مجلس التعليم العالي
המועצה להשכלה גבוהה
COUNCIL FOR HIGHER EDUCATION
Planning & Budgeting Committee

350,000 students are expected to attend the 2021-2022 academic year

This constitutes an increase of 4% relative to the 2020-2021 academic year

After an increase by 24,000 in the number of students who attend the higher education system in 2020-2021
The projected increase in the number of students attending the 2021-2022 academic year is milder.

- **In 2020-2021, the number of higher education students sharply increased by almost 24,000, most of whom attended attend bachelor's degree studies.**
- **The number of high-tech students, including women, has continued to increase.**
- **Resources were allocated to the students' assistance program in the amount of approximately NIS 0.5 billion a year**, including a designated additional amount (NIS 100 million) for the COVID crisis.
- **An additional NIS 70 million** to facilitate digital teaching and develop technological tools and training techno-pedagogic teams.
- **Experience-based learning –** An investment of NIS 24 million in occupation-oriented academic courses for the years 2019-2022, and a one-time addition of NIS 30 million for 2022-2024.
- **Launching the Quantum Project:** NIS 1.2 billion, in collaboration with the Administration for the Development of Weapons and Technological Infrastructure, the Innovativeness Authority, the Ministry of Science and the Ministry of Finance.
- **A total of 38,010 engineering students during the 2020-2021 academic year**, the largest academic program in Israel (approximately 18% of bachelor's degree students). Moreover, an additional 20,060 attended bachelor's degrees studies (math, statistics and computer science). A total of approximately 58,070 technological degree students.

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- **The number of first-year nursing students doubled in the last decade – from 1000 to 2,200.**

More women in academia

- **Women constitutes 60% of the number of students. Viewed annually, this is a significant increase in the percentage of women (all degrees) –** 58% of bachelor's degrees, 64% of master's degrees and 53% of PhDs.
- **More women attend high-tech studies** – in 2010-2021, the number of students who attended bachelor's degree studies (computer science, including mathematics and statistics) was 2.6 larger – from 2,622 to 6,784 in 2020-2021, and the number of female engineering students grew by 40%: from 8,581 students in 2011-2012 to 12,008 female students in 2020-2021.
- **The "Equator" Index for the facilitation of gender fairness** was launched at institutions funded by the Planning and Budgeting Committee for the purpose of improving the representation of women in senior staff and the administration of higher education institutions.

Accessibility of higher education to diverse populations

- **Access to higher education in peripheral regions**: in 2020-2021, almost 58,000 students, who constitute approximately 30% of bachelor's degree students, came from settlements that belong in lower socioeconomic clusters (Clusters 1-4). The part of students who live in those settlements is particularly notable at academic colleges that are funded by the Planning and Budgeting Committee, where they constituted 35% of bachelor's degree students, similarly to their part of the population that lives in those clusters (36%).
- **Access to higher education in the Arab sector:** Some 58,000 Arab students, who constitute 17% of all students in Israel (they represent 21% of the population). This represents an increase of 122% since the beginning of the last decade.
- **Excellence Program for Ethiopian students:** An increase of 45% in the number of Ethiopian bachelor's degree students in the last six years – from 2,608 in 2014-2015 to

3,782 in 2020-2021. Their percentage among students is 1.5%; the constitute 1.7% of the general population.

- **More Haredi (ultraorthodox) students**: Approximately 15,350 ultraorthodox students, an increase of approximately 2,000, constituting an increase by 15% in the number of students relative to 2019-2020 – 4.6% of all students in Israel, relative to 13% (their percentage of the population).

International higher education

- **OECD rating**: Israel is among the world's leaders in terms of the number of higher education graduates and academic alumni among 25–64-year-olds.
- **We continue to facilitate our international higher education standing**: more international post-doc and advanced degree students.

Budget of the higher education system

- **Substantial expansion of the higher education budget**: from NIS 7.3 billion in 2011-2012 to NIS 12.5 million in 2021-2022.
- **The research fund budget 2.4 is times greater** – Annual research fund budgets are 2.4 times greater – from NIS 536 million to NIS 1,297 million.
- **Substantial increase in the number of competitive research grants (biannual average)** – from USD 157 million in 2011-2012 to USD 331 million in 2021-2022 (+90%).
- **An increase of NIS 620 million (research infrastructure in the framework of the multi-annual program)**

Minister of Education – Dr. Yifat Shasha-Biton:

I would like to congratulate the 350,000 students who will attend higher education studies this year.

As the system that prepares its graduates for the job market, academia strives to be attentive and relevant to the employment needs of the State of Israel, such that its alumni would be integrated in every field and support our national strength.

As someone who sees the minimization of gaps in Israeli society as a key objective, we will continue to improve academic access to all members of the population, while maintaining academic quality. This includes taking additional steps to establish the university in the Galilee region.

The academic system fosters that the best researchers and brings tremendous honor to the State of Israel. We will continue to strengthen the research field this year and foster new researchers.

Professor Yaffa Zilberschatz, the soon-to-be ex-chairwoman of the Planning and Budgeting Committee of the Council for Higher Education: "The past decade has been characterized by excellence and the massive growth of the academic system. The larger budget has enabled the system to develop and expand the accessibility programs and to open the gates of academia to all members of the society. Moreover, a significant increase has been observed in research investments, funds and infrastructures in general, and in flagship fields in particular: Data science and artificial intelligence, personalized medicine, science and technology, quantum physics and the humanities. Moreover, the number of academic publications has increased, and, thanks to the National Program for Strengthening High-tech Professions, many students have joined the system in those fields, and engineering studies have become the most sought-after academic program in Israel. The digital learning revolution that we have led has enabled the system to provide full academic teaching services during the COVID crisis. In addition, the system facilitates entrepreneurship and innovation studies and the expansion of collaborations between academia and industry."

1. COVID Year – A revolutionary transition of the higher education system to online teaching

1. The 2021-2022 academic year is expected to begin at 59 higher education institutions, while the daily life amidst the COVID crisis has been accompanying the system since the second semester of the previous year.

2. During the second semester of 2019-2020, and as a result of the COVID pandemic, higher education institutions had to immediately transition to an online learning platform. This will be the place to mention that the fact that the elements of online learning have been incorporated into the institutions in the framework of the current multi-annual program has enabled the revolution's success. Special efforts were made by institutions, students, the Planning and Budgeting Committee and the Council for Higher Education, who brought about the rapid organization of the system, and the provision of a suitable response to the new reality – and achieved that in a manner of within days.

3. Academic studies continued primarily by means of online learning, including all necessary adjustments. Semester exams have taken at the institutions, which were attended by tens of thousands of students, and, in practice, the academic year was successful beyond our expectations.

4. Research activities at higher education institutions continued and will continue to take place within the bounds of requisite health restrictions, and this includes limited presence on campuses. The universities responded to the need to open up designated COVID research labs, and they are investing a great deal of effort in studying this field and finding solutions that deal with that situation.

5. Despite the challenges faced by the institutions, students and staff, as a result of the COVID crisis, the number of higher education students increased in 2020-2021 by 8%, and the expected increase in 2021-2022 is 4%.

6. In response to financial difficulties currently faced by students, higher education institutions have expanded their assistance programs, in the framework of which considerable grants and loans were provided in order to allow studies to continue.

7. In addition, an assistance program amounting to NIS 100 million was formulated, which provided students with assistance through three main channels: an expanded Student Assistance Fund budget, in the amount of NIS 40 million, and the granting of an additional 10,000 grants (NIS 4,000 each). Moreover, a designated scholarship fund was established by Mifal HaPayis for all students in Israel who were financially harmed by the crisis (NIS 50 million), which is intended to provide scholarships to thousands of

students who volunteer in communal frameworks (the "Summer Vacation School Program"). Assistance is also provided to students through academic institutions to prevent dropouts and provide requisite financial assistance.

8. In the course of the past two months, institutions have invested resources in improving the technological infrastructure that enables remote learning, and in training staff members in the context of digital learning by means of pedagogic training workshops for the purpose of providing staff members with tools that improve and optimize curricula and teaching methods, so as to tailor them to the new academic reality.

