



FUNDAMENTALS OF MATHEMATICS

26511 - FUNDAMENTALS OF MATHEMATICS (2024-25)

General

Code: 26511

Lecturer responsible:

PAKHROU PAKHROU, TIJANI

Credits ECTS:	6,00
Theoretical credits:	1,32
Practical credits:	1,08
Distance-base hours:	3,60

Departments involved

- **Dept:** APPLIED MATHEMATICS
Area: APPLIED MATHEMATICS
Theoretical credits: 0
Practical credits: 0
- **Dept:** MATHEMATICS
Area: STATISTICS AND OPERATIONS RESEARCH
Theoretical credits: 0,66
Practical credits: 0,47
This Dept. is responsible for the course.
This Dept. is responsible for the final mark record.

Study programmes where this course is taught

- [DEGREE IN BIOLOGY](#)
Course type: CORE (Year: 1)

Competencies and objectives

Course context for academic year 2024-25

Mathematics are a fundamental tool for the study of experimental sciences. Its location in first course inside the common teachings of basic formation in Biology degree allows to consolidate the knowledge that students should have acquired in High School, and, moreover, it gives the basic tools for the elaboration, study and simulation of different biological dynamic models.

Generic Degree Course Competences

- **CG1** : Desenvolupar la capacitat d'anàlisi, síntesi i raonament crític.
- **CG10** : Desenvolupar actituds crítiques basades en el coneixement.
- **CG3** : Resoldre problemes de manera efectiva.
- **CG4** : Demostrar capacitat de treball en equip.
- **CG5** : Comprometre's amb l'ètica i els valors d'igualtat, i també en la responsabilitat social com a ciutadà i com a professional.
- **CG6** : Aprendre de manera autònoma.
- **CG7** : Demostrar capacitat d'adaptar-se a noves situacions.
- **CG9** : Demostrar habilitat per a transmetre informació, idees, problemes i solucions a un públic tant especialitzat com no especialitzat.

Specific Competences:>>Theoretical

- **CE3** : Conèixer i aplicar els mètodes matemàtics i estadístics per a validar models a partir de dades experimentals aplicades a la biologia.

Specific Competences:>>Ability

- **CE30** : Interpretar, avaluar, processar i sintetitzar dades i informació biològica.
- **CE35** : Interpretar les dades procedents d'observacions i mesuraments en el laboratori i camp.
- **CE37** : Saber cercar, analitzar, comprendre i redactar textos científics i tècnics.
- **CE40** : Relacionar la biologia amb altres disciplines.

Exclusive skill taught in this course

No data

Learning outcomes (Training objectives)

No data

Specific objectives stated by the academic staff for academic year 2024-25

Understand the basic operations of matrices and determinants.

Solve systems of linear equations.

Know when an array is diagonalizable.

Know the basic rules of limits and derivatives.

Know how to calculate the integrate and its applications.

Solve Ordinary Differential Equations

Content for academic year 2024-25

B0: Introduction

Introduction to mathematical language. Notation. Elementary notions of logic.

B1: Algebra

1. Matrices and determinants
2. Systems of linear equations
3. Diagonalization of matrices

B2: Analysis

1. Real functions of real variable
2. Continuity
3. Derivabilidad
4. Integral calculation
5. Applications of the definite integral
6. Ordinary Differential Equations

Related links

No data

Métodos matemáticos en biología

Author(s): MARTÍNEZ CALVO, M^a Cristina; PÉREZ DE VARGAS, Alberto

Issue: Madrid : Centro de Estudios Ramón Areces, 1993;

ISBN: 84-8004-093-9 (rúst.)

Category: Complementario

Ecología con números : una introducción a la ecología con problemas y ejercicios de simulación

Author(s): Piñol, Josep ; Martínez-Vilalta, Jordi

Issue: Bellaterra (Barcelona) : Lynx, 2006;

ISBN: 978-84-96553-01-9

Category: Complementario

Ecuaciones diferenciales

Author(s): Ayres, Frank

Issue: México : McGraw-Hill, 2007;

ISBN: 978-970-10-0004-5

Category: Sin especificar

Matemáticas : acceso a la universidad

Author(s): BALLVÉ, María E. [et.al.]

