

# **KURUM İÇ DEĞERLENDİRME RAPORU**

**ORTA DOĞU TEKNİK ÜNİVERSİTESİ**

**2018**

# 1. KURUMSAL BİLGİLER

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## 1.1. Contact Information

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## 1.2. Institutional Background

As of 2018-2019 Academic Year, Fall Semester, in the Ankara and Erdemli campuses, the total number of students was recorded as 23,090, with a decrease of 93 from 2017-2018. The number of undergraduate students was recorded as 15,352, with an increase of 282 compared to last year. The number of master's and doctoral students decreased from 4,816 to 4,530, and from 3,297 to 3,208, respectively. The number of international students registered showed a decline of 22, from 1,292 to 1,270. The number of graduates at all levels increased by 189, from 3,507 to 3,696 (2,578 from the undergraduate, 858 from master's and 246 from doctoral programs). The number of preparatory school students has been 3,331. Average number of students per faculty remained at 0.25, with no significant change from last year.

The number of full-time faculty members decreased from 798 to 775. The number of contracted international faculty has still been at low levels, remaining at 44. The number of total academic staff reached 2,051 with a decrease of 64 from last year. The number of research assistants decreased from 633 to 602. In addition to these, there were 456 instructors, 107 specialists, 238 research assistants (including  YP and those recruited on the basis of Article 35). The number of administrative personnel increased by 945 and reached to 2,632, after transferring contracted personnel to permanent status.

In 2018, METU undertook specialized activities in Horizon 2020 European Research Council (ERC) projects. Six applications to ERC projects were delivered in 2018. The second ERC project

carried out in METU, NEOGENE was initiated with a budget of € 2.5 million.

In terms total budget, METU is the most successful Turkish research institution Framework Program 7 (FP7), and second most successful in Horizon 2020 Program. The total H2020 budget of METU reached € 9 million by the end of 2018.

Within the scope of TÜBİTAK ARDEB 1001 Program, METU ranks as the university with the largest number of accepted project proposals in 2018. Among the 17 projects sponsored within the scope of ARDEB 1004, which was initiated in 2018, research and application centers in METU takes place in research projects in the fields of solar energy and Microelectromechanical systems.

As a research university, METU bestows great importance to increasing the number of Ph.D. degrees granted. In CoHE's 100/2000 Doctoral Scholarship Programs, METU ranked first with 142 sponsored students. In 2018, within the scope of 2244 Industry Doctorate Program 47 of 517 doctoral students were trained in METU, as part of the university-industry-cooperation.

In relation to supporting improvement cycles of administrative processes and strengthening quality assurance system four administrative units were granted ISO9001:2015 Quality Management Certificate in 2018. In addition, the Directorate of Library and Documentation, Directorate of Computing, Directorate of Personnel Affairs, and Directorate of Student Affairs were also awarded with ISO27001 Information Security Management System Standards Certificate.

In bringing together science and the society, our university also serves as an example with science fairs, and METU Science Café activities targeting children and youngsters.

### **1.3. Mission, Vision, Values and Objectives**

According to 2018-2022 METU Strategic Plan,

*“METU's mission is to attain excellence in research, education and public service for society, humanity and nature by nurturing creative and critical thinking, innovation and leadership within a framework of universal values.”*

And the **Vision** is to become:

*“A pioneer university at international level, which transforms its region and the world”*

The code of ethics and core values (<http://www.metu.edu.tr/code-ethics-core-values>) guide us in carrying out our responsibilities in education, research and community service.

According to the 2018-2022 Strategic Plan, the university determined 59 objectives under 4 strategic priorities, which are (1) Holistic Approach, (2) Cooperation and Interaction, (3) Reinforcing the Foundation and (4) Strengthening the Resources. In summary, our objectives are, with a holistic perspective that envisions interdisciplinary education and research, and enhancing the cooperation and interaction between all stakeholders—especially public-university-industry cooperation—conducting studies towards solving the fundamental problems of our country and the region.

To carry out these studies in a healthy and sustainable fashion, it is imperative to enhance and effectively utilize the information, human and financial resources, and the physical infrastructure, that supports education and research activities.

### **1.4. Units offering Education and Teaching services**

As of 2018, the academic units that offer education and teaching services are as follows:

At Ankara Campus,

- 41 undergraduate degree programs under 5 faculties (<http://www.metu.edu.tr/undergraduate-programs-and-degrees>),
- 105 master's degree and 68 doctoral programs, 48 of which are interdisciplinary programs (<http://www.metu.edu.tr/graduate-programs-and-degrees-offered-odtu>).

At Northern Cyprus Campus (METU-NCC)

- 15 undergraduate degree programs and 6 graduate programs.

At Erdemli (Mersin) Campus, at the Institute of Marine Sciences ([ims.metu.edu.tr](http://ims.metu.edu.tr)) 4 graduate programs are offered.

Of these programs, there are 5 master's level and 13 doctoral level international joint-degree programs.

### 1.5. Research and Development Infrastructure

In METU, the research and development activities are carried out by institutes, graduate schools, and research and application centers (<http://www.metu.edu.tr/faculties-institutes-schools/>). To assist researchers in their activities, there are also support departments that offer services in relation to various aspects of the research and development processes.

#### *Institutes and Graduate Schools*

METU has five graduate schools and institutes:

- Graduate School of Applied Mathematics (<http://iam.metu.edu.tr/>)
- Graduate School of Informatics (<http://ii.metu.edu.tr/>)
- Graduate School of Marine Sciences (<http://ims.metu.edu.tr/>)
- Graduate School of Natural and Applied Sciences (<http://fbe.metu.edu.tr/>)
- Graduate School of Social Sciences (<http://sbe.metu.edu.tr/>)

#### *Research and Application Centers*

As of 2018, METU hosts 31 Research and Application Centers (<http://www.metu.edu.tr/research-centers>). In 2018, the Senate decided to propose the termination of four centers—for being inactive or having fulfilled their reason for existence—and the establishment of two new ones was passed on to the Council of Higher Education (CoHE).

#### *Support Units*

- **METU Project Support Office** aims to help researchers at METU, for the application, execution and auditing of sponsored national and international R&D projects.
- **METU Project Development Office** is responsible for determining and preparing strategy documents for the prioritized R&D fields of the university. Moreover, the office also supports the activities of research and application centers that report directly to the Rectorate.
- **METU Project Execution Office** is responsible for the execution of Researcher Training Program (ÖYP) throughout the university.
- **METU Scientific Research Projects (BAP) Coordination Unit** coordinates the procurement of products and services needed by our researchers, in conducting national and international

research projects, offer the necessary assistance in a timely and effective manner, and measure our University's research performance to support the formulation of research and development strategies.

## **METU Technopolis**

In 2018, METU Technopolis ranked second in the Ministry of Science, Industry and Technology's Technology Development Centers Rankings, after leading the list for 6 years consecutively.

In 2018, the number of R&D firms increased from 256 to 372. Among the 138 new applications, 88 were evaluated and only 79 were accepted, 23 being on a conditional basis. The contracts with 2 existing firms were terminated due to their poor R&D activity, and lack of cooperation with the University.