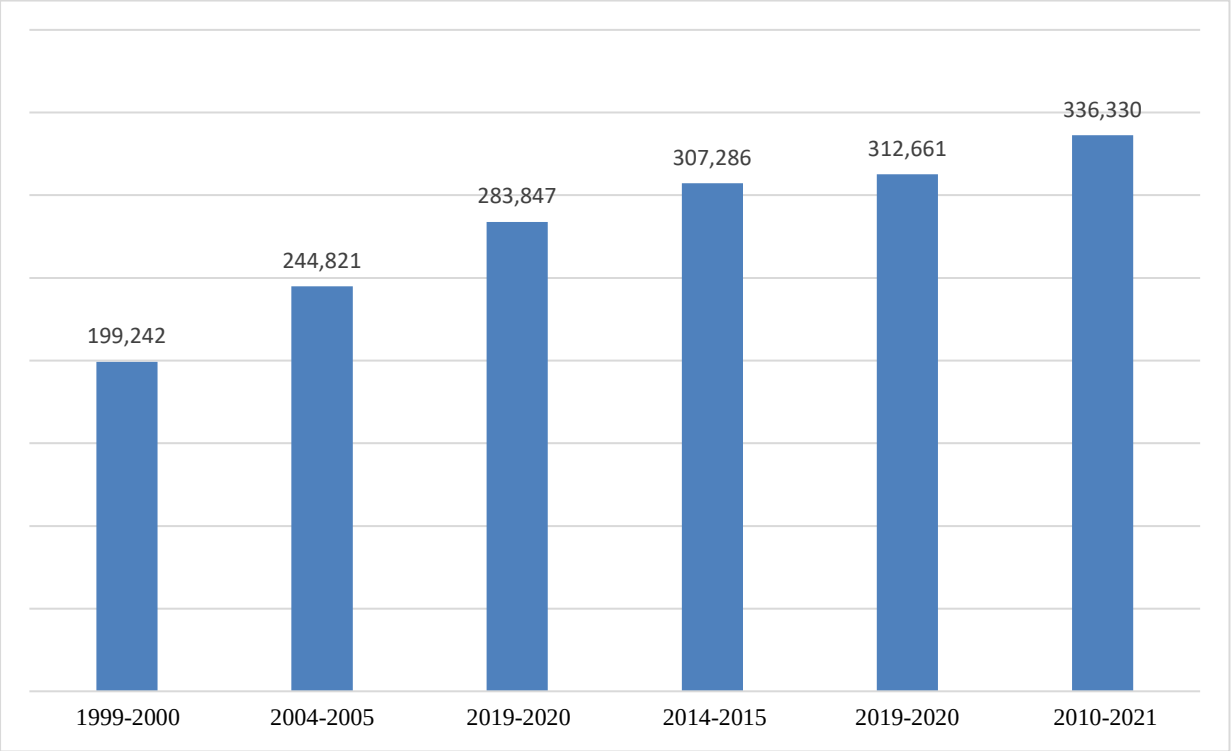
9. An additional budget in the amount of NIS 70 million was allocated for this purpose.

2. Sharp increase in the number of students in 2020-2021 – primarily bachelor's degree students

A sharp increase in the total number of students took place in 2020-2021 – almost 24,000 additional students relative to 2019-2020, 17,780 of whom attend bachelor's degree studies. In 2021-2022, according to the estimates of higher education institutions, an increase of approximately 14,000 students is expected (approximately 4% relative to 2020-2021).

336,330 students attended 59 academic institutions in Israel in 2020-2021, including:[1] 254,630 bachelor's degree students, 68,885 master's degree students, 11,855 PhD candidates and 960 students attended certification studies[2]. Following the stability that characterized the higher education system over the past decade, the total number of students has exhibited growth over the past two years, reaching, as stated, its peak in 2020-2021 among bachelor's degree students (17,780), but a remarkable increase was also observed in the number of master's degree students (5,665), and the number of PhD candidates has also increased by 211.

[1] Student numbers that appear in this report were received from the Central Bureau of Statistics in coordination with and pursuant to the instructions of the Planning and Budgeting Committee of the Council for Higher Education.
[2] The numbers also include Open University students. Open University data do not include academic paper writers: 3203 bachelor's degree students and 209 master's degree students in 2020-2021. These data were reported by the Open University to the Central Bureau of Statistics for the first time in 2018-2019.
The number of students attending teaching certification studies refer to certification studies at universities.



Multiannual Outlook – students by degree

	Total	Bachelor's	Master's	PhD	Certificate
1989-1990	89.060	68.250	16.100	3.910	800
1999-2000	199.240	159.560	31.340	6.650	1.690
2019-2020	283.850	221.810	50.270	10.570	1.200
2014-2015	307.300	235.300	59.700	10.890	1.410
2018-2019	308.340	232.365	63.200	11.720	1.055
2019-2020	312.660	236.850	63.220	11.645	945
2020-2021	336.330	254.630	68.885	11.855	960

Number of bachelor's degree students in 1999-2021

Field	1999-2000		2009-2010		2019-2020		2020-2021	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Total	**126.899**	**100.0**	**178.739**	**100.0**	**194.273**	**100.0**	**208.461**	**100.0**
Engineering	18.378	14.5	31.918	17.9	35.699	18.4	38.011	18.2
Social Sciences	24.793	19.5	41.171	23.0	34.358	17.7	37.144	17.8
Education and Education Training	22.842	18.0	22.502	12.6	30.885	15.9	31.364	15.0
Business and Management Sciences	6.762	5.3	19.463	11.1	20.105	10.3	22.822	10.9
Mathematics, Statistics and Computer Science	10.849	8.5	9.122	5.1	18.302	9.4	20.062	9.6
Paramedical professions	5.406	4.3	8.185	4.6	13.418	6.9	14.106	6.8
Law	9.932	7.8	15.790	8.8	12.410	6.4	14.575	7.0
Humanities	16.718	13.2	13.849	7.9	10.431	5.4	10.351	5.0
Art and Design	2.595	2.0	5.530	3.1	5.932	3.1	6.126	2.9
Life Sciences	3.119	2.5	4.675	2.6	5.187	2.7	6.048	2.9
Physical Sciences	2.110	1.7	2.484	1.4	2.704	1.4	2.818	1.4
Medicine	1.214	1.0	1.457	0.8	2.035	1.0	2.040	1.0
Architecture	1.399	1.1	1.623	0.9	1.782	0.9	1.823	0.9
Agriculture	782	0.6	970	0.5	1.025	0.5	1.171	0.6

Comments:
1. Data do not include Open University.
2. Engineering studies include the following fields: electrical engineering and electronics, computer and software engineering, information system engineering, civil engineering, mechanical engineering, chemical and material engineering, industrial and administrative engineering, and other types of engineering.
3. The arts and design fields only refer to those studied at academic colleges.

Impressive achievement of the National Program for Strengthening Engineering and High-tech Professions: The 2020-2021 data indicate that this is the 4th year in a row in which

engineering studies are the most studied program in Israel (bachelor's degree – 38,011 students, constituting 18.2% of all bachelor's degree students). Engineering studies have exceeded social studies, which over the years have been regarded as the largest academic field in Israel. The strengthening of high-tech professions has also been reflected by a more than 100% increase in the number of students who attend mathematics, statistics and computer science programs (20,062 students in 2020-2021 as opposed to 9122 students in 2009-2010). The number of students attending this field has increased by 1760 only over the past year. The aforementioned data indicate that one out of four students (approximately 26%) in Israel studies engineering and computer science, mathematics and statistics (approximately 58,070 students out of the 208,461 bachelor's degree students).

Following a decrease in the number of law school students over the past decade (from 15,790 in 2009-2010 to 12,410 in 2019-2020, their number in 2020-2021 increased to 14,575 in 2020-2021, together with the general increase in the number of students that year). The number of students attending administration studies decreased from 22,232 (peak value) students in 2012-2013 to only 18,711 students in 2018-2019. In 2019-2020, their number increased to 20,105, and it soared to 22,822 in 2020-2021.

A substantial increase of 72% was also observed in the number of bachelor's degree students who attended a paramedical studies program – from 8185 in 2009-2010 to 14,106 students in 2020-2021 – this increase was primarily caused by the large number of students who attended nursing studies (from 3000 to 7330 in that period of time).

Century Program – Humanities: Pursuant to the ongoing downward trend of the humanities in the past few years, which also continued in 2020-2021, the Steering Committee for The Humanities headed by Prof. Haviva Padia, a member of the Council for Higher Education, renewed its work and submitted its recommendations to the Planning and Budgeting Committee in March 2021. The recommendations of the Committee have defined the main objective as the facilitation of the humanities, including support for the various humanities programs, augmenting the humanities' prestige, bringing the humanities to an interdisciplinary dialogue with all sciences, access to humanities courses by means of online platforms, and the expansion of humanities studies the incorporation of other disciplines, including natural sciences, technology and law.

The recommendations of the Committee, which were unanimously adopted by the Planning and Budgeting Committee and the Council for Higher Education, address the creation of coherent and structured course clusters in the humanities that focus on the specialty level, and these will create new affinities between various fields of knowledge (encompassing at least 20 credits), whose purpose is to enrich the various faculties. The purpose of these clusters is to strengthen the humanities among students who do not attend humanities studies, in order to open a gateway for them to all of those fields of knowledge and to "soft skills" that are not available to them in the framework of their studies.

Moreover, the recommendations address the establishment of SLHSs (Science, Law, Humanities and Social Studies), which are new frameworks that will pool research and teaching in the context of advanced degrees and facilitate the creation of new and up-to-date bachelor's degrees. The centers will be established at the faculties of the humanities and will serve as a center for interdisciplinary activity among researchers, research associates and students with scholarships. The SLHSs will serve as a center for communal interaction and discussion, as well as a center for online, inter-institutional and international learning. The SLHSs will reflect academic pluralism, interdisciplinary work, diversity and heterogeneity through the interaction with other disciplines that contribute to the development of new fields at the forefront of science. Each such center will include at least three interdisciplinary study programs, and will provide a center of attraction for researchers and advanced degree students. It was decided to enable the establishment of the SLHSs in one of two possible ways: One super-center within the faculty of the humanities, surrounding a key topic in the humanities that also incorporates other fields of the humanities. 2. An inter-faculty super-center that enables the combination of disciplines from various and diverse faculties.

