

MA2021 Differential Equations and Dynamics

Academic Year: 2020/1
Module Level: Year 2
Scheme: UG
Department: Mathematics
Credits: 20

Student Workload (hours)

Lectures
 Seminars
 Practical Classes & Workshops
 Tutorials
 Fieldwork
 Project Supervision
 Guided Independent Study
 Demonstration
 Supervised time in studio/workshop
 Work Based Learning
 Placement
 Year Abroad
 Total Module Hours

Period: Semester 2
Occurrence: E
Coordinator: Ivan Tyukin
Mark Scheme: UG Module Mark Scheme

No.	Assessment Description	Weight %	Qual Mark	Exam Hours	Ass't Group	Alt Reass't
001	Coursework	30				
003	Examination (Final)	70		2		
103	Examination (Final)	100		2		Y

Intended Learning Outcomes

- Explain the differences between classes of differential equations
- Analyse initial value problems in order to determine whether or not they have unique solutions
- State, explain, and prove basic existence and uniqueness theorems
- Use and apply methods for finding general solutions of ordinary differential equations
- Apply and write programs for finding numerical solutions of ordinary differential equations

Teaching and Learning Methods

Lectures, feedback classes, computer classes, automated computer assignments

Assessment Methods

Final exam, coursework (problem sheets, computer assignments)

Pre-Requisites

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Co-Requisites

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Excluded Combinations

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Guided Independent Study: Indicative Activities

Directed reading, working on problem sheets, reviewing lecture recordings, preparing reports on computer practical assignments, revision for final exam