



University
of Cyprus

Founded in 1989
52 best young university
(THE World University Rankings - 2017)



Faculty of Pure and Applied Sciences

Department of Biological Sciences

Department of Chemistry

Department of Computer Science

Department of Mathematics and Statistics

Department of Physics

Devoted to excellent education
and high caliber research



VISION

Aspires to be established as a world-class Faculty of excellence in Pure and Applied Sciences.

MISSION

Devoted to excellent education and high caliber research in the fields of Biology, Computer Science, Mathematics and Statistics as well as Physics and Chemistry.

Objectives:

- To produce quantifiable, cutting-edge research activity, widely recognized.
- To pursue and disseminate knowledge with impact on societal and world problems.
- To foster collaborations and partnerships, sustaining its internationally extrovert profile.
- To recruit the best students and educate new generations of researchers and leaders of Cyprus in Pure and Applied Sciences, while ensuring their employability; to prepare future citizens socially responsible and able to apply knowledge and skills acquired in real-world settings in order to deal with complex and challenging issues.

VALUES

Quality, Innovation, Competitiveness, Integrity, Professionalism.

HISTORY: FACTS & FIGURES

- The Faculty - one of the first Schools of the University of Cyprus (UCY) - was established in 1992 with 3 Departments.
- Today, it counts 5 Departments and 2 Research Centers (Molecular Medicine Research Centre and Oceanography Centre) and 34 Laboratories.
- It is staffed by 88 outstanding faculty members, 28 specialized education staff members, 112 research scientists and 29 administrators and it has awarded Honorary Doctorates to 9 notable figures.
- It numbers 828 undergraduate students, 150 Master level students and 141 PhD level students, and 2,633 alumni of a Bachelor, 943 of a Master and 189 of a PhD degree.
- It is housed in 2 buildings - world-class infrastructure - at University Campus, a vibrant and diverse community.
- The Faculty is administered by the Board of Faculty and each Department by its Departmental Board. Its leadership comprises of Dean, Deputy Dean, Chairpersons and Vice Chairpersons.
- It boasts a significant number of patents, awards and achievements.
- It demonstrates a continuous successful upward trend of faculty and students mobility in the context of Erasmus, Leonardo da Vinci, Comenius and Grundtvig Programmes.



Faculty members and admin personnel have been working restlessly, committed to the fulfilment of Faculty's mission and vision, contributing eventually to the UCY Strategic Plan.

The outstanding level of research activity and development that has been achieved in just a handful of years promises an exciting future for the School.

The Departments are reviewed systematically for quality assurance at both internal and external level (EUA, DIPAE, ENQA, INQAAHE).

Department of Biological Sciences

Programmes of Study

Undergraduate Programme

- B.Sc. in Biological Sciences

Master's Programmes

- M.Sc. in Molecular Biology and Biomedicine
- M.Sc. in Biomedical Sciences
- M.Sc. in Biodiversity and Ecology

Ph.D. Programmes

- Ph.D. in Biomedical Sciences
- Ph.D. in Biodiversity and Ecology

Research

It has been producing internationally competitive, cutting-edge research, published in high impact, peer-reviewed, world-renowned scientific journals such as, the 'Developmental Cell', 'Nature Communications', 'PloS Genetics', 'Proceedings of the National Academy of Sciences' (PNAS), "The Journal of Cell Science", etc.

Since its establishment in 2002, it has received more than 11 million euros in external research funding and has attracted funding for major research programmes such as, ERC (Antonis Kirmizis) and Marie Curie (Leondios Kostrikis, Giorgos Apidianakis, Chrysoula Pitsouli, Alexander Kirschel) from the EU Commission.

Department of Chemistry

Programmes of Study

Undergraduate Programme

- B.Sc. in Chemistry

Master's Programmes

- M.Sc. in Chemistry

Ph.D. Programmes

- Ph.D. in Chemistry

Research

It has published over 300 papers in peer reviewed scientific journals, including publications in high impact journals such as, the 'Nat. Mater.', 'Nat. Commun.', 'Chem. Soc. Rev.', 'J. Am. Chem. Soc.', 'Angew. Chem. Int. Ed.', etc.