In cooperation with METU Technopolis firms, 18 departments, 7 research and application centers and 130 researchers started 112 new research projects and signed 174 contracts. For more information about University-Industry Cooperation through METU Technopolis, please view METU Technopolis Annual Report (in Turkish) attached (Evidence 1.5.1).

In 2018, with the assistance of the METU Technology Transfer Office (TTO), a total of 12 national and international patents, and 3 design patents were registered (Evidence 1.5.2). In addition, for 3 innovations in the METU TTO's Patent Portfolio, a contract was signed with an international cooperation operating in Germany. In 2018, under the TTO's supervision a total number of 25 projects, with a value of TL 5.2 million, were signed.

The annual value of the technology exports from METU Technopolis has reached to \$100 million, the total export revenues from R&D activities so far has reached to \$1.3 billion, and domestic revenues has far exceeded TL 13 billion by 2018.

METU Technopolis Incubation services, under YFYI (New Ideas, New Jobs) ZONE, were made available in the Informatics Innovation Center. In 2018, 23 companies were founded and 95 start-up companies were supported through the YFYI Zone and KOSGEB TEKMER Incubation Centers.

For more information regarding the METU Technopolis, please visit <http://www.odtuteknokent.com.tr/en>.

## **Kanıtlar**

- [1.5.1. METU Technopolis Annual Report 2018 \(in Turkish\).docx](#)
- [1.5.2. ODTÜ TTO 2018 Başvuru Tescil Listesi.xlsx](#)
- [1.5.3 ODTÜ Yönetim Şeması.pdf](#)

## **2. KALİTE GÜVENCESİ SİSTEMİ**

### **1. Kalite Politikası**

#### **QUALITY ASSURANCE SYSTEM**

##### **2.1. The Strategic Plan, Mission, Vision, and Values**

During the preparation of the 2018-2022 Strategic Plan, the existing mission, vision (<http://www.metu.edu.tr/mission-vision>) and values of the university (<http://www.metu.edu.tr/code-ethics-core-values>) were revised. Meetings of Strategic Planning Board and Commissions as well as conferences with the participation of different stakeholders aimed to reflect the changing context, priorities and the culture of the institution properly in the plan. The strategic planning process is

explained in detail in METU 2018-2022 Strategic Plan, accessible at <https://sp.metu.edu.tr>.

The development phase of the strategic plan involves a detailed situation analysis with wide participation of stakeholders. In addition to this input, the mission and the vision were formulated considering the internal and external stakeholders' forecasts of the future. In line with the mission and the vision, the strategic priorities of our university were set forth and objectives, goals and strategies towards attaining these goals were formulated. Thus, the congruence of goals and strategies with mission and vision were achieved.

As underlined by its mission, METU acknowledges teaching and education, research and development, and community service as the basic duties of a university. In 2017, METU has been identified as one of the Research Universities within the framework of the Mission Differentiation and Specialization Project. METU gives priority to maintain and develop its strong research and development culture, and infrastructure, in integration with education, by engaging students from all levels into research projects. Finding solutions to local and global challenges through basic and applied research is another priority of our University. Towards this end, our university seeks to increase the number of awarded Ph.D. degrees, research projects funded by national and international resources, impact of scientific publications, patents and other research.

### ***The METU Quality Policy***

METU published its **Quality Assurance Manual V.1.2** (Evidence 2.1.1) in 2017, along with the Quality Assurance Policy. In light of feedback from the 2017 CoHE Quality Commission (YÖKAK) External Audit, the METU Quality Commission is working on the revision of the Quality Assurance Policy to be included in the Quality Assurance Manual Version 2.0. Following the approval of the University Senate, the Quality Assurance Policy will be communicated to all internal and external stakeholders via KGPO website, under the heading Quality Assurance Activities at <http://kgpo.metu.edu.tr/tr/kalite-guvence-faaliyetleri-0>.

The METU Quality Assurance Policy is to some extent based on “compliance with standards,” and “fitness of purpose” in some other fields of activity. The mission, vision, values and objectives of our university; along with the ENQA-*European Standards and Guidelines*, ISO standards, and those of accreditation bodies, the Bologna Process and national standards such as NHQ (TYYÇ) constitute the basic guidelines of the institutional quality policy. METU has developed its own standards that set an example for many other universities in areas such as strategic planning, appointment and promotion, program development and so on.

### ***The Integrated Approach to Strategic and Quality Management***

The Vice Rector responsible for the Strategic Planning and Quality Commission, carries out both strategic management and quality assurance activities, as these two are interrelated.

The monitoring of the Strategic Plan is conducted with 134 Performance Indicators under 59 goals and 9 headings (Interdisciplinary Approach, Teaching and Education, Research and Development, International Collaborations, Community Service and Human, Financial, Physical and Information Resources. In addition to the strategic plan performance indicators, METU monitors and evaluates a list of indicators including Institutional Self Evaluation Report (ISER) Indicators, Rankings (URAP, QS, THE, ARWU, CWUR, NTU and U.S News -Best Global Universities) and Indexes (Entrepreneurial Innovative University Index).

The Quality Commission has undertaken a study to narrow down the list of key performance indicators.

In 2018, with the collaboration of the Institutional Development and Planning Office (KGPO), Strategic Management Unit, and Directorate of Computing, the Strategy and Quality Management



Information System (SKYBIS) was completed for the purposes of recording and monitoring this extensive list of performance indicators. Through SKYBIS:

- *3rd level units* (departments, offices and other units) can record and monitor their own strategic and quality improvement activities, and related performance indicators;
- *2nd level units* (faculties, institutes, schools, research and application centers, directorates, and offices directly reporting to rectorate) can record and monitor their own strategic and quality improvement activities, and related performance indicators; and monitor the strategic and quality improvement activities, and related performance indicators of the units below them;
- *1st (or top) level administrators* (the Rector, Vice Rectors, Advisors to the Rector and the General Secretary) can monitor the strategic and quality improvement activities of the entire university/the units reporting directly to them/units collaborating with them in the strategic goals of the university they are responsible for.

SKYBIS was developed to monitor not only strategic activities, but also operational (day-to-day) activities of the 2<sup>nd</sup> and 3<sup>rd</sup> level units. The next step in SKYBIS is to include modules that allow quality assurance management through monitoring of the **Plan-Do-Check-Act (PDCA) Cycle** at university, 2<sup>nd</sup> and 3<sup>rd</sup> levels.

The key performance indicators are monitored bi-annually and evaluated on an annual basis. The Institutional Development and Planning Office is responsible for data collection and organization.

According to the legislation, some of the key strategic management activities (those related to budgeting) are carried out by the Directorate of Strategy Development. In order to fully-integrate strategic and quality management, the responsible units are integrated to work as a task force. To complete this integration and assure its sustainability, the institutional infrastructure of these units, especially KGPO, needs to be improved by developing necessary human capital.

Annual and 5-year **Plan-Do-Check-Act (PDCA) Cycles** regarding all the activities that take place in the university to ensure the integration of strategic and quality management are covered in the Quality Assurance Manual V1.2.

### **Internationalization Policy**

The **Strategic Objective #13**, aims to extend international collaborations beyond student and staff exchange agreements. Towards this end, international collaboration agreements are evaluated on the basis of additional criteria, their ability to open up new opportunities for collaboration, target different levels and benefit our university, in 3 to 5-year periods.