Issue: Madrid : Sanz y Torres; UNED, 2012;

ISBN: 978-84-15550-13-6 (o. c.)

Category: Básico

Ecuaciones diferenciales y sus aplicaciones

Author(s): BRAUN, Martin

Issue: México : Grupo Editorial Iberoamérica, 1990;

ISBN: 968-7270-58-6

Category:	Complementario
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Ecuaciones diferenciales

Author(s):	Bronson, Richard ; Costa, Gabriel B.
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Issue:	México D.F. : McGraw-Hill, 2008;
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ISBN:	978-970-10-6509-9
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Category:	Sin especificar
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Problemas de álgebra lineal

Author(s):	Bru, Rafael
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Issue:	València : Universitat Politècnica de València, 1998;
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ISBN:	84-7721-629-0
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Category:	Complementario
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Cálculo infinitesimal de una variable
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Author(s):	Burgos Román, Juan de
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Issue:	Madrid : McGraw-Hill/Interamericana de España, 2007;
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ISBN:	978-84-481-5634-3
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Category:	Complementario
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Álgebra lineal i geometria

Author(s):	Castellet, Manuel
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Issue:	Barcelona : Universitat Autònoma de Barcelona, 1990;
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ISBN:	84-7488-284-4
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Category:	Sin especificar
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Cálculo II Teoría y problemas de funciones de varias variables

Author(s):	García López, Alfonsa
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Issue:	Madrid : Clagsa, 2002;
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ISBN:	978-84-921847-5-0
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Category:	Complementario
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Álgebra lineal

Author(s):	Grossman, Stanley I.
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Issue:	México : McGraw-Hill , 2020;
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ISBN:	9781456272128 (libro e.)
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Category:	Complementario
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Álgebra lineal y geometría

Author(s):	Hernández Rodríguez, Eugenio
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Issue:	Madrid : Pearson, 2012;
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ISBN:	978-84-7829-129-8
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Category:	Complementario
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Cálculo 1 de una variable

Author(s):	Larson, Ron
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Issue:	México : McGraw-Hill, 2010;
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ISBN:	978-607-15-0273-5
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Category:	Complementario
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Álgebra lineal y sus aplicaciones

Author(s):	Lay, David C.
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Issue:	Ciudad de México : Pearson, 2016;
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ISBN:	978-607-32-3745-1
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Category:	Complementario
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Cálculo : una variable (v.1)

Author(s):	Rogawski, Jon
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Issue:	Barcelona : Reverté, 2016;
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ISBN:	978-84-291-5194-7
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Category:	Complementario
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Ecuaciones diferenciales con aplicaciones y notas históricas	
Author(s):	Simmons, George F.
Issue:	Madrid : MacGraw-Hill, 1993;
ISBN:	84-481-0045-X
Category:	Sin especificar

Ecuaciones diferenciales : teoría, técnica y práctica	
Author(s):	Simmons, George F. ; Krantz, Steven G.
Issue:	México, D.F. : McGraw-Hill, 2007;
ISBN:	978-970-10-6143-5
Category:	Sin especificar

Calculus	
Author(s):	Spivak, Michael
Issue:	Barcelona : Reverté, 2012;
ISBN:	978-84-291-5182-4
Category:	Complementario

Single variable calculus : concepts and context	
Author(s):	STEWART, James
Issue:	Belmont, CA : Brooks/Cole, 2009;
ISBN:	978-1-439-04691-3
Category:	Sin especificar

Linear algebra and its applications	
Author(s):	STRANG, Gilbert
Issue:	Belmont (California) : Brooks Cole, 2006;
ISBN:	978-0-534-42200-4
Category:	Básico

Problemas de álgebra con esquemas teóricos

Author(s): Villa Cuenca, Agustín de la

Issue: Madrid : Clagsa, 2010;

ISBN: 84-921847-1-2

Category: Complementario

Cálculo con geometría analítica

Author(s): ZILL, Dennis G.