To date, it has received funding for 130 External Research Programmes (overall budget €13.196.429,22) and 19 Internal Programmes (overall budget €1.126.908,23) by key funding bodies [EU & Cyprus Research Promotion Foundation (Marie Curie: Sophia Hayes, Angelos Efstathiou, Anastasios Tasiopoulos)].

Department of Computer Science

Programmes of Study

Undergraduate Programme

- B.Sc. in Computer Science

The Department of Computer Science offers the following specializations:

- Computer Networks
- Fundamentals of Computer Science
- Big Data and Internet Computing
- Artificial Intelligence
- Software Engineering
- Real World Computing
- Digital and Embedded Systems

Furthermore, the Department offers a general Minor Programme of Studies and a Minor Programme in Biomechanics.

Master's Programmes

- M.Sc. in Computer Science (MCS)
- M.Sc. in Internet Computing (MIC)
- M.Sc. in Intelligent Systems (MIntS)
- Professional M.Sc. in Advanced Information Technologies (PM)
- M.Sc. in Design and Development Electronic Games and Interactive Technologies (MCG)

Ph.D. Programmes

- In different specialisations of Computer Science

Research

Its research output:

- 53 books authored or edited.
- 965 scientific papers in peer reviewed venues.
- 34 key note talks during the years 2013-2016.

During the past 12 years, it has been successfully attracting competitive research funding, with the total of €19,908,417.80 for 153 Research Projects. The funding bodies include among others, the EU (Marie Curie: Marios Dikaiakos, George Samaras, George Pallis) and CRPF. About 500 Young Researchers have been employed to support Research Projects.

Department of Mathematics and Statistics

Programmes of Study

Undergraduate Programme

- B.Sc. in Mathematics and Statistics, with one of the following specializations:
 - Pure Mathematics
 - Applied Mathematics
 - Probability/Statistics

Master's Programmes

- M.Sc. in Applied Mathematics
- M.Sc. in Pure Mathematics
- M.Sc. in Applied Statistics

Ph.D. Programmes

- Ph.D. in Mathematics
- Applied Mathematics
- Pure Mathematics
- Ph.D. in Statistics

Research

It carries out high-quality research activity in a wide range of Pure Mathematics, Applied Mathematics and Statistics, published in top journals. Its faculty members cooperate and participate in research programmes with other Universities and Research Centers (Marie Curie programmes: Emmanouil Milakis, Giorgos Georgiou and Pantelis Damianou). Beyond the academic arena, the Department has established research partnerships with public and private organizations in Cyprus and abroad.

The ongoing research activities extend beyond the traditional areas of Mathematics Research, including:

- Computer-Aided Design
- Modelling of Rainfall
- Computational Oceanography
- Biomedicine
- Molecular Genetics
- Short-Term Load Forecasting

For the last 6 years, the total budget of the External Research Programmes is estimated to be €1,886,285. The total budget of the Internal Programmes which have been funded by the University is €268,400.

Department of Physics

Programmes of Study

Undergraduate Programme

- B.Sc. in Physics

Master's Programmes

- M.Sc. in Physics
- M.Sc. in Physics Principles

Ph.D. Programmes

- Ph.D. in Physics

Research

The research is supported through several competitive external grants funded by EU (Marie Curie: Nicolaos Toumbas, Constantia Alexandrou, Spiros Skourtis and Fotios Ptochos), including one European Research Council (ERC) grant (Constantinos Skordis), CRPF, as well as Internal University Programmes. For the last 5 years, the total budget of the External Research Programmes is estimated to be €3,055,415. The total budget of the Internal Programmes which have been funded by the University is €374,000.