In 2018,

- Collaboration with the University of Ottawa (Canada) has been extended to include further and more profound collaboration opportunities. In order to improve their knowledge, skills and international experience, high profile doctoral researchers from this university are invited at least for a semester to METU, to support courses with presentations, experiments and exams, under the supervision of the course instructor.
- The student and academic exchange agreement with the National Taiwan University is extended to include a joint masters' degree program in Biotechnology, providing students from different parts of the world with a joint-degree diploma from both universities.
- The existing exchange agreements with Drexel University (USA), is extended to include CoHE Project Based Mevlana (<https://ico.metu.edu.tr/project-based-mevlana>) and EU Erasmus+ KA107 (<https://ico.metu.edu.tr/erasmus-plus>) collaborations. In the Project Based Mevlana, faculty from the METU Graduate School of Informatics Cognitive Sciences program and METU Department of Metallurgical and Materials Engineering developed two different projects

in collaboration with Drexel University on Human-Computer Interaction (HCI) and Energy Storage and Materials.

A list of the international protocols effective as of 2018 are presented in Evidence 2.1.3.

## **Kanıtlar**

- [2.1.1. ODTU\\_Kalite\\_Yonetim\\_Rehberi\\_Surum1.2.pdf](#)
- [2.1.2. List of International Protocols.xlsx](#)

## **2. Yükseköğretim Kalite Komisyonlarının Görev, Sorumluluk ve Faaliyetleri**

### **2.2. The Duties and the Responsibilities of the Quality Commission**

#### ***Quality Assurance Organization in METU***

The METU Quality Assurance Organization, as presented in the evidences, includes the Quality Commission as the guiding body under the supervision of the Vice Rector responsible for the Strategic Management and Quality Commission, other support commissions (EPİD, Education Commission, and BAP Commission), and the coordinators from all the academic and administrative units, in accordance with the organizational hierarchy of the institution. The Quality Assurance Organization is supported by the Institutional Development and Planning Office, providing necessary information and data, as well as its flow from units to commissions, and to the top administration.

The Directive on the functioning of the Quality Commission is available at the following link (in Turkish): <http://kidr.metu.edu.tr/yonerger>.

#### ***The Quality Commission and Other Commissions***

In all fields of activity, the implementation of the university level strategic plan—and the supporting unit-level action plans—is monitored in July, and evaluated in detail on an annual basis in January of the following year. This decision was put forward with the 2018-2022 Strategic Plan, and the implementation began in July 2018.

In addition to the strategic goals and related performance indicators, this mechanism of monitoring and evaluation is extended to report all basic performance indicators through SKYBIS (mentioned in part 1.1). Such systematic monitoring and evaluation would reveal all the processes and activities that require further improvement, enabling the administration to take necessary precautions when required. In the field of education and teaching, the evaluation is carried out by EPİD (Education Planning Monitoring and Evaluation Commission), led by the Vice Rector responsible for education and teaching. The commission is divided into work groups around each of the strategic themes (development of core programs, renewal of academic advising mechanisms, basic and elective courses, education technologies, student orientation, interdisciplinary programs, and professional development of academic staff) under the education heading. The commission not only supports decision making mechanism by preparing themed reports, but also helps evaluate the performance of the institution in related themes. Currently, the university plans employment of similar commissions for other fields, such as the research and development, and community service. The inputs from these commissions will be evaluated by the Quality Commission and will subsequently be reported to the University Board and the Senate.

Similar monitoring and evaluation mechanisms are also created at unit level for units to monitor and



evaluate their own action plans in relation to university goals. The evaluations from units also serve as inputs to the university level monitoring and evaluation, as SKYBIS allows for top level administrators (the Rector, Vice Rectors and Advisors to the Rector) to monitor all the activities, related to their field of responsibility, carried out by the related units.

The Quality Assurance Processes as defined in the Quality Assurance Manual are presented in the evidences (Evidence 2.1.1).

In addition to the Quality Commission and EPID, the **Education Commission**, consisting of Vice Faculty Deans, gathers 4-to-5 times a year to discuss curriculum, international student acceptance, regulations and other education related issues, and to propose actions to improve the quality of education.

The **Scientific Research Projects (BAP) Commission** consisting of directors of the graduate schools/institutes and the faculty deans, is designated by the BAP directive ([https://bap.metu.edu.tr/tr/system/files/dokumanlar/odtu\\_bap\\_uygulama\\_yonergesi\\_0.pdf](https://bap.metu.edu.tr/tr/system/files/dokumanlar/odtu_bap_uygulama_yonergesi_0.pdf)), and is led by the Rector. The duty of this commission is to formulate strategies related to Scientific Research Projects, evaluation of project proposals, and identification of call topics in line with the strategic plan.

Efforts to constitute a university-level Advisory Board, which will support quality management and administration, is currently in progress.

### ***Disseminating the Quality Culture within the Institution***

Starting from early 2018, with the leadership of Vice Rector responsible for strategic management and quality assurance, there has been several meetings and workshops gathering quality coordinators from academic and administrative units to ensure acceptance of a quality-focused approach within the institution. Following the appointment of quality coordinators from each academic and administrative unit, KGPO initiated a systematic communication program to make sure that quality objectives of the organization are understood by the coordinators to follow the procedure in a timely and precise manner. Weekly bulletins were also instrumental in reminding coordinators the tasks they are responsible for, as well as in finding solutions to common problems that coordinators faced in each step. The Directorate of Computing assisted the process by guiding the coordinators in technical issues, and prepared manuals to help coordinators in using SKYBIS.

The key to foster a culture of quality within the organization is to share information and data regarding the university's activities and resources. Towards this end, the Institutional Development and Planning Office prepared two different webpages that share key information and data:

- The **METU at a Glance** webpage offers detailed information under Education-Teaching, Research-Development, Community Service, and Human, Physical, Information and Financial Resources (<https://kgpo.metu.edu.tr/en/metu-glance>)
- The **METU at Glance Graphic** webpage offers infographics regarding a summary of key activities carried out by METU (<http://ilkbakista.odtu.edu.tr/>)

Also new modules in strategic management and quality assurance have been added to ongoing training and orientation programs designed for the newcomer academic and administrative staff, AGEF and IGEP, in order to cultivate a quality of culture within the organization.

The aforementioned commissions also contribute to the processes that help disseminate the quality of culture within the university, and make improvements in the quality assurance framework.

In response to the feedback from internal and external stakeholders, the Quality Commission made the following changes in the Quality Assurance Organization in 2018.

