18.10.2022

COUNCIL FOR HIGHER EDUCATION
Planning & Budgeting Committee | הוועדה לתכנון ולתקצוב

Press release before the start of the 2022/2023 academic year

- **342,000 students are expected to attend the 2022/2023 academic year, compared to 337,230 in 2021/2022, an increase of 1.6% in the entire system.**
- **In 2021/2022, 337,230 students studied at all degree levels in all higher education institutions, of whom 256,170 were bachelor's degree students, an increase of 1,500 compared to the number of bachelor's degree students in 2020/2021.**
- After the exceptional increase in 2020/2021 of about 24,000 students after the COVID pandemic, the number of students in 2021/2022 stabilized and the forecast is that the trend of stabilization will also continue in 2022/2023.
- **The overall number of high-tech students, including women, has continued to increase in 2021/2022.**
- **There were a total of 37,750 engineering students during the 2021/2022 academic year - approximately 18% of all bachelor's degree students.** Moreover, an additional 20,540 bachelor degree students studied mathematics, statistics and computer science. A total of about 58,290 students in technological subjects are needed in the high-tech sector.
- **The number of students who began medical studies increased in the past decade from 530 to 895.**
- **The number of first-year nursing students doubled in the last decade from 1,000 to 2,200.**

More women in academia

- **Women are 60% of the students in academia. Viewed annually, this is a significant increase in the percentage of women (all degrees)** – 58% of bachelor's degrees, 65% of master's degrees and 53% of PhDs.
- **There has been an increase in the number of women attending high-tech studies** – in 2009/2010-2021/2022, the number of female students who attended bachelor's degree studies in computer science (including mathematics and statistics) increased 2.6 times – from 2,622 to 6,884 in 2021/2022, and the number of female engineering students grew by 40%: from 8,581 students in 2009/2010 to 12,310 female students in 2021/2022.

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- **The "Equator" Index for advancing gender fairness** was launched in institutions funded by the Planning and Budgeting Committee (PBC) for the purpose of increasing the representation of women in senior staff and the administration of higher education institutions.

Access to higher education of diverse populations

- **Access to higher education in peripheral regions**: in 2020/2021, about 65,000 students, who constitute approximately a third of bachelor's degree students, came from settlements in lower socioeconomic clusters (Clusters 1-4). The participation of students who live in those settlements is particularly notable in the academic colleges funded by the PBC, where they were 38% of bachelor's degree students, similarly to the percentage of the population that lives in those clusters (40%).
- **Access to higher education in the Arab sector:** There are more than 60,000 Arab students in higher education, and they are 18% of all students in Israel, whereas they are 21% of the population. This represents an increase of 133% since the beginning of the last decade.
- **Excellence Program for students of Ethiopian origin:** An increase of 1.5 times in the number of bachelor's degree students of Ethiopian origin during the multi-annual program – from 2,937 in 2014/2015 to 4,522 in 2021/2022. Their percentage among students is 1.5%, whereas they are 1.7% of the general population.
- **More Haredi (ultra-Orthodox) students**: During the past decade the number of ultra-Orthodox students has multiplied threefold, from 5,500 in 2010/2011 to 16,575 in 2021/2022 – 4.9% of all students in Israel, whereas they are 13% of the population.

International higher education

- **OECD rating**: Israel is among the world's leaders in terms of the percentage with higher or academic education among ages 25-64.
- **We continue to advance our international higher education standing**: more international post-doc and advanced degree students.

Minister of Education and Chair of the Council of Higher Education, Dr. Yifat Shasha-Biton:

"I welcome all the students at the beginning of the academic year.
In academia in Israel many processes are taking place the aim of which is to strengthen and develop the system, make it accessible to extensive parts of Israeli society, make it more relevant to the employment market as well as advancing and developing research, while

retaining academic excellence, and continuing to advance the establishment of a university in the Galilee that has already been approved by the CHE, which will also help to realize important aims, as well as strengthening the north and its residents.
We will continue to act to strengthen the academic system in Israel, which is an important growth engine for the Israeli economy, creates researchers at international level who contribute to science and to global research, and brings great honor to the state of Israel."

Prof. Yossi Mekori, Chair of the Planning and Budgeting Committee of the Council for Higher Education:

"The data shows a general increase in the numbers of students in the system, particularly from the point of view of the percentage studying the high-tech subjects needed by the economy and industry. We are also glad to see the significant increase in the percentage of women studying these subjects. These increases would not be possible without the significant resources directed by the PBC and the CHE to these fields and the response of the higher education institutions to this task.

"The Israeli academic system is in a good place and we aspire to continue to strengthen scientific research excellence with the aim of retaining the competitive advantage of Israeli academia in the international arena. With this aim the next multi-annual program will focus on the fields at the forefront of global research, including sustainability, advanced biomedical research, bio-convergence, data science and artificial intelligence. We will increase the resources designated for competitive research and research infrastructures, and we will act to strengthen academia-industry-employment connections, together with activities the aim of which is to extend access to higher education institutions for the entire population, with emphasis on fields with demand and growth."

