



UNSW

# Course Outline

Semester 1 2015

## **MTRN4230/9221 Robotics**

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## **1. COURSE STAFF**

**Contact details and consultation times for course conv**



<https://my.unsw.edu.au/student/atoz/GraduateAttributes.html>

UNSW graduates will be

1. Scholars who are:

- 1.1. understanding of their discipline in its interdisciplinary context
- 1.2. capable of independent and collaborative enquiry
- 1.3. rigorous in their analysis, critique, and reflection
- 1.4. able to apply their knowledge and skills to solving problems
- 1.5. ethical practitioners
- 1.6. capable of effective communication
- 1.7. information literate
- 1.8. digitally literate

2. Leaders who are:

- 2.1. enterprising, innovative and creative
- 2.2. capable of initiating as well as embracing change
- 2.3. collaborative team workers

3. Professionals who are:

- 3.1. capable of independent, 1 72.lq3(n)6 Tv.3Cming, Tm[ )TJETBT1 0 0 6 Tm8MCID 21BDC BT

Dialogue is encouraged between you, others in the class and the lecturers. Diversity of experiences is acknowledged, as some students in each class have prior knowledge and experience. Your experiences are drawn on to illustrate various aspects, and this helps to increase motivation and engagement.

#### **4. TEACHING STRATEGIES**

The following strategies will be used to teach the subject matter of this course:

Presentation of the material in lectures and discussions so that the major categories of robot, role and peripheral items are understood.

Practical assignments in individual and group form with time limits to assist understanding of industrial demands and boundary conditions on the use of robots.

Suggested approaches to learning in the course







## 6. ACADEMIC HONESTY AND PLAGIARISM

Plagiarism is using the words or ideas of others and presenting them as your own.

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a booklet which provides essential information for avoiding plagiarism:

<https://my.unsw.edu.au/student/academiclife/Plagiarism.pdf>

There is a range of resources to support students to avoid plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one. Information is available on the dedicated website Plagiarism and Academic Integrity website:

<http://www.lc.unsw.edu.au/plagiarism/index.html>

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in a honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:

<http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf>

Further information on School policy and procedures in the event of plagiarism is presented in a School handout, *Administrative Matters*, available on the School website.

## 7. RESOURCES FOR STUDENTS

The prescribed textbook for the course presents a very wide range of background material in an accessible manner with extensive Matlab examples:

Corke, P., **Robotics, Vision and Control: Fundamental Algorithms in Matlab**, 2013, Springer. This book is available in the UNSW Bookshop.

The full book is also available online for download through the UNSW library:

integrated to reduce the content in the major assignments. Thus the assignments will be more appropriately sized for the course. Additional resources will be provided to assist students in completing assignments (particularly in computer vision), without removing the requirement for independent study.

Positive feedback included the use of a real robot system and this has been maintained. Up to date videos and robotics news provided and insight into the current state of the art and this will be continued and students are invited to contribute material they have found themselves. Integration between theory and practice was a highlight, and the assignments will continue to be linked to course content and practical implementation to ensure this is maintained.

You are also encouraged to comment on all aspects of the course using the discussion forum within Moodle while the course is being conducted.

## **9. ADMINISTRATIVE MATTERS**

You are expected to have read and be familiar with [Administrative Matters](#), available on the School website. This document contains important information on student responsibilities and support, including special consideration, assessment, health and