

COMP1010 – Week 12

Computing and the ICT Industry

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COMP1010 – Introduction to Computing

University of Newcastle



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

FACULTY OF
ENGINEERING AND
BUILT ENVIRONMENT



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Group Assessment

- Your group report and presentation marks will be made available on Blackboard by the end of next week.
- Any concerns with your group report and presentation marks please email Raymond.
- All groups have been marked using the same rubric and marking scheme.

Examination

- Final Exam is the last hurdle
- You must achieve greater than 40% in your final exam to pass the course, no matter how well you performed in the group work.
- If you submit special consideration and it is accepted then you will be eligible for a supplementary exam.

Examination

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- 2 hour exam
- 120 multiple choice questions
- A question a minute !
- "Study aid" permitted – double sided A4 piece of paper, written or printed, containing a subset of your study notes.
- Study aid must have your name + student number on it and it will be submitted to us along with your answer sheet (i.e. you don't keep it afterwards).

Examination

- Review the notes you have been making during the semester
- Work through the workshop questions again. If you want to clarify any of the answers you can email your tutors THIS WEEK.
- There are lots of practise questions in the text book, but remember that the text book covers a lot more material than what we taught.
- There are no practise exams available.

Exam Day

- Set an alarm !
- Parking is generally still questionable during exams (not AS bad, but still not fantastic).
- Know where your examination room is ! If you don't know – go find it the day before.
- Not everyone is in the same room !
- There is a good chance you will be in a room in a building you have never been in before.



DON'T PANIC

May 24, 2017

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Exam Day

- Skip questions if you have to, but mark them so you can come back and have another attempt if you have time.
- Answer all questions ! We aren't using negative marking.
- Don't leave early – go back and double-check your answers.
- Use the process of elimination
- Try and supply your own answer before looking at the options

Afterwards

- Final marks are made available via the official system on the official release date.
- You don't get your answer sheet back.
- Any issues with your mark afterwards, contact Raymond as Course Coordinator.

ICT Industry

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- ICT is a very wide field
- You may find yourself in a role that crosses multiple core disciplines
- ICT Employers tend to be either:
 - Dedicated ICT companies
 - ICT divisions in a non-ICT company
 - Research and Development

Some Example ICT Roles

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- Computer Operations / Technical Support
- Data / Networking
- Hardware Design and Development
- ICT Management
- Multimedia / Internet
- Software Development
- Specialist Support

Computer Operations / Technical Support

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- Includes such roles as:
 - Helpdesk / Tech Support Engineer
 - Helpdesk / Tech Support Manager
 - Data Centre Manager
 - System Administrators
 - Operations Engineers
 - Database Administrators

Data / Networking

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- Includes such roles as:
 - Network Designers
 - Network Engineers
 - Network Administrators
 - Network Managers

Hardware Design and Development

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- Includes such roles as:
 - Hardware Engineers
 - Firmware Engineers
 - Hardware Specialists

ICT Management

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- Includes such roles as:
 - Chief Information Officer
 - IT Directors
 - Sales and Marketing

Multimedia / Internet

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- Includes such roles as:
 - Internet / Web Design
 - SEO Engineers
 - Graphic Designers
 - Content Development

Software Development

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- Includes such roles as:
 - Systems Analysts
 - Programmers
 - Project Managers
 - Enterprise Architects

Specialist Support

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- Includes such roles as:
 - Auditor
 - Quality Assurance / Testing
 - Security Engineer
 - Penetration Tester

Your Degree

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- Your degree's are built to give you a wide breath of knowledge
- Your choice of electives can help prepare you for specific roles so best to start thinking now about where you would like to end up
- It's not a concrete plan – so don't panic.

Bachelor of Information Technology

SINGLE MAJOR PATHWAY



Commencing in 2017



Studying at Callaghan/Ourimbah

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek prior advice from your [Program Advisor](#) to ensure you remain on track.