1. Stabilization in the number of students in 2021/2022

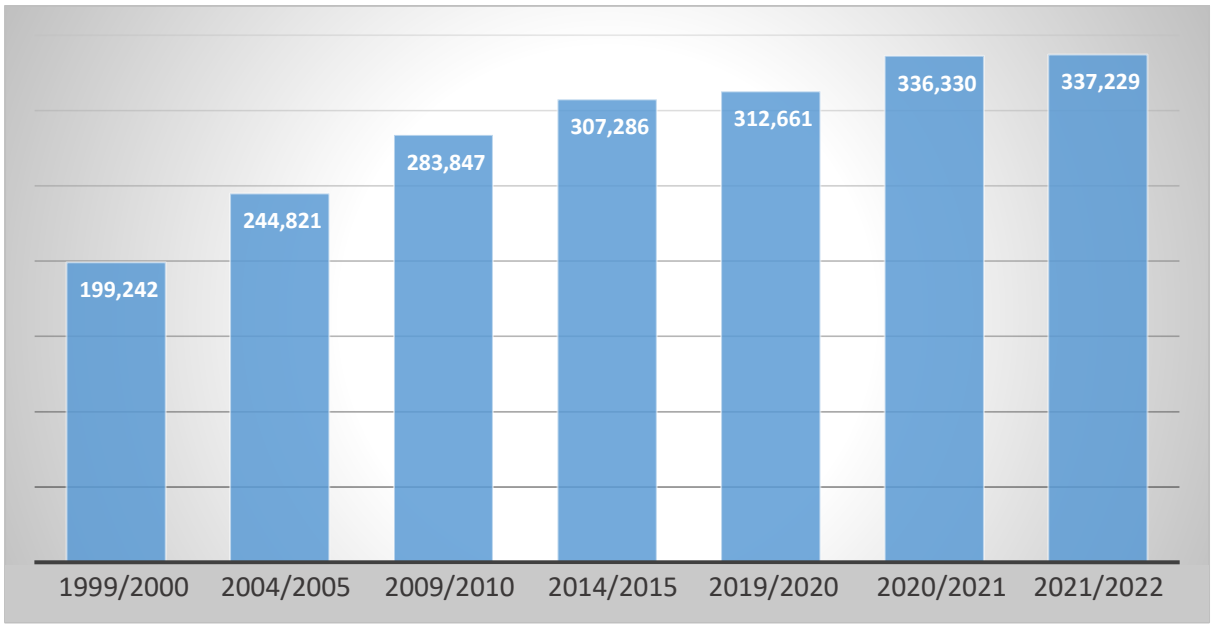
In 2021/2022 stabilization in the trend of growth in the higher education system was evident, after a significant and exceptional increase in the numbers studying in higher education institutions in 2020/2021 following the COVID pandemic.

337,230 students attended 59 academic institutions in Israel in 2021/2022[1], including: 256,175 bachelor's degree students, 68,545 master's degree students, 11,725 PhD candidates and 785 students who attended certification studies[2]. Following the stability that characterized the higher education system over the past decade, in recent years there has been an increase in the total number of students, which, as stated, peaked in 2020/2021 with an increase of nearly 24,000 students. In 2021/2022 the overall rate of growth in the system returned to normal and was 0.3%,

[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 data also includes Open University students. Open University data does not include academic paper writers: 3,456 bachelor's degree students and 192 master's degree students in 2021/2022. These figures were reported by the Open University to the Central Bureau of Statistics for the first time in 2018/2019.
The data for students attending teaching certification studies relates to certification studies at universities.

an increase of about 900 students; the number of bachelor's degree students increased by 1,540, which was mostly due to the increase in non-budgeted academic colleges.

Students in the higher education system



Multi-annual outlook – students by degree level

	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
2009/2010	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
2021/2022	337,230	256,175	68,545	11,725	785

Bachelor's degree students in the years 1999/2000-2021/2022

Field	1999/2000		2009/2010		2019/2020		2020/2021		2021/2022	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Total	**126,899**	**100.0**	**178,739**	**100.0**	**194,273**	**100.0**	**208,461**	**100.0**	**211,334**	**100.0**
Social Science	24,793	19.5	41,171	23.0	34,358	17.7	37,144	17.8	38,006	18.0
Engineering	18,378	14.5	31,918	17.9	35,699	18.4	38,011	18.2	37,753	17.9
Education and Education Training	22,842	18.0	22,502	12.6	30,885	15.9	31,364	15.0	30,546	14.4
Business and Management Sciences	6,762	5.3	19,463	11.1	20,105	10.3	22,822	10.9	23,655	11.2
Mathematics, Statistics and Computer Science	10,849	8.5	9,122	5.1	18,302	9.4	20,062	9.6	20,538	9.7
Paramedical professions	5,406	4.3	8,185	4.6	13,418	6.9	14,106	6.8	14,774	7.0
Law	9,932	7.8	15,790	8.8	12,410	6.4	14,575	7.0	16,005	7.6
Humanities	16,718	13.2	13,849	7.9	10,431	5.4	10,351	5.0	9,681	4.6
Art and Design	2,595	2.0	5,530	3.1	5,932	3.1	6,126	2.9	6,108	2.9
Life Sciences	3,119	2.5	4,675	2.6	5,187	2.7	6,048	2.9	6,062	2.9
Physical Sciences	2,110	1.7	2,484	1.4	2,704	1.4	2,818	1.4	3,037	1.4
Medicine	1,214	1.0	1,457	0.8	2,035	1.0	2,040	1.0	2,105	1.0
Architecture	1,399	1.1	1,623	0.9	1,782	0.9	1,823	0.9	1,872	0.9
Agriculture	782	0.6	970	0.5	1,025	0.5	1,171	0.6	1,192	0.5

Comments:
1. The data does not include the 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 engineering and management, and other types of engineering.
3. The art and design fields refer to subjects studied at academic colleges only.

High tech: An impressive achievement of the National Program for Strengthening Engineering and High-tech Professions - the PBC met its goal of growth in the number of students: according to the data for 2021/2022, despite stabilization in the number of bachelor's degree students this year, the number of students studying mathematics, statistics and computer sciences continued to grow and reached 20,538 compared to 9,122 at the beginning of the decade. Engineering

studies are among the most studied programs in Israel for a bachelor's degree (37,753 students, constituting 18% of all bachelor's degree students). In recent years engineering has overtaken social science, which over the years was regarded as the largest academic field in Israel, and in 2021/2022 the percentage of students in each of these fields was similar. According to the data one out of four students (approximately 28%) in Israel studies engineering and computer science, mathematics and statistics (approximately 58,291 students out of the 211,334 bachelor's degree students).

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 have invested many resources in order to strengthen the high-tech field, including 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 of a 40% increase in the number of bachelor's degree students in high-tech fields, and in practice the increase reached 55% in 2015/2016-2020/2022.

Second, the PBC allocated an additional NIS 150 million to augment high-quality human resources in advanced degrees in high-tech fields that will serve as reserves for future staff members, 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 supplementary step to increase the number of high-tech students, the PBC provided additional quotas to academic colleges that teach these fields. The significant addition of quotas led to the achievement of requisite growth objectives in high-tech fields in the course of the previous multi-annual program, and these trends have continued during the present multi-annual 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.