- The Quality Commission authorized the Quality Assurance Workgroup, consisting of quality specialists from each of the five faculties, to make improvements in the functioning of the Commission. The role of the Workgroup has evolved into an intermediary between the Quality Commission and the units; in evaluating information from the units on behalf of the Commission.
- In preparing this year's I-SER (KIDR), the Quality Council has devised a self-evaluation report format for academic units, the Academic Unit Self Evaluation Report (U-SER), which would help collect information and data from the academic units, as inputs to the overall report at the university level. The U-SERs were prepared by the quality coordinators of the units, to be collected and organized by KGPO. The third level academic units' (i.e. departments) U-SERs were reported to the 2nd level units (the faculties, institutes and schools). The 2nd level unit quality coordinators based their U-SERs on the reports prepared by the units under them. After the completion of U-SERs by the 2nd level units, the quality specialists—who also constitute the Quality Assurance Work Group—from each faculty carefully evaluated and edited U-SERs of their respective units. With the support of KGPO in organizing the data (reports, evidences and performance indicators), faculty U-SERs were finalized. The university I-SER was compiled from individual faculty U-SERs.
- Upon completion of the I-SER, the Quality Assurance Work Group will serve as an internal examining committee, to provide feedback to academic units, carry out peer evaluations by cross examining each other's faculty. In their guidance, KGPO will share best practices from academic units via monthly or bi-monthly bulletins directed at academic unit quality coordinators.
- Next year, this pilot application will be extended to include specialists from the institutes, also a similar flow will be utilized for the administrative units.

### ***The Institutional Development and Planning Office***

The duty of the METU Institutional Development and Planning Office is to prepare, provide, and maintain the applications and reports related to the METU's Organizational Development, such as the "Strategic Plan", "Internal and External Quality Assessment Reports" "Annual Activity Report", and the university performance rankings. The office ensures the preparation of these reports effectively, with reliable and valid data.

The office supports the Quality Assurance Organization, more specifically the Quality Commission, in coordination with all the academic and administrative units within the university.

The directive for the Institutional Development and Planning Office can be accessed here (In Turkish): [https://kgpo.metu.edu.tr/tr/system/files/kgpo\\_yonergesi\\_0.pdf](https://kgpo.metu.edu.tr/tr/system/files/kgpo_yonergesi_0.pdf)

### ***The Unit Quality Coordinators***

In order to support the quality assurance activities, all the academic and administrative units were requested to appoint Unit Quality Coordinators in 2018. The resulting organization structure is a three-tiered quality assurance organization, with the Rector, Vice Rectors, and Advisor to the Rectors on top, the Faculty/Institute/High School and Directorate (and offices reporting directly to the Rectorate) quality coordinators at the second level, and the departments and units directly reporting to them at the third level.

The unit quality coordinators were appointed at three different levels, the responsibilities of the Unit Quality Coordinators include collection and reporting of required data and information from their respective units to be used in internal (self) and external assessment, as well as strategic management (including monitoring and evaluation) of the institution. They are also responsible for disseminating

the quality improvement activities to their units.

In order to ensure further/widespread participation and representation of all the academic units within the Quality Assurance Organization, the Quality Commission is composed of members from academic and administrative units. The members of the Quality Commission are listed at <http://kidr.metu.edu.tr/komisyon-listesi>.

### ***Previous External Audits, Accreditation and Certificates and Outcomes***

The list of external audits, program and laboratory accreditations and certificates, and system standards are provided as evidences.

In 2017, the university has undergone an external audit by the CoHE Quality Commission. The Institutional Feedback Report given by the audit team was shared with all internal and external stakeholders.

In 2018, the Quality Commission started an initiative to share the best practices among academic units, especially from accredited programs to other academic units through bulletins and reports. In preparing this year's Institutional Self Evaluation Report for CoHE, the Quality Commission required the academic units to prepare their own self-evaluation reports (as explained above). In 2019, the Commission will evaluate applications regarding issues such as implementation of exit surveys; handling internal and external of stakeholder involvement to program design and renewal as well as research and development activities; and communication mechanisms with alumni and stakeholders within academic units. The best practices will be shared with the quality coordinators of other units. Such a mechanism would help spread accredited programs' experiences with those planning to go through an accreditation process in the near future, and thus save both human and financial resources which are already scarce.

### **Plan-Do-Check-Act (PDCA) Cycles in Education-Teaching Processes**

For planning, implementation and evaluation of processes of education and teaching, under the supervision of the responsible Vice Rector, educational support units (ÖGEM, Instructional Technology Support Office and Disability Support Office) and related commissions (Education Commission, EPİD and its workgroups) are responsible.

- An important step in education and teaching processes is the acceptance of undergraduate and graduate students. After their enrollment, orientation programs are carried out for national and international students.
- Syllabi revised in accordance with program outcomes, aims and competencies are uploaded to ODTÜSyllabus program to be shared with the students before the semester begins.
- While accredited programs are evaluated on the basis of compliance with the standards, in other academic units, education and learning experiences are evaluated with Mid-term Course Evaluations and Peer Evaluations during the semester, as prepared by ÖGEM. At the end of each semester, Course Evaluations are carried out in all academic units to provide feedback to both instructors and administrators.
- In addition to these, mechanisms such as student satisfaction surveys, alumni surveys etc. provide stakeholder opinions as inputs improvement processes for the coming semester.
- The areas for improvement are determined by EPİD, based on the university-wide measurements and feedback, and implemented by the Vice Rector responsible for education and teaching. On a departmental level, Education Commission and Faculty/Institute/Department Boards help determine the areas for improvement. The Directorate of Student Affairs, the Directorate of Computing and responsible Vice Rectors, regularly evaluates processes related to student affairs, and initiates improvement processes. As with all the other processes, the areas for

improvement determined through strategic plan monitoring and evaluation processes and shared with the responsible administrators and units, improvements are also monitored and evaluated for the following term. For example, in 2018, registration processes for elective courses are designated as an area for improvement, forming a workgroup consisting of members of related units and academic experts. The workgroup assigned a team of 3<sup>rd</sup> and 4<sup>th</sup> year students to prepare a situation analysis report regarding the issue. The team also collected student opinions through surveys and face-to-face interviews to identify problems and potential solutions. The alternative solutions are currently being developed in relation to the outcomes of this study.

### **Plan-Do-Check-Act (PDCA) Cycles in Research-Development Processes**

Similar to those in education and teaching, the operation of processes, in accordance with the plan, to increase and continuously improve the research quality and capacity of the university are monitored periodically with the help of appropriate indicators, and the planning of improvement and preventive actions are based on the same cycle. Improvement cycle examples that are completed in 2018 are given below:

- METU had started its candidate selection mechanism and one-to-one guidance services for the ERC program in 2016, after which it was adapted for the MSCA-IF program in 2017. Since this procedure proved successful in both cases, it was adapted for the WIDESPREAD-Twinning program in 2018. This procedure proved successful again, because one of METU's two Twinning applications in November 2018 was recently accepted for funding. The value of this project lies in the facts that it is Turkey's second and METU's as well as Turkish Universities' first Twinning project.
- METU has been organizing an Academic Development Program (AGEP) since 2013. This program offers a well-designed development and orientation program for recently recruited faculty members. The R&D module of this program has been developed to meet the needs of faculty members and instructors who are at the onset of their academic career and thus aims to facilitate their adaptation to the funding opportunities in Turkey and Europe as well as to increase the impact of their research. This successful program has been recently modified in to English, so that foreign faculty members can also benefit from a full set of information consisting of a vast variety of funding opportunities all rolled in one presentation.