Semester 1

Semester 2

Year
1

COMP1010 Computing Fundamentals	INFT1004 Introduction to Programming or SENG1110 Object Orient Programming	MAJOR	ELECTIVE
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SENG1050 Web Technologies	INFT1150 Foundation of Information Systems	MAJOR	ELECTIVE
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Year
2

SENG2130 Systems Analysis & Design	MAJOR	ELECTIVE 2000 or 3000 level	ELECTIVE
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COMP1140 Databases & Information Management	INFT2031 Systems & Network Administration	INFT2150 Business Analysis	MAJOR
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Year
3

INFT3100 Project Management	SENG3300 User Interface Design	MAJOR 3000 Level	ELECTIVE 2000 or 3000 level
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INFT3970 IT Major Project (20 units)	MAJOR 3000 Level	ELECTIVE 2000 or 3000 level
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Program Plan Key: = Core = Major = Elective

Bachelor of Information Technology

DOUBLE MAJOR PATHWAY



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	Semester 1				Semester 2			
Year 1	COMP1010 Computing Fundamentals	INFT1004 Introduction to Programming or SENG1110 Object Orient Programming	MAJOR 1	MAJOR 2	SENG1050 Web Technologies	INFT1150 Foundation of Information Systems	MAJOR 1	MAJOR 2
Year 2	SENG2130 Systems Analysis & Design	MAJOR 1	MAJOR 2	MAJOR 2	COMP1140 Databases & Information Management	INFT2031 Systems & Network Administration	INFT2150 Business Analysis	MAJOR 1
Year 3	INFT3100 Project Management	SENG3300 User Interface Design	MAJOR 1 3000 Level	MAJOR 2 3000 level	INFT3970 IT Major Project (20 units)	MAJOR 1 3000 Level	MAJOR 2 3000 level	

Program Plan Key: = Core = Major 1 = Major 2

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Majors Courses (compulsory courses listed in **ORANGE**)

Subject to change - Please refer to the program handbook for up to date information.

Business Technology	Interactive Media	Systems Development
<p>STAT1060 Business Decision Making EBUS3050 The Digital Economy INFT3970 IT Major Project (20 units)</p>	<p>CMNS1230 Foundations of Media Production INFT1201 Digital Technologies for Media and Entertainment INFT3970 IT Major Project (20 units)</p>	<p>INFT2012 Application Programming INFT2050 Mobile Applications and the Cloud INFT3050 Web Programming INFT3970 IT Major Project (20 units)</p>
<p>Choose 10 units from the following courses.</p> <p>Choose 30 units of Directed course, with at least 10 units at the 3000 level.</p>	<p>Choose 40 units of Directed courses, with at least 20 units at the 3000 level.</p>	<p>Choose 30 units of Directed courses, with at least 10 units at 3000 level.</p>
<p>1000 Level Courses:</p> <p>ACFI1001 Accounting for Decision Makers ACFI1002 Accounting Practice CMNS1290 Introduction to Public Relations ECON1001 Microeconomics for Business Decisions ECON1002 Macroeconomics in the Global Economy MNGT1001 Introduction to Management MNGT1002 Introduction to Entrepreneurship and Innovation MKTG1001 Foundations of Marketing</p> <p>2000 Level Courses:</p> <p>IRHR2270 Introduction to Human Resource Management MNGT2001 Business Strategy MNGT2002 Business Venturing OPSM2000 Supply Chain Management</p> <p>3000 Level Courses:</p> <p>IRHR3035 Managing Diversity MNGT3002 Knowledge Management MNGT3004 Organisational Structures and Design MNGT3005 Managing Organisational Change</p>	<p>1000 Level Courses:</p> <p>CMNS1000 Introduction to Digital Communication CMNS1004 Media Production: Video CMNS1005 Media Production: Cinematography CMNS1130 Media Production: Sound Production DESN1102 Graphic Design in Practice MKTG1001 Foundations of Marketing</p> <p>2000 Level Courses:</p> <p>CMNS2016 Media Production: Social and Interactive Media CMNS2035 Media Production: Television CMNS2400 Media Production: Introduction to Radio DESN2803 3D Animation</p> <p>3000 Level Courses:</p> <p>CMNS3440 Media Production: Screen Drama CMNS3450 Media Production Project (20 units) FMCS3100 Digital Culture INFT3950 Games Design INFT3960 Games Production</p>	<p>1000 Level Courses:</p> <p>ENGG1003 Introduction to Procedural Programming MATH1510 Discrete Mathematics MNGT1002 Introduction to Entrepreneurship and Innovation SENG1120 Introduction to Software Engineering 2</p> <p>2000 Level Courses:</p> <p>CMNS2016 Media Production: Social and Interactive Media COMP2230 Algorithms COMP2240 Operating Systems SENG2050 Introduction to Web Engineering SENG2250 Computing Security</p> <p>3000 Level Courses</p> <p>COMP3260 Data Security COMP3330 Machine Intelligence COMP3340 Data Mining INFT3007 The Information Resource INFT3940 Information Technology Applications INFT3950 Games Design INFT3960 Games Production SENG3400 Network and Distributed Computing</p>