In addition to the above, in view of the program's success and meeting its objectives, the PBC has allocated NIS 30 million from 2022/2023 to 2027/2028 for extending the high-tech program for bachelor's degrees while updating the program and extending the subjects included in the budget.

Technological developments are forcing the academic world to make necessary adjustments, and, instead of the traditional division into different faculties, academia is working to remove barriers and create interdisciplinary study programs that provide its graduates with a diverse toolkit. 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 medical students in the four medical faculties in the universities in 2009/2010 was only 530 students. Over the past decade, 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 medical programs **resulted in 895 students beginning their medical studies in 2021/2022**, 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. An additional step carried out successfully in the PBC in the past year was **closing the international programs** in the three medical faculties in Israel, and as of 2023/2024 new foreign students will not register in these programs. This step, which took place in collaboration with the deans of the medical faculties, is intended to increase the number of Israeli students in the existing medical programs who have potential to join the medical workforce after graduating, instead of international students who come to Israel for their period of studies only and then return to their countries of origin.

Paramedical studies: There has also been a substantial increase of 80% in the number of bachelor's degree students who attended paramedical studies – from 8,185 in 2009/2010 to 14,774 students in 2021/2022 – this increase was primarily caused by the large number of students who studied nursing, from 3,000 to 7,640 in that period. Since the beginning of the last decade, the number of first-year nursing students has doubled: from 1,000 in 2009/2010 to 2,260 in 2021/2022, and there are currently 7,640 students studying for a bachelor's degree in nursing in the 13 programs that operate both in universities and in 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.

Law: The highest increase that we see in segmentation of students according to their fields of studies is in law; after a decrease in the number of students in this field in the past decade from 15,790 in 2009/2010, to 12,410 in 2019/2020, in 2021/2022 the number increased by 1,430 - an increase of about 10% compared to 2020/2021. This increase was mainly in non-budgeted academic colleges that teach this field. A relatively high increase in the past year (833 students) was also evident in business administration studies; after the number of students studying this

field decreased from a peak of 23,232 students in 2012/2013 to only 18,711 students in 2018/2019, the number has increased since 2019/2020 and in 2021/2022 it reached 23,655.

Century Program – Humanities: Pursuant to the ongoing downward trend in the number of bachelor's degree students in 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 13th Council for Higher Education, accelerated its work and submitted its recommendations to the PBC in March 2021. The recommendations of the Committee defined the main objective as the advancement 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 and collaboration with other disciplines, including natural sciences, technology and law.

The recommendations of the Committee, which were unanimously adopted by the PBC and the CHE, 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 in the humanities faculties and will serve as a focus for interdisciplinary activity among researchers, research associates and scholarship recipients. The SLHSs will serve as a focus for interaction and discussion, as well as 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: 1. 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 PBC's decision of March 18, 2021 and the decision of the CHE of April 6, 2021 – the "Century Program for the Facilitation of the Humanities in the Framework of the 2016/2017-2021/2022 Multi-Annual Plan," the PBC approved, at its meeting of May 12, 2021, the issuance of an invitation to the higher education institutions budgeted by the PBC 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.

2. Stabilization also in the number of bachelor's degree candidates

The number of bachelor's degree candidates at universities increased fairly steadily 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 peaked in 2020/2021 – 43,910 – an increase of more than 9,300 students compared to 2019/2020, and in 2021/2022 decreased to 40.117, in a return to the trend that existed before 2020/2021. 24,670 of the bachelor's degree candidates were accepted and began their studies (62%).[3]

The number of candidates in academic colleges in 2021/2022 also decreased after a peak in 2020/2021 (from 51,809 in 2020/2021 – an increase of almost 4.000 students relative to 2019/2020, to 48,189 in 2021/2022). The ratio between the number of candidates that were admitted and the number of actual students who attended increases in most years, and it reached 69% in 2021/2022. The most sought-after fields of study offered at academic colleges are engineering, social studies, business administration, law, paramedical studies and computer science. Law and business administration are mostly studied at the non-budgeted colleges, most of the social science, computer science and engineering programs are taught at budgeted colleges and paramedical studies are taught at both kinds of institutions. The percentage of bachelor's degree candidates in engineering studies in universities in 2021/2022 was 19.7%, which is similar to the percentage in academic colleges. In paramedical subjects the number of candidates was around 9% in both kinds of institutions. In contrast, in the fields 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 – 18% relative to 7%; law students – 10% relative to 6%.
In universities the percentage of candidates in the fields of mathematics, statistics and computer science is greater than in the academic colleges: 13.2% compared to 8.5%. In natural sciences, which include life sciences, physical sciences and agriculture, the percentage of university candidates is also higher than the percentage in academic colleges: 8% compared to 2%.

To a certain extent the data concerning high-demand bachelor's degree studies at universities in 2021/2022 reflects 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 studies in that field. In this section we will specify the most

[3]As of 2021/2022, the data for university candidates also includes candidates for Reichman University.

sought-after fields of study at universities in 2021/2022 based on those indices. The data is presented in the following table:

Bachelor's degree candidates at universities and the ratio between candidates and students who were admitted and attended studies, 2021/2022
(By fields of study selected as first preference)

		Candidates	Accepted for first preference	Ratio between candidates and students who were admitted and attended studies
	First-preference field - Total	**40,117**	**22,536**	**1.8**
Of which:	General Medicine	2,390	558	4.3
	Architecture and Urban Construction	803	258	3.1
	Business Administration	1,558	735	2.1
	Paramedical professions	3,778	1,788	2.1
	Industrial Engineering and Management	1,168	657	1.8
	Computer Sciences	4,371	2,385	1.8
	Law	2,389	1,307	1.8
	Economics	1,446	785	1.8
	Electrical engineering and Electronics	2,515	1,517	1.7
	Social Work	957	559	1.7
	Life Sciences	1,865	1,187	1.6
	Social Work	2,190	1,378	1.6
	General Humanities	1,392	1,052	1.3

The decrease of about 3,800 candidates in 2021/2022 occurred in most fields of study, except business and management studies and law, in which the number of candidates increased due to including the figures for Reichman University for the first time in the data on university candidates: in business and management studies the number of candidates increased significantly by 530 from 2,403 in 2020/2021 to 2,932 in 2021/2022 and in law it increased by about 50 from 2,334 to 2,389. Despite the decrease in most fields of study in 2021/2022, the number of candidates this year is still high compared to the number in 2019/2020, except in humanities and the arts where a decrease can be seen compared to 2019/2020. Especially large increases compared to 2019/2020 can be seen in engineering, social sciences and mathematics, statistics and computer sciences: in engineering the number of candidates in 2021/2022 was 7,895 compared to 9,478 in 2020/2021 and 7,219 in 2019/2020; in mathematics, statistics and computer sciences the number was 5,280 in 2021/2022 compared to 5,372 in 2020/2021 and 4,560

in 2019/2020; and in social sciences the number was 8,633 in 2021/2022 compared to 8,942 in 2020/2021 and 6,757 in 2019/2020. The increase in social sciences and computer science is derived from including the Reichman University data in the data of the universities, but in engineering the increase took place in the budgeted universities only.

