COMPUTER APPLICATIONS

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Objectives

• Becoming a digitally literate student
  ▫ To introduce the use of Digital Literacies to support becoming a student in a digital age
  ▫ The use of digital tools for
    • Personal effectiveness in support of becoming an engineer.
    • Communication to share, analyse, and present data.
    • Collaboration tools for team working.

• Skills in programming for engineering solutions.
  ▫ Python applications

• Working in a team to develop a practical engineering software application.
Practicalities: Teaching

- **Lectures**
  - Groups 3 & 4 Monday 09:00 building 44, 1041
  - We will have some of the lectures in the lab (44/1061), starting at 9:00 – we will let you know which ones!

- **Labs**
  - Groups 3 & 4 Monday directly after lecture until 10:50
    - Building 44/1061
  - Register taken at labs.
  - You are responsible for ensuring that a demonstrator has seen your work and marked it in assessed labs.
  - Ask for help when you need it.

- **Self Study**

*Do not be late!*
Practicalities: Teaching

• Lectures
  ▫ Groups 1 & 2  Friday 09:00 building 44, 1041
  ▫ We will have some of the lectures in the lab (44/1061), starting at 9:00 – we will let you know which ones!

• Labs
  ▫ Groups 1 & 2 Friday directly after lecture until 10:50
    • Building 44/1061
  ▫ Register taken at labs.
  ▫ You are responsible for ensuring that a demonstrator has seen your work and marked it in assessed labs.
  ▫ Ask for help when you need it.

• Self Study

Do not be late!
Interactive University map using open data [maps.soton.ac.uk](http://maps.soton.ac.uk)
Introductions

• Me
• You:
  ▫ Spend 5 minutes talking to the person sitting behind or in front of you.
  ▫ Find out & make notes:
    • Their name
    • Where they’re from
    • What degree they want to do after FY
    • What are their interests outside study
Learning

• Attending lectures will help you to pass the module.
• The lectures will not give you all the answers.
  ▫ One of the objectives of this course is learning how to learn to use new software.
• Labs are practical sessions where you learn how to apply what is taught in the lectures
  ▫ Help yourself first but ask questions if you are truly lost.
  ▫ Sign the on-line attendance sheet at each lab.
• If you have little or no previous experience of MS Office,
  ▫ Microsoft have some good online tutorials
  ▫ Lynda.com, sign on with your UoS user account
How to do “xxx” in yyy

• Help yourself - every application will have some help available- check before asking the post grads
  ▫ Application-Help menu

• Look for resources on the web, the application’s own tutorials are very useful and there are many others e.g on YouTube
Lesson Plan Semester 1 (1)

- University computing environment and the web as a study tool
- Organising Life
- Working Together
- Online Identity
Lesson Plan Semester 1 (2)

• Programming concepts
• Introduction to Python
• Variables and Operators
• Decision Structures
• Loops
• Revision
Assessment

- All coursework is handed in online through Blackboard
- Coursework pass mark 60%
- Assignment 1, worth 20% of course total
  - Data analysis + presentation
  - Electronic Hand in November 2017 (date to be confirmed)
- Assignment 2, 30%
  - Simple Python applications
  - Assessed through labs
- Assignment 3, 50% Semester 2
  - Team programming project, details closer to the time
Resources

• Available through Blackboard
  □ Foundation Year – Computer Applications
  □ Lecture slides
  □ Possibly extra notes and links to other resources
  □ Practical exercises.

• The Web
Appropriate use of University Systems

• Read and follow the University regulations
  ▫ Protect account passwords
  ▫ Don’t use the university network (including halls) for anything that you can’t justify to:
    • Hugh, Jian and Yvonne
    • Dr Barney
    • the police
    • your grandmother

• Plagiarism and Academic Integrity
  ▫ www.sell-me-an-essay.com

• University Policy on Plagiarism
  ▫ http://www.calendar.soton.ac.uk/sectionIV/academic-integrity-regs.html
  ▫ You are cheating yourself, you will be caught

• Google doesn’t find everything, you might try the following search engines:
  ▫ duckduckgo.com
  ▫ www.yahoo.com
  ▫ www.bing.com
Literacy, n.

“The quality or state of being literate; knowledge of letters; condition in respect to education, esp. ability to read and write.”

- The Oxford English Dictionary

Discussion (5 min)

In small groups (3-4) what are the types of digital literacy that you can think of (skills concerning the use of ICT and Web 2.0 technology)?
Street Wisdom on the Digital Highway

Identity and Reputation

Media Literacy

Beliefs and Practices

Business Models

Information Literacy

ICT Skills

Digital Citizenship

Digital Workpractices

Digital Academic Practices

Communication

Collaboration

Social Networking

Networks (of People)

Evaluating Affordances

Finding, evaluating, processing, organising, analysing, presenting

Using applications and services
The learner is given the stuff via the network
The learner finds stuff on the network
The learner finds stuff from the network (of people)
The learner is part of the network and contributes
  - Stuff
  - Meaning and Understanding

- Beliefs and Practices
- Business Models
- Information Literacy
- Collaboration
- Social Networking
- Communication
- Digital Workpractices
- Digital Academic Practices
- Networks (of People)
- Media Literacy
- Identity and Reputation
- Street Wisdom on the Digital Highway
- Evaluating Affordances
- ICT Skills
Digital Literacies are the skills needed to live, learn, work, collaborate, influence and lead in the virtual and digital world.

