ENGG1811 Computing for Engineers

Course Introduction

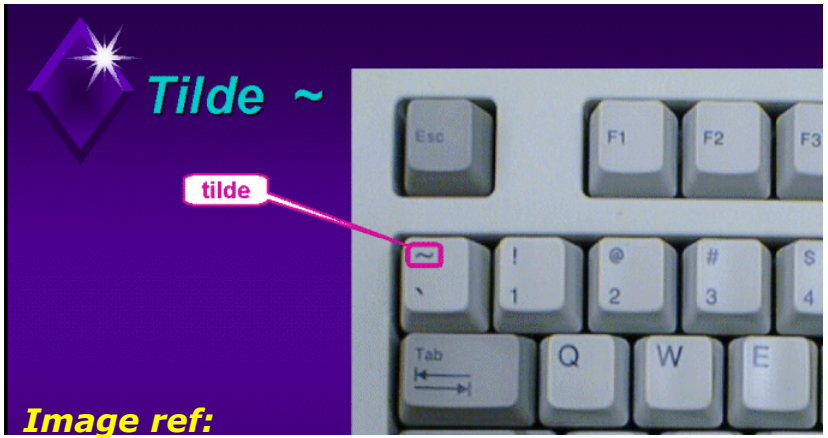
- Staff
- Course Objectives
- Ways of Learning
- Lecture Schedule
- Assessment
- Avoiding Plagiarism
- Administration, lab locations
- Feedback from past sessions
- See the class home page
  `www.cse.unsw.edu.au/~en1811`

Staff: Session 2 2017

Staff Name	Role	Email	Phone
Dr Ashesh Mahidadia	Lecturer-in-charge	ashesh@cse.unsw.edu.au	
Mei Cheng Whale	Course Administrator	meicheng@cse.unsw.edu.au	9385-5683 (ext 55683)

- For general administrative questions, email
  en1811@cse.unsw.edu.au
- For info see the class home page
  www.cse.unsw.edu.au/~en1811

This is a ***tilde***



http://www.ctdlc.org/remediation/2-Type/images/tilde.gif

Course Objectives

- What you *should be able to do* by the end of the semester:
  - **use spreadsheets** and their associated tools to solve small computational problems in Engineering, Science and Business [topic **SS**];
  - design and implement solutions to problems by **writing small programs** using a scripting language such as OpenOffice Basic or equivalent [topic **BP**];
  - use a **numerical computing environment** such as MATLAB® to analyse, model and visualise data and systems [topic **NC**]; and
  - understand a bit about **where the technology** is and might be going (so you can be better prepared to exploit it in your professional career) [topic **IT**]

Ways of Learning

- Lectures
  - slides released as PDFs
  - only effective if audience cooperates by maintaining silence
  - will try to add occasional interactive elements (bonuses for volunteers!)
- Labs
  - develops experience with using the problem-solving systems
  - tasks based on previous lecture material
  - has a small on-line assessment exercise based on very basic knowledge
  - fully supervised and assessed within the class, some self-assessment
  - must be ready to show (some) work 30 minutes before end
- Assignments
  - completed in own time, individual unless specified
  - fully develops skills, especially in programming
  - important exercise in time management
  - submitted on-line, fully tested and objectively assessed
  - second assignment is peer-assessed using objective criteria
  - late penalty is 15% per day off the maximum available mark

Ways of Learning, continued

- Revision lab classes
  - offered once or twice mid-semester, covering programming material
  - focus is on absolutely minimum level of knowledge to pass
- Consultation
  - lecturer has specific times, or see after class
  - lots more scheduled prior to assignment due dates
- Course forum
  - general, lecture, labs and assignment-specific
  - used for assignment-related questions and answers
  - tutors and lecturer will post and reply
  - strongly encouraged to participate
  - usual etiquette:
    - respect for participants' opinions
    - please check before starting a topic that it's genuinely new
    - no assignment solutions (tiny fragment is OK to ask a question though)

Lecture Schedule

The proposed lecture schedule is:

Week	Topic
Weeks 1 to 3	SS: Spreadsheets and Data Analysis
Weeks 4 to 7	BP: Problem Solving and Programming (OpenOffice Basic)
Weeks 8 to 11	NC: Numerical Computing, modelling and visualisation using Matlab
Weeks 11,12	IT: Introduction to some of the current and emerging Information Technologies