Pursuant to the Planning and Budgeting Committee's decision of March 18, 2021 and the decision of the Council for Higher Education of April 6, 2021 – the "Century Program for the Facilitation of the Humanities in the Framework of the 2016-2022 Multiannual Plan," the Planning and Budgeting Committee approved, at its meeting of May 12, 2021, the issuance of an invitation (sent to the higher education institutions budgeted by the Planning and Budgeting Committee) to create clusters of courses that provide humanistic education and the creation of Centers for the Humanities. The invitation resulted in more than twenty selected clusters and four centers.

Considerable investments in high-tech - The PBC achieved the objective (student number growth): pursuant to Government Decision 2292 of January 15, 2017 on the subject of the "National Program for Augmenting Human Resources for the High-tech Industry," the PBC and the CHE invested many resources in order to strengthen the high-tech field, by way of increasing the number of students in the following fields: computer science, electrical engineering and electronics, computer engineering and information system engineering. First, the PBC allocated NIS 700 million for this objective at universities, and it can now be said that the program was a great success. The PBC has achieved the objective presented by the Government: a 40% increase in the number of bachelor's degree students in high-tech fields – dozens an increase of dozens of percent, and, according to projections, the increase will reach 80% in 2021-2022.

Second, the PBC allocated an additional NIS 150 million to augment high-quality human resources in advanced degrees and high-tech fields that will serve as reserves for future staff members, and the adjustment of the number of senior and junior staff members and teaching assistants, as a function of the increased number of students, and the creation of infrastructures for additional growth in the number of bachelor's degree students in the future.

As a step that supplements the increased number of high-tech students, the PBC provided additional quotas to academic colleges that teach these fields. The significant addition of quotas already leads to the achievement of requisite growth objectives in high-tech fields in the course of the previous multi-annual program, and these trends continued during the present multiannual program. In the last two years (the 2019-2020 and 2020-2021 Budgets), additional quotas amounting to NIS 6 million were provided for each year so as to further support the increased number of students in this field.

Technological developments are forcing the academic world to make necessary adjustments, and, instead of the traditional division into various faculties, academia is working to remove barriers and create interdisciplinary study programs that provide its graduates with a diverse toolbox. For example, high-tech, exact sciences, economics and business administration

students will be able to include philosophy, literature and art, history, cultural studies and more as part of their degrees.

Medicine: the number of first-year med school students at the four medical faculties at the universities was only 530 students in 2009-2010. Over the past decades, special efforts were made to resolve the considerable shortage of doctors, and an additional faculty of medicine was therefore opened in Safed (Bar-Ilan University) in 2011-2012, and the faculty of medicine at Ariel University was also opened in 2019-2020. The growth of existing faculties with respect to the 6-year programs and the opening of the 4-year med school programs lead **resulted in 810 students beginning their medical studies in 2020-2021**, who will join in the nation's doctors and physicians after the end of their studies. Of course, these moves required the allocation of additional resources that were dedicated to this national task, and there is no doubt that we will have to continue to see growth in order to meet the needs of the health system, in collaboration with the Ministries of Health and Finance, and all of the agencies that are relevant to the success of this task.

Nursing: since the beginning of the last decade, the number of first-year nursing students was doubled: from 1000 in 2009-2010 to 2200 in 2020-2021, and there are currently 7300 students who are about to begin their bachelor's degree in nursing through the 13 programs that operate both universities and colleges. This substantial increase is a reflection of the special efforts made by the higher education system by means of allocating additional resources and opening up new academic programs designed to reduce the existing shortage of nurses.

3. Peak numbers of bachelor's degree candidates at universities and academic colleges

The number of bachelor's degree candidates at universities rather steadily increased until the mid-2000s, at which point their number reached 39,400. After a downward trend that ended in the middle of the last decade, the number of students in recent years began to moderately increase, until the number of candidates reached its peak in 2020-2021 – 43,910 – an increase of more than 9300 students compared to 2019-2020. 25,930 of the bachelor's degree candidates were accepted and began their studies (60%).

A peak number of bachelor's degree candidates was also reached at academic colleges in 2020-2021 (51,809 – an increase of almost 4000 students relative to 2019-2020). The ratio between the number of candidates that were admitted and the number of actual students who attended is increasing, and it reached 60% in 2020-2021. The most sought-after fields of study offered at academic colleges are social studies, engineering, business administration, law and computer science. Law and business administration are mostly studied at the unbudgeted colleges, and most of the social science, computer science and engineering programs are being taught at budgeted colleges. The percentage of university candidates in 2020-2021 (engineering – 22%; paramedical professions – 10%) is rather similar to the percentage of bachelor's degree candidates at academic colleges: 19% and 8% respectively. In contrast, in the field of business and administration science and law, the percentage of academic college candidates is higher relative to their percentage at universities: business and administration science – 17% relative to 5%; law students – 10% relative to 5%.

The data concerning high-demand bachelor's degree studies at universities in 2020-2021 reflect, to a certain extent, the more sought-after professions in the Israeli market. A measurement that reflects the surplus demand in a certain field is the ratio between the number of candidates and the number of people who begin to attend studies in that field. In this section we will specify the most sought-after fields of study at universities in 2020-2021 based on those indices. The data are presented in the following table:

Bachelor's degree candidates at universities and the ratio between the number of candidates and the number of admitted students who attended their studies, 2020-2021 (By first-priority selected fields of study)

		Candidates	First priority accepted	Ratio between the number of candidates and number of admitted students who attended their studies
First-priority field - Total		**43.910**	**23.942**	**1.8**
Of which:	General Medicine	2.476	526	4.7
	Architecture and Urban Construction	818	286	2.9
	Law	2.334	992	2.4
	Paramedical professions	4.470	1.984	2.3
	Industrial Engineering and Management	1.554	801	1.9
	Computer Sciences	4.373	2.280	1.9
	Electrical engineering and Electronics	2.912	1.599	1.8
	Social Work	1.153	626	1.8
	Economy	1.370	749	1.8
	Psychology	2.249	1.376	1.6
	Business Administration	579	416	1.4
	General Humanities	1.521	1.100	1.4

In addition to the general increase in the number of candidates, the number of candidates in most fields of study increased in 2020-2021. The most considerable increases in the number of bachelor's degree candidates at universities were observed in the fields of engineering, architecture, and social studies. Engineering and architecture – the number of candidates grew from 7219 in 2019-2020 to 9478 in 2020-2021, with most of the increase being observed in the fields of electrical engineering and electronics, and industrial engineering and management (582 and 502, out of an increase of 2259 candidates, respectively). Social sciences – the number of candidates grew from 6757 in 2019-2020 to 8942 in 2020-2021, with most of the increase (802 out of an increase of 2185 candidates) being observed in the field of psychology. Moreover, an increase in paramedical fields was observed - from 3369 in 2019-2020 to 4470 in 2020-2021, with most of the increase being observed among nursing students (540 out of an increase of 1101 candidates). Law school – the number of candidates also grew from 1469 in 2019-2020 to 2334 in 2020-2021.

The highest increases in the number of bachelor's degree candidates in the field of engineering, architecture and social sciences were also recorded at academic colleges. Engineering and architecture: the number of candidates grew from 8271 in 2019-2020 to 9701 in 2020-2021. At academic colleges, most of the increase was observed in the fields of electrical engineering and electronics, and industrial engineering and management (464 and 328 out of an increase of 1430 candidates, respectively). Social studies – the number of candidates grew from 10,716 in 2019-2020 to 11,597 in 2020-2021. Most of the increase (528 out of an increase of 881 candidates) was observed in economics. Moreover, an increase in the number of law school candidates grew from 4368 in 2019-2020 to 4950 in 2020-2021, and, in the paramedical field, from 3490 in 2019-2020 to 4011 in 2020-2021.

4. Women – bachelor's degree studies

- **Multiannual Outlook – continued increase in the number of women – all degrees**
- **The number of female computer science students has doubled (including mathematics and statistics)**
- **Substantial increase in the number of female engineering students**

The impressive growth of high-tech professions was also reflected in the number of women who studied these professions: Since the beginning of the decade, the number of female students who attend bachelor's degree studies in computer sciences (including mathematics and statistics) was more doubled and grew from 2622 to 6784 in 2020-2021. A substantial increase of 40% was also recorded in engineering studies: from 8581 female students in 2009-2010 to 12,008 female students in 2020-2021. These increases are also the result of the General Program for Strengthening High-tech Professions of the PBC and CHE, under which financial incentives are invested in favor of the distributing scholarships and grants to female students, workshops that present students to high-tech professions, and the provision of support that includes additional extracurricular classes and personal assistance. In total, the percentage of female students who attend (only) high-tech studies among students (in the fields of mathematics, statistics and computer sciences, electrical engineering and electronics, and information system engineering) in 2015-2021 grew from 24% to 29%.

