

Welcome to Robot Manipulators and Automation AUTO4507 2025

Associate Lecturer Kieran Quirke-Brown office EE3.11
 Consultation time: via email to organise a time

Unit web site:

<http://roblab.org/courses/robman/>

Lab & Project Contacts:

- Kieran Quirke-Brown kieran.quirke-brown@uwa.edu.au

Assessment:

- Midterm 50%
- Labs 30% groups of 1–2
- Project 20% groups of 3
- Total 100%

Semester Dates:

| ROBOT MANIPULATORS AND AUTOMATION | | | | | | | | | | 2025 |
|-----------------------------------|--------|------------|------------------------------|-------------------------------|----------------------|------------|----------------|----------------|----------------|----------------|
| week | cal-wk | week start | lectures A Mon. (2h reading) | lectures B Thur. (2h reading) | project | lab prep. | lab | lab contents | | |
| 1 | 9 | 21-Jul | Org., 0. Introduction | ER 1 | 1. Technology | Frey: Tech | --- | | --- | |
| 2 | 10 | 28-Jul | 2. Automation | | 3. CodeSys | ER 5 | CodeSys | | --- | |
| 3 | 11 | 4-Aug | 4. Manipulators | ER 13 | (cont.) | ER 16 | Nachi | 1 | Festo | |
| 4 | 12 | 11-Aug | Forward Kinematics | Craig | (cont.) | Craig | UR5 | 2 | Nachi | |
| 5 | 13 | 18-Aug | Inverse Kinematics | Craig | Vision | | pick and place | 3 | Chess | |
| 6 | 14 | 25-Aug | Reliability | | Statics-Dynamics | Craig | Project | Exam Prep | | Pick and Place |
| break | 15 | 1-Sep | | | | — | | | 4 | |
| 7 | 16 | 8-Sep | Exam prep | | MidTerm | | Project | Motion control | 5 | |
| 8 | 17 | 15-Sep | | | | Project | Jenga | 6 | Motion control | |
| 9 | 18 | 22-Sep | | | | Project | Igus | 7 | Jenga | |
| 10 | 19 | 29-Sep | | | | Project | Igus | 8 | Igus | |
| 11 | 20 | 6-Oct | | | | Project | | | Igus | |
| 12 | 21 | 13-Oct | | | Project presentation | | Project | | | |

RA = Robot Adventures ER = Embedded Robotics