Issue: México : Grupo Editorial Iberoamérica, 1987;

ISBN: 968-7270-37-3

Category: Sin especificar

Assessment

Assessment procedures and criteria 2024-25

REGULAR CALL

The final grade of the student will be the arithmetic mean of the qualifications of "continuous assessment" and "final examination", provided that the final examination note is equal to or greater than 4.00 and the continuous assessment is equal or superior to the final review.

In case of failure to comply with any of these conditions the final grade will be note of the final examination, which means that the continuous assessment is recoverable in the final examination.

It is necessary at least 5.00 to pass the course.

EXTRAORDINARY CALL

The final grade will be the exam note. It is necessary at least 5.00 to pass the course.

Description	Criteria	Type	Weighting system
Theoretical-practical test written	There will be a single control at the end of the semester on the theoretical-practical contents set by the teacher.	ACTIVITIES OF EVALUATION DURING THE SEMESTER	50
Final test	Final examination of the ordinary convocation.	FINAL TEST	50

Official exam dates for academic year 2024-25

Exam session	Date	Time	Group - Classroom(s) allocated	Comments
(C1) Pruebas extraordinarias de finalización de estudios	01/10/2024			
(C2) Periodo ordinario para asignaturas de primer semestre	24/01/2025			
(C4) Pruebas extraordinarias para asignaturas de grado y máster	04/07/2025			

Academic staff



PAKHROU PAKHROU, TIJANI

Lecturer responsible

THEORY CLASS: Groups: 1

PROBLEM PRACTICALS / WORKSHOP: Groups: P1

GROUP TUTORIALS: Groups: T1



ALBUJA BROTONS, ALMA LUISA

PROBLEM PRACTICALS / WORKSHOP: Groups: P5



ARAGON ARTACHO, FRANCISCO JAVIER

THEORY CLASS: Groups: 2

PROBLEM PRACTICALS / WORKSHOP: Groups: P4

GROUP TUTORIALS: Groups: T2



GUARDIOLA ALCALA, LUIS ANTONIO

PROBLEM PRACTICALS / WORKSHOP: Groups: P2



HANTOUTE, ABDERRAHIM

THEORY CLASS: Groups: 3

PROBLEM PRACTICALS / WORKSHOP: Groups: P3

GROUP TUTORIALS: Groups: T3

Groups

THEORY CLASS

Group	Semester	Morning or afternoon session	Language	No. of enrolled students	On registration, distribution
Gr. 1 (THEORY CLASS) : 1	1S	Morning	Spanish	104	From ID document number A - To ID document number N
Gr. 2 (THEORY CLASS) : 2	1S	Morning	Spanish	92	From ID document number P - To ID document number Z
Gr. 3 (THEORY CLASS) : 3(ARA)	1S	Morning	English	14	■ Allowed DEGREE IN MARINE SCIENCES

PROBLEM PRACTICALS / WORKSHOP

Group	Semester	Morning or afternoon session	Language	No. of enrolled students	On registration, distribution
Gr. P1 (PROBLEM PRACTICALS / WORKSHOP) : P1	1S	Morning	Spanish	55	From ID document number A - To ID document number F
Gr. P2 (PROBLEM PRACTICALS / WORKSHOP) : P2	1S	Morning	Spanish	51	From ID document number G - To ID document number N
Gr. P3 (PROBLEM PRACTICALS / WORKSHOP) : P3(ARA)	1S	All day	English	14	■ Allowed DEGREE IN MARINE SCIENCES
Gr. P4 (PROBLEM PRACTICALS / WORKSHOP) : P4	1S	Morning	Spanish	45	From ID document number P - To ID document number T
Gr. P5 (PROBLEM PRACTICALS / WORKSHOP) : P5	1S	Morning	Spanish	45	From ID document number V - To ID document number Z