### **Plan-Do-Check-Act (PDCA) Cycles in Community Service Processes**

As one of the key duties of the university, improvement cycles in the community service processes are operated in a similar way to those in the research and development processes. An example from 2018 is given below.

Science Communication can be defined as the dissemination of subjects related to science, with those constituents who have limited knowledge in these subjects. In time, Science Communication, has been moved to a dimension with which increasing contact among researchers, their institutions and the public, reaches beyond informing the public, to encourage shaping scientific practice and policies surrounding them. With this consciousness, in relation to the **METU 2018-2022 Strategic Plan Objective #12**, "to elevate the public concern in scientific approach and development to the highest level" with the goal of "creating science communication mechanisms to share the processes and outputs of scientific projects carried out at METU" created the Science Communication Team (METU-BiG). To disseminate science communication to large audiences, a TV program with scientific content has been developed in cooperation of METU-BiG and Pergamon Productions to be broadcasted on TRT Belgesel documentary channel. The first episode of *Bilimin Ev Hali* was aired on January 10, 2019, hosted by Cengiz Eşiyok and METU students. In each episode, the program focuses on a different subjects to explain them in an entertaining manner, targeting science

enthusiasts at an age level of high school and above. The fact that similar programs are broadcasted only in foreign channels and languages, as well as the use of national resources from directors to academicians supporting the project, from presenters to location in which the program is shot, shows the value of increasing success by the Science Communication Team in a university that does not have a faculty of communication.

### **Plan-Do-Check-Act (PDCA) Cycles in Administrative Processes**

**Quality Assurance Manual V.1.2** describes 5-year and annual **Plan-Do-Check-Act (PDCA) Cycles** in administrative processes in detail. Monitoring and evaluation of strategic plan, I-SER and U-SER preparations serve as important inputs to improvement of administrative processes. Following examples can be given to improvements made in 2018:

In order to support the planning, evaluation, reporting and decision-making processes—which are time consuming and tiring for units, and making it difficult to have access to reliable data—the **Strategic and Quality Management Information System (SKYBIS)** has been initiated in early 2018. By the end of 2018, the project has been completed to a great extent and put into service.

In response to **Satisfaction-Improvement-Development (MIG)** forms shared on a regular basis with administrators and relevant units, numerous improvement activities were initiated towards complaints and suggestions in almost all areas. The elimination of bugs and addition of new functions to the mobile applications, and the development of a web service providing information about the accessibility of medical doctors in the Health Center can be given as examples.

## **3. Paydaş Katılımı**

### **2.3. Stakeholder Involvement**

#### ***Identification and Prioritization of Stakeholders at the University Level***

During the 2018-2022 Strategic Planning process internal and external stakeholders were identified at the university level with respect to the strategic planning areas. The list of stakeholders, the methods by which their opinions were collected, and the issues they contributed were presented in Tables 3 and 4 (*pp.* 49-51) of the 2018-2022 Strategic Plan accessible at <https://sp.metu.edu.tr>. Stakeholder orientation that was embedded in the strategic planning process, serve as a communication mechanism with stakeholders, and will reach out to the University Advisory Board to be formed.

The prioritization of stakeholders depends on the areas, for example, the internal stakeholders that are directly influenced by the administrative decisions (academic, and administrative staff, and students) are regarded as the high priority, and they are informed about such decisions through systematic announcements on the university and unit's website, by e-mail, and on related social media accounts. The methods by which stakeholder opinions are gathered are explained in the following section.

Among the external stakeholders, the public institutions that set the legal framework for the university's areas of operation are regarded as the highest priority external stakeholders. These include Council of Higher Education (CoHE), the Presidency of the Republic of Turkey Presidency of Strategy and Budget, Turkish Court of Accounts. In addition to these, the institutions, enterprises and legal entities with which the university cooperates in its area of activities (joint education-teaching, research and development, and community service) are regarded as high priority stakeholders. Their opinions and feedback are gathered, and they are informed, through legal



mechanisms including reports, letters, and meetings.

Another high priority external stakeholder group is identified as the alumni of our university. The methods by which the university communicates with alumni is explained in the coming sections.

## **Gathering Stakeholder Opinions and Feedback**

The administration gathers stakeholder opinions through a variety of mechanisms:

- Satisfaction, Improvement and Feedback Forms (<http://gs.metu.edu.tr/node/124>) for all internal and external stakeholders,
- Annual Satisfaction Surveys for students, academic and administrative staff and alumni.

In relevant topics such as project development, budgeting and human resources planning and implementation, theme-based meetings are held with external stakeholders, at both university and unit level. Their expectations and opinions on the improvement of existing applications, and introducing new ones are put into consideration. In addition to this, the university and the faculties and institutes are currently working on forming advisory boards, in their respective levels.

In addition to this, in order to allow alumni and their employers to offer feedback, **Alumni Relations Office** and **Career Planning Center** are currently working on feedback mechanisms. Units, especially those with accreditation, have their own mechanisms to receive feedback, such as alumni exit surveys and employer surveys.

For example, the **Petroleum and Natural Gas Engineering Department** an “Assessment and Evaluation Loop” has been developed to evaluate Program Educational Objectives periodically. The assessment is mainly done by periodic surveys (Exit Survey, Alumni Survey, Employer Survey, Summer Practice Survey and Exit Interviews). Summer Practice Survey is conducted with company supervisors of the students during their summer practices and they are asked to fill a questionnaire which is included in the Summer Practice Guide of each student. Eight questions are asked to evaluate the performance of the students during their summer practices. These questions are related to their ability to apply knowledge of mathematics, science and engineering, their ability to function in teams, their working discipline and their communication skills. The questionnaires are mailed to the Departmental Summer Practice Committee confidentially and then evaluated by the committee coordinator. At the **Department of Electric and Electronics Engineering** employer survey results, National Industrial Advisory Board (NIAB) meeting reports, and online-alumni survey results, are integrated with the direct feedback of the faculty members.

The Quality Commission has been working on mechanisms to disseminate these applications to all the programs at both undergraduate and graduate level.

### ***Identification and Prioritization of Stakeholders at the Unit Level***

In addition to university level stakeholders, each academic and administrative unit has identified internal and external stakeholders, and mechanisms to communicate with these stakeholders. Table 2.3.1 provides examples of list of internal and external stakeholders at academic unit level.



## *The Involvement of Internal and External Stakeholders into Institutional Decision-Making Processes*

In order to create a sustainable and institutional interaction mechanisms with the internal and external stakeholders, which started in 2018-2022 Strategic Planning process, the units were also asked to create such mechanisms that allow for continuous involvement of the stakeholders with planning and decision-making processes. Units began to deploy survey and focus group applications on an annual basis.