PATENTS

The inventions patented by the Faculty's researchers create an integral part to the progress of the science and technology in UCY and society in general.

Faculty members that have obtained patents:

- *Panos Razis (Dept. of Physics)*: "Biometric Identification Method"
- *Angelos Efstathiou (Dept. of Chemistry)*:
 - "Catalyst Consisting of Platinum Supported on Chemically Promoted Magnesium Oxide and Cerium Dioxide Towards H₂-SCR"
 - "Catalyst Containing Platinum on a Support Consisting of Magnesium Oxide and Cerium Oxide for the Reduction of NO to N₂ with Hydrogen under NO_x Oxidation Conditions"
 - "Catalyst Containing Platinum and Palladium for the Selective Reduction of NO_x with Hydrogen (H₂-SCR)"
 - "Catalyst for the Reduction of NO to N₂ with Hydrogen under NO_x Oxidation Conditions"
 - "Catalyst containing platinum of a support consisting of Nano-crystal magnesium oxide and cerium dioxide towards H₂-SCR"
- "Catalyst containing platinum and palladium for the selective reduction of NO_x with hydrogen (H₂-SCR)"
- *Anastasios Keramidas (Dept. of Chemistry)*: "Tocopherol Ester Compounds"
- *Nicolaos Chronakis (Dept. of Chemistry)*: "Method of Synthesis of Water Soluble Fullerene Polyacids Using a Malonate Reactant"
- *Constantia Kapnissi (Dept. of Chemistry)*: "Analytical Separations with Polyelectrolyte Layers, molecular Micelles, or Zwitterionic Polymers"
- *George Archontis (Dept. of Physics)*: "Molecular Dynamics in Drug Design: New Generations of Compstatin Analogs"

COLLABORATIONS AND PARTNERSHIPS

The Faculty has a long history of developing new collaborations and partnerships and strengthening the established ones (see list below):

- FMT Worldwide Pty Ltd
- Central Bank of Cyprus
- Wadja Media Ltd
- Primetel PLC
- Lanitis Development Ltd
- Cyprus University of Technology, Department of Multimedia and Graphic Arts
- Games2Gaze
- Cyta
- MTN Cyprus Ltd
- Ideas2life Ltd
- Inteliscape Ltd
- Charalambides Christis Ltd
- Froggy Ltd
- Trading Point of Financial Instruments Ltd (XM)
- AAI Scientific Cultural Services Ltd (AAISCS)
- Blupath Ltd
- Nicosia Municipality
- Stremble Ventures Ltd
- Cypriot branch of AVVA Pharmaceuticals Ltd
- Medochemie Ltd
- NORTEST
- Remedica Ltd
- CP. FOODLAB
- GEM Analysis Ltd
- SASOL, South Africa
- MEL CHEMICALS, U.K.
- BIOPHARM RESEARCH INSTITUTE LTD

ACHIEVEMENTS

- Marie Curie International Outgoing Fellowship, Assoc. Prof. Nikolaos Tziolas, Dept. of Mathematics and Statistics (2015-2017)
- Important findings describing a novel mechanosensitive complex guiding tissue responses to force and critical for tissue and organ morphogenesis, Assoc. Prof. Paris Skourides, Dept. of Biological Sciences (2016)
- European Marie Skłodowska-Curie Scholarship, Dr Kleito Petalidou, Postdoc. Research Assoc. Dept. of Chemistry (2016)
- Academy of Athens Award on Mathematical Analysis for the publication «Strong Asymptotics for Bergman Polynomials over Domains With Corners and Applications», Prof. Nikos Stylianopoulos, Dept. of Mathematics and Statistics (2015)
- Cyprus among the 100 elected members of the 3rd Heidelberg Laureate Forum, Demetris Trichinas and Elli Zavou, students of the School (2015)
- “Research Prize - Distinguished Researcher 2014” from the Research Promotion Foundation, Prof. Constantinos Deltas, Dept. of Biological Sciences (2014)
- International recognition of the research work of Prof. Angelos Efstathiou by Elsevier, Dept. of Chemistry (2014)

SOCIAL IMPACT & PUBLIC ENGAGEMENT

The Faculty views social responsibility as part of its mission and therefore it is engaged in activities that promote awareness and education of the public in important science-related issues. Furthermore, it provides specialist expertise and consultation to the public and private sector, liaises with schools to raise interest in the study of Sciences and provides training activities for young students. The School sees its mission as part of an overall drive to benefit and empower society through education, science and technological innovation.

