

# **Technology and Context of Robotics and Autonomous Systems (TCRAS)**

EMATM0018

Unit director: Nathan Lepora

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Room 2.50 MVB

# Teaching schedule

BRL: Weds 10-11am FROME (mainly)

UoB: Thurs 11-12noon G.1S Hepple LT

Schedule subject to change – check

<https://goo.gl/yruay9>

UoB Unit runs weeks 1-12

# Course content - UoB

25 minute seminars

Range of topics in Robotics and  
Autonomous Systems  
Given by experts in each area

# Course content - UWE

Either 2 x 25 minute seminars

OR

Specific lab tours in BRL

Note that we must police speakers  
↳ i.e. ensure they don't run over

# Range of topics

Mostly correspond to BRL Themes:

Aerial Robotics	Safe HRI
Assistive Living	Self repairing systems
Bioenergy	Smart Automation
Neuro-robotics	Soft robotics
Medical robotics	Swarm robotics
Nonlinear robotics	Tactile Robotics
Robot vision	Unconventional computation
	Verification & validation

# Relation to Project

Dissertation Module: Original research  
taken mainly over next summer  
(MSc: 60 credits; CDT: 80 credits)

Seminars can relate to offered projects:

- allows you to see the research areas
- supervisors show you their research

## Relation to Project

**November 2016** – projects made available to students

**Mid-December 2016** – students submit ordered list of 5 preferred projects and

*optional* co-created proposal  
*created with supervisor.*

**IF YOU LIKE A RESEARCH AREA ARRANGE TO SEE THE SUPERVISOR**

# ADVICE

co-created proposal

last year: CDT 10/13; MSc 4/24

Everyone got their co-created proposal  
Preferred choices: some 3<sup>rd</sup> or 4<sup>th</sup> choice

*Don't complain if you don't get your top  
choices & you don't co-create!*



# ADVICE

Choosing a supervisor:

**DO:** choose an area you are interested in

**DO:** choose because you liked the TCRAS talk

**DON'T:** choose a supervisor because they are a professor/head of X/program director

**DON'T:** choose because others on your program like the project/supervisor

**DO:** check their track record (talk to PhD students; check their publication record with past students etc)

# TCRAS Assessment

10 credit unit = 100 hours of work!

Assessment will be coursework only  
i.e. no exam!

You should put time & effort into the  
assessment to get good marks.

# Assignment 1

20%

Write a report on the research topics **attended** in the seminar series on TCRAS

- Write about 1 UWE and 1 UoB seminar per week
- About 100 words for each, briefly summarizing *research area* and a *research challenge*
- Reflect on content covered to summarize area
- Identify each by title & lecturer; Neatly order
- Try to write immediately after each seminar
  - Marking: quality X attendance

Remember:

2 seminars  
at UWE,  
2 at UoB  
(each week)

**DO NOT PLAGIARISE!!!**

\* Use Latex.

## Assignment 2

80%

Write a report on the Technology and Context of a topic in Robotics and Autonomous Systems.

- 3000-4000 words (10-15 pages including figures)
- One field of RAS or one area where robotics has the potential to address pressing problems
- Critically evaluate social, legal and ethical impact
- Critically evaluate economic and industrial impact
  - Reference core and emerging technologies
  - Cite published references (not webpages!)

Note: 2 page doc. on mybristol.

# More details and deadlines

Check blackboard for more details  
There is a guidelines sheet for each assessment

## Deadlines:

Assessment 1: 11:59pm Friday 16<sup>th</sup> December

Assessment 2: 11:59pm Friday ~~27<sup>th</sup>~~ January

19<sup>th</sup>