

UNDERGRADUATE PROSPECTUS
Supplement 2018-2020



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INTRODUCTION

The *Undergraduate Prospectus Supplement 2018-2020* is issued in the interim year and updates the existing data of the Undergraduate Prospectus 2018-2020. It includes information such as changes in course titles, course codes, credits, alterations in the curriculum, new undergraduate programmes, etc. The main objective of this publication is to give both potential and current students the relevant and updated information on undergraduate programmes.

More detailed information on the undergraduate programmes offered by the University of Cyprus, can be found in the Undergraduate Prospectus 2018-2020 and at the University's Publications Office website: www.ucy.ac.cy/publications

FACULTY OF ENGINEERING



DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

NEW ELECTIVE COURSE

MME 350 Internship Programme (10 ECTS)

The aim of the Internship Programme is the placement and training of undergraduate students who have completed their 3rd year of studies, in industrial units, mechanical engineering design and technical companies, service companies and organizations that employ mechanical engineers. This is a full time six-week programme during the summer semester. The main objective of the programme is for the students to gain professional experience, additional knowledge and to develop communication skills, as well as to increase students' employment opportunities upon completion of their undergraduate studies.

NEW COURSE CODE TITLE

MME 218 Programming and Numerical Methods (5 ECTS) (Previous Code Title – MME 217)

CHANGES ON THE TABLE -ANALYTICAL PROGRAMME OF STUDIES

The course **MAS 029 Elements of Linear Algebra** is taught in the fall semester of the second year of studies.

The course **MME 218 Programming and Numerical Methods** is taught in the spring semester of the second year of studies.

FACULTY OF PURE AND APPLIED SCIENCES



DEPARTMENT OF MATHEMATICS AND STATISTICS

ADDITIONAL COMPULSORY COURSE SPECIALIZATION: PURE MATHEMATICS

MAS 426 Field Theory

NEW COURSE CODE TITLE

Specialization: Pure Mathematics

Compulsory Courses from other Departments

The new course code for the course PHY XXX is PHY 103

Specialization: Applied Mathematics

Compulsory Courses from other Departments

The new course code for the course PHY XXX is PHY 103

REQUIREMENTS FOR THE MINOR PROGRAMME OF STUDY IN MATHEMATICS

In relation to the existing requirements for the Minor Programme in Mathematics, the course MAS 207 is no longer required. Two courses, 7 or 8 ECTS are required by the Department of Mathematics.

NEW ELECTIVE COURSE

MAS 501, MAS 502, MAS 503 Internship Programme I, II, III (1 ECTS each)

The aim of the course is to offer to the students of the Department of Mathematics and Statistics the possibility to apply the skills acquired during their studies, in real worldwide situations in order to gain a better understanding and perception of their related field. This will be achieved either through a specific project assigned to the students by the Hosting Organization at the start of the term of the internship, or by working at the Hosting Organization. Moreover, the course aims at engaging the students with industrial and/or research experience and enhance their understanding of the needs/demands of the job market. In this respect, students will be able to make wiser decisions relating to their career after graduating from the University.

Notes:

- Students have the opportunity to register in the Internship Programme during the summer months.
- This is a one to three-month programme with 1 ECTS credited for each month of work.
- The ECTS earned from the Internship Programme do not contribute to the total of 240 ECTS required for obtaining the degree.
- Students are allowed to do the internship (1-3 ECTS) during the summer term only once, either between the second and third year of their studies, or between the third and fourth year of their studies.

NEW COURSE TITLE AND COURSE DESCRIPTION OF THE COURSE**MAS 439 INTRODUCTION TO ALGEBRAIC GEOMETRY****MAS 439 Special Topics in Geometry (7 ECTS)**

The topics selected for this course depend on the research interests of the academic staff.

NEW COURSE OFFERED EXCLUSIVELY TO OTHER DEPARTMENTS**MAS 020 Introductory Mathematics II (CHEMISTRY) (5 ECTS)**

Differential equations of first order – Linear differential equations of second order – Special forms of differential equations - Complex numbers and their properties – Polar and exponential forms – Applications of complex numbers – Relations between trigonometric and hyperbolic functions – Functions of two variables – Limits and continuity – Partial derivatives – Maxima and minimum – Double integrals – Introduction to Linear Algebra - Systems of linear equations – Matrices – Determinants – Vectors – Vector spaces – Eigenvalues and Eigenvectors.

NEW COURSE DESCRIPTIONS OFFERED TO OTHER DEPARTMENTS**MAS 012 Calculus for Computer Scientists II (5 ECTS)**

Real numbers – Absolute value – Cartesian and polar coordinates – Equation of line, circle and parabola - Functions of one variable – Inverse functions – Trigonometric functions – Exponential and logarithmic functions – Hyperbolic functions - Limits – Computing limits – Continuity – Limits and continuity of basic functions - Tangent lines and rates of change – The derivative function – Techniques of differentiation – Derivatives of basic functions – Chain rule – Implicit differentiation – Derivatives of inverse functions - Related rates – Linear approximation – Differentials – L'Hopital rules – Increase, decrease and concavity – Local and absolute maxima and minima – Graphs – Newton's method - Rolle's theorem – Mean value theorem - Indefinite integral – Definite integral (Riemann's integral) – First fundamental theorem of integral calculus – Average value of a function – Second fundamental theorem of integral calculus – Integrals of basic functions - Integration by parts – Trigonometric and algebraic substitutions – Integrating rational functions by partial functions.