Similarly to the general population, the last decade was characterized by a decrease in the number of social studies and law school students, although, in 2020-2021, with the sharp increase in the general number of students in most academic fields, the number of female students in those fields also significantly increased: social studies – an increase of 2000 students; law school – an increase of 1000 female students. It should be noted that a substantial increase has been recorded over the past decade in the number of female education and education training students, in addition to paramedical students.

Female bachelor's degree students by field of study – 2009-2021

	2009-2010	2012-2013	2017-2018	2018-2019	2019-2020	2020-2021
Total	**97,955**	**106,596**	**110,354**	**111,257**	**113,002**	**121,051**
Education and Education Training	17,793	21,292	25,680	25,074	24,282	24,381
Social Sciences	27,222	27,544	23,501	23,759	23,705	25,627
Business and Management Sciences	9,180	11,809	11,044	11,182	11,730	13,482
Engineering	8,581	8,152	9,820	10,389	10,984	12,008
Humanities, arts and design	11,910	12,066	10,751	10,660	10,572	10,642
Paramedical professions	6,756	8,038	10,171	10,650	11,063	11,651
Law	7,695	7,949	6,914	6,585	6,775	7,893
Mathematics, Statistics and Computer Science	2,622	3,154	5,127	5,602	6,144	6,784
Life Sciences	2,985	3,091	3,258	3,335	3,613	4,223
Architecture	926	1,054	1,225	1,245	1,257	1,281
Medicine	804	980	1,302	1,205	1,211	1,246
Physical Sciences	899	886	1,039	1,054	1,107	1,189
Agriculture	582	581	522	517	559	644

Data do not include Open University.

- **Women constitutes 60% of the number of students.**

The percentage of female students was 59% in 2020-2021, after a significant increase in their attendance of academic studies, primarily in the 1990s. Women currently constitute a majority in every degree: bachelor's degree – 58%; master's degree – 64%; PhD – 53% The number of women who attend advanced degree studies has impressively increased over the years: in 1989-1990, the percentage of women who attend master's degree studies exceeded 50%, and, as stated, reached 64% in 2020-2021. The increase in the number of women stems, inter alia, from the expansion of master's degree programs at general academic colleges and teaching colleges, where the rate of women reached 66% and 82%, respectively. The percentage of female students among PhD candidates crossed the 50% threshold for the first time at the end of the 1990s, and increased over the past few years until it reached 53% in 2020-2021.

Multi-annual outlook – More women in academia

	1989-1990	1999-2000	2009-2010	2017-2018	2018-2019	2019-2020	2020-2021
Bachelor's Degree	53.6	57.4	54.8	58.1	58.4	58.2	58.1
Master's degree	50.3	57.8	58.4	62.7	63.1	62.9	63.9
PhD	41.3	51.1	52.7	52.8	53.2	53.8	53.3

The Gender Fairness Plan to Increase the Representation of Women among Academic Staff Members

In addition to encouraging women to study high-tech professions, the PBC and CHE are taking measures to expand the representation of women among senior academic staff members and senior academic administrations at higher education institutions. For this purpose, a series of decisions were made to promote this issue pursuant to the recommendations of the Steering Committees headed by Prof. Rivka Carmi, the former President of Ben Gurion University., and by Prof. Ruth Arnon, former President of the Israeli National Academy of Sciences.

And 2019, Prof. Yonina Eldar of the Weizmann Institute was appointed Head of the Steering and Judicial Committee for the Facilitation of Gender Fairness (PBC and CHE). The Gender Equality Program formulated by the Committee that has been recently adopted is in line with the principles determined for promoting women among senior staff members, and it is based on the recommendations of the Steering Committees, which primarily consist of raising the awareness of gender equality at higher education institution, and the hiring and promotion of women among academic staff members in general, particularly in fields in which women's representation is particularly poor, such as exact sciences and various types of engineering.

The principal points of the program are presented below:

- ✓ An **output-based index was published for the promotion of gender fairness** at institutions that are budgeted by the PBC for the years 2020-2025 – the "Equator" Index, which was formulated by one of the teams of the Steering and Judicial Committee of the CHE/PBC: Prof. Ruth Halperin Kadri, Prof. Naama Shefi and Michal Bar-Asher Sigal. The purpose of the Index is to incentivize institutions to examine the challenges they face in this context, and to take measures to augment women's representation among senior academic staff members, among decisionmakers and senior academic officers, and members of facilitation and recruitment committees, with the long-term objective being the achievement of gender equality and parity among men and women among senior staff members and senior officers at institutions. The institutions that participate in the program will receive budgets according to the degree of their success in achieving the various objectives that were predefined by them and approved by the Steering and Judicial Committee for the Facilitation of Gender Fairness of the CHE/PBC. All budgeted universities at 15 academic colleges have submitted strategies in the framework of this index, and those plans are currently being examined by the Steering and Judicial Committee for the Facilitation of Gender Fairness of the CHE/PBC.
- ✓ **Determining criteria for the President's Advisor on General Fairness:** Powers, profile, term of office, compensation, subordination, etc.: as a precondition for participating in the "Equator" Index, and, as of 2021-2022, the institutions' compliance with those criteria will constitute a condition for receiving the advisor's budget.
- ✓ **Scholarships for outstanding female PhD candidates:** USD 30-40 thousand a year (for two years). The amount of the scholarship will be determined according to the candidate's

marital status. Under the program, which will begin in 2020-2021 in collaboration with the Zuckerman Foundation, up to 30 new scholarships will be granted every year. It should further be noted that candidates who were admitted into the combined post-doctorate program may also apply for this program, some of which takes place in Israel and some overseas, in order to allow outstanding candidates to complete a high-quality post-doctorate program while minimizing the difficulties entailed in relocating the candidate's family for further education purposes, etc.

- ✓ **Scholarships for PhD candidates and outstanding students (research-based master's degree in high-tech fields):** the scholarship amount for PhD candidates is NIS 60 thousand a year for 3 years, and the scholarship amounts for master's degree students is also NIS 60 thousand a year for 2 years. Under both programs, up to 10 new scholarships are granted every year.
- ✓ **Competitive budget in support of system-wide projects that facilitate gender fairness in academia,** including a focus on encouraging women to enroll in postdoctoral programs and returning and integrating them back in Israel.
- ✓ **Updated procedures and guidelines:** scholarships (Alon, Maof etc.); guidelines for creating new curricula; self-assessment reports, etc.; the procedures of the Supreme Professor Appointment Committees.
- ✓ **Continuing the process of raising awareness of gender fairness in higher education institutions,** including the continued filing of annual gender reports by the institutions.

5. Access to higher education in peripheral regions

- **In 2020-2021, 57,260 students came from settlements that are located in low socioeconomic clusters (including Arab and ultraorthodox settlements).**
- **Within 5 years, an increase was observed of 14,000 students who came from settlements that are located in low socioeconomic clusters (Clusters 1-4).**
- **35% of bachelor's degree students and PBS-budgeted colleges come from Clusters 1-4, similarly to the percentage of the entire population that lives in those clusters.**

Bachelor's degree students by type of institution and socioeconomic cluster, 2020-2021

	Total		Social economic cluster (%)				
	Absolute Numbers	%	2-1	4-3	6-5	8-7	10-9
Total No. of Students	**191.555**	**100.0**	**7.9**	**22.0**	**16.3**	**24.7**	**20.7**
Universities	81.630	100.0	5.6	19.6	15.0	26.0	26.2
PBC-budgeted colleges by the PBC [3]	68.904	100.0	9.5	25.2	18.8	23.5	14.9
Unbudgeted colleges	41.021	100.0	9.6	21.5	14.6	24.0	19.5

Comments:
1. The data do not include Open University and education colleges that are not budgeted by the PBC.
2. The total number includes students that were not attributed to a socioeconomic cluster.

The sharp increase in the number of students in recent years was reflected primarily by significant achievements in terms of improved access to higher education among population groups that live in peripheral regions and among weak population groups. Special data processing carried out by the Central Bureau of Statistics examines the socioeconomic cluster of the student's place of residence during their senior high school year.

The data show that, between 2015-2021, an increase was observed of 14,260 students who came from low socioeconomic clusters (1-4 – including Arab and ultraorthodox settlements), such that, in 2020-2021, 57,260 students – approximately 30% of all bachelor's degree students – are came from settlements that are located in those clusters.

The improved access to higher education in peripheral regions is primarily reflected by the number of bachelor's degree students at PBC-budgeted colleges, including 35% of bachelor's degree students who came from Cluster 1-4 settlements. This number is similar to the part of the population that lives in those clusters, which was 36%.