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Bachelor of Computer Science

SOFTWARE DEVELOPMENT MAJOR



Commencing in 2017



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Semester 1

Semester 2

Year 1	COMP1010 Computing Fundamentals	MATH1110 * Mathematics for Engineering, Science & Technology 1	SENG1110 Object Orientated Programming	ELECTIVE
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COMP1140 Database and Information Management	MATH1510 Discrete Mathematics	SENG1050 Web Technologies	SENG1120 Data Structures
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Year 2	SENG2130 System Analysis and Design	SENG2200 Programming Languages and Paradigms	DIRECTED	DIRECTED
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COMP2230 Introduction to Algorithmics	COMP2240 Operating Systems	SENG2250 Computing Security	SENG2260 Human-Computer Interaction
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Year 3	COMP2270 Theory of Computation	COMP3851A Computer Science Work Integrated Learning Project	INFT3100 Project Management	SENG3320 Software Verification and Validation
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COMP3851B Computer Science Work Integrated Learning Project	SENG3400 Network and Distributed Computing	DIRECTED	ELECTIVE
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Program Plan Key:



= Core



= Major



= Directed



= Elective

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AUSTRALIA

Bachelor of Computer Science

DATA SCIENCE MAJOR

 **Commencing in 2017**

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See the
last page
for some
helpful hints
& tips!





Semester 1

Semester 2


Year 1	COMP1010 Computing Fundamentals	SENG1110 Object Orientated Programming	MATH1110 * Mathematics for Engineering, Science & Technology 1	STAT1070 Statistics for the Sciences				
					COMP1140 Database and Information Management	MATH1510 Discrete Mathematics	SENG1050 Web Technologies	SENG1120 Data Structures
Year 2	SENG2130 System Analysis and Design	MATH1120 Mathematics 2	DIRECTED	ELECTIVE				
					COMP2230 Introduction to Algorithmics	COMP2240 Operating Systems	SENG2250 Computing Security	SENG2260 Human-Computer Interaction
Year 3	COMP2270 Theory of Computation	COMP3330 Machine Intelligence	COMP3350 Advanced Database	COMP3851A Computer Science Work Integrated Learning Project				
					COMP3851B Computer Science Work Integrated Learning Project	SENG3400 Network and Distributed Computing	COMP3340 Data Mining	ELECTIVE

Program Plan Key:

 = Core

 = Major

 = Directed

 = Elective

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Bachelor of Computer Science

COMPUTER SYSTEMS & ROBOTICS MAJOR



Commencing in 2017



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Semester 1

Year 1	COMP1010 Computing Fundamentals	MATH1110 * Mathematics for Engineering, Science & Technology 1	SENG1110 Object Orientated Programming	ELECTIVE
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Semester 2

