



University of
South Australia

Problem Solving and Programming

Introductory Information
Study Period 5, 2020

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▪ Course Coordinator for PSP

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Consulting times (available on the web).

What will be covered in PSP ... ?

Two sections (that are closely related)

Problem Solving

- Problem solving process
- Problem solving approaches such as abstraction, decomposition, pattern recognition, algorithmic thinking

Programming

- Language concepts, keywords, types, constants, variables
- Expressions and Boolean expressions
- Strings
- Control structures - sequence, selection, repetition
- Functions, parameters
- Lists (arrays)
- Input and output
- File I/O

Learning to program is challenging!

- Anyone can learn to code.
- You have to be determined to learn how to program!
- Persist, persist, persist.
- It's okay not to understand everything straight away.
- Be patient while the concepts are learnt over time.
 - Things may start to click over time, not right away, and that's okay.
- Seek help early.
- Stay connected.
- Ensure that you attend **all** classes!
- Don't be discouraged by humble beginnings.

Dr Jo Zucco

Course Coordinator

Post questions to the discussion forum.

Administration questions via email
(jo.zucco@unisa.edu.au).

Who to see for help ...

- **Dr Jo Zucco**

- Administration questions.
- Course content questions.
- Extensions.
- Assessment marks.
- Marking disputes.
- Any other problems/queries not covered here.

Please post content questions to the discussion forum.

Please send personal or administration questions via email
(jo.zucco@unisa.edu.au).

Course Schedule

- **Weeks 1 – 5:**

- **Tutorials** – two hours per week.
- **Computer Practicals** – two hours per week.

- **Weeks 10 – 13:**

- **Tutorials** – two hours per week.
- **Computer Practicals** – two hours per week.

Tutorial and practical classes begin in week 1.

Refer to course website for weekly material.

Textbooks

Gaddis, Tony. *Starting Out with Python*, **4th edition, 2018**.
Pearson Education, Inc.

Or...

Gaddis, Tony. *Starting Out with Python*, 3rd edition, 2015.
Pearson Education, Inc.

Third edition also available as an e-textbook via the Library catalogue:

http://search.library.unisa.edu.au/record/UNISA_ALMA51120387060001831

Online Resources

- The home page for the course is located at:
<https://lo.unisa.edu.au/course/view.php?id=21470>
- News forum – read at least weekly
- Discussion forum – read at least weekly
- Tutorial and Practical work
- Tutorial and practical solutions
- Assignment work
- Sample test paper
- Staff contact information / consulting times
- and much much more ...

Assessment

- **Continuous Assessment** **20%**

Assessed contributions throughout the study period.

Details posted on the web.

- **Assignment** **30%**

- Assignment – part 1 (15%)

Assignment involves writing a program in Python.

Details posted on the web.

- Assignment – part 2 (15%)

Assignment involves writing a program in Python.

Details posted on the web.

- **Test** **50%**

Two hour open book test.

Details posted on the web.

Students must achieve at least 45% in the test (and a pass mark overall) in order to pass the course.

Extensions / Late Submissions

- There will be **no extensions/late submissions** for this course without one of the following exceptions:
- A medical certificate is provided that has the timing and duration of the illness and an opinion on how much the student's ability to perform has been compromised by the illness. Please note if this information is not provided the medical certificate **WILL NOT BE ACCEPTED**. Late assessment items will not be accepted unless a medical certificate is presented to the Course Coordinator. The certificate must be produced as soon as possible and must cover the dates during which the assessment was to be attempted. In the case where you have a valid medical certificate, the due date will be extended by the number of days stated on the certificate up to five working days.
- A Learning and Teaching Unit councillor contacts the Course Coordinator on your behalf requesting an extension. Normally you would use this if you have events outside your control adversely affecting your course work.
- Unexpected work commitments. In this case, you will need to attach a letter from your work supervisor with your application stating the impact on your ability to complete your assessment.
- Military obligations with proof.
- Applications for extensions must be made via the on-line course assignment extension facility **before** the due date of the assignment.

Note: Equipment failure, loss of data, 'Heavy work commitments' or late starting of the course are not sufficient grounds for an extension.

Expectations

- Check your emails regularly (at least weekly).
- Check the News Forum and discussion forum on the course website at least weekly.
- **Bring your laptop/tablet with you to every class – this is important.**
- **Ensure that you undertake the pre-class learning activities BEFORE you attend your classes for the week.**
 - Watch the videos
 - Read the slides
 - Undertake the set reading and revise for the in-class tests
- Attend **all** of your allocated classes.
- Come to class ready to engage with the learning activities and your peers.
- **If you are feeling unwell at all, please act responsibly, please stay home and seek medical advice – do NOT come onto campus and risk the health and well-being of others.**

Academic misconduct

- UniSA aims to foster and preserve the scholarly values of curiosity, experimentation, critical appraisal and integrity.
- Throughout their learning experience, students are encourage to work collaboratively.
- Students are expected to adhere to high standards of academic integrity and honesty at all times.
- Failure to do so may constitute academic misconduct.
- Academic misconduct, whether inadvertent or deliberate, includes the following:
 - inclusion of material in individual work that includes **significant assistance from another person**, where such assistance is not expressly permitted in the course outline.
 - **seeking or providing assistance to a student** in the presentation of individual work, where such assistance is not expressly permitted in the course outline.
 - any other actions that contravene the principles of academic integrity.

Academic misconduct

- Plagiarism is a specific and serious form of academic misconduct.
- Whether inadvertent or deliberate, plagiarism includes the following:
 - **direct copying of the work of other persons**, from one or more sources, without clearly indicating the origin.
 - using **very close paraphrasing of sentences or whole passages** without due acknowledgement in the form of referencing the original work.
 - **submitting another student's work** in whole or in part.
 - **use of another person's ideas**, work or research data without acknowledgement.
 - **submitting work that has been written by someone** else on the student's behalf.
 - **copying computer files, algorithms or computer code** without clearly indicating their origin.
 - submitting work that has been **derived, in whole or in part, from another student's work by a process of mechanical transformation (e.g. changing variable names in computer programs)**.
 - in any way appropriating or imitating another's ideas and manner of expressing them.

Academic misconduct

- **You will be caught**
 - **We use software on all submissions to check for plagiarism.**
- We protect the quality and perceived value of your UniSA degree.
- We adopt a diligent and rigorous approach to detecting and investigating academic misconduct.
- We penalise students who are found to have engaged in academic misconduct.
- Your attention is drawn to the University's policy on Academic Misconduct, which will be strictly adhered to in this course.

Academic misconduct - your responsibilities

- Protect your work from being seen or copied by other students.
 - Be proud of your work and protect it, even if your marks are not as high as you would have liked.
- Act in an ethical way.
 - If you suspect other students are committing academic misconduct stay away from them and if you think it is appropriate, let us know
- Protect yourself:
 - Talking about your submission is fine but **don't** work too closely with other students.
 - Do not show the material you are going to submit to another student under any circumstances.
 - Do not leave your work unattended.
 - If your printout is collected by someone else and he or she uses your work to get marks, we assume that plagiarism has happened between you and that person.
 - Before you print, check how many jobs in the printer's queue.
 - Collect your printout right away.
 - Retain a derivation history of your work and keep it on a separate storage device from your working copy.
 - If someone copies your work, they will not have the derivation history and you will. Thus, you will be able to show that it is your work and not theirs.
 - Someone who is so dishonest that they copy your work is likely to say that you copied from them.

Finally...

I hope that you will find the course interesting, challenging and ultimately rewarding. I also hope you have some fun along the way!

Questions?