The number of bachelor's degree candidates also decreased in the academic colleges in most fields of study from 51,809 in 2020/2021 to 48,189 in 2021/2022 - a decrease of 3,620, and similarly to the universities, in all the academic colleges there are also fields of study that despite the decrease, have still increased compared to the 2019/2020 figure. An example of this is engineering that decreased by 250 compared to 2020/2021 but has increased compared to 2019/2020 by 1,181 - the number of candidates in 2021/2022 reached 9,452.
A similar pattern was seen in law: in 2021/2022 the number of candidates in this field reached 4,821 compared to 4,950 in 2020/2021 and 4,368 in 2019/2020. The fields of study in which an increase can be seen in the number of candidates in 2021/2022 are the paramedical subjects: 4,192 compared to 4,011 in 2020/2021, and education: 3,575 compared to 2,920 in 2020/2021, after expansion of these study programs in non-budgeted academies.

3. Women – bachelor's degree studies

- **Multi-annual outlook – a continued increase in the percentage of women in all degree levels**
- **The number of female computer science students has doubled (including mathematics and statistics)**
- **A 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 last decade, the number of female students who attend bachelor's degree studies in computer sciences (including mathematics and statistics) multiplied by 2.6 and grew from 2,622 to 6,844 in 2021/2022. A substantial increase of 43% was also recorded in engineering studies: from 8,581 female students in 2019/2020 to 12,310 female students in 2021/2022. 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 to distribute scholarships and grants to female students, for workshops that introduce students to high-tech professions, and for 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) grew in 2015/2016-2021/2022 from 24% to 29%.

After the large increase in the number of bachelor's degree students that we saw in 2020/2021, in 2021/2022 we see that the numbers have stabilized; among bachelor's degree students there was a slight increase of about 2% in 2021/2022 - about 2,400 female students in total. The fields of study in which a significant increase can be seen are: law (900+ female students, business and management sciences (870+), social sciences (670+) and paramedical professions (610+).

Female bachelor's degree students by field of study – 2009/2010-2021/2022

	2009/2010	2012/2013	2014/2015	2019/2020	2020/2021	2021/2022
Total	**97,955**	**106,596**	**109,758**	**113,002**	**121,051**	**123,408**
Education and Education Training	17,793	21,292	23,908	24,282	24,381	23,474
Social Science	27,222	27,544	25,684	23,705	25,627	26,299
Business and Management Sciences	9,180	11,809	11,461	11,730	13,482	14,352
Engineering	8,581	8,152	8,423	10,984	12,008	12,310
Humanities, Arts and Design	11,910	12,066	12,095	10,572	10,642	10,167
Paramedical professions	6,756	8,038	9,424	11,063	11,651	12,258
Law	7,695	7,949	8,059	6,775	7,893	9,795
Mathematics, Statistics and Computer Science	2,622	3,154	3,701	6,144	6,784	6,844
Life Sciences	2,985	3,091	3,320	3,613	4,223	4,235
Architecture	926	1,054	1,106	1,257	1,281	1,357
Medicine	804	980	1,088	1,211	1,246	1,367
Physical Sciences	899	886	906	1,107	1,189	1,292
Agriculture	582	581	584	559	644	658

* The data does not include the Open University.

- **Women constitute 60% of the number of students in academia.**

The percentage of female students was 59% in 2021/2022, after a significant increase in their participation in academic studies, primarily in the 1990s. Women currently constitute a majority in every degree: bachelor's degree – 58%; master's degree – 65%; PhD – 53%. The number of women who participate in advanced degree studies has impressively increased over the years: in 1989/1990, the percentage of women in master's degree studies exceeded 50%, and, as stated, reached 65% in 2021/2022. The increase in the percentage of women stems, inter alia, from the expansion of master's degree programs at general academic colleges and teaching colleges, where the percentage of women reached 69% and 83%, 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 2021/2022.

Multi-annual outlook – increase in the percentage of women in academia

	1989/1990	1999/2000	2009/2010	2019/2020	2020/2021	2021/2022
Bachelor's degree	53.6	57.4	54.8	58.2	58.1	58.4
Master's degree	50.3	57.8	58.4	62.9	63.9	64.7
PhD	41.3	51.1	52.7	53.8	53.3	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 in 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.

In 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 Fairness Program formulated by the Committee that has been recently adopted is in line with the principles determined for promoting women to senior staff positions and it is based on the recommendations of the Steering Committees, which primarily consist of raising the awareness of gender fairness in higher education institutions, and hiring and promoting women among academic staff members in general, and particularly in fields in which women's representation is particularly poor, such as exact sciences and the 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** in institutions that are budgeted by the PBC for the years 2020/2021-2024/2025– the "Equator" Index, which was formulated by a team from the Steering and Judicial Committee of the CHE/PBC: Prof. Ruth Halperin-Kaddari, Prof. Naama Shefi and Prof. Michal Bar-Asher Siegal. 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 decision-makers 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 in 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 and 21 academic colleges submitted strategies in the framework of this index in 2020/2021 and 2021/2022. In 2020/2021, 8 programs were approved and operated in universities and 6 programs in colleges, and the programs presented in 2021/2022 are now being examined by the Steering and Judicial Committee of the CHE/PBC.