The development of colleges led to a substantial increase in the number of students at academic institutions in the North and South Districts. In 2020-2021, approximately one quarter of bachelor's degree students studied at existing academic institutions in the North and South Districts (9.1% in the North District and 14.3% in the South District). The number of students in the North District is almost 3 times higher compared to the beginning of the 2000s, primarily as a result of the expansion of existing programs at academic institutions in the north, and the initiation of new academic programs. This significant change of the Israeli higher education map, which took place over the past 2 decades, would not have been made possible without the requisite allocation of significant budgetary resources to those two peripheral districts.

Multiannual Outlook – bachelor's degree students by district

DISTRICT	1989-1990	1999-2000	2009-2010	2020-2021
Absolute Numbers – Total	**55.250**	**126.900**	**178.740**	**208.461**
% – Total	**100**	**100**	**100**	**100**
North	...	5.3	9.2	9.1
Haifa	21.7	17.9	13.8	12.1
Tel-Aviv	42.8	31.5	30.9	30.2
Central District	4.1	15.9	17.4	18.7
Jerusalem	22.7	15.5	13.4	15.6
South	8.7	13.9	15.3	14.3

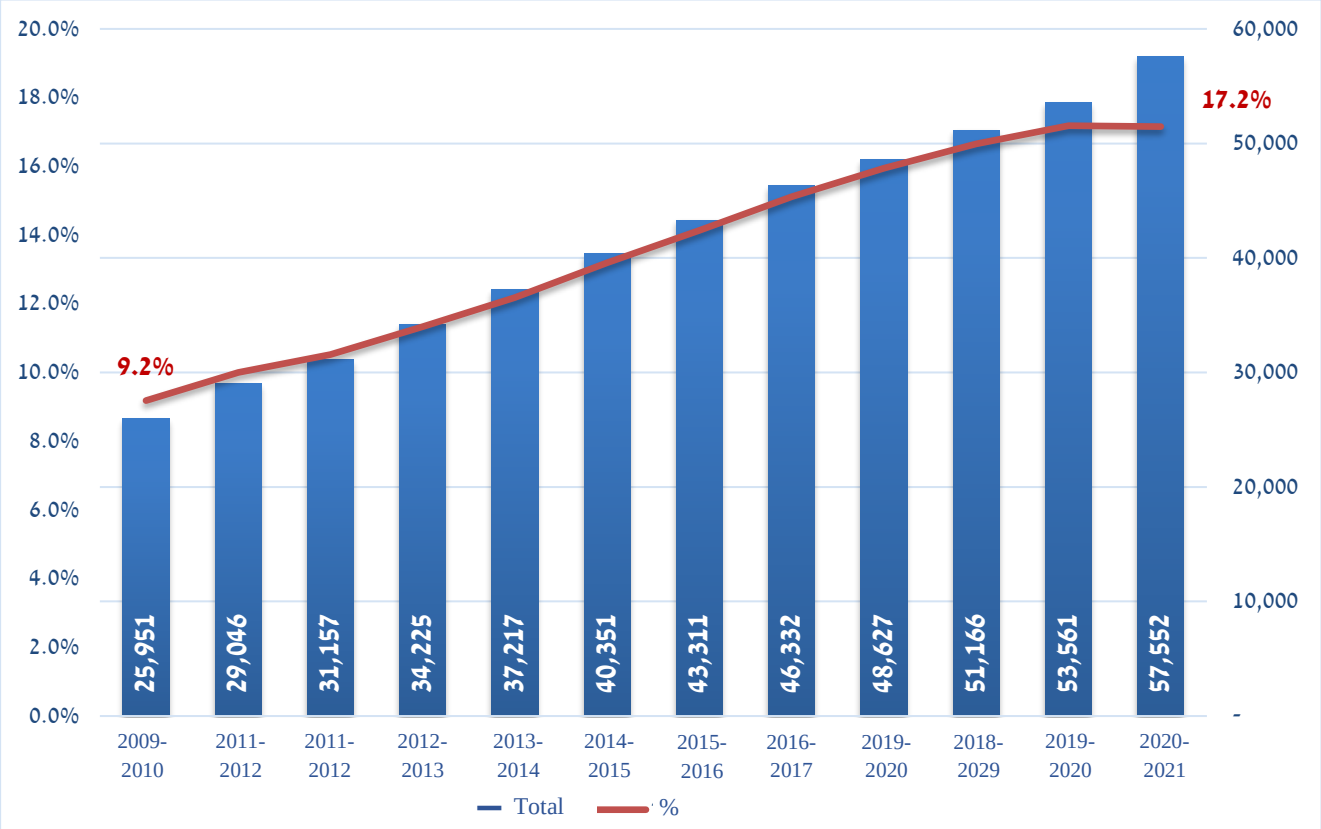
Data do not include Open University.

6. Accessibility of higher education in the Arab Sector

Some 58,000 Arab students, who constitute 17% of all students in Israel, relative to their percentage of the population (21%).

- The number of Arab students approved by 122% within a decade (2011-2021)
- Bachelor's degree – The number of students grew by 106%.
- Master's degree – The number of students grew by 228%.
- PhD – The number of students grew by 133%.

Decade-long multiannual helpful: the number of Arab more than doubled



The number of Arab students at higher education institutions continued to grow in 2020-2021, which cross the 50,000 students threshold for the first time in 2018-2019, and reached 50,000 students and 2020-2021. This represents an increase of 122% between 2009-2021.

In 2009-2010, the number of Arab bachelor's degree students was only 22,268, and they constituted 10% of bachelor's degree students in Israel. In 2020-2021, 45,856 Arab bachelor's degree students attended in Israel, and they constituted 18% of all bachelor's degree students.

The number of Arab master's degree students grew by 228% between 2009-2021. If, in 2011-2012, there were only 3270 Arab master's degree students in Israel, who constituted only 6.5% of all master's degree students in Israel, by 2020-2021, their numbers grew to 10735, and their percentage out of the total number of master's degree students grew to 16%. A substantial increase in the number of Arab master's degree students has taken place particularly this year. There were 1500 more students in 2020-2021 relative to 2019-2020 (900 of them at non-budgeted institutions), with the average growth between each year over the 10 preceding years amounting to 600 students.

Between 2009-2010 and 2020-2021, a substantial increase of 133% was also observed among PhD candidates, such that, in 2020-2021, there were 961 Arab PhD candidates, constituting 8% percent of all PhD candidates in Israel, relative to only 413 students in 2009-2010.

Multiannual Outlook – Arab students by degree

	BACHELOR'S DEGREE	MASTER'S DEGREE	PHD	TOTAL
2009-2010	22,268	3,270	413	25,951
2010-2011	24,346	4,243	457	29,046
2011-2012	25,843	4,847	467	31,157
2012-2013	28,481	5,233	511	34,225
2013-2014	30,969	5,692	556	37,217
2014-2015	33,571	6,165	615	40,351
2015-2016	35,758	6,929	624	43,311
2016-2017	37,441	8,197	694	46,332
2017-2018	39,160	8,708	759	48,627
2018-2019	41,087	9,251	828	51,166
2019-2020	43,454	9,252	855	53,561
2020-2021	45,856	10,735	961	57,552

The increased integration of Arab students is the result of a comprehensive and holistic program implemented by the PBC, which starts in high school and persists well into the students' advanced degree studies.

The number of Arab students in academia has more than doubled over the past decade, and currently amounts to 58,000 students. This significant increase, *inter alia*, is the result of a holistic and extensive program the PBC and CHE have been operating for the past 9 years. The program begins during the student's high school years, and it includes their exposure to academia, and continues in the form of incentives and assistance over the course of various academic stages, beginning with pre-academic programs, through to bachelor's degrees, and continued assistance with advanced degrees – master's degrees, PhD and postdoctoral studies, and culminating in the appointment of academic staff members at institutions.

The PBC's "Ruad Program" for high school students is active in 72 settlements, and it provides exposure, information, and assistance with choosing one's field of study for students attending 173 high schools within the Arab sector, including support for relevant courses (e.g.: SATs (the Israeli "psychometric exam"), preparations for the YAEL Hebrew exam and the AMIR English exam). Tours at academic institutions and higher education fairs take place in collaboration with institutions within those settlements.

In the framework of pre-academic and bachelor's degree studies, designated assistance programs for the Arab sector are used to reduce the number of dropouts and improve academic achievement, and these include language lessons (Hebrew and English) and extensive academic support, in addition to financial and social assistance.

The most significant supports that's provided to bachelor's degree students is primarily provided during the first academic year because that particular year is replete with challenges, and success in that year decreases dropout rates and substantially increases the chances of successfully completing the entire degree. The "Irtaka" scholarship is granted during the student's bachelor's degree studies (budgeted by the PBC and operated by PERAKH). The scholarship is awarded to 2200 students every year, of whom 800 are new students that start their freshman year. In the last academic year (2020-2021), the PBC approved a larger number of scholarships (it increased to 872) on a one-time basis. The scholarship is awarded to students throughout their degrees. Students are selected on the basis of their socioeconomic status and

preferred fields of study in order to bring about diversity in terms of those fields of study that are needed in the Israeli job market, and which are underrepresented in the Arab sector, e.g., high tech, psychology and art. Fields of studies are diversified by means of various PBC programs, such as Ruad, designated engineering programs and preparatory programs and the "High-tech Achievements Program," which brings young people from peripheral regions, including large numbers of Arabs, to high-tech fields.