GROUP TUTORIALS

Group	Semester	Morning or afternoon session	Language	No. of enrolled students	On registration, distribution
Gr. T1 (GROUP TUTORIALS) : T1	1S	All day	Spanish	104	From ID document number A - To ID document number N
Gr. T2 (GROUP TUTORIALS) : T2	1S	All day	Spanish	92	From ID document number P - To ID document number Z
Gr. T3 (GROUP TUTORIALS) : T3(ARA)	1S	All day	English	14	

THEORY CLASS

Group	Start date	End date	Day	Start time	End time	Lecture room
1	10/09/2024	10/09/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	17/09/2024	17/09/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	20/09/2024	20/09/2024	VIE	10:00	11:00	<u>A1/1-50X</u> 
1	26/09/2024	26/09/2024	JUE	10:00	11:00	<u>A1/1-50X</u> 
1	27/09/2024	27/09/2024	VIE	10:00	11:00	<u>A1/1-50X</u> 
1	27/09/2024	27/09/2024	VIE	09:00	10:00	<u>A1/1-50X</u> 
1	01/10/2024	01/10/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	08/10/2024	08/10/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	15/10/2024	15/10/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	18/10/2024	18/10/2024	VIE	10:00	11:00	<u>A1/1-50X</u> 
1	22/10/2024	22/10/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	24/10/2024	24/10/2024	JUE	08:00	09:00	<u>A1/1-50X</u> 
1	25/10/2024	25/10/2024	VIE	10:00	11:00	<u>A1/1-50X</u> 
1	29/10/2024	29/10/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	30/10/2024	30/10/2024	MIE	10:00	11:00	<u>A1/1-50X</u> 
1	31/10/2024	31/10/2024	JUE	10:00	11:00	<u>A1/1-50X</u> 
1	05/11/2024	05/11/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	08/11/2024	08/11/2024	VIE	10:00	11:00	<u>A1/1-50X</u> 
1	12/11/2024	12/11/2024	MAR	09:00	10:00	<u>A1/1-50X</u> 
1	14/11/2024	14/11/2024	JUE	10:00	11:00	<u>A1/1-50X</u> 

Group	Start date	End date	Day	Start time	End time	Lecture room
1	14/11/2024	14/11/2024	JUE	08:00	09:00	A1/1-50X 
1	15/11/2024	15/11/2024	VIE	10:00	11:00	A1/1-50X 
1	19/11/2024	19/11/2024	MAR	09:00	10:00	A1/1-50X 
1	26/11/2024	26/11/2024	MAR	09:00	10:00	A1/1-50X 
1	28/11/2024	28/11/2024	JUE	10:00	11:00	A1/1-50X 
1	03/12/2024	03/12/2024	MAR	09:00	10:00	A1/1-50X 
1	04/12/2024	04/12/2024	MIE	09:00	10:00	A1/1-50X 
1	04/12/2024	04/12/2024	MIE	10:00	11:00	A1/1-50X 
1	10/12/2024	10/12/2024	MAR	09:00	10:00	A1/1-50X 
1	13/12/2024	13/12/2024	VIE	10:00	11:00	A1/1-50X 
1	16/12/2024	16/12/2024	LUN	08:00	09:00	A1/1-50X 
1	17/12/2024	17/12/2024	MAR	09:00	10:00	A1/1-50X 
1	20/12/2024	20/12/2024	VIE	10:00	11:00	A1/1-50X 
2	10/09/2024	10/09/2024	MAR	10:00	11:00	A1/1-51X 
2	17/09/2024	17/09/2024	MAR	10:00	11:00	A1/1-51X 
2	20/09/2024	20/09/2024	VIE	09:00	10:00	A1/1-51X 
2	26/09/2024	26/09/2024	JUE	08:00	09:00	A1/1-51X 
2	27/09/2024	27/09/2024	VIE	09:00	10:00	A1/1-51X 
2	27/09/2024	27/09/2024	VIE	10:00	11:00	A1/1-51X 
2	01/10/2024	01/10/2024	MAR	10:00	11:00	A1/1-51X 
2	08/10/2024	08/10/2024	MAR	10:00	11:00	A1/1-51X 