- ✓ Determining **criteria for the role of advisors to the president on the subject of gender fairness** - in order to position the status of the advisors in the higher education institutions, the Steering Committee defined the authority of the advisors, their period of office and their subordination to the presidents of the institutions and more. The Steering Committee also determined that the advisor is to have a senior academic profile and is acting to encourage the institutions to remunerate the advisors for this role, as a prerequisite of participation in the Gender Fairness index. In addition, as of 2021/2022 the institutions will be required to fulfil the criteria determined in order to receive a budget for the advisor's activity.
- ✓ **Scholarships for outstanding female PhD candidates:** In recent years the scholarship has been USD 30,000-40,000 a year for two years, and the amount of the scholarship was determined according to the candidate's marital status; as of 2021/2022, the amount of the scholarship is USD 36,000 a year for two years. In the framework of the program up to 20 new scholarships are funded by the CHE each year. In 2021/2022, as a result of collaboration with the Zuckerman Foundation, 30 scholarships were distributed. It should further be noted that candidates who were admitted into the combined post-doctorate program, some of which takes place in Israel and some overseas, may also apply for this program, 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 female PhD candidates and outstanding students in a research-based master's degree in high-tech fields:** The scholarship amount for female PhD candidates is NIS 60,000 a year for 3 years, and the scholarship amounts for master's degree students is also NIS 60,000 a year for 2 years. In both programs, up to 10 new scholarships are granted every year.
- ✓ **A 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:** Emphasizing and relating to data, candidacy and employment of women in the different academic frameworks: scholarship rules (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.

4. Access to higher education in peripheral regions

- **In 2021/2022, 64,940 students came from settlements that are located in low socioeconomic clusters (including Arab and ultra-Orthodox settlements).**
- **Within 5 years, there was an increase of 18,000 students who came from settlements that are located in low socioeconomic clusters (Clusters 1-4).**
- **38% of bachelor's degree students in PBC-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, 2021/2022

	Total		Social economic cluster (%)				
	Absolute numbers	%	2-1	4-3	6-5	8-7	10-9
Total No. of Students	**198,752**	**100.0**	**9.2**	**23.5**	**17.5**	**25.5**	**21.7**
Universities	88,661	100.0	5.5	19.2	15.2	26.8	30.1
PBC-budgeted colleges	73,051	100.0	11.3	26.6	20.2	24.3	15.5
Non-budgeted colleges	37,040	100.0	13.9	27.7	17.9	24.8	14.0

Comments:
1. The data does not include the Open University or education colleges that are not budgeted by the PBC.
2. The data of the colleges budgeted by the PBC includes the students in the academic colleges of education budgeted by the PBC.
3. 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 in 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 shows that between 2016/2017-2021/2022 there was an increase of 18,120 students from low socioeconomic clusters (1-4 – including Arab and ultra-Orthodox settlements), such that, in

2021/2022, 64,940 students – approximately 33% of all bachelor's degree students – 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 38% of bachelor's degree students who came from Cluster 1-4 settlements. This number is similar to the percentage of the population that lives in those clusters, which was 40%.

The development of the academic colleges has led to a substantial increase in the number of students at academic institutions in the North and South Districts in recent decades. In 2021/2022, approximately one quarter of bachelor's degree students studied at existing academic institutions in the North and South Districts (9.8% 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 possible without the requisite allocation of significant budgetary resources to those two peripheral districts.
It is to be noted that the percentage of bachelor's degree students who studied in the Haifa District decreased in the past year from 12.1% to 10.6% and at the same time the percentage of students who studied in the Tel Aviv District increased by about 2%.

Multi-annual outlook – bachelor's degree students by institution district

District	1989/1990	1999/2000	2009/2010	2020/2021	2021/2022
Absolute numbers – total	**55,250**	**126,900**	**178,740**	**208,461**	**189,620**
% – Total	**100**	**100**	**100**	**100**	**100**
North	...	5.3	9.2	9.1	9.8
Haifa	21.7	17.9	13.8	12.1	10.6
Tel-Aviv	42.8	31.5	30.9	30.2	32.3
Central District	4.1	15.9	17.4	18.7	17.5
Jerusalem	22.7	15.5	13.4	15.6	15.5
South	8.7	13.9	15.3	14.3	14.3

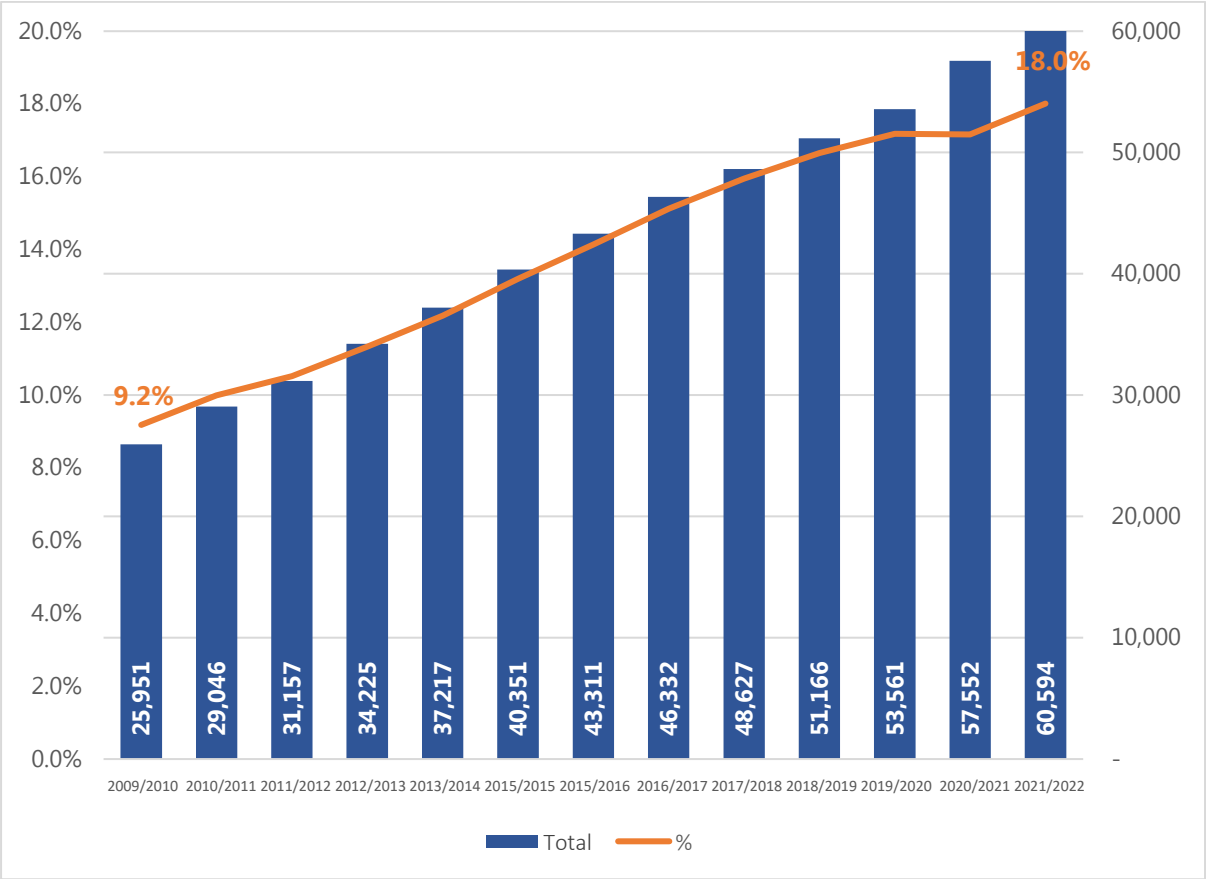
The data does not include the Open University