The mechanisms by which these academic units, communicate with internal and external stakeholders, and the issues on which such communication continued are listed as follows:

- The **Faculty of Education** involves its internal stakeholders in different committees that guide the faculty administration in different issues, from human and financial resources planning to curriculum changes. The committee members, mostly from the departments, collect the opinions of their own departments' faculty members and students and share with the committee. They also carry information and the decisions made back to their departments. The opinions of students are collected mostly through surveys administered by each of the departments. The faculty also conducts focus groups, interviews and administers surveys with external stakeholders regarding its interactions with them, and the progress of the faculty in relation to its goals. The faculty gathers the opinions of external stakeholders via mostly meetings. Throughout the strategic planning process, the faculty also conducted some interviews and focus groups with external stakeholders. The mechanism will be improved by more systematically gathering their opinions yearly on issues that they can contribute to and as a way of understanding how the faculty is perceived by the external stakeholders.
- In the **Faculty of Architecture**, juries, colloquiums, studio evaluation meetings, regular meetings of commissions and committees (especially for curriculum renewal activities) serve as mechanisms by which the Faculty gathers opinions of stakeholders, both internal and external. All these activities are influential in collective decision-making processes. The **Department of Industrial Design**, collects the views of the external stakeholders during interviews done in the ongoing project activities in industrial corporations. This interaction helped the Department to include innovative study and work fields in the educational program of the Department and organization of new elective courses and revisions in project topics. The **Department of City and Urban Planning** uses departmental meeting platforms to include inner stakeholders in improvement and decision making processes. Colloquia are useful for student participation. Visits and meetings during site visits with the external stakeholders are platforms to exchange views and communication.
- The **School of Foreign Languages** uses surveys, focus group meetings and interviews to gather relevant data on such issues as needs analysis, program evaluation, SWOT analysis, program design and renewal. Systematic analysis contributes to the decision-making processes of the school.
- The **Institute of Marine Sciences**, conducted a “stakeholder feedback survey,” supported with face to face meetings. Outputs are used in improving courses, the developing Turkish Marine Strategy, national and regional level projects.

Currently, there are no advisory boards serving at the faculty level, however, the **Faculty of Engineering**, the **Faculty Arts and Sciences** and the **Faculty of Education** scheduled the forming of their own advisory boards for 2019. **The School of Foreign Languages'** advisory board consists of the members of the School Board, the head of the English Proficiency Exam committee and a

senior member of R&D. The school has plans in place to add alumni to its advisory board in 2019.

On a departmental level, most of the engineering departments has an advisory board consisting of members from the industry, as it is also an important necessity for ABET certification. They are chosen to represent different sectors of the related professions. The boards meet annually during the departmental career days and advises on shaping the education, research and outreach goals.

In informing stakeholders about applications and decisions about the university, and to strengthen the internal and external communication mechanisms as envisioned by the **2018-2022 Strategic Plan Objective #13**, a new newspaper named “Kampüs” has been published by the university. METU in Press (<http://basinda.odtu.edu.tr/>) website also help all stakeholders to follow news reports mentioning METU. Printed archives of all written and visual material, in relation to **Strategic Objective 11, Goal 2**, has been digitalized.

### *Mechanisms for Student Involvement*

The involvement of students to decision making process is ensured by METU Student Representatives Council, according to the related directive (<http://oidb.metu.edu.tr/orta-dogu-teknik-universitesi-ogrenci-temsilcileri-konseyi-yonergesi>).

In 2018, with the initiation of Institutional Development and Planning Office, Student Satisfaction Surveys mechanisms were set up, with the guidance of ÖGEM. The report on survey methodology and results are presented in Evidence 2.3.1.

### *Alumni Involvement*

In relation to **Strategic Objective #13**, METU employs various mechanisms to maintain its communication with the alumni at both university and departmental level.

At the university level, one of the key mechanisms to continue alumni relations is the Alumni Council (<https://www.odtumd.org.tr/konsej-hakkinda/>), consisting of alumni associations, is held every three months. Representing METU, the Advisor to the Rector responsible for alumni relations, Alumni Relations Office Staff, and other related unit representatives attend the council meetings. In these meetings, parties exchange information and opinions regarding the latest developments at METU and the programs of alumni associations.

- In 2018, the number of alumni registered in Alumni-Mailing List has reached to 68,000, meaning that almost half of METU alumni are included in this list. In 2018, 21 e-mail messages were sent to alumni to inform them about different topics concerning METU society.
- **ODTÜLÜ** Magazine is prepared by **Institutional Communications Office** biannually, in 2018, 64<sup>th</sup> and 65<sup>th</sup> issues were distributed as 9 thousand print editions. The magazine is available online at [odtulu.metu.edu.tr](http://odtulu.metu.edu.tr).
- **METU Alumni Day** has been traditionally held since 1991, awarding 10, 20, 30, 40, 45, 50 and 55<sup>th</sup> year alumni with medals in their names. The event gives the university a chance to keep connected with its alumni, as many departments organize cocktails, picnics, in addition to the medal ceremony held in each department. These encounters help departments to update their

records on alumni. The Alumni Day 2018 was held in September 15, awarding more than 10 thousand undergraduate and 2,800 graduate alumni with their medals.

- In February 2018, METU initiated its ODTUM platform to manage alumni relations on a more systematic manner, allowing communication both among alumni themselves and with the university. The platform allows alumni:
  - To share information regarding their education, training, career, location, as well as their interests. Alumni can contact each other about these interests, career opportunities etc. By the end of 2018, the number of registered alumni has reached to 17 thousand, 91% of which being alumni. (<https://mezun.metu.edu.tr/tr/odtumden-mezunlara-erismek>)
  - To form groups based on department, location and interests and fields of expertise. In 2018, 63 groups were formed on ODTUM (<https://mezun.metu.edu.tr/tr/odtumde-topluluklar>)
  - To offer mentorship to other alumni offering career and internship advices, reviewing resumes and job applications, permitting students to shadow for a day or having simply a cup of tea at the workplace (<https://mezun.metu.edu.tr/tr/odtumde-yonderlik>)

Many departments have their own mailing lists and social media accounts to continue their communications with the alumni.

In 2019, a survey carried out with the initiation of The Institutional Development and Planning Office, prepared and analyzed by ÖGEM and carried out by Alumni Relations Office. The survey was sent to 8,000 of 21,992 students, with stratified sampling, graduated between 2013 and 2018, producing a response rate of 13.14%. 94.5% of the respondents rated their satisfaction level form METU as 84.64/100 and their respective programs as 72.82/100. The report on survey methodology and results are presented in Evidence 2.3.2.

### ***The Involvement of Local Governments, Non-Governmental Organizations, Related Government Offices and Institutions in Institutional Development***

As stated above, METU recognizes CoHE, TUBITAK, the Presidency of Strategy and Budget, and the Ministry of Treasury and Finance as high priority external stakeholders. The university continues regular meetings and correspondence with these institutions and organizations, and participates in work groups in specific themes. This helps the university to receive, much needed information and suggestions, in planning and decision processes, which are the key to the institutional development. In return, the university may offer information to these institutions, about project and investments that would enable our institutional development.

Similarly, the continuing communication and cooperation with the municipalities, associations, chambers, other universities, schools, development agencies, help renew and improve our infrastructure, raise awareness, enrich institutional culture, and create grounds and receive support for joint activities.

Moreover, for departments related to the functioning of local governments (such as City and Regional Planning, Architecture, and Industrial Design), receive support from local governments in carrying out their educational activities.