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2	18/10/2024	18/10/2024	VIE	09:00	10:00	A1/1-51X 
2	22/10/2024	22/10/2024	MAR	10:00	11:00	A1/1-51X 
2	25/10/2024	25/10/2024	VIE	09:00	10:00	A1/1-51X 
2	29/10/2024	29/10/2024	MAR	10:00	11:00	A1/1-51X 
2	30/10/2024	30/10/2024	MIE	09:00	10:00	A1/1-51X 
2	31/10/2024	31/10/2024	JUE	08:00	09:00	A1/1-51X 
2	05/11/2024	05/11/2024	MAR	10:00	11:00	A1/1-51X 
2	08/11/2024	08/11/2024	VIE	09:00	10:00	A1/1-51X 
2	12/11/2024	12/11/2024	MAR	10:00	11:00	A1/1-51X 
2	14/11/2024	14/11/2024	JUE	08:00	09:00	A1/1-51X 
2	14/11/2024	14/11/2024	JUE	09:00	10:00	A1/1-51X 
2	15/11/2024	15/11/2024	VIE	09:00	10:00	A1/1-51X 
2	19/11/2024	19/11/2024	MAR	10:00	11:00	A1/1-51X 
2	26/11/2024	26/11/2024	MAR	10:00	11:00	A1/1-51X 
2	28/11/2024	28/11/2024	JUE	09:00	10:00	A1/1-51X 
2	03/12/2024	03/12/2024	MAR	10:00	11:00	A1/1-51X 
2	04/12/2024	04/12/2024	MIE	10:00	11:00	A1/1-51X 
2	04/12/2024	04/12/2024	MIE	09:00	10:00	A1/1-51X 
2	10/12/2024	10/12/2024	MAR	10:00	11:00	A1/1-51X 

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2	18/12/2024	18/12/2024	MIE	08:00	09:00	A1/1-51X 
2	20/12/2024	20/12/2024	VIE	09:00	10:00	A1/1-51X 
3	10/09/2024	10/09/2024	MAR	08:00	09:00	A1/1-28M 
3	17/09/2024	17/09/2024	MAR	08:00	09:00	A1/1-28M 
3	20/09/2024	20/09/2024	VIE	08:00	09:00	A1/1-28M 
3	26/09/2024	26/09/2024	JUE	09:00	10:00	A1/1-28M 
3	27/09/2024	27/09/2024	VIE	10:00	11:00	A1/1-28M 
3	27/09/2024	27/09/2024	VIE	09:00	10:00	A1/1-28M 
3	01/10/2024	01/10/2024	MAR	08:00	09:00	A1/1-28M 
3	08/10/2024	08/10/2024	MAR	08:00	09:00	A1/1-28M 
3	15/10/2024	15/10/2024	MAR	08:00	09:00	A1/1-28M 
3	18/10/2024	18/10/2024	VIE	08:00	09:00	A1/1-28M 
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3	29/10/2024	29/10/2024	MAR	08:00	09:00	A1/1-28M 
3	30/10/2024	30/10/2024	MIE	08:00	09:00	A1/1-28M 
3	31/10/2024	31/10/2024	JUE	10:00	11:00	A1/1-28M 
3	05/11/2024	05/11/2024	MAR	08:00	09:00	A1/1-28M 
3	08/11/2024	08/11/2024	VIE	08:00	09:00	A1/1-28M 