5. Access to higher education in the Arab sector: There are more than 60,000 Arab students in higher education

Some 60,600 Arab students, who are 18% of all students in Israel, relative to their percentage of the population (21%).

- Since the beginning of the previous decade - an increase of about 133% in the number of students in the Arab sector
- Bachelor's degree – the number of students grew by 115%.
- Master's degree – the number of students grew by 257%.
- PhD – the number of students grew by 140%.

Decade-long multi-annual outlook: the number of Arab students more than doubled



In 2021/2022 the number of Arab students exceeded 60,000 for the first time and grew by 133% compared to the beginning of the previous decade. 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 2021/2022, there were 47,936 Arab bachelor's degree students in Israel, and they constituted 18.7% of all bachelor's degree students.

The number of Arab master's degree students grew by 257% between 2009/2010-2021/2022. While in 2009/2010, there were only 3,270 Arab master's degree students in Israel, who constituted only 6.5% of all master's degree students in Israel, by 2021/2022, their numbers grew to 11,665, and their percentage out of the total number of master's degree students grew to 17%.

Between 2009/2010 and 2021/2022, there was also a substantial increase of 140% in PhD candidates, such that, in 2021/2022, there were 993 Arab PhD candidates, constituting 8.5% percent of all PhD candidates in Israel, relative to only 413 students in 2009/2010.

Multi-annual 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
2019/2017	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
2021/2022	47,936	11,665	993	60,594

The increase in integration of students from the Arab sector is the result of a comprehensive holistic program operated by the PBC from the stage of high school to studies for advanced degrees.

The number of Arab students in academia has more than doubled over the past decade, and currently amounts to 60,600 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 ten 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 bachelor's degrees, and continued assistance with advanced degrees – master's degrees, PhDs 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 230 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 of 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 support provided for 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 Perach). The scholarship is awarded to 2,200 students every year, of whom 850 are new students starting their freshman year. The scholarship is awarded to students throughout their degree. 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 research-based master's degrees, PhDs 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 (2012/2013-2021/2022), 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.

Integration of Bedouin students into Israeli academia: 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 for 2021/2022 is at least 1,500 students, with an emphasis on high-quality integration into academic degrees and employment-oriented occupations. In 2020/2021, 1,200 Bedouin students began their freshman year, and 4,120 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 Economic Council in the Prime Minister's Office, whose purpose was to formulate a suitable policy. After an extensive learning and thinking process, the team recommended the integration of Bedouin students into the existing budgeted academic system and the regular programs, together with all students, while 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 separate preparation for academic integration together with several points of interaction with the rest of the 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 preparation 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 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 join academic studies through the same acceptance methods as other students.

In 2022/2023 the program will be extended to a fifth class group that will enable some 465 new students to join the program and a total of some 1,500 students from the five class groups will study in it. Originally, NIS 225 million were allocated for the program for 3 class groups (2018/2019-2020/2021), 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. In March 2022 the PBC decided to extend the program to 2022/20223 at an estimated cost of NIS 37 million including participation of the Bedouin Authority according to Government Decision no. 1279.

6. The Excellence Program for Israelis of Ethiopian descent

An increase of 1.5 times the number of students of Ethiopian descent

	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2020
Total number of Ethiopian students	2,937	3,287	3,591	3,800	3,996	4,092	4,316	4,522
Bachelor's degree	2,608	2,903	3,194	3,377	3,567	3,604	3,782	3,965

The multi-annual program defined an objective in terms of the increase in the number of students of Ethiopian descent (bachelor's degrees), such that their percentage out of all students will amount, by the end of the multi-annual program (2021/2022), to 1.7%, similarly to their percentage of the population. In 2021/2022, the number of bachelor's degree students of Ethiopian descent amounted to 3.965, consisting of 1.5% of all students, which is close to achieving the objective. This is after the number of students of Ethiopian descent increased 1.5 times during the years of the multi-annual program, from 2,937 in 2014/2015 to 4,522 in 2021/2022.

In 2016/2017, the PBC began to formulate an extensive accessibility program to improve access to higher education among Israelis of Ethiopian descent. Until this year, this was the responsibility of the Students' Administration of 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 Sagy. The Committee consists of public officials and members of academia, most of whom are of Ethiopian descent.

In the course of its work, the Steering Committee mapped the main barriers facing the incorporation of Israelis of Ethiopian descent 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) of the amount of NIS 10,000 for bachelor's and master's degrees (Marom scholarships) to students of Ethiopian descent 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 support and encouragement for outstanding students throughout the students' academic studies (bachelor's degrees, research-based master's degrees, PhDs and programs intended to incorporate academic members of staff of Ethiopian descent in higher education institutions). The program enables us to shed light on the community of Israelis of Ethiopian descent from the perspective of excellence so as to realize the students' academic and social potential.

