RAYMOND AND BEVERLY SACKLER FACULTY OF EXACT SCIENCES

The Faculty of Exact Sciences consists of five major academic units: the School of Chemistry; the School of Computer Science; the School of Physics and Astronomy; the School of Mathematical Sciences; and the Department of Geophysics and Planetary Sciences.

The average length of time of the undergraduate program is three years. In special cases permission may be granted to extend the period to five years.

Eligibility and Admission Requirements

Foreign high school graduates must have successfully completed one year in exact sciences in the preparatory program (Mechina) or one academic year at a university where studies included at least one advanced mathematics course as well as courses in the exact sciences.

Applicants holding the British G.C.E. must have passed A-level exams in mathematics and at least one other subject in the exact sciences.

Graduates of French secondary schools must have certificates indicating successful completion of the mathematics, physics, and chemistry courses.

Applications of candidates who have completed their secondary education outside Israel will be evaluated by the Admissions Committee.

Applicants with Advanced Placement (AP) course units in mathematics, whose registration is based on a U.S. High School Diploma and SAT scores (1270 at least in the verbal and math sections) but do not attend "Mechina," are required to contact the registration office in order to verify their eligibility to apply to the School of Mathematics or to the School Computer Science.

Applicants holding an Israeli Matriculation (Bagrut), see the Hebrew Information Booklet.

Preparatory courses

Preparatory courses in mathematics, physics, and chemistry are offered during the summer for a period of 6-8 weeks. Those wishing to refresh their knowledge may participate. A tuition fee is charged.

School of Chemistry

In addition to the classic studies of physical chemistry, inorganic chemistry, organic chemistry, and qualitative and quantitative analysis, the B.Sc. program requires that the undergraduate acquire a solid foundation in mathematics, physics, quantum chemistry, statistical mechanics, computer programming, electronics, biochemistry, and instrumentation.

0351 Chemistry (sm)

The purpose of this program is to train chemists for research, industry, and teaching.

The program of studies leading to the B.Sc. consists of two years of required courses and a third year of mostly elective courses.

0355 Chemistry Major – Physics Minor

This program permits more intensive studies in physics than in the regular chemistry program.

Transfer to a double major program with computer Science

A first year Chemistry student with high academic achievements, will be eligible to apply for tranfer to the double major program in Chemistry and Computer Science.

For more details see our site:
www.tau.ac.il/exact_sciences/site

Department of Geophysics and Planetary Sciences

The Geophysics and Atmospheric and Space Sciences curriculum provides a thorough grounding in physics and mathematics, which forms the basis for specific professional courses.

Undergraduate Programs:

0341 Geophysics and Atmospheric and Space Sciences (sm)

B.Sc. studies focus on the theoretical and applied aspects of the Earth Sciences: applied geophysics and geology, atmospheric sciences and meteorology as well as courses in the planetary and space sciences.

In the first two years, students concentrate mainly on mathematics, physics, and chemistry. The following year is devoted to geophysical, atmospheric, and space studies.

0341.0378, 0341.0366 Geophysics and Atmospheric and Space Sciences – dm – together with the School of Mathematical Sciences.

The program is open to candidates who have a background in the exact sciences. The program offers the option of combining Geophysics with one of the programs in the School of Mathematical Sciences: Mathematics, Computer Science,[1] and Statistics. Candidates must meet the admission requirements of both majors.

0341.0321 – Geophysics and Planetary Sciences – dm together with Physics. Studies focus on Physics and its application to Geophysics as well as Atmospheric and Space Sciences. Candidates must meet the admissions requirements of both majors.

0341.0351 – Geophysics and Atmospheric and Planetary Sciences – dm together with Chemistry. Studies focus on Chemistry and its application to Geophysics as well as Atmospheric and Space Sciences. Candidates must meet the admissions requirements of both majors.

xxxx.0341 – Geophysics and Planetary Science – dm – together with an additional major in any other department from any Faculty (as dm) –B.Sc.

The program offers the option of combining Geophysics with any additional program in any other Faculty (as dm). Candidates must meet the admission requirements of both programs.

0342 Geophysics and Atmospheric and Space Sciences Major – Mathematics Minor

The program is open to candidates who have a background in the exact sciences and wish to acquire a higher education in geophysics, the atmospheric and space sciences, and mathematics.

0321.0341 Physics and Geophysics and Atmospheric and Space Sciences B.Sc. (dm)

Candidates must meet the admission requirements of both programs.

Transfer to a double major program with computer Science

A first year student with high academic achievements, will be eligible to apply for tranfer to the double major program in Chemistry and Computer Science.

1 See admission requirements to Computer Sciences.

For more details see our site:
www.tau.ac.il/exact_sciences/site

0311 General Science (sm/dm)

The program offers the option of basic studies in the various disciplines of exact sciences rather than specialization in one single field.

Two fields of study (mathematics and physics) are compulsory. The third field (either chemistry, geophysics, statistics, mathematics-expanded program, physics-expanded program, or computer science) is optional. One of the following supplementary fields is also required: geography, education, psychology, philosophy, or economics.

There is a possibility of studying for the B.Sc. in General Science in combination with an additional major from another faculty, except for another program of general studies in the following disciplines: General and Interdisciplinary Studies (0662), Women and Gender Studies (0608), Multidisciplinary Program in the Arts (0861), Communication (1085), Management (1221), or Accounting (1211).

School of Mathematical Sciences

The various undergraduate programs provide students with basic knowledge in various areas of theoretical and applied mathematics and the broadest possible knowledge in computer science, probability, statistics and operations research.