Besides the research output at national level, its faculty members are active in the global arena through Journal Editorial Board Membership, participation in Conference Steering and Organization Committees, as well as Technical Programme Committees, as chairs and members (see list below).

- Participation in the International Biology Olympiad
- Annual Organization of Computer Science Workshops (e.g. Open House).
- Programming Competitions (e.g. Logipaignion, Hackathon).
- Participation in informatics series of lectures for elementary students (Hour-of-Code).
- Hosting various Computer Science events (Open Source Software Initiative).
- Assistance/Consultancy Government and the Ministries (e.g. the Ministry of Education, the Ministry of Health, the Ministry of Finance, the Cyprus Institute).
- Active in professional bodies such as IEEE, IFAC and ACM, providing consulting to International Companies e.g. Intel.
- Cyprus-CERN Committee.
- Governing Board of PRACE.
- The C20 Committee on Computational Physics of IUPAP.
- The Computational Physics Board of EPS.
- The International Advisory Committee for the Lattice Field Theory Annual Conferences.
- The National Contact of HEP of the European Physical Society.
- The Resources Review Board (RRB) of CERN.
- The International Committee for Future Accelerators (ICFA).
- The HADES Collaboration Board Committee.
- The Cyprus Council for the Recognition of Higher Education Qualifications (KYSATS).
- Union of Cypriot Physicists.
- Presentations to High School students regarding the sciences.
- Participation in the International Chemistry Olympiad.
- Organization or co-Organization of Chemistry Conferences (Postgraduate Chemistry Conference, Greece – Cyprus Chemistry Conference, North America, Greece, Cyprus Workshop on Paramagnetic Materials, and others).
- Assistance/Consultation to Government Organizations and Ministries (e.g. the State General Laboratory, the Geological Survey Department, the Cyprus Organization for Promotion of Quality, etc.).
- Consultation to International Companies (e.g. SASOL).
- Participation in Cyprus Councils and Government Committees (e.g. the Council for Radiation Protection and Nuclear Safety in Cyprus and the Reliability Inspection Council).
- Participation in EUCHEMS Committees.

FUTURE ENDEAVORS

Since its inception, the Faculty has set very high standards with regards to both education and research.

Its long-term goal is to always meet these standards, through the development of an internationally competitive body of research, as well as the provision of a high level and up-to-date education and research training through our study programmes.

Additional goals aiming at Faculty's constant development: to attract promising and diverse students and to recruit and retain outstanding scholars and admin personnel that will contribute further to extending diversity in its areas of research.

EDITING: Athina Frangou-Selipa,
University Business Development Officer,
Rector's Office

DESIGN: T&E Polydorou Design Ltd





University of Cyprus
Faculty of Pure and
Applied Sciences

CONTACT DETAILS

School of Pure and Applied Sciences

1 University Avenue, 2109 Aglantzia
P.O.Box 20537
1678 Nicosia-Cyprus

<https://www.ucy.ac.cy/fpas/en/>

- Department of Biological Sciences
<http://www.ucy.ac.cy/biol/en/>
- Department of Chemistry
<http://www.ucy.ac.cy/chem/en/>
- Department of Computer Science
<http://www.ucy.ac.cy/cs/en/>
- Department of Mathematics and Statistics
<http://www.ucy.ac.cy/mas/en/>
- Department of Physics
<http://www.ucy.ac.cy/phy/en/>