Designated career centers were also established for the Arab sector at academic institutions (that receive budgeting from the PBC), which provide assistance with the students' preparation for the job market. The PBC also supports the encouragement of outstanding achievements and extensively grants excellence scholarships for advanced degrees to Arab Israelis, and this includes master's degrees (research-based), PhD's and post-docs, and it supports the incorporation of outstanding academic staff members from among the Arab sector.

MAOF scholarships for the integration of outstanding academic staff members from the Arab sector: over the past decade (2012-2022), the PBC awarded 55 MOAF scholarships, amounting to NIS 37 million, to outstanding academic staff members from the Arab sector. MAOF Scholarships are intended for outstanding young scientists from the Arab sector. They are intended to enable the incorporation of eligible students into PBC-budgeted higher education institutions in Israel – universities and academic colleges, in addition to the existing programs, and by way of adding designated positions. The institutions are committed to incorporating scholarship recipients as full-time staff members at the end of their scholarship.

Incorporation of Bedouin students into Israeli academia: with regard to the Bedouin sector, and pursuant to Government Resolution 2397 of February 12, 2017 on the subject of the "Program for the Economic and Social Development of the Bedouin Population in the Negev – 2017-2021," the PBC decided to encourage higher education institutions to increase the number of Bedouin students in the Negev that begin their first year of their bachelor's degree, until the end of the multi-annual program, at a rate of 75% of their numbers in 2015-2016. Accordingly, the target number of first-year students by 2021-2022 is at least 1500 students, with an emphasis on high-quality integration into academic degrees and employment-oriented occupations. In 2019-2020, 1270 Bedouin students began their freshman year, and 4000 students attended bachelor's degree studies at all higher education institutions.

Pursuant to the government's resolution, a joint professional team was formed that consisted of PBC and CHE representatives and representatives of the relevant Ministries: the Budget Department of the Ministry of Finance, the Ministry of Agriculture (Bedouin Administration), and the National Economics Council at the Prime Minister's Office, whose purpose was to formulate a suitable policy. After an extensive learning and thinking process, the team recommended the incorporation of bitumen Bedouin students into the existing budgeted academic system and the regular programs, together with all students, providing a holistic response to the unique needs of Bedouin students from the Negev.

Designated programs for Bedouin sector in the Negev – Gateway to Academia: several models were examined, including the "Gateway to Academia" pilot, which began in 2015-2016 at Sapir Academic College, which enables the separate preparation for academic integration together with several points of interaction with all students in order to minimize concerns and alienation on both sides, and in order to allow for optimal integration later on. The program provides actual experience with academic studies and preparations for high-quality integration into bachelor's degree studies in a variety of fields, by providing extensive and personalized assistance, which includes educational support, language studies, social and personal tutoring, financial assistance and summer programs. Accordingly, the PBC/CHE decided to expand the "Gateway to Academia" pilot and add it to several leading academic institutions in the Negev that are budgeted by the PBC as of 2018-2019, while adhering to the principles that emerged as necessary on the basis of research and the knowledge accumulated during the years of the pilot. In addition to the Gateway to Academia Program, it is, of course, also possible to incorporate students into academic studies by using normal methods that are applied to other students.

In 2021-2022, approximately 500 new students are expected to join the program, and it will be attended by 1100 students in four class groups. Originally, NIS 225 million were allocated for the program for 3 class groups (2018-2021), of which the PBC's share was NIS 130 million, and the remainder consisted of a designated budgetary addition provided by the Ministries of Finance, Agriculture and Education. 2021, the PBC decided to extend the program to 2021-2022, and provided an additional NIS 18 million, taken from the accumulated surplus funds of the General Arab Sector Program.

7. The Excellence Program for Ethiopian-Israelis

Within 6 years, the number of Ethiopian students (bachelor's degrees) grew by 45%.

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Total number of Ethiopian students	2.937	3.287	3.591	3.800	3.996	4.092	4.316
Bachelor's Degree	2.608	2.903	3.194	3.377	3.567	3.604	3.782

The multiannual program defined an objective in terms of the increase in the number of Ethiopian students (bachelor's degrees), such that their percentage out of all students will amount, by the end of the multiannual program (2021-2022), to 1.7%, similarly to their percentage of the population. In 2020-2021, the number of Ethiopian bachelor's degree students amounted to 3782, consisting of 1.5% of all students, which is close to achieving the objective. This was followed by a substantial increase of 45% in the last 6 years in the number of Ethiopian bachelor's degree students, from 2608 students and 2014-2015 to 3782 in 2020-2021.

As a 2015-2016, the PBC began to formulate an extensive accessibility program to improve the access to higher education among Ethiopian Israelis. Until this year, this was the responsibility of the Students' Administration at the Ministry of Integration. The PBC committee responsible for this issue is the Steering Committee for Improving the Access to Higher Education among Ethiopian-Israelis – headed by CHE Member Prof. Shifra Sagi. The Committee consists of public officials and members of academia, most of whom are Ethiopians.

In the course of its work, the Steering Committee mapped the main barriers facing the incorporation of Ethiopians into the higher education system, and provided the PBC with a series of measures, based on a holistic accessibility concept, and which begins at the pre-academic stage. The program includes information and guidelines for higher education in the settlements themselves, assistance with removing barriers to compliance with admission

requirements, educational and financial assistance for pre-academic students, as well as academic and financial assistance in the course of the students' bachelor's degree studies, and all for the purpose of increasing the number of admitted students and graduates (bachelor's degrees). Moreover, pursuant to the government's resolution on the subject of transferring the responsibility for this issue from the Ministry of Immigration and Integration to the CHE/PBC, the PBC has been granting scholarships since 2019-2020 (economic assistance) in the amount of NIS 10,000 for bachelor's and master's degrees (Marom scholarships) to Ethiopians students who have been in Israel for more than 15 years. As of the 2021-2022 academic year, these scholarships will also include students at all academic teaching colleges.

Moreover, and as a central element, the Steering Committee is promoting a concept of excellence and leadership, which includes the support and encouragement of outstanding students throughout the students' academic studies (bachelor's degrees, research-based master's degrees, PhDs and programs intended to incorporate Ethiopian academic members of staff at higher education institutions. The program enables us to shed light on the Ethiopian committee from the perspective of excellence so as to realize the students' academic and social potential.

The Committee's decisions are based on the fundamental principles defined in Government Resolutions 1300 and 324 on the subject of the "Government Policy for Promoting the Integration of Israeli Citizens of Ethiopian Origin in Israeli Society" of July 31, 2015, in all matters pertaining to minimizing gaps, excellence and leadership in Israeli society.

8. Accessibility of higher education in the Ultra-orthodox Sector

The PBC and CHE invest a great deal of efforts and resources to improve the access to higher education among the ultraorthodox population, and to integrate it into the job market and society in Israel. These efforts are predicated on two guiding principles: 1. The incorporation in academia of ultraorthodox men and women who wish to do so, while respecting their way of life and providing a suitable solution to their academic and cultural needs. 2. Maintaining academic excellence.

The Centers for Expanding the Ultraorthodox Population's Access to Higher Education Program was founded in 2011. The program consists of 15 designated academic frameworks

for the ultraorthodox population, which are spread over the entire country, and which encompass a variety of academic fields. The CHE approved a multiannual program in 2017 for 2016-2022 on the subject of improving the ultraorthodox population's access to higher education. This program continues the development of designated ultraorthodox frameworks, alongside the incorporation of ultraorthodox students who wish to do so on general campuses. The program emphasizes the fields most needed by the Israeli economy, with particular regard to the ultraorthodox sector, including high tech, paramedical fields, and teachers' training, and particularly in the context of core subjects (mathematics, English and science).
The total number of ultraorthodox students who attended higher education institutions in 2020-2021 was 15350: 12850 bachelor's degree students, and 2500 students attending advanced degree studies, an increase of 15% from the number of ultraorthodox students in 2019-2020 and an increase of 150% within a decade (in 2011-2012, there were 6000 ultraorthodox students attending all academic degree studies).

In addition to the increase in the number of ultraorthodox students, a large number of dropouts on the part of ultraorthodox students is still observed relative to the general population of students. In 2020-2021, the CHE-PBC will launch a comprehensive program for preventing dropouts, which will include support and assistance for ultraorthodox students, as of the pre-academic stage, through to successful academic studies and their integration into high-quality employment.

9. Increased number of post-docs and international advanced degree students

The Council for Higher Education and the Planning and Budgeting Committee defined the promotion of international activities in the context of higher education in general and of teaching in particular as a main objective of the annual program for 2016-2022. The promotion of international activity is highly important to increasing quality levels and the competitiveness of Israeli academia, particularly on the part of outstanding advanced degree students and research staff, improving Israel's international reputation, and creating diversity among students and staff members, who are exposed to different cultures and perspectives, who

acquire language skills, and more. Moreover, the promotion of internationality also contributes a great deal to the State of Israel at the diplomatic, social and economic levels. Many studies have shown that innovativeness grows in international and multicultural environments, and internationality is therefore vital for both academia and a strong Israeli economy.