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3	14/11/2024	14/11/2024	JUE	10:00	11:00	A1/1-28M 
3	15/11/2024	15/11/2024	VIE	08:00	09:00	A1/1-28M 
3	19/11/2024	19/11/2024	MAR	08:00	09:00	A1/1-28M 
3	26/11/2024	26/11/2024	MAR	08:00	09:00	A1/1-28M 
3	28/11/2024	28/11/2024	JUE	09:00	10:00	A1/1-28M 
3	29/11/2024	29/11/2024	VIE	09:00	10:00	A1/1-28M 
3	03/12/2024	03/12/2024	MAR	08:00	09:00	A1/1-28M 
3	04/12/2024	04/12/2024	MIE	09:00	10:00	A1/1-28M 
3	04/12/2024	04/12/2024	MIE	10:00	11:00	A1/1-28M 
3	10/12/2024	10/12/2024	MAR	08:00	09:00	A1/1-28M 
3	13/12/2024	13/12/2024	VIE	08:00	09:00	A1/1-28M 
3	16/12/2024	16/12/2024	LUN	09:00	10:00	A1/1-28M 
3	17/12/2024	17/12/2024	MAR	08:00	09:00	A1/1-28M 
3	20/12/2024	20/12/2024	VIE	08:00	09:00	A1/1-28M 

PROBLEM PRACTICALS / WORKSHOP

Group	Start date	End date	Day	Start time	End time	Lecture room
P1	12/09/2024	12/09/2024	JUE	09:00	11:00	A1/1-50X 
P1	19/09/2024	19/09/2024	JUE	09:00	11:00	A1/1-50X 

Group	Start date	End date	Day	Start time	End time	Lecture room
P1	24/09/2024	24/09/2024	MAR	09:00	11:00	A1/1-50X 
P1	03/10/2024	03/10/2024	JUE	09:00	11:00	A1/1-50X 
P1	07/10/2024	07/10/2024	LUN	09:00	11:00	A1/1-50X 
P1	17/10/2024	17/10/2024	JUE	09:00	11:00	A1/1-50X 
P1	24/10/2024	24/10/2024	JUE	09:00	11:00	A1/1-50X 
P1	07/11/2024	07/11/2024	JUE	09:00	11:00	A1/1-50X 
P1	22/11/2024	22/11/2024	VIE	09:00	11:00	A1/1-50X 
P1	05/12/2024	05/12/2024	JUE	09:00	11:00	A1/1-50X 
P1	12/12/2024	12/12/2024	JUE	09:00	11:00	A1/1-50X 
P1	19/12/2024	19/12/2024	JUE	09:00	11:00	A1/1-50X 
P2	12/09/2024	12/09/2024	JUE	09:00	11:00	A1/1-44P 
P2	19/09/2024	19/09/2024	JUE	09:00	11:00	A1/1-44P 
P2	24/09/2024	24/09/2024	MAR	09:00	11:00	CI/1005 
P2	03/10/2024	03/10/2024	JUE	09:00	11:00	A1/1-44P 
P2	07/10/2024	07/10/2024	LUN	09:00	11:00	A1/1-30M 
P2	17/10/2024	17/10/2024	JUE	09:00	11:00	A1/1-44P 
P2	24/10/2024	24/10/2024	JUE	09:00	11:00	A1/1-44P 
P2	07/11/2024	07/11/2024	JUE	09:00	11:00	A1/1-44P 
P2	22/11/2024	22/11/2024	VIE	09:00	11:00	A1/1-51X 
P2	05/12/2024	05/12/2024	JUE	09:00	11:00	A1/1-44P 
P2	12/12/2024	12/12/2024	JUE	09:00	11:00	A1/1-44P 
P2	19/12/2024	19/12/2024	JUE	09:00	11:00	A1/1-44P 