Undergraduate Programs

0366 Mathematics (B.Sc.) – sm

0366 Mathematics (B.Sc.) – and 0368 Computer Science (B.Sc.) – dm

0366 Mathematics (B.Sc.) – and 0365 Statistics and Operations Research (B.Sc.) – dm

0366.xxxx Mathematics (B.Sc.) – together with an additional major in any other Faculty (dm)

0376 Mathematics – Major and Physics – Minor (B.Sc.) – sm

0323 Combined Mathematics – Physics Program (B.Sc.) – sm

0365.0351, 0366.0351 – Chemistry – and Mathematics, or Statistics and Operations Research – dm

0365.0341, 0366.0341 – Geophysics – and Mathematics, or Statistics and Operations Research – dm

0365 Statistics and Operations Research (B.Sc.) – sm

0365 Statistics and Operations Research (B.Sc.) and 0378 Computer Science (B.Sc.) – dm

0365.xxxx Statistics and Operations Research (B.Sc.) – together with an additional Major in any other Faculty – dm

0379 Mathematics and Extended Complimentary Units – dm

Admission to Mathematical Sciences

The admission requirements and the program of studies during the first year are common to all students in the programs labeled with the code number 0366. Transfer to the various programs is subject to the approval of the Curriculum Committee.

Admission to Statistics and Operations Research

The admission requirements for Statistics and Operations Research with a double major (Code 0365. dm) may differ from those for the other programs of study in the School of Mathematical Sciences.

For more details see our site:
www.tau.ac.il/exact_sciences/site

School of Computer Science

The school's diverse undergraduate programs offer students the broadest possible knowledge in computer science, probability, statistics, and operations research, while also providing basic knowledge in various areas of theoretical and applied mathematics.

Undergraduate Programs

0368 Computer Science (B.Sc.) sm

0368 Computer Science (B.Sc.) dm – and 0366 Mathematics (B.Sc.) dm

0515 Combined Studies – Computer Science with Electrical and Electronic Engineering (B.Sc.) sm

0382 Computer Science with emphasis on Bio-informatics (B.Sc.) sm

0378.0321 Computer Science (B.Sc.) dm – and Physics (B.Sc.) dm

0378.0351 Chemistry (B. Sc.) dm – and Computer Science (B. Sc.) dm

0378.0341 Geophysics (B. Sc.) dm – and Computer Science (B. Sc.) dm

0369. XXXX Computer Science (B.Sc.) dm together with an additional Major in any other faculty (as dm)

0378.0365 – Computer Science (B.Sc.) – dm – and Statistics and Operations Research (B.Sc.) – dm

Since enrollment to the School of Computer Science is limited, only candidates with the highest grades will be admitted.

Transfer to the various programs is subject to the approval of the Curriculum Committee.

Admission to Computer Science

The admission requirements to Computer Science with Mathematics (0368) are very high, and even higher to Computer Science with any other major (0369) due to the large volume of applicants. Admission depends on high grades on the Matriculation Examinations ("Bagrut" or equivalent) and the Psychometric Entrance Examination, and in rare instances, on high grades in extensive advanced studies in Mathematics and Physics.

To qualify for the second year in Computer Science, a student must complete the first year courses in the School of Mathematical Sciences with a weighted minimum average of 70. (The teaching committee may require a higher average from students who changed the program to which they were originally accepted and from students who are exempted from some of their first year courses on the basis of previous academic studies). Since available places are limited, the number of students accepted will be determined each year according to the number of openings.

Students who are not accepted to the Computer Science School may transfer to the School of Mathematical Sciences in one of the other tracks.

School of Physics and Astronomy

The physics curriculum broadly covers both classical physics and quantum physics. Third year students are introduced to present day research in condensed matter physics, nuclear physics, particle physics, astrophysics, and applied physics.

Undergraduate Programs:

0321 Physics (Track 100) B.Sc. – sm

0323 Combined Mathematics -Physics program – B.Sc.

0516 Combined Physics Electrical Engineering – B.Sc.

0321 Physics Major – Mathematics Minor (Track 101) B.Sc.

0321.0369 Physics and Computer Science B.Sc. – dm

0321.0341 Physics and Geophysics and Atmospheric and Space Science B.Sc. – dm

0321.xxxx – Physics (B.Sc.) dm – together with an additional major in any other Faculty (as dm)

0321 Physics (Track 100)

The program aims at giving the student the basic knowledge necessary for a physicist as well as a broad overview of the different branches of physics. Nominal completion time for the undergraduate program is three years.

0323 Combined Mathematics –Physics Program

This program is for students who wish to major in both physics and mathematics. An undergraduate degree in this program with adequate grades allows the student to enroll for graduate studies in either of the two subjects.

Transfer to a double major program with computer Science

A first year student with high academic achievements, in either 0321 or 0323 will be eligible to apply for transfer to the double major program in Physics and Computer Science.

For more details see our site:
www.tau.ac.il/exact_sciences/site

0516 Combined Physics – Electrical Engineering

This program is offered jointly by the School of Physics and Astronomy and the Department of Electrical Engineering (EE).

Applicants must meet the acceptance requirement of both departments, when they graduate, these students get two degrees: B.Sc. in Physics and B.Sc. in EE. The studies last four years.

0321.0369 Physics and Computer Science – dm

Candidates must meet the admission requirements of both programs. Admission to studies in Computer Science is limited. See admission requirements to Computer Science in the School of Mathematical Sciences.

0321 Physics Major – Mathematics Minor (Track 101)

This program offers approximately 75% of the courses in physics as well as the basic courses in the mathematics program.

0321. XXXX Physics – dm

This program offers the option to combine studies in physics with any other program from any faculty (as dm). Candidates must meet the admission requirements of both programs.