The CHE/PBC has been operating a program for promoting internationality in the higher education system for the past 5 years. In the framework of that program, two models have been operational for the last 3 years that are used to provide budgets to institutions, so as to facilitate internationality on the basis of institutional strategies: the first model is an output-based model for institutions that included infrastructures for the facilitation of internationality and a growth-based model for institutions that were just starting their way in this context upon the initiation of the multiannual program. The program emphasizes the incorporation of outstanding students (advanced degrees and post-docs) as a main tool for achieving the aforementioned objectives, as well as the incorporation of international students for short periods of time. In order to monitor the program's achievements, an orderly process of collecting data about international students in Israel began in 2018-2019 through the assistance of the Central Bureau of Statistics. In 2019-2020, 11,500 international students studied in Israel (bachelor's degrees – 1966, master's degrees – 2066; PhDs – 992; and 1614 attended the postdoctoral program (the others attended programs that are not in the framework of an academic degree, or other short-term programs). It should be noted that – despite the COVID crisis – academic institutions and post-doc scholarship programs for outstanding international students have reported an increase in the number of candidates and advance degree enrollees in Israel.

10. Significant increase in digital course studies

Tens of thousands of students are attending academic high-tech and data science courses through the International Campus IL Platform

The PBC/CHE attributes a great deal of significance to promoting digital studies at higher education facilities in Israel, as a tool for developing innovation in the context of teaching and learning, as well as extensive access to higher education and strengthening the position of Israeli academia around the world. Accordingly, this issue was included in the multi-annual program for the development of higher education in 2016-2022.

In order to promote digital learning at institutions, the CHE/PBC – in collaboration with the headquarters of the national project titled "Digital Israel" (National Digital Department) sent five invitations to budgeted institutions (2016-2020) to formulate digital academic courses. At present, the invitations of 26 academic institutions have been successful. Since the beginning of that initiative, 60 courses were launched in the framework of the National IL Campus Platform in several languages (Hebrew, Arabic and English). In addition, the international platform includes 25 courses in English (edX.org), under "IsraelX." An additional 25 courses are expected to be launched in the course of the next academic year on the IL Campus Platform.

It should be emphasized that the fourth digital learning invitation focused on high-tech and data science, and included the budgeting of 22 academic courses (approximately 90 credits). At present, 10 course have been launched on the Campus IL Platform, of which three were concurrently launched on the International IsraelX Platform, and two were also produced in Arabic. During the first semester of 2021-2022, an additional 10 courses in this field are expected to be launched, resulting in a total of 70 credits. The number of attendees of the aforementioned courses is currently 40,000 (as of 2020), some of which form part of academic degree studies and some of them are "lifelong studies." In addition, in the framework of previous invitations, three additional high-tech courses were launched on the Campus IL Platform, which were attended by 50,000 students since 2018.

In order to prepare for the challenges caused by the increased use of digital learning within the higher education system and in view of the COVID pandemic, and to simultaneously exploit the potential of those new opportunities, the PBC allocated 70 NIS million to encourage, establish and consolidate infrastructures for the facilitation and strategic development of digital studies at higher education institutions. These infrastructures include technological infrastructures, technological human capital infrastructures and techno-pedagogic infrastructures (training, support, development, incorporation of innovative tools for digital learning, and more), follow-up mechanisms, control, and data collection and analysis for the purpose of assessing and optimally developing digital studies.

11. The National Quantum Science and Technology Program

The National Quantum Science and Technology Program is a joint program of the PBC, the Administration for the Development of Weapons and Technological Infrastructures, the Innovation Authority, the Ministry of Science and the Ministry of Finance, and its purpose is to facilitate relevant research and industrial enterprises in Israel. The program was initiated in 2018 when the PBC approved the recommendation of the Steering Committee founded for the purpose of allocating a designated budget in the amount of NIS 200 million, reserved to the development of this field in the framework of the multi-annual program. These recommendations included the following: establishing programs for supporting relevant human capital, including a program for integrating staff members and scholarship programs for outstanding PhD candidates and post-docs, in addition to a program for the creation and improvement of institutional research infrastructures. In addition to implementing the aforementioned recommendations, the PBC submitted an outline of an extended National Research Infrastructures Forum Program (involving the aforementioned Government Ministries and the PBC).

Pursuant to the recommendation of the NRI's Investigative Committee, the program has been further expanded, and it now amounts to NIS 1.25 billion over the course of six years. The extensive program, which was fully approved by the government as part of the Economic Acceleration Program of summer 2020, includes additional investments in the development of academic research, including the leveraging of human capital in this field, and the improvement of research infrastructures, as well as the encouragement of international cooperation in the context of research and development, and the facilitation of developing relevant industries.

12. 150 million for the promotion of data science and artificial intelligence

The data science field pertains to the principles of developing methods for collecting, storing and analyzing data, with regard to a wide variety of academic disciplines and commercial applications – so as to draw conclusions from, sort, predict, and create knowledge from them, in addition to developing tools that are based on the data and their analysis, and in view of the human and social aspects of this process. In recent years there is an increased and accelerated

growth of the field and financial investments accordingly, both from industry and from universities and private research institutes. Although the approach that puts the data at the center of research is not new, in recent years there has been a global revolution in the field, which stemmed from the development of designated hardware components used to transfer, store and process data, owing to a significant increase in the quantity and availability of data (big data), and the ongoing development of methods and algorithms. These developments have also led to the current revolution in the field of Artificial Intelligence (AI), to the extent that certain areas in the data sciences, such as machine learning, are identified as artificial intelligence and vice versa.

In 2018, the PBC approved the recommendations of the Steering Committee that was appointed for the purpose of allocating a designated budget that's reserved to the development of this field, in the amount of NIS 150 million, which primarily consists of supporting the establishment and consolidation of data science and artificial intelligence research centers at universities (NIS 120 million in total). These centers, which are supported by the PBC, are currently operating at seven research universities in Israel. In March 2020, an invitation was published to provide additional support to research centers, whose results were included in 2021 tenders. In addition, scholarship programs for outstanding PhD candidates and post-docs have been very successfully operational for the last 3 years, and they are expected to continue. At the same time, the PBC approved – in the framework of the 2016-2022 multiannual program – more than 30 pertinent programs, two thirds of which are bachelor's degree programs, with the remainder being master's degree programs.

A National Department for Synchronizing the Operations of Research Centers Program was launched in July 2020 (the IDSI or Israel Data Science Initiative). The executive committee of the IDSI consists of the directors of research centers at universities, and is headed by a director selected in a competitive process. The purpose of the IDSI is to leverage inter-institutional cooperation and collaborations with public agencies, industrial players and overseas parties, and to host an international annual convention, with the first convention scheduled for January 2022 (in the Dead Sea area).

13. Academia and Practical Experience – A bridge between academia and the job market

The PBC attributes a great deal of significance to strengthening the academia-employment spectrum, and encouraging innovativeness in the context of teaching and learning, which is also defined as a main objective of the PBC-CHE's multi-annual program. Innovations in the context of teaching include, inter alia, the understanding that students need to finish their studies with a toolbox that will help them integrate within the job market, and deal with the many challenges that they face. Therefore, the PBC provides budgets to institutions to develop institutional departments that would be responsible for facilitating the academia-job market spectrum, including the development of courses that incorporate academic contents and practical experience in off-campus organizations, and which entitle students to academic credits. In 2019-2022, the program has been operational as a joint enterprise of the PBC, the Aluma Association and the Edmond De Rothschild Foundation. The project's budget is NIS 24 million (over the course of 3 years). In addition, the PBC decided to expand the project for another 2 years (2022-2024), using a total budget that amounts to NIS 29.1 million. The additional funds are intended to expand the program at institutions and establish the necessary infrastructures needed for its implementation, the promotion and strategic development of studies that incorporate job market experience, and investments in the institutional agencies that oversee and lead this enterprise, human capital infrastructures and the establishment of monitoring, control and data collection systems.

14. Study: The annual budget of research foundations in Israel increased 2.4-fold within a decade

The PBC's annual budget for investing in research foundations between 2011-2022:

- The research fund budget is almost 2.5 times larger: from NIS 536 million to NIS 1297 million.
- The National Science Foundation is almost 2 times larger: from NIS 311 million to NIS 589 million.
- The European R&D Program's budget grew almost threefold: from NIS 202 million to NIS 594 million.[1]

Unprecedented investments in research: The annual budget of research foundations in Israel grew almost 2.5-fold over the past decade. The increase in budgets is the result of the PBC's policy, which views the research foundations as the backbone of basic and competitive research, whose strengthening is vital and necessary to preserve the State of Israel's international status. The budgetary additions enable the increase in the number of research grants, larger research grant amounts, and their improved quality.