The Committee's decisions are in the spirit of 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, and to excellence and leadership in Israeli society. The Committee's decisions are in the spirit of 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, and to excellence and leadership in Israeli society.

7. Making higher education accessible to the ultra-Orthodox sector

In 2021/2022 the number of students who are graduates of ultra-Orthodox education increased by about 8% compared to 2020/2021 and was about 16,575, compared to the general slowing down that characterized the system in the past year. During the past decade the number of ultra-Orthodox students has multiplied threefold, from 5,500 in 2020/2021 to 16,575 in 2021/2022. The average annual growth of the number of students in this period was about 11%, compared to 4% among the ultra-Orthodox population of the age relevant for higher education in recent years. Since the middle of the past decade there has also been a noticeable increase in the number of ultra-Orthodox students in master's degree programs, from 1,060 in 2014/2015 to 2,480 in 2021/2022.

According to the data of the labor arm, a high percentage (more than 85%) of ultra-Orthodox graduates are employed and their average wage is twice that of the average wage of the general ultra-Orthodox public. Nevertheless, the percentage of ultra-Orthodox participation in academia is low relative to their percentage in the population - the ultra-Orthodox are about 5% of the bachelor's degree students compared to 13% of the percentage of the ultra-Orthodox population in Israeli society.

The CHE and the PBC invest a great deal of efforts and resources to improve access to higher education among the ultra-Orthodox population, and to integrate them into the job market and society in Israel. These efforts are predicated on two guiding principles: 1. The incorporation in academia of ultra-Orthodox men and women who wish to do so, while respecting their way of

life and providing a suitable solution for their academic and cultural needs. 2. Maintaining academic excellence.

The CHE acts to vary the academic solutions for the ultra-Orthodox population in view of the great difference that exists in this society and to vary the fields of study according to the needs of the economy and the needs of ultra-Orthodox society itself. In 2021/2022 the Zarkor program was launched - the support program of CHE/PBC in collaboration with the labor arm and run by the Aluma association. The program is intended for graduates of ultra-Orthodox education and helps candidates for academia with guidance, advice, assessment, completing gaps and accompanies them closely during academic studies until high-quality employment.

In addition, the PBC is extending financial assistance for ultra-Orthodox students in all degrees and is acting to establish solutions for the ultra-Orthodox population in the geographical periphery. Further emphasis is given to the population of former ultra-Orthodox students who have special challenges and obstacles that necessitate an adapted support package.

8. International higher education

The Council for Higher Education and the Planning and Budgeting Committee have defined the promotion of international activities in the context of higher education in general and in teaching in particular as a main objective. Promoting international activity is highly important in order to improve Israel's international reputation and academic excellence, and also in order to create diversity among students and staff members who are exposed to different cultures and perspectives, acquire language skills, and more. Moreover, the promotion of internationality also contributes 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.

In 2020/2021 (the data for 2021/2022 will be received towards the end of 2022), some 10,100 international students studied in Israel (bachelor's degrees – 1,878, master's degrees – 2,180; PhDs – 1,158; and 1,685 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-doctoral scholarship programs for outstanding international students have reported an increase in the number of candidates and advance degree enrollees in Israel. In the multi-annual program for 2022/2023-2027/2028 the PBC will continue to invest in turning the Israeli campuses into international ones, by increasing the use of English for teaching and by supporting international activity of the institutions as well as in the different scholarship programs for bringing outstanding researchers and students from abroad, among other ways.

9. Establishing digital learning in academia and promoting innovation in teaching

The CHE/PBC attributes great significance to promoting digital studies in higher education facilities in Israel as a tool for developing innovation in teaching and learning, for extensive access to higher education and in order to strengthen the position of Israeli academia around the world. Accordingly, in collaboration with the National Digital Israel Initiative it sent five invitations to budgeted institutions (2016-2020) to formulate or convert digital academic courses in MOOC format for Campus IL and edX platforms. When the COVID pandemic began in 2020, the PBC allocated NIS 70 million to encourage, establish and consolidate infrastructures for digital studies in higher education institutions, 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. These include: technological infrastructures, technological human capital infrastructures and techno-pedagogic infrastructures, follow-up mechanisms, control, and data collection and analysis for the purpose of assessing and optimally developing digital studies. As of today, 28 budgeted institutions participate in the program, and they are required to meet objectives such as use of digital tools in 30% of the teaching courses or to include at least two courses that make use of digital leaning in bachelor's degree studies, among other matters. Digital learning is one of many tools that contribute to innovation in teaching and on the basis of this program the CHE/PBC plans to encourages additional across-the-board steps to advance the quality of teaching that will also relate to the subject of teaching skills for the employment market.

10. Program to advance entrepreneurship and innovation in academia

In the past 4 years the PBC has supported the activity of entrepreneurship centers in 15 academic institutions including all the research universities (except the Weizmann Institute), the design and arts colleges and engineering colleges. More than NIS 65 million have been invested in the project, including NIS 11 million from the budget of the Ministry for Social Equality. The academic entrepreneurship centers enable training by means of designated courses that give academic credits and contribute to creating an active entrepreneurial culture that includes workshops, webinars, lectures, hackathons and competitions. At the same time, the entrepreneurship centers help students and researchers from different disciplines to establish work teams accompanied by professional mentors. In the framework of the program more than 400 projects have been developed, some of them with the support of the PBC by means of a program that operated in the years 2020/2021-2022/2023 to advance outstanding projects at the stage of Proof Of Concept (POC).

11. Flagship research programs

A. 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 advance research and industry in Israel. The program was initiated by the PBC in 2018 and became a national program in 2020 with a total budget of NIS 1.25 billion for six years activity for 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 R&D, and encouraging development of relevant industries.

B. 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, sort, predict, and create knowledge from them, in addition to developing tools that are based on the data and their analysis, such as artificial intelligence. In 2018, the PBC approved a budget of NIS 150 million for advancing this field, which primarily consists of supporting the establishment and consolidation of data science and artificial intelligence research centers at universities (80% of the budget in total). These centers, which are supported by the PBC, are currently operating at seven research universities in Israel. There are also scholarship programs for outstanding doctoral and postdoctoral students. At the same time, the PBC approved – in the framework of the 2016/2017-2021/2022 multi-annual program – more than 30 pertinent programs, two thirds of which are bachelor's degree programs, with the remainder being master's degree programs.

