COMP3851A/B COMP3850

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY WORK INTEGRATED LEARNING

A bit of history

GREW UP IN RIO

```
INPUT "What is your name: "; U$
PRINT "Hello "; U$
REM
INPUT "How many stars do you want
S$ = ""
FOR I = 1 TO N
S$ = S$ + "*"
NEXT I
PRINT S$
REM
INPUT "Do you want more stars? ";
IF LEN(A$) = 0 THEN GOTO 70
A$ = LEFT$(A$, 1)
IF (A$ = "Y") OR (A$ = "y") THEN
PRINT "Goodbye ";
FOR I = 1 TO 200
U$; " ";
```

A bit of history

GOT MY FIRST COMPUTER AT AGE 12. PROGRAMMED IN BASIC.

A bit of history
WENT TO UNIVERSITY AT UNICAMP (STATE UNIVERSITY OF CAMPINAS)

A bit of history

INSTITUTE OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

A bit of history

- ARRIVED IN NEWCASTLE IN 2003:
  - Research Assistant until 2006
  - Lecturer in 2007
  - Senior Lecturer in 2012

- NOW
  - Married, one kid.
  - Still prefer soccer to rugby.

Introduction

Course coordinator and lecturers

- Dr. Alex Mendes (ES236 - Callaghan)
- Dr. Jacqueline Bailey (Ourimbah)

Introduction

Contact hours – Callaghan and Ourimbah

- Lecture - F2F and via Zoom: Friday 9AM-11AM
- Workshop – F2F and via Zoom: Friday 1PM-3PM
- Those sessions will also be used to provide feedback on individual and group projects, as required by students.

Introduction

COMP3851A/B and COMP3850

- Course outline
- Blackboard

Course content (COMP3851A and COMP3850 projects)

- **An industry-sponsored project**: Projects are listed on Blackboard. You will select three of them as 1st, 2nd, and 3rd preferences. Prepare a CV and a generic cover letter and submit on Blackboard. You will be interviewed and if selected, you can start the project.
- **A self-directed group project**: If there are no projects listed that you think are suitable, you will be assigned to a group (or you can form one) and the group will pick one of the two options.
  - **Orientation website or app for UoN 1st year students**
  - **Program Advisory Tool website or app**

Introduction

COMP3851A and COMP3850

- Course outline
- Blackboard

Course content (COMP3851B)

- Students will continue the work started in Semester 2, last year

Project selection process

- Choose up to three industry project preferences, plus one of the two default projects
- Prepare a CV and a cover letter
- Complete the test on Blackboard (under the Assessment tab)
- Get ready to be contacted by e-mail or over the phone. You will likely be interviewed.
- Companies will select their preferred candidates and I will do the allocation
- Students will be communicated about their allocation and start working immediately
- Even if you don't choose any industry project, you will still need to write up a CV and cover letter

CV preparation and interview

We provide lots of information on the first video in the playlist for "Soft skills and professionalism". Use a professional-looking template and try to add as much relevant information as possible. DO NOT put just your degree. **Focus on skills and provide examples.**

Industry will be interested in any specific courses that you might have done that will help with the project. Make sure you mention those, e.g.: **Algorithms** or **Business Analysis** for a data analysis project, **Human-Computer Interaction** for a user-interface project, **Advanced Databases** for a database-focused project.

Have you done any projects outside uni? Any software development at home? Any volunteer or paid work related to your degree? Do you belong to professional societies (e.g. Newcastle Coders group) and engage with local community? All of those are relevant information to put in your CV and reinforce in the cover letter.

CV preparation and interview

Remember, the company needs to know:

What degree you are doing	At what stage of the degree you are (i.e. how many courses you have completed)	What are your personal interests	If you are available for 100h or 200h (COMP3850 or COMP3851A /B)	If you can work in Newcastle, Central Coast or both	If you have the right set of skills for their project	If you can perform well as part of a team

From the company's perspective, you are not a student anymore. You are a professional. Communicate like one. Behave like one. Be professional.

LinkedIn profile

Companies will check if you have a LinkedIn profile. If you do, that will increase your chances of getting an interview.

Your LinkedIn profile is your extended CV / Business Card. Talk about your skills and important courses that you completed. Give examples of assessment items when you practiced or acquired those skills. Follow communities that are related to your areas of interest.

DO NOT LEAVE YOUR LINKEDIN PROFILE BLANK!!!

That is worse than having no profile at all. If your profile has only your name and your degree, you will come across as unmotivated. Industry knows that you are not fully-skilled professionals yet - they expect that. But they can't deal with unmotivated students. Motivation is a TOP CRITERION for selection.

If you don't want to apply for any of the industry projects…

Default project 1

Orientation website/app

- **Orientation website/app for UoN 1st year students**: This is to provide information for new students, who feel lost in the first few weeks of uni.

