PX916-60 Dissertation

21/22

Department
Physics
Level
Taught Postgraduate Level
Module leader
Nicholas Hine
Credit value
60
Assessment
50% coursework, 50% exam
Study location
University of Warwick main campus, Coventry

Description

Introductory description

N/A.

Module web page

Module aims

The student will write up their Individual Project research in the form of a dissertation, of around 10,000-12,000 words, or equivalent length in the case of more mathematical projects.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

The dissertation is expected to follow the topic suggested by the Project Supervisor, which will have been approved by the CDT board according to the procedures outlined in the HetSys course description. The dissertation must demonstrate detailed knowledge and approaches the frontiers of research, with the innovative requirement to include explicit quantification of uncertainties and/or modern aspects of software design.

Learning outcomes

By the end of the module, students should be able to:

- Demonstrate knowledge of state-of-the-art practices and methodologies in an area of computational modelling as applied to heterogeneous materials systems, and a wide-ranging understanding of the context of these practices within the broader field.
- Create novel understanding, interpretation and prediction of the behaviour of a complex heterogeneous system through computational modelling, applicable to cutting-edge technology or fundamental research.
- Create or adapt, and then analyse, an appropriate computational model within robust scientific software, including means to acquire quantitative insight into the uncertainty and error bars associated with predictions it makes.
- Communicate of the results of this research to other researchers in related disciplines.
- Be defended in a viva voce examination by internal examiners who are experts in a related field of study.

Research element

Research project within HetSys CDT.

Subject specific skills

Demonstrate knowledge of state-of-the-art practices and methodologies in an area of computational modelling as applied to heterogeneous materials systems, and a wide-ranging understanding of the context of these practices within the broader field.

Create novel understanding, interpretation and prediction of the behaviour of a complex heterogeneous system through computational modelling, applicable to cutting-edge technology or fundamental research.

Create or adapt, and then analyse, an appropriate computational model within robust scientific software, including means to acquire quantitative insight into the uncertainty and error bars associated with predictions it makes.

Communicate of the results of this research to other researchers in related disciplines
be defended in a viva voce examination by internal examiners who are experts in a related field of study.

Transferable skills

Writing and presentation skills. Data Analysis.

Study

Study time

Type	Required
Project supervision	24 sessions of 1 hour (100%)
Total	24 hours

Private study description

Research for Project.

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group C

	Weighting	Study time
HetSys MSc Dissertation	50%	200 hours
Dissertation Viva	50%	32 hours

Feedback on assessment

Examiners Report.

Past exam papers for PX916

Availability

There is currently no information about the courses for which this module is core or optional.