COMP1140 Database and Information Management	MATH1510 Discrete Mathematics	SENG1050 Web Technologies	SENG1120 Data Structures
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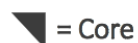
Year 2	SENG2130 System Analysis and Design	MATH1120 Mathematics 2	DIRECTED	ELECTIVE
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COMP2230 Introduction to Algorithmics	COMP2240 Operating Systems	SENG2250 Computing Security	ELEC1710 Digital and Computer Electronics 1
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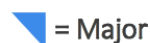
Year 3	COMP2270 Theory of Computation	COMP3851A Computer Science Work Integrated Learning Project	COMP3330 Machine Intelligence	ELEC3730 Digital and Computer Electronics 2
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SENG2260 Human-Computer Interaction	COMP3851B Computer Science Work Integrated Learning Project	SENG3400 Network and Distributed Computing	COMP3290 Compiler Design
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Program Plan Key:



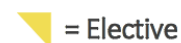
= Core



= Major



= Directed



= Elective

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Bachelor of Engineering (Honours) (Software)



Commencing in 2017



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Semester 1

Year 1	ENGG1500 Introduction to Professional Engineering	COMP1010 Computing Fundamentals	MATH1110 Mathematics for Engineering, Science and Technology 1	SENG1110 Object Oriented Programming
Year 2	ENGG2500 Sustainable Engineering Practice	SENG2130 Systems Analysis and Design	SENG2200 Programming Languages and Paradigms	SENG2050 Web Engineering
Year 3	ENGG3500 Managing Engineering Projects	SENG3150 Software Project 1	SENG3320 Software Verification and Validation	DIRECTED
Year 4	ENGG4500 Engineering Complexity	SENG4430 Software Quality	SENG4400 Enterprise SW Architecture	SENG4211A Software Engineering Final Year Project Part A

Semester 2

COMP1140 Database and Information Management	MATH1510 Discrete Mathematics	SENG1050 Web Technologies	SENG1120 Data Structures
COMP2230 Algorithms	COMP2240 Operating Systems	SENG2260 Human-Computer Interaction	SENG2250 Computing Security
SENG3160 Software Project 2	SENG3400 Network and Distributed Computing	ELECTIVE PATHWAY	ELECTIVE PATHWAY
SENG4211B Software Engineering Final Year Project Part B (20 units) <i>This course must be taken in the semester immediately following SENG4211A</i>	ELECTIVE PATHWAY	ELECTIVE PATHWAY	

Program Plan Key: = Core = Directed = Elective Pathway

Full Course List

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- COMP - <https://www.newcastle.edu.au/course#COMP>
- SENG - <https://www.newcastle.edu.au/course#SENG>
- INFT - <https://www.newcastle.edu.au/course#INFT>

Questions about your Degree ?

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- First point of contact – the office in EA (COMP/SENG) or ICT (INFO)
- Each degree has a "program convener". They are responsible for the end-to-end degree and organising which courses are included. They can help you with transitioning, etc.
 - Software Engineering – Dr. Shamus Smith (Sem 1) / Associate Professor Hongyu Zhang (Sem 2)
 - Computer Science – Dr Nasimul Noman
 - Information Technology - Dr David Cornforth

ICT in Newcastle / Central Coast

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- Lots of local companies
 - CSIRO
 - CSA
 - Greater Building Society
 - Newcastle Permanent
 - NIB
 - Software Development – Qvalent, CIBIS, Definiti, NextGen, Blink Mobile
 - ISP's – Vocus
 - Mining Industry (Bureau Veritas, etc)
 - and of course, the University of Newcastle
 - many more !

Why to be looking around now ?

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- Industry Experience
 - Especially if you are a Soft. Eng student !
- Contacts
 - “Who you know, rather than what you know”
- Help shape your elective selections

Getting Involved

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- Work experience
- Local User Groups (Newcastle Coders Group, etc)
- Social Networking (Linkedin, etc)
- Keep an eye on your email for advertisements (internal and external)

Student Feedback

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- If you haven't already done it yet, please complete the SFC !
- SFC is vital, especially in a new course like this
- SFC results are reviewed by the course co-ordinator and at the school level.