DIPLOMA SUPPLEMENT

Higher Education System in Israel

Degrees

Higher education in Israel is a three-tiered system offering Bachelor's, Master's and Doctoral degree programs. Programs granting Bachelor's degrees (e.g., BA, BSc, BSN, BSW) usually last three or four years. Completion of this first degree qualifies students for admission to subsequent degree programs. Master's degree programs generally last two years and offer a thesis or non-thesis tracks. Students who complete a Master's degree with a research track are eligible for admission to Doctorate programs. Each university determines additional admissions requirements. Doctorate programs generally last four to six years and are offered in various disciplines.

Access to Higher Education

Israeli institutes of higher education generally require a matriculation diploma and a standardized psychometric examination. The exact requirements vary depending on the institution and field of study. Programs may have additional requirements such as entrance interviews, examinations, or artistic portfolios. Admission requirements for all programs are determined on a competitive basis by the institution and are approved by Israel's Council for Higher Education (CHE).

Types of Higher Education Institutions

Israel has 61 academic institutions: nine universities (including the Open University) and 31 academic colleges that award Bachelor's and Master's degrees. Currently, only research universities offer research PhD degrees.

Government Agencies

The Council for Higher Education (CHE), established according to the Council for Higher Education Act 1958, is the regulatory body responsible for the academic aspects of all institutions of higher education in Israel. According to the Council for Higher Education Act, higher education institutions are accredited by the Quality Assessment Division of the CHE at the study program level in universities and colleges.

Ruppin Academic Center

With 5000 students, Ruppin Academic Center (RAC) is one of the largest public colleges in Israel. It was established in 1949 by Israel's first Prime Minister, David Ben Gurion.

Today, RAC awards 21 undergraduate (BA, BSc, BSN, BSW) and graduate degrees (MA, MBA, MSc) in Marine Sciences, Engineering, Social and Community Sciences, Economics and Management. RAC offers innovative study programs committed to developing knowledge and professional competencies that address Israel's most vital social and economic challenges.

Ruppin Academic Center has been consistently awarded top ratings in satisfaction surveys conducted among Israel's higher education student population.

The Ruppin Academic Center has four faculties:

The Faculty of Economics and Business Administration awards BA degrees in Economics and Accounting, Economics and Management, Business Administration, and a Global Master's in Business Administration (MBA).

The Faculty of Social and Community Sciences awards Bachelor's degrees in Behavioral Sciences (BA), Nursing Sciences (BSN), and Social Work (BSW) and Master's degrees in Immigration and Social Integration, Organizational Psychology, Clinical Psychology (with thesis), and Clinical Psychology of Adulthood and Aging.

The Faculty of Engineering awards BSc degrees in Industrial Engineering and Management, Computer Engineering, Electrical and Electronics Engineering, Computer and Information Sciences, and MA degrees in Logistics and Global Supply Chain.

The Faculty of Marine Sciences awards BSc degrees in Marine Environmental Sciences and Marine Biotechnology, Master's degrees in Marine Resource Management and MSc degree in Marine Sciences (with thesis).

The Faculty of Engineering awards BSc degrees in Industrial Engineering and Management, Computer Engineering, Electrical and Electronics Engineering, Computer and Information Sciences, and MA degrees in Logistics and Global Supply. The Faculty offers a variety of programs and specializations tailored to the high-tech industry's current and anticipated future needs. The Faculty is at the forefront of Israel's colleges. In addition to basic studies in engineering and sciences, it offers select content and majors that open the door to a wide range of employment opportunities in engineering in general and in the areas of specialization. As part of the undergraduate programs, students have access to advanced labs that cover the latest technologies and disciplines in electrical engineering and electronics, computer engineering, computer and information sciences, and industrial engineering and management.

The Faculty offers four CHE-accredited undergraduate programs: BSc degrees in Electrical and Electronics Engineering, Computer Engineering, Computer and Information Sciences, and Industrial Engineering and Management, and a CHE-accredited MA in Logistics and Global Supply Chain.

Undergraduates (BSc) in Computer and Information Sciences – Profile

Undergraduates of the Computer and Information Sciences Department will gain theoretical and practical knowledge about the fundamentals of computer systems in the following areas:

- Programming languages – C language, Python, Java, JavaScript, and C#;
- Core theoretical topics – linear algebra, calculus, discrete mathematics, logic and set theory, probability, statistics, data structures, automata and formal languages, algorithms, and theory of computation;
- Systems – computer architecture, operating systems and evaluation of their performance, software engineering, communication networks, cloud systems, and information security;
- Information and data management – relational and non-relational databases, data processing, and big data engineering.

In addition to gaining theoretical and practical knowledge in these core subjects, students will specialize in one of the following areas:

1. **Data Science and Deep Learning**

   Graduates of this specialization will have acquired the following:

   - Big data science: data science life cycle, big data engineering, noSql;
   - Advanced machine learning methods with an emphasis on their algorithmic and mathematical bases;
   - Advanced methods for analyzing data, including data that is not normally distributed (nonparametric statistics, Bayesian statistics, boosting, etc.);
   - Big data architecture;
   - Artificial intelligence and deep learning architectures, including neural networks, decision trees, natural language processing, etc.;
   - Algorithms for analyzing text and time-series analysis;
   - Data visualization methods using them for conducting experiments.

2. Applications and Social Networks

Graduates of this specialization will have learned the following:

- How to develop web and mobile applications;
- Theory and quantitative tools for analyzing networks in general and social networks in particular;
- Graph algorithms;
- Principles of working with application servers in communication, logic, and data layers.

Additionally, Undergraduates of this program will have the following knowledge and soft skills:

- Critical thinking and problem solving;
- Independent learning and teamwork;
- Presentation skills;
- Creativity and entrepreneurship.