Group	Start date	End date	Day	Start time	End time	Lecture room
P3	12/09/2024	12/09/2024	JUE	09:00	11:00	A1/1-28M 
P3	19/09/2024	19/09/2024	JUE	08:00	10:00	A1/1-28M 
P3	24/09/2024	24/09/2024	MAR	09:00	11:00	A1/1-28M 
P3	03/10/2024	03/10/2024	JUE	08:00	10:00	A1/1-28M 
P3	07/10/2024	07/10/2024	LUN	09:00	11:00	A1/1-28M 
P3	17/10/2024	17/10/2024	JUE	09:00	11:00	A1/1-28M 
P3	24/10/2024	24/10/2024	JUE	09:00	11:00	A1/1-28M 
P3	07/11/2024	07/11/2024	JUE	09:00	11:00	A1/1-28M 
P3	26/11/2024	26/11/2024	MAR	11:30	13:30	A1/1-29M 
P3	05/12/2024	05/12/2024	JUE	08:00	10:00	A1/1-28M 
P3	12/12/2024	12/12/2024	JUE	08:00	10:00	A1/1-28M 
P3	19/12/2024	19/12/2024	JUE	09:00	11:00	A1/1-28M 
P4	12/09/2024	12/09/2024	JUE	09:00	11:00	A1/1-51X 
P4	19/09/2024	19/09/2024	JUE	09:00	11:00	A1/1-51X 
P4	24/09/2024	24/09/2024	MAR	09:00	11:00	A1/1-51X 
P4	03/10/2024	03/10/2024	JUE	09:00	11:00	A1/1-51X 
P4	07/10/2024	07/10/2024	LUN	09:00	11:00	A1/1-51X 
P4	17/10/2024	17/10/2024	JUE	09:00	11:00	A1/1-51X 
P4	24/10/2024	24/10/2024	JUE	09:00	11:00	A1/1-51X 
P4	07/11/2024	07/11/2024	JUE	09:00	11:00	A1/1-51X 
P4	29/11/2024	29/11/2024	VIE	09:00	11:00	A1/1-51X 

Group	Start date	End date	Day	Start time	End time	Lecture room
P4	05/12/2024	05/12/2024	JUE	09:00	11:00	A1/1-51X 
P4	12/12/2024	12/12/2024	JUE	09:00	11:00	A1/1-51X 
P4	19/12/2024	19/12/2024	JUE	09:00	11:00	A1/1-51X 
P5	12/09/2024	12/09/2024	JUE	09:00	11:00	A1/1-29M 
P5	19/09/2024	19/09/2024	JUE	09:00	11:00	A1/1-29M 
P5	24/09/2024	24/09/2024	MAR	09:00	11:00	A1/1-29M 
P5	03/10/2024	03/10/2024	JUE	09:00	11:00	A1/1-29M 
P5	07/10/2024	07/10/2024	LUN	09:00	11:00	A1/1-29M 
P5	17/10/2024	17/10/2024	JUE	09:00	11:00	A1/1-29M 
P5	24/10/2024	24/10/2024	JUE	09:00	11:00	A1/1-29M 
P5	07/11/2024	07/11/2024	JUE	09:00	11:00	A1/1-29M 
P5	29/11/2024	29/11/2024	VIE	09:00	11:00	A1/1-50X 
P5	05/12/2024	05/12/2024	JUE	09:00	11:00	A1/1-29M 
P5	12/12/2024	12/12/2024	JUE	09:00	11:00	A1/1-29M 
P5	19/12/2024	19/12/2024	JUE	09:00	11:00	A1/1-29M 

GROUP TUTORIALS

Group	Start date	End date	Day	Start time	End time	Lecture room
T1	13/09/2024	13/09/2024	VIE	10:00	11:00	A1/1-50X 
T1	07/10/2024	07/10/2024	LUN	08:00	09:00	A1/1-50X 
T1	21/11/2024	21/11/2024	JUE	10:00	11:00	A1/1-50X 

Group	Start date	End date	Day	Start time	End time	Lecture room
T2	13/09/2024	13/09/2024	VIE	09:00	10:00	A1/1-51X 
T2	03/10/2024	03/10/2024	JUE	08:00	09:00	A1/1-51X 
T2	21/11/2024	21/11/2024	JUE	08:00	09:00	A1/1-51X 
T3	13/09/2024	13/09/2024	VIE	08:00	09:00	A1/1-28M 
T3	21/11/2024	21/11/2024	JUE	09:00	10:00	A1/1-28M 
T3	28/11/2024	28/11/2024	JUE	10:00	11:00	A1/1-28M 