  - **Some fundamental requirements:**

    - Information about basic university services and where to find important information

    - Who is who in our Discipline, School and Faculty (a directory)

    - Induction for "Before uni starts TO-DO list" to "What you need to know by week 1"

    - What a typical semester will look like and feel like

    - FAQs and testimonials

  - **Other important aspects:**

    - Must use a mix of text and multimedia (diagrams, graphs, photos, video content).

    - Must look professional and be easy to use

    - Must target domestic and international students

    - Must be flexible. What if the Program Convenor for Information Technology changes? How can that information be updated in your system? What if I want to add new testimonials?

Default project 2

Program Advisory Tool app

- **Program Advisory Tool**: The goal is to help students find a pathway to completion for their degree.

  - **The basic use-case/requirement:**

    - Student selects a degree and major, and provides the courses that they have already completed.

    - The system auto-completes as much as possible the pathway to graduation. Incomplete parts can be completed by the student manually, and the system checks if the selection of courses is valid.

  - **Other important aspects:**

    - Must be flexible. What if a program structure changes? What if a course code changes (i.e. course is replaced by an equivalent). Or if the list of assumed knowledge for a course changes? Or if the semester when it is offered changes?

    - Must be extendable. What if I want to include a new major? Or an entire new program?

    - Must be able to support full-time, part-time and study breaks.

    - Must allow the fine-tuning of the schedule, i.e. moving courses around to see how small changes affect the completion.

Feedback

Feedback from 2019 - "The ugly"

- This is the second year we are offering COMP3851 as a multi-semester course, and of course we can't get everything right the first time. We are taking students' opinions very seriously.

- Here are some anonymous comments about WIL in semesters 1 and 2:

  - ***"There was no teaching or learning activities in this course."***

    - I agree it looks like that. The course is 90% self-directed study. Some learning materials are provided in the workshops and the few lectures that we have in semester, but those are related to generic skills and professionalism.

Feedback from 2019 - "The bad"

▶ **"*Workshop material wasn't very structured*"**

  ▶ Some of the workshops are delivered by the industry and some have been previously recorded. In previous semesters, we ran workshops on Github and version control, Notion, Slack, low code, innovation and startups, CV preparation and interviews. The fact that the workshops were on all sorts of topics might have given the impression of lack of structure.

  ▶ This year we will have three new industry workshops.

  ▶ Some of the workshops are also run by alumni, to tell about their industry experience. We had former alumni from UoN talking about their experience at Komatsu and Atlassian.

Feedback from 2019 - "The ugly"

- *"**Most of the learning i did in this course was self–directed to overcome problems in my project. The teaching staff were not helpful.**"*

  - Indeed, as I said, 90% of the learning will be done on your own time. If you need to learn a new software for your project, you will have to learn it by yourself, just like it would be at a company. If you need my help to guide you to resources, I can help with that, but (1) you need to ask, and (2) you will still need to learn by yourself.

Feedback from 2019 - "The good"

- *"I feel the teaching and the way teacher motivates and support students is awesome. I can say he has got best skill to communicate with his students and to provide them with sufficient resources to learn and grow."*

Feedback from 2019 - "The bad/good"

▶ *"Can not say I was a major fan of the progress report quizzes this semester, although they were fine. I very much enjoy the amount of self direction and independence within this course."*

  ▶ The quizzes were added in 2020 and are still present to reinforce the soft skills development aspect of WIL.

  ▶ Self-direction and independence will remain.

Feedback from 2019 - "The good"

- *I liked the weekly tasks and that they were short.*

- *I liked all the speakers that were brought to talk to us and share resourceful information – I wish to always have this sort of thing even when I finish my studies.*

- *I liked that I could get work experience and make some connections because of this course.*

- *I liked all the information provided and that there were barely any lectures!*

- *I liked the workshops because we would get important information tailored to our assessments, unlike other courses – where we do different things in the lecture, workshop material wasn't even in the lectures and any assignment help is from Google.*

Feedback from 2019 - "The good"

- *Alex takes constructive criticism well and actually acts on them. He should continue to be the coordinator of this course. It's nice to have a supportive mentor like Alex who gives us any information regardless of who/where we are – about the real world both in terms of work and personally.*

- *Students, please bombard him with emails because he responds as soon as he can and really helps you. Also, take this course seriously and attend the workshops. Also do the weekly tasks if they continue in future – I learned a lot from this course and will continue to use the material throughout. Do everything you need to that is required in this course – it will make you work–ready or at least more informed of what's expected out there.*

Feedback from 2020

What was negative about the course?