C. Sustainability and climate

Subject to receiving the resources, in the framework of the multi-annual program for 2022/2023-2027/2028 the PBC decided to advance a flagship project on the subject of sustainability and climate with the aim of: (1) encouraging basic, innovative, multidisciplinary, path-breaking research of subjects that are directly or indirectly related to current global challenges, and (2) supporting the achievement of national goals and objectives and contributing to economic growth, both by promoting applied research in collaboration with government ministries and relevant authorities, and by encouraging teaching and training. The program is planned to focus on key fields in which it is estimated that the investment will position Israeli academia at the forefront of scientific research, and will advance the state of Israel to the status of a leader in

finding solutions for coping with the climate crisis, such as: energy, food, agriculture and biological diversity, marine and water sciences and smart cities.

12. Human capital and research infrastructures

Subject to receiving the resources, in the framework of the multi-annual program for 2022/2023-2027/2028 the PBC has decided to continue the program for supporting the various aspects of research infrastructures: equipment grants for new researchers, equipment grants for established researchers, making research infrastructures accessible, institutional equipment grants. The program will continue to operate on a competitive basis according to criteria of scientific excellence with the aim of raising the level of infrastructures in the research universities in Israel, expanding the supply of research infrastructures, improving utilization of existing infrastructures, and raising the level of the research carried out in Israel. In order to fully utilize the investment in research infrastructures, reinforce the research system, leverage islands of excellence in the research universities, and increase high-quality research outputs in Israel, the PBC decided, at the same time and subject to receiving the resources necessary for this matter, to support the employment of research associates in the research universities. A research associate is a scientist with a proven research background who works together with and is subordinate to the group/laboratory head (PI), helps to advance research, integrates the laboratory's work (international liaison, accompanying students, developing and operating the equipment and complex systems), and is a partner in writing articles and applying for competitive grants.

13. Academia and practical experience – a bridge between academia and the job market

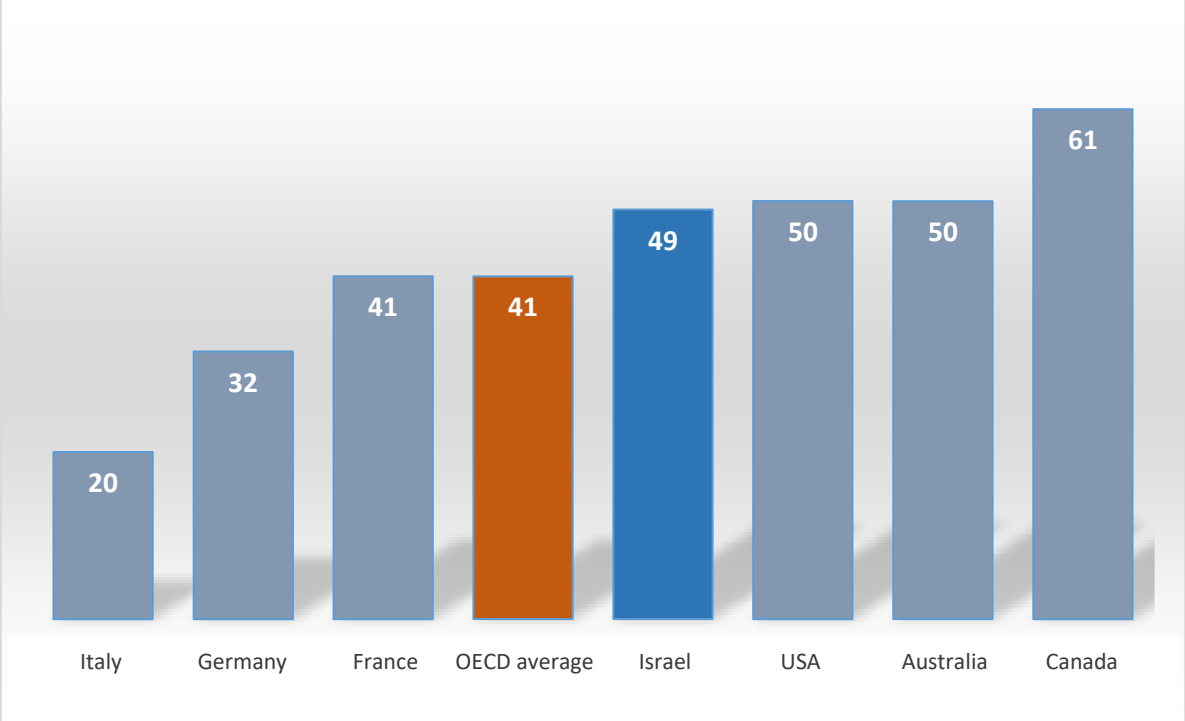
The PBC attributes a great deal of significance to strengthening the academia-employment continuum, and encouraging innovativeness in the context of teaching and learning, which is also defined as a main objective of the PBC-CHE's multi-annual program. Innovation in teaching includes, inter alia, the understanding that students need to finish their studies with a toolkit 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 are responsible for advancing the academia-job market continuum, including the development of courses that incorporate academic content and practical experience in off-campus organizations, and which entitle students to academic credits. In 2019/2020-2021/2022, the program operated as a joint enterprise of the PBC with the Aluma association, in partnership with the Edmond De Rothschild Foundation. The project was extended for another 2 years

(2022/2023-2023/2024), and in its framework emphasis was placed on expanding the program in institutions and establishing the necessary infrastructures needed for the implementation, promotion and strategic development of studies that incorporate job market experience, and investment in the institutional agencies that oversee and lead this enterprise, human capital infrastructures and the establishment of monitoring, control and data collection systems.

14. OECD rating: Israel is among the world's leaders in terms of the number of higher education graduates among ages 25-64

A recently published OECD report[5] (October 2022) rated Israel as one of the world's leaders, and above the OECD average in terms of the percentage of citizens between the ages of 25-64 with higher and academic education (50%). Israel has been thereby maintaining its leading position for several consecutive years.

2022 OECD Report: Half of those aged 25-64 in Israel have secondary and higher education.



[5] Education at a Glance, 2022