- There is a one week break after week 4

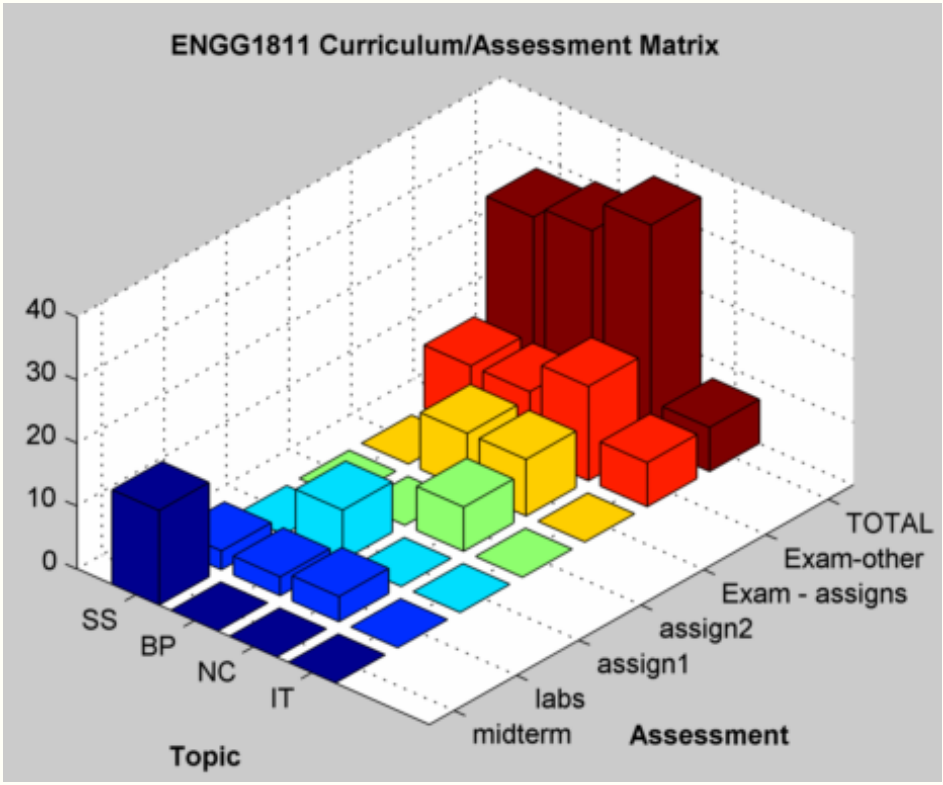
Assessment

- Labs (weeks 2 to 13)
  - each lab has an on-line assessment (1 mark) and tutor's assessment (marked out of 3)
  - best 10 marks for each category taken of potential 12
  - contributes **10%** of total
- Assignments
  - assign 1 due w9 (OOBasic program), **7%** (but see below)
  - assign 2 due w11 (Matlab program), **8%** (but see below)
- Mid-Semester Test
  - during week 5 lab, 45 mins, practical, **15%**
  - covers first 3 weeks' material (labs 2 to 4)
- Final written exam
  - 3 parts: multiple choice, OOBasic, Matlab
  - **60%** of overall assessment, minimum competency 33.3% (20/60)
  - Non-linear formula applied if min exam mark not reached (details later)
  - **18** marks of the 60 in the final exam are *directly related to the two assignments,* assessing whether you really learned sufficient from them

Curriculum/Assessment Matrix

Topic	SS	BP	NC	IT
midterm	15			
labs	3	3	4	
assign1		8		
assign2			7	
Exam - assigns		9	9	
Exam - other	10	10	15	7
TOTAL	28	30	35	7

Tabulated data representation



One possible visualisation of the data (Matlab's bar3 function)

Avoiding Plagiarism

- Academic honesty
  - everything submitted for assessment must be your own work
  - acknowledge all sources unless obvious
- Assignments 1 and 2
  - program code must be developed alone [unless explicit groupwork]
  - discussion about solutions OK, indeed encouraged
  - imperfect but honest attempt will still attract fair marks
  - exam-related question carries more weight than the assignment, and will only be solvable if attempted the assignment
- Anti-plagiarism measures
  - start early and get help if you're struggling
  - we usually run sophisticated similarity analysis software
  - mark reduction of *up to 100%* applies to non-original submissions
- Reference site
  - https://student.unsw.edu.au/plagiarism

Administration

- Changing classes
  - myUNSW used for all changes if possible
  - places are limited for this semester
  - intractable timetable clash is the only reason for squeezing into a full class
  - email the class account `en1811@cse.unsw.edu.au`

Feedback from past sessions [our emphasis]

- **Best bits**
  - "Very **practical** and **interesting** course."
  - "The **labs** helped dramatically to cement the material covered in lectures."
  - "Lots of **practical** tasks/problems with a **real-world** application/basis, with a strong focus on providing **useful** and practical **knowledge**."
  - "it **improves** our thinking",
  - "It was **interactive**, engaging and interesting." , "**online examples** shown"
- **Things that could be improved**
  - "**Explaining** better to students who have never even used excel"
  - "more control by telling others to keep quiet in the lecture theatre", "**too much noise from other student[s]**"
  - "more coverage of the **basic aspects of vba** programming. ...most students are being exposed to vba for the first time."
  - "assignemnt was too difficult", "**encourage** more to do more pre lab work"

More on the Class Web page

- The class home page is the source of all official information about ENGG1811. Its contents include
  - Notices, updated frequently (keep a close eye on them).
  - The Course Outline (near the top of the left sidebar) which contains formal details about the course.
  - CourseWork: lecture notes and working documents, lab exercises and assignment requirements.
  - Help: Consultation schedule and course forum link.
  - Resources: online documentation, tutorial material and lecture recordings.
  - Timetable and lab class roll.
  - Assessment records and assignment submission/collection.
  - Staff and policies.
- The class web page (in case you missed it) is still at `www.cse.unsw.edu.au/~en1811`

Checklist

To start this course off on the right foot, make sure you have done all of the following by the end of week 1.

- ❑ **Enrolled** in the course properly (with a lab class)
- ❑ Found out **where the labs are**
- ❑ Installed OpenOffice 4.1.2 on your own computer (strongly recommended)
- ❑ Had a go at the **first lab** (lab 02) if you have OpenOffice Calc
  - ➢ Excel solutions might convert to OO Calc but no guarantees
  - ➢ The labs and midterm will use OO Calc so you should get used to it
  - ➢ Recycling solutions from previous semesters gets you no (or negative!) marks
- ❑ Dropped into the course forum, maybe posted a comment
- ❑ Considered buying the main **reference book** (recommended)
  - ➢ not used until week 8 so no hurry

Class home page (yet again): **www.cse.unsw.edu.au/~en1811**