## Kanıtlar

- [Table 2.3.1 Stakeholders at the Unit Level.docx](#)
- [2.3.1 ODTU\\_Ogrenci\\_Memnuniyet\\_Degerlendirmesi.docx](#)
- [2.3.2 Mezun\\_Memnuniyeti\\_Degerlendirmesi.docx](#)

## 3. EĞİTİM VE ÖĞRETİM

### 1. Programların Tasarımı ve Onayı

#### 3.1. Program Design and Approval Processes

**All undergraduate and graduate programs are designed considering Educational Program Goals, program outcomes and the Turkish National Qualifications Framework for Higher Education (TYYÇ) (<https://egitim.metu.edu.tr/pc>).**

Within the 2018-2022 Strategic Plan, the Educational Policies, Monitoring and Advisory Board (EPİD) consisting of members from various disciplines and levels was formed to systematically plan, observe and evaluate educational studies by the responsible vice rector. The board held its first meeting in February 2018.

#### *Stakeholder Involvement and Feedback*

Members of faculty of commissions within the concerned department of programs who have prepared program proposals in line with the information and data obtained regarding the recent scientific developments, the needs of the related sector and society present their program proposal for the evaluation of the concerned department and/or the commission responsible for education. Following the assessment of the concerned department chair and/or education commission, the proposal is discussed in the department/program academic board. The approved proposal is sent to the concerned faculty/graduate school. After being evaluated by the faculty/graduate school the proposal deemed suitable for assessment at the faculty/graduate school board is presented to the board.

The program proposal is evaluated taking into consideration criteria such as the programs currently offered at the university, the adequacy of the quality and numbers of faculty members, the sustainability of the program, the targeted student profile, employment opportunities after graduation and benefits for the society. A proposal which is approved by the concerned faculty/graduate school board is presented to the Rectorate for evaluation. A proposal deemed suitable for assessment of the senate is presented to the senate. A proposal approved by the senate is sent to the CoHE (YÖK).

Newly designed programs are shared with stakeholders through the university websites, and online and on the printed versions of the academic catalogue. Furthermore, these are shared with the departments and faculties as well as state and private institutions via university members and mail lists.

Processes related to strengths and improvements at different faculties are as follows:

- In the **Faculty of Engineering**, surveys filled by the students, alumni and employers are periodically collected and evaluated by the departments and these serve as inputs to program revision process, in line with the requirements of the ABET accreditation process. Furthermore, feedback from the Department Advisory Boards is collected through regular meetings. The evaluation results for the student outcomes are also periodically shared with the Department Advisory Board members. The departments' web pages show the current curricula together with

the up to date information about the courses, research laboratories, educational and research activities. Most departments have social media presence through Facebook, Twitter, LinkedIn and YouTube.

- In the **School of Foreign Languages**, in large scale curriculum renewal studies, external stakeholders, both graduates and employers, are informed of and involved in the study as participants. They contribute invaluable (qualitative and quantitative) data through semi-structured and structured interviews, focus group meetings and surveys. Informative meetings are held regularly during the study phases and reports of findings are shared with stakeholders.
- In the **Faculty of Education**, overall it is seen that the opinions of the graduates are gathered more often than the employers' opinions. These evaluations should be more systematically collected from the graduates through exit surveys that are conducted university-wide. Currently, the outcomes are not shared with the stakeholders systematically although in meetings with some stakeholders improvements are shared. More systematic mechanisms to collect and disseminate findings need to be identified.
- The **Department of Foreign Language Education** has recently decided to open an MA Program in Linguistics. Before proposing the MA program, an online questionnaire was given to undergraduate students to assess their potential interest in such a program. Moreover, the Department also looked at the feasibility of such a proposed program given the number of existing faculty and responsibilities related to already existing graduate and undergraduate programs. Only when these issues were considered thoroughly did the department propose opening this new MA Program. More information is attached provided regarding the program and the feasibility study conducted in the departments.
- In the **Graduate School of Informatics**, a new PhD program in Multimedia Informatics, is being planned under the Department of Modelling and Simulation, which currently offers only MSc degree. In the design of this program, opinions from their graduates and their advisory board have been taken into account. The advisory board is usually informed via email.

### ***Integration of Research-Development to Education and Teaching at Every Level***

In METU, applications to develop students' competency for research and development at both undergraduate and graduate levels, and these applications are supported by various projects.

At undergraduate level:

#### **• AdimODTÜ Undergraduate Research Projects**

AdimODTÜ, a joint project of METU Corporate Communications Office and METU Development Foundation, where undergraduate, graduate students, student communities and researchers can create their own projects for scientific, cultural and sports activities and share with METU members and enthusiasts living in more than 140 countries with the support of the AdimODTÜ team. As well as providing financial support for projects, the project owners can announce their studies and even ask those interested to make a physical contribution to their project. After the project is completed, a detailed report is sent to sponsors and the persons who are interested in the project. (<https://adimodtu.org.tr>) In 2018, AdimODTÜ sponsored undergraduate level research projects. Of nearly 100 applications, 17 of them involving students from 22 undergraduate programs were found eligible for support. On November 21, 2018 a ceremony was held to award eligible projects. As a result, the target set by the university to increase the percentage of undergraduate programs engaging in undergraduate level research projects (*Performance Indicator 6.1.1*) to 15% by the end of 2018, was exceeded with 44% of programs involved in such projects. The list of sponsored undergraduate projects is provided in Evidence 3.1.1.

- **METU Design Factory**

**Interdisciplinary Design Studio (IDS)** is offered to all undergraduate programs for the 8<sup>th</sup> time in Spring Semester 2018, as an elective undergraduate course, coordinated by **METU Design Factory** (<http://tf.metu.edu.tr/en/>). Groups consisting of students from different undergraduate programs create innovative solutions to real-life problems in collaboration with partners from the industry and NGOs. By the end of 2018, the number of projects carried out reached to 35 with 18 different partner institutions. In addition to projects, consultancy services and workshops carried out by METU Design Factory, preparations are in progress for an interdisciplinary master's degree program that endorses a *Design Thinking* approach.

- **Matter Magazine**

Developed by the Department of Metallurgical and Material Engineering, the magazine only publishes research output by undergraduate students. In this sense, Matter is the first and only scientific journal at undergraduate level (<http://matter.mete.metu.edu.tr/>).

- **EEE STAR Program**

EEE Undergraduate Student Academic Research (STAR) Program is a one-year program that provides undergraduate Electric and Electronics Engineering students with the opportunity to be part of various research groups in the department and conduct cutting-edge research. The STAR Program has been initiated for the first time in 2014, with the aim of encouraging a culture of undergraduate research, and it has become a regular yearly event since then (<http://star.eee.metu.edu.tr/>).