- *The limited availability of industry programs. Seems unfair that some can do a industry program and others have to do the default project*

- *The default project specs. Due to never completing a project or making a piece of software to this scale ever before, it was difficult to learn the steps that were required to get from an idea to a finished piece of software...*

- *My biggest suggestion would be to suggest to students to take this course independently from others, even if only the second half. This course has huge potential to give the most valuable lessons to students, and this information can be better understood if the student is able to put more time into it.*

Feedback from 2020

What was positive about the course?

▶ *Working on something bigger than a university assignment, with professionals....I also enjoyed to guest lecturers. Hearing from recent grads was the best.*

▶ *We were free to pretty much do our projects with no major side tasks...I liked the fortnightly updates as it encouraged me to progress more on the project so that I had something to write about in the update.*

▶ *The freedom of the course*

▶ *The best aspects of this course were learning how to complete tasks realistically and achieving goals with the help of our lecturer.*

▶ *The ability to be able to self learn.*

Feedback from 2020

What was positive about the course?

- *Quick replies.. easy to understand assignment requirements..*

- *Minimal assessment and contact hours throughout the semester allowed me to get more work done on my project, which was strongly appreciated. One-on-one conferencing with course coordinator was also helpful.*

- *Learning how to work in a group environment where we're all focused on one goal with that goal being something that isn't just a finished assignment.*

- *Getting real industry experience was the most valuable aspect of my university experience. Finding out what industry actually needs and wants from university students.*

Setting the expectations right

In this course, you will do most of the learning on your own time.

Lectures, workshops and the playlists provided are the only resources that you will have available.

If you need specific resources for your project, please let me know. We can meet and discuss your (or the group's) specific needs.

Having only two default projects will allow me to provide more tailored supervision to individual groups, but my role will be more of a client than the supervisor.

All groups must use GitHub, Slack and Notion, or indicate equivalent tools.

Assessments

Project plan

- Prepared together with the supervisor or as a team
- Template will be provided in Week 2

Presentation and written report

- Demonstrate and explain the work done
- Demonstrate communication skills (both verbal and written)
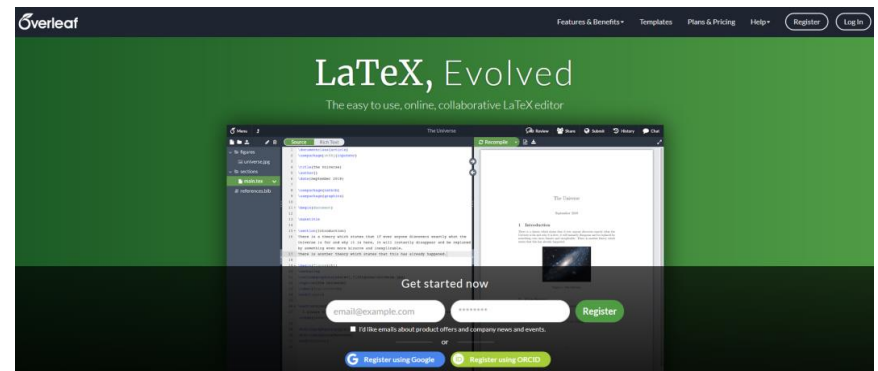
Progress reports (Quizzes)

- Groups will be required to submit meeting minutes and individual activities
- And all students must complete the individual workshop quizzes

