can deal with conflict and resolve differences. Form close attachment to the team.
  Team is now an effective, cohesive unit; can begin ‘performing’ its allotted task.
- Team focus:
  - emphasize quality work;
  - utilize each member's talents;
  - meet deadlines; and
  - continue to work on team commitment.

Final stage

- **Transforming**: The team is performing so well that members believe it is the most successful team they have experienced; **or**
- **Ending**: The team has completed its mission or purpose and it is time for team members to pursue other goals or projects.
- **But, of course**:
  - Not every team moves through these stages in order
  - Events such as adding a new team member can send the team back to earlier stages.
  - Time depends on experience and skills of team

The nature of leadership

What does a leader do?

What makes a good team leader?

What does the team leader do?

- Define goals and set firm dates
- Organize resources to maximize performance
- Guide individuals towards those goals
- Facilitate team problem solving
- Facilitate cooperation
- Resolve conflict

What makes a leader successful?

Attributes observed in successful leaders	Attributes of leaders who became ‘derailed’ and failed to fulfil their promise
• Ability to build and lead their team	• Failed to build or lead their team
• Ability to develop or adapt to change	• Inability to develop or adapt to change
• Ability to establish collaborative relationships	• Poor working relationships with colleagues
• Non-authoritarian	• Over authoritarian
• Consistent exceptional performance, predictable	• Inconsistent performance, unpredictable
• Ambitious	• Over ambitious

Are leaders born or made?

Myths that hinder leadership development*

- Myth 1: *Good Leadership Is All Common Sense*
  - Studies of leadership reported tend to confirm what anyone with common sense 'already knows'
- Myth 2: *Leaders Are Born, Not Made*
  - Each person needs to make the most of leadership opportunities he or she faces.
- Myth 3: *The Only School You Learn Leadership from Is the School of Hard Knocks*
  - A course in leadership can help you to analyze your experiences from multiple perspectives

*Hughes, Ginnett and Curphy, *Organizational Leadership*, (2005) McGraw−Hill Primis, 5e
http://www.scribd.com/doc/26292606/Organizational-Leadership

Scenario

Toby has missed three out of six meetings so far held and seems to have contributed very little to the team effort.

All other team members feel they would like to get rid of him.

As team leader, what would you do?

If teams are not working – tell your tutor at the start not end of the term ! – cannot do anything afterwards.

Dealing with freeloaders
What would you do?

- ‘Sideline’ them so that they can’t do any harm.
- Complain to your tutor or the course coordinator.
- Get the rest of the team to gang up on them.
- Keep on their case until they do the job.
- Who has encountered similar problems in the workforce when working in a team?

Adopting a positive approach

- Discover each team member's particular talents
- Exploit existing talents to the benefit of the team
- Allocate tasks fairly and sensitively
- Do not expect every one to contribute equally. *'Vive la difference'!*
- Keep your cool

Case study IT in Education

Learning Management System & marking system

What happened before this ?
Everything is now online – think of how life was without this ?

For next week

- Remember Tutorial discussions & Read the articles
- Form / finilize teams by week 2
- ***Make sure you are in your groups on "Learning management system – by week 7 - failure to do so will mean" : -***