- The most substantial increase in the budgets of local research foundations is reflected by the **increased budget of the National Science Foundation** from NIS 311 million in 2011-2012 to NIS 589 million in 2021-2022. The National Science Foundation is an association designed to "assess, select and support basic research grants in the context of the humanities and social studies, life sciences, medicine, exact sciences and technology, by way of providing research grants for basic research proposals, which will be selected by way of a competitive process on the basis of scientific excellence and quality."
- **The budget of the European R&D Program grew threefold:** The share of the PBC in terms of the program's membership fees is 50% of Israel's membership fees. The percentage of the PBC's share of the Program's budget grew from NIS 202 million in 2011-2012 to NIS 594 million in 2021-2022. It should further be noted that, in 2021-2022,

[1] The share of the PBC alone constitutes 50% of the State of Israel's membership fees with regard to this program, as stated below.

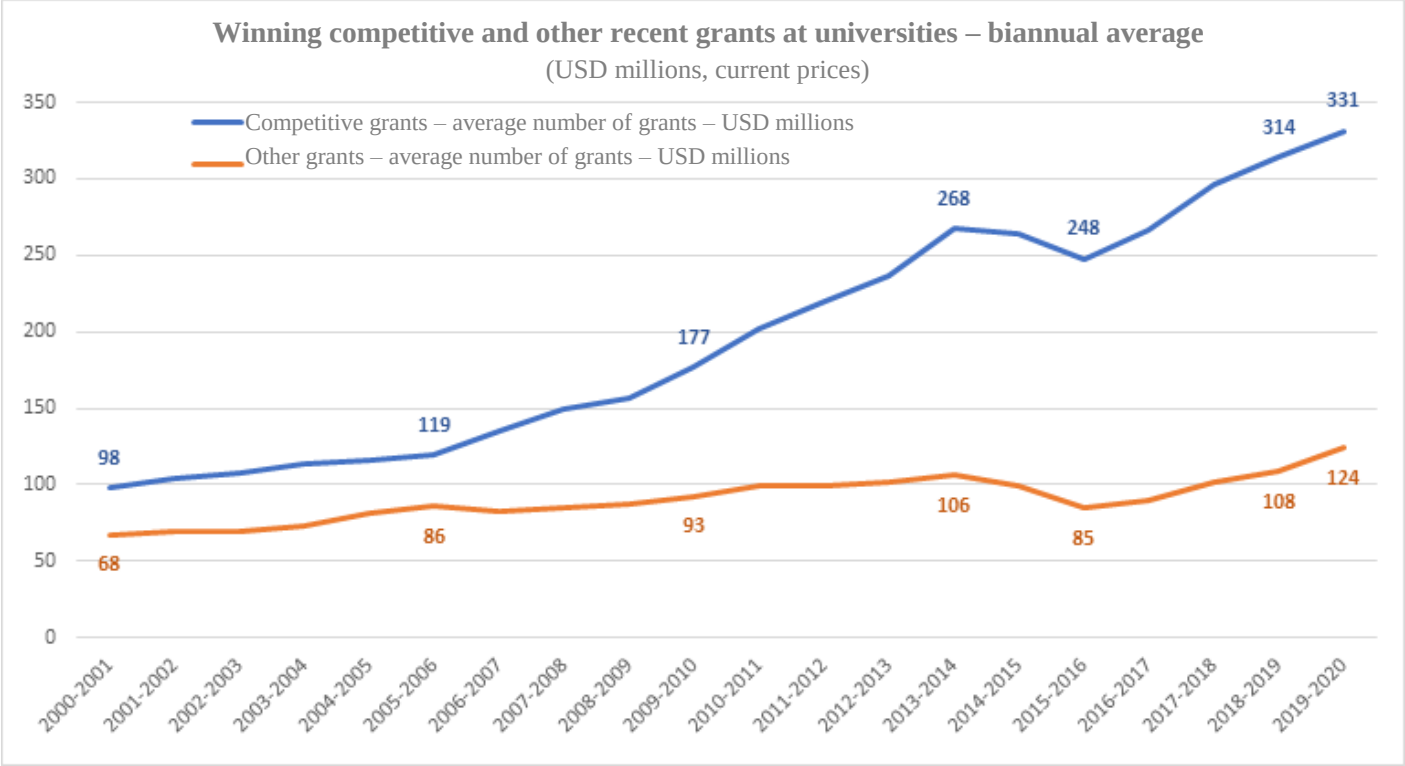
the important Horizon Europe program is expected to begin. The details of the program and Israel's participation in it have yet to be agreed upon, and, accordingly, the PBC's involvement in the 2021-2022 program is yet to be finalized, and it may certainly grow in the future. Israel's involvement over the first two years of the program will be determined by the ratio between Israeli GDP and European GDP, but the mechanism is expected to change in the future and to be based on the scope of actual wins on the part of Israeli participants in the Program.

- **Since 2013, the PBC has also provided the budget for the NSF-BSF research grant program:** This is a prestigious program that involves scientific collaboration between Israeli and American researchers. The program provides research grants for a variety of research fields, including exact sciences, engineering and computer science (STEM), natural and life sciences, planetary and environmental science, economics, psychology and more. The total budget of the Program in 2020-2021 was NIS 38.3 million. For Israeli researchers, this is a highly important program that significantly expands the possibilities of research and collaboration with American science, which is considered to be a global leader.

The 2016-2022 multiannual program especially emphasized the subject of research infrastructures at various levels: national and system-wide research infrastructures, institutional research infrastructures and personal research infrastructures. This special emphasis is reflected by the addition of NIS 620 million to the PBC's multiannual program, which are dedicated to this purpose, and especially for the following programs: Quantum science and technologies, personalized medicine, data science and artificial intelligence, and the strengthening and upgrading of research equipment (including personal research equipment for new and longstanding researchers, and for institutional research equipment), and more.

15. Multiannual outlook – significant increase in research foundation wins and academic publications

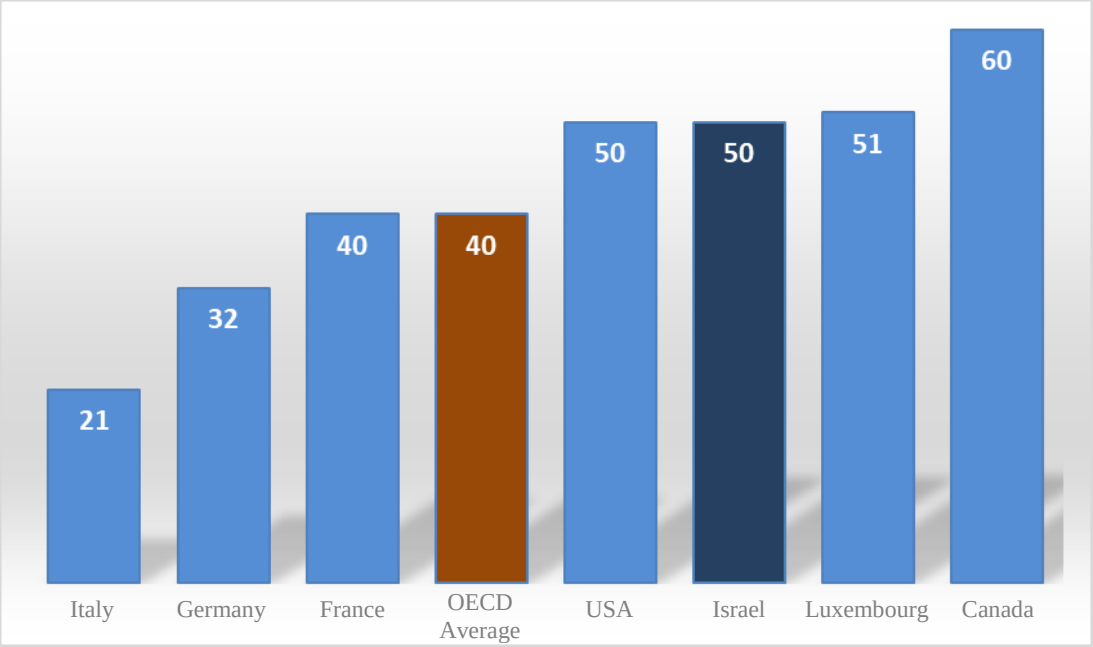
A sharp (twofold) increase can be observed over the past decade in the total amount of competitive research grant twins, the vast majority of which (approximately 80%) consists of National Science Foundation and European R&D Foundation wins. The highest number of wins was observed in the fields of medicine and life sciences (approximately 40% of all wins), and this persisted over time (relatively), but the most significant increase in percentage points was observed in the fields of engineering, mathematics and computer science, whose total number of wins grew 2.5-fold since 2009.



16. OECD rating: Israel is among the world's leaders in terms of the number of higher education graduates among 25–64-year-olds.

A recently published OECD report [4](September 2021) rated Israel as one of the world's leaders, after Canada and Luxembourg, in terms of the percentage of citizens between the ages of 25-64 who possess higher and academic education (50%). Israel has been thereby maintaining its leading position for several consecutive years.

2021 OECD Report: half of all 25–64-year-olds in Israel possess higher education.



[4] EDUCATION AT A GLANCE, 2021