- Beliefs and Practices
- Business Models
- Digital Citizenship
- Digital Workpractices
- Digital Academic Practices
- Information Literacy
- ICT Skills
- Collaboration
- Communication
- Social Networking
- Networks (of People)
- Media Literacy
- Identity and Reputation
- Evaluating Affordances
- Street Wisdom on the Digital Highway

Digital Literacies include:

1. **Information Literacy**
2. **ICT Skills**
3. **Business Models**
4. **Digital Citizenship**
5. **Digital Workpractices**
6. **Digital Academic Practices**
7. **Collaboration**
8. **Communication**
9. **Social Networking**
10. **Networks (of People)**
11. **Media Literacy**
12. **Identity and Reputation**
13. **Evaluating Affordances**
14. **Street Wisdom on the Digital Highway**
What is Digital Literacy?

What is Digital Literacy?

awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.

Why is Digital Literacy important

In an increasingly digital world, where the workplace is often virtual, we see it is our responsibility to equip students with ‘digital literacies’ so they develop skills to flourish, influence and lead in that environment.

- Professor Hugh Davis
By the end of the Practical Session

- Log in to public workstation, SUSSED, Blackboard
- Use digital tools for research
- Use a word processing application to record your findings
Global
The New Web
All you need is a browser and an internet connection
University Computing Environment
Where’s my stuff?

Institutional
Wired/ wireless intranet /
- Institutionally provided software
- Blackboard
- Timetable
- Email
- edShare
- MSOffice 365

Personal / local
No connection needed
MS Office
Software applications

Global
Internet connected
Tools: Google docs, gmail, Hotmail
Storage: Dropbox
Social Networking: Facebook, Twitter ...

**Personal Software**

- On your own computer you might have Office 20xx or Open Office (free Open Source equivalent)?
- Python for programming, this is available for free download
- Links
- Mac vs Windows vs Linux
  - I own a Mac and a Windows 7 PC, I regularly use Mac OSX, Windows 7, and Linux
  - You will be taught using Windows 7/8 and Mac OSX
  - MS Office is available for Macs, Last year several students used Windows software on Macs by using Parallels Desktop
- Other Software
  - When looking for software it is often a good idea to see if there is a free open source program that suits you before shelling out hard cash
  - Chat, Pidgin [http://www.pidgin.im/](http://www.pidgin.im/)
Personal Hardware

• You can survive without your own computer (if you are happy using public workstations / the base room)
• Laptop vs Desktop vs netbook vs iPAD vs smartphone?
  ▫ For the same computing power a laptop is more expensive and more fragile.
  ▫ Having a laptop means that you can always have the computer you use on campus set up how you want it.
  ▫ Carrying your laptop around all day can get heavy, and will your battery last the day?
  ▫ Netbooks are great for email and taking notes but don’t have full apps.
  ▫ Tablets (e.g. iPAD’s) are great for looking up resources on the web and communication but don’t have full apps (would you like to write a report on your iPAD?)
• Backup
  ▫ Whichever you choose ensure that your computer is backed up regularly
  ▫ Maybe agree with a friend to hold backups of each other’s files
  ▫ On line storage (e.g. Dropbox?)
• Memory sticks
  ▫ great for transporting files
  ▫ very easy to break or lose
  ▫ do not rely on them as the only place to keep your files
Questions

• Software
  ▫ This course will be taught using Microsoft Office 20xx (Word, Excel, PowerPoint) and Python (2). You will be expected to submit your assignments in formats that can be opened by these programs. All of these are available on the public workstations. Python is available for free download from Python.org.

• IT Support
  ▫ Public workstations have Windows 8, and have Office 365, Python
  ▫ The public workstations and halls network are provided by ISS. If you have problems with these not working how you think they should, try the ISS support pages http://www.soton.ac.uk/iss/essentials/help/index.html
Most student resources can be accessed through the university’s SUSSED portal.

This can be used off campus as well.
You can access your university email account. You are expected to check this every day during term time.
SUSSED

Library information can be accessed here.

Sussed Library
Link to BlackBoard
Mobile apps: Blackboard

free app from:

- the Apple store for iphone, ipod and ipad,
- Google Play for Android,
- Windows store for Windows phone..

http://www.southampton.ac.uk/isolutions/computing/elearn/mobilelearn/
Mobile apps: MySouthampton

Maps, timetable, bus times, staff directory, new student information, ‘Your Library’, Sports Centre times

free app from:

- iphone,
- Android,
- Blackberry
- Browser version for Windows phone and PCs

See
http://www.southampton.ac.uk/mysouthampton/