



Università degli Studi della Basilicata

DIPARTIMENTO DI MATEMATICA, INFORMATICA ED ECONOMIA

COURSE: Graduate Abstract Algebra

ACADEMIC YEAR: 2019/20

TYPE OF EDUCATIONAL ACTIVITY:

TEACHER: Domenico Senato

e-mail: domenico.senato@unibas.it

website: oldwww.unibas.it/utenti/senato/

phone: +390971205887

mobile: +393204238537

Language: Italian

ECTS: (lessons e tutorials/practice)	n. of hours: (lessons e tutorials/practice)	Campus: Potenza Dept. : DiMIE Program: Master's Degree in Mathematics	Semester: second
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EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES:

The course provides skills and tools of contemporary algebra, highlighting their applications in a more general mathematical context and in other related disciplines

PRE-REQUIREMENTS:

A first course in abstract algebra and knowledge of the basics notions of linear algebra, combinatorics and affine geometry.

SYLLABUS:

Group actions – direct and semidirect product and abelian groups, 6 ore.

Introduction to module theory, 14 ore.

Introduction to commutative algebra, 14 ore.

Introduction to the representation theory of finite groups, 14 ore.

TEACHING METHODS:

Theory lessons which include a part of exercises solved and proposed. Study sessions and seminar activities directly involving students at individual and group level.

EVALUATION METHODS:

oral examinations.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL:

ABSTRACT ALGEBRA, David S. Dummit, Richard M. Foote John Wiley & Sons, Inc.

REPRESENTATION and CHARACTERS of GROUPS, Gordon James, Martin Liebeck, Cambridge mathematical textbooks.

INTERACTION WITH STUDENTS:

appointment request via e-mail

EXAMINATION SESSIONS (FORECAST)¹.

6/08/2020 - 7/01/2020 - 9/21/2020

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

¹ Subject to possible changes: check the web site of the Teacher or the Department/School for updates.