MAS 013 Calculus for Computer Scientists II (5 ECTS)

Review of principles of integration - Area between two curves – Volumes – Length of a curve – Area of a surface of revolution – Improper integrals - Sequences – Monotone sequences - Infinite series – Convergence tests – Alternating series – Absolute and conditional convergence - Taylor and Maclaurin polynomials - Taylor and Maclaurin series - Convergence of Taylor series – Differentiating and Integrating power series - Differential equations of first order – Linear differential equations of second order – Special forms of differential equations - Functions of two or more variables – Limits and continuity – Partial derivatives– Maxima and minima of functions of two variables – Complex variables – Operations of complex variables – Exponential forms of complex numbers – Applications – Relations between trigonometric and hyperbolic functions.

MAS 029 Elements of Linear Algebra (7 ECTS)

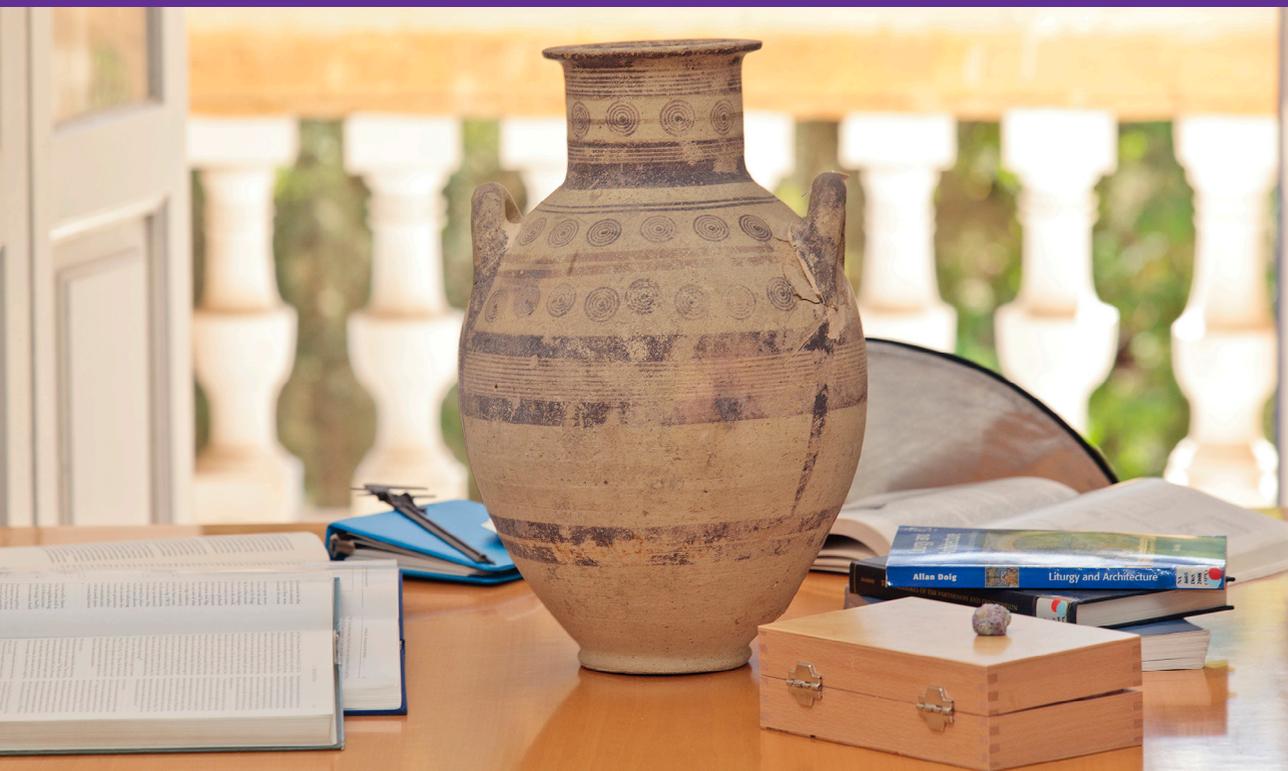
Vectors on the plane and in space. Inner and outer product. Vector spaces. Linear independence. Basis and dimension of a vector space. Matrices. Linear systems and Gauss method. Inverse of a matrix. Orthogonal matrices. Rank. Determinants. Eigenvalues, eigenvectors, and diagonalization. Inner product spaces. Gram-Schmidt orthonormalization.

DEPARTMENT OF CLASSICS AND PHILOSOPHY

REVISED PROGRAMME OF STUDY

The Department of Classics and Philosophy has revised its undergraduate programme of study. The new programme of study, as offered from the fall semester 2018/2019 onwards, is available at the Department's website www.ucy.ac.cy/cph/en

FACULTY OF LETTERS





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