

# COMP2600: Formal Methods for Software Engineering - 2011

## Online Course Information

The online course page is at <http://cs.anu.edu.au/student/comp2600/index.php> It contains links to information about and material for assignments, tutorials, etc.

The course page in Wattle will be used only for lecture recordings.

## Lecturers

- **Course Coordinator:** [Rajeev Gore](mailto:Rajeev.Gore@anu.edu.au), (Rajeev.Gore@anu.edu.au) Room B260, RSISE Building, phone 56803
- [Jeremy Dawson](mailto:Jeremy.Dawson@anu.edu.au), (Jeremy.Dawson@anu.edu.au) Room B247, RSISE Building, phone 57778
- [Malcolm Newey](mailto:Malcolm.Newey@anu.edu.au), (Malcolm.Newey@anu.edu.au) Room N318, CSIT Building, phone 54506
- [Ranald Clouston](mailto:Ranald.Clouston@anu.edu.au), (Ranald.Clouston@anu.edu.au) Room B220, RSISE Building, phone 57030

Note that some of us are part-time - it would be best to make an appointment to see us.

## Course Outline

- The overall theme of the course is the specification of software and mathematically rigorous arguments about program properties. It also provides an introduction to formal languages and the theory of computation.
- The standard [course outline](#) is given in the ANU Handbook, see <http://studyat.anu.edu.au/courses/COMP2600;details.html>
- The major topics of the course (approximately 3 lectures each) are
  - Admin & Revision
  - Logic
  - Inductive Types and Structural Induction
  - Specification in Z
  - Finite Automata
  - Grammars & Languages
  - Computability etc
  - Hoare Logic
  - WP Calculus
  - Various topics
    - Completeness & Consistency
    - Type Checking, Unification
    - Logic Programming
  - Guest lectures on special topics (non-examinable)

# Organisation

*COMP2600: Formal Methods for Software Engineering* is a 6 unit course offered in second semester. There will be about 30 lectures (3 per week) and 8 or 9 one-hour tutorials. An approximate draft schedule of lectures, tutorials and assignments can be found at <http://cs.anu.edu.au/student/comp2600/schedule.html> Almost certainly, it will be modified and updated as the semester progresses.

The lecture times each week in 2011 are

- Monday 12-1 Haydon Allen Tank (HAT) (Building 23)
- Tuesday 12-1 Forestry Lecture Theatre (FSTY T) (Building 48)
- Thursday 2-3 CHEM T1 (Building 34)

# Tutorials

In 2011 there are six tutorial groups. Register for one of them using StReAMS.

- Wednesday 11:00 AM CSIT N108 (Building 108)
- Wednesday 12:00 PM CSIT N108 (Building 108)
- Thursday 1:00 PM CSIT N108 (Building 108)
- Thursday 3:00 PM CSIT N108 (Building 108)
- Thursday 5:00 PM CSIT N108 (Building 108)
- Friday 1:00 PM CSIT N109 (Building 108)

These will be held weekly from week 3, in classrooms (not labs). So you must print and bring with you the sheet containing the tutorial exercises.

# StReAMS

StReAMS is the School of Computer Science's Student Registration And Marks System, located at <https://cs.anu.edu.au/streams/> Go there to:

- view messages in the COMP2600 on-line announcements forum (announcements in this forum should also be sent to you by email)
- participate in the COMP2600 on-line discussion forum
- register for a tutorial group
- find the results of your continuous assessment

The relevant forums are

- "COMP2600 2011 Announcements", for significant announcements posted by staff, and you should also receive these by email (tell me if you don't!)
- "COMP2600 2011 Discussion", for discussion and questions about the course material - course staff should see these messages, though not immediately

# Assessment Scheme

## Components:

### 1. Assignments (36%)

There will be four assignments of equal weight. They will be due on (approximately) the Monday of weeks 6, 8, 10, 12. See the Assignments page for further details.

### 2. Tutorial Participation (4%)

It is expected that students actively take part in tutorials. This 4% component of the course mark is easily earned - one only needs to participate.

### 3. Mid-semester Quiz (10%)

The quiz is 1 hour, conducted in week 8 or 9 of the semester. You may bring in one A4 sheet of paper with hand-written notes on both sides.

This component is *redeemable*. That means that if your performance on the final exam is better than that on the quiz, the percentage from the final will be used for the quiz.

There will be *no second sitting* for the mid-semester quiz. If a student is sick or is out-of-town then the quiz mark will be derived from the from the final exam.

### 4. Exam (50%)

The exam is 3 hours, conducted at the end of semester. You may bring in one A4 sheet of paper with hand-written notes on both sides.

## Final Mark (100%)

In COMP2600, your final mark may not necessarily be the sum of the above components. Because the assignment mark is not a reliable indicator of achievement in the unit, the final (course) mark will be capped at the percentage  $\text{Exam} \times (100/60) + 10$ .

For example, a student may have good assignments, but he or she will need 40% on the final exam to pass. For example, a student may have excellent assignments, but a credit level performance in the exam will mean that a high distinction becomes impossible.

Final marks are moderated by the Department of Computer Science examiners meeting.

## Assignment Deadlines

These are firm, and in general there will be no extensions. The exception to this is in the case of illness serious enough to stop you working, with a medical certificate. Otherwise, late submission will be penalised at 10% per day (or part thereof).

## Plagiarism in Assignments

Assignment submissions must be your own work. This means that while you may seek general assistance in understanding the course material (and you are encouraged to do this), and you may do this after knowing the contents of an assignment, you should never view another student's answers, or ask someone to show you how to do a particular assignment question.

The guidance about plagiarism from the University (at <http://academichonesty.anu.edu.au/>) and the Department (in [http://cs.anu.edu.au/student/StudentHandbook\\_SOCS.pdf](http://cs.anu.edu.au/student/StudentHandbook_SOCS.pdf)) is also applicable and important.