TO DO

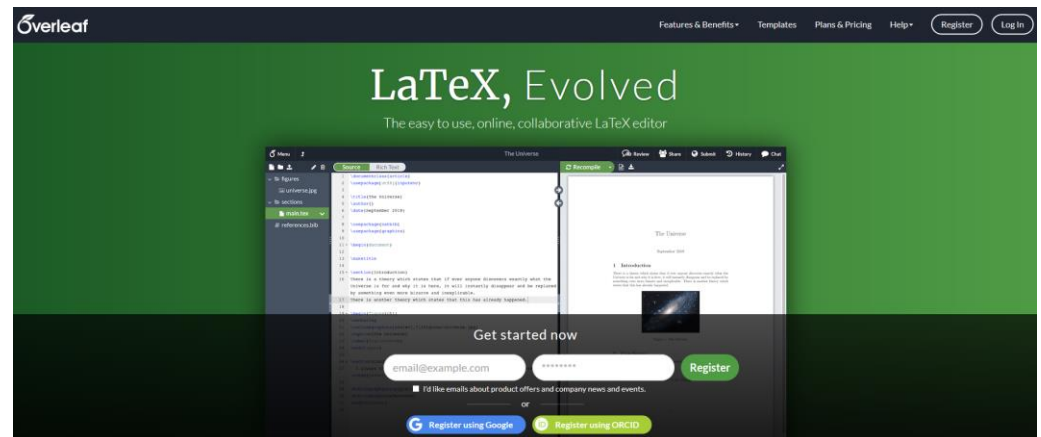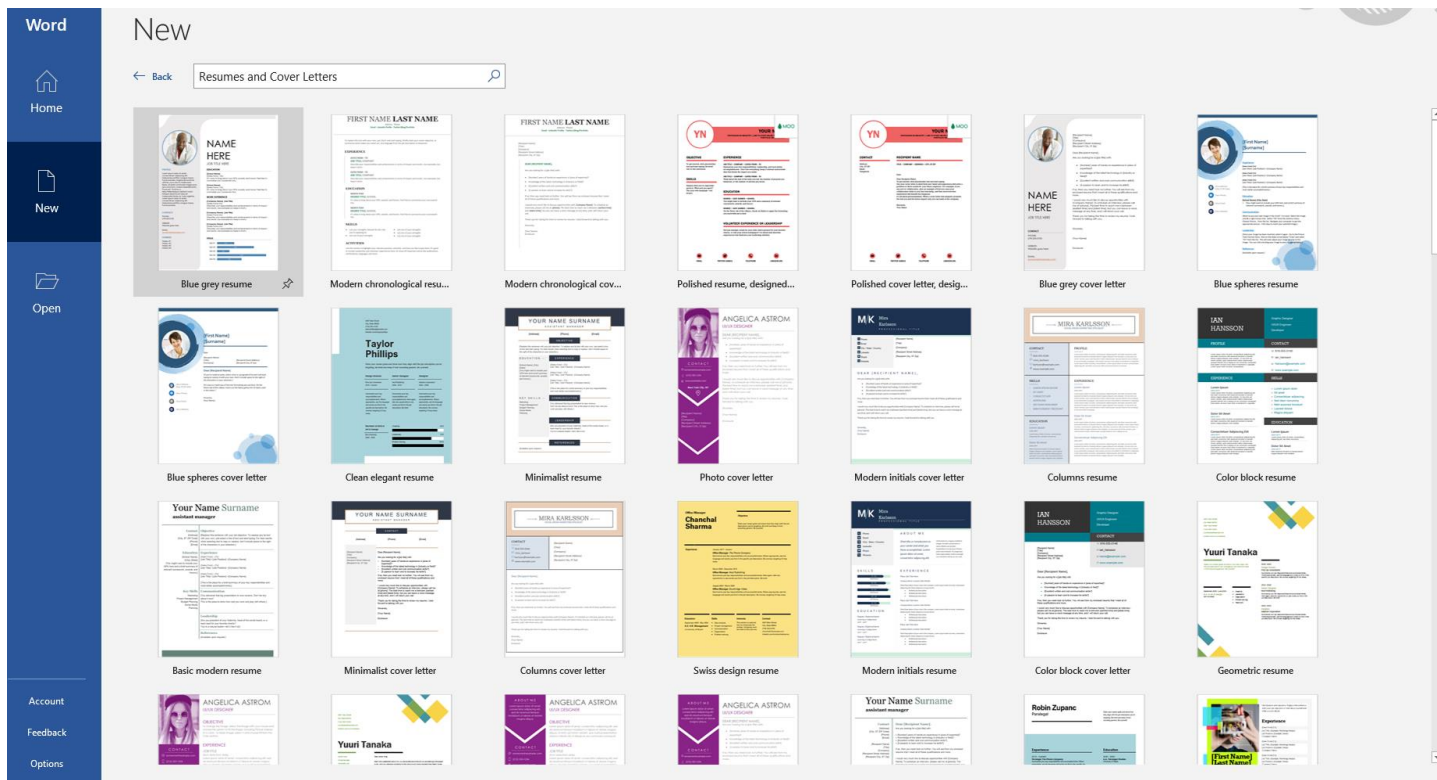|	
Read	Read the course outline
Read	Read all projects and select three of them, plus a default one • Complete the quiz on BB
Create	If you want to do one of the default projects, create a thread in the Discussion Board seeking other students to form a group. • Let me know if when you have formed a team. Students without a team will be allocated to teams randomly.
Prepare	Prepare your CV and cover letter. To help with that, check these videos and the Youtube channel: • https://www.youtube.com/watch?v=RKM_LZ0ujX8 • https://www.youtube.com/watch?v=IxhdjXecGuw
Get	Get ready for the interviews and watch this: https://www.youtube.com/watch?v=IqzGmUg4ZvE

CVs and Overleaf

- Great online tool for preparing documents using Latex

- Lots of templates for all types of documents

- Typesetting looks very professional. Way better than Microsoft Word.

CVs and Overleaf

► Very easy to use

► Tutorials available online:
https://www.latex-tutorial.com/tutorials/

CVs and Microsoft Word

More suitable if you do not already know Latex and/or your time is limited

Thank you

▶ See you in the workshop!