## **Undergraduate Courses and Projects**

In most of the undergraduate degree programs in METU, a variety of courses include a component requiring students to undertake research and project development with the supervision of faculty members:

- In the **Faculty of Education**, faculty members conduct research projects where they provide opportunities to graduate and some undergraduate students to take part as researchers.
- Due to the nature of the design education, the Departments of the **Faculty of Architecture** realized advanced level project-based research activities at undergraduate and graduate level. Undergraduate education is based on uninterrupted studio education across eight semesters. In studio courses, students undertake design projects in increasing complexity. The research skills and competences developed in undergraduate studios are supported by the fieldwork students undertake. The graduate-level studio also has a focus on design research skills and particularly the translation of research outcomes into design proposals. In addition, all but few elective courses at graduate level include the objectives to develop research skills.
- In the **Faculty of Arts and Sciences**, the Laboratory for Computational Ontology (LCO) offers research methodologies in semantic web, knowledge representation, automated inference, textual entailment, and hybrid computation. In the **Biological Sciences** Department, undergraduate Biology program involves 6, Molecular Biology and Genetics program, involves 6 compulsory courses with laboratory component. In addition to these, there are technical elective courses with similar components. Moreover, the Special Project courses for senior class also involves laboratory work towards the topics of students' interest. In the **Department of Sociology**, specifically in elective courses, there are projects including field work. While the projects aim to help students understand the course topics, they also provide our students with a competence of sociological research. Different courses support this competence from different angles. The Department of Chemistry, hosts several research/education activities to build research competence. For example, undergraduate research courses "CHEM499" are offered in



both spring and fall semesters. This course is intended to improve the research capabilities of undergraduate students. Each student conducts an independent research project under the supervision of one of the faculties, as they learn how to do research and report scientific results. Additionally, both undergraduate and graduate students have a chance to join independent research groups in the department during their stay at METU. METU chemistry hosts several independent research groups conducting world-class research. In the **Department of Psychology**, project development component is added in undergraduate level must and elective courses. Each semester, two or three workshop courses are offered in order to enable students to carry out research activities at undergraduate level.

- The **Faculty of Engineering** organizes the “Engineering Day” annually in May and encourages the students to participate in the design and research poster competitions. In addition to these there is an engineering team task competition which is held on site with students’ participation. Multiple awards are presented at the end of the day. Departments in the faculty provide research opportunities to students in several forms. Department of Food Engineering involved in two TUBITAK 2209 grants in 2018 with undergraduate students in the role of investigators. Through undergraduate research courses offered in our departments the students are encouraged to take roles in research projects.

At graduate level:

- **ASELSAN Academy**

In order to take advantage of university-industry cooperation with profound R&D implications; METU, ASELSAN and three Research Universities (Gazi University, Gebze Technical University and Istanbul Technical University) signed a Graduate Education Protocol in 2018. The program entails cooperation not only with ASELSAN, but also among participating research universities towards contributing to our defense industry in the fields of technology and engineering. The number of graduate students participating in the ASELSAN Academy program are increasing with the heightened involvement of METU. The program was evaluated in a workshop hosted by METU in Northern Cyprus. The program will be continued in 2019.

Applications integrating research and development with teaching processes run by academic unit level include conferences, workshops, and academic projects are convened by our faculty members in order to foster a research culture in our students. Also, graduate student conferences and workshops are a means to develop research competence.

- **Graduate School of Informatics** holds Open Research Day event, yearly, which is an opportunity for students to present their research as posters. Students are also supported via projects to attend international conferences to present their research.
- Each student in the **Institute of Marine Sciences** gains practical experience in marine, physical and chemical laboratories and operational experience both in research cruises and field studies. Besides, students participate in workshops and summer schools related to their field of study to gain research competence. In 2018, all METU-IMS students participated in a monthly or seasonal scientific cruises which mainly supported by i) ODTÜ-BAP II - DEKOSİM, ii) TUBİTAK 1001 - Hydroelectric Plants and Possible Effects on Marine Ecosystems, iii) ODTÜ-BAP I - Erdemli Time Series Marine Surveys 2018, ODTÜ DÖSİM - Integrated Marine Pollution Monitoring Program (2018 Summer-2019 Winter Period), iv) TUBİTAK 1001 - Computer Modelling as a Tool for Determining the Fundamental Niche of Lessepsian Migratory Fishes in Mediterranean coast of Turkey projects.
- In the **Faculty of Arts and Sciences**, graduate students at **Biological Sciences** are carrying out

research projects under BAP, TÜBİTAK, EU, CoHE 100/2000, SANTEZ programs. In Psychology graduate programs, the students are required to complete a minimum of two "Supervised Research" courses which direct students to carry out research projects in areas outside their thesis topics.

### ***Sharing of Program Educational Outcomes with Stakeholders***

The university's common outcomes, program outcomes, and program educational objectives can be accessed through <http://egitim.metu.edu.tr/en/node/221>. In addition to this website, the METU syllabus program (<https://odtusyllabus.metu.edu.tr/>) and the academic catalogue are platforms for METU faculty to share program goals and learning outcomes with students.

### ***Alignment with the National Quality Framework***

Matrix tables showing the match of the National Quality Framework and program outcomes for graduate and undergraduate programs at METU Ankara and NCC is shared at the link below. <https://egitim.metu.edu.tr/en/common-outcomes-undergraduate-programs/>.

### **Reflecting the workload of national/international professional applications, fieldwork and internships to programs**

The workload for internships has been determined by the departments using the ECTS credit system. This way all internships received an ECTS credit. The list of departments with compulsory internship programs are provided in the evidences.

#### **Kantlar**

- [3.1.1 List of ADIMODTU Undergraduate Projects.xlsx](#)

## **2. Programların Sürekli İzlenmesi ve Güncellenmesi**

### **3.2. Continuous Monitoring and Evaluation of Programs**

#### ***The Methods and Frequency by which the Programs are Evaluated and Renewed***

It is the primary responsibility of academic boards of departments, institutes/faculty educational committees to design, improve, approve and monitor all programs.

Within the 2018-2022 Strategic Plan, EPİD aimed to analyze core curriculum needs and make improvements accordingly. All programs were evaluated at the Faculty level. It is known that core curriculum is already applied in engineering programs, while preparations to introduce a core curriculum in the Faculty of Education is still underway. In other faculties, introducing a faculty-wide core program is also being evaluated and the work is still going on.

In relation to **Strategic Objective #1**, the review of interdisciplinary programs (DAPs) has been carried out throughout 2018. Total of 20 interdisciplinary programs were evaluated on the basis of resources human and financial resources available, and the way these resources are utilized. Starting in Fall 2018-2019 semester, DAP Information Pack has been compiled for each program, information covering student numbers, scholarship opportunities, number of publications, permanent and supporting faculty numbers, research activities carried out, research and application centers within DAPs and related activities were collected for a detailed analysis to be carried out in 2019.

To serve **Strategic Objective 5, Goal #1**, 24 of 26 basic sciences courses were evaluated with face-

to-face interviews with course coordinators, and surveys to gather student opinions. In 2019, the remaining courses will be evaluated, and findings will be used in carrying out necessary improvements.

Within the scope of on-going evaluation and renewal of programs, the Center for Advancing Learning and Teaching has carried out ODTÜSyllabus Program activities that relate to all programs. Following the design, development, and piloting stages, ODTÜSyllabus program started to be used on METU Ankara and North Cyprus campuses in the 2014-2015 academic year. A Users' Manual was prepared for the teaching faculty. ODTÜSyllabus Program is continuously improved. Thus, the Users' Manual is systematically updated by the Center for Advancing Learning and Teaching to introduce the changes and to assist the users.

Some of our departments have advisory boards, comprised of internal and external stakeholders, which meet with the teaching faculty of the program on regular basis to evaluate the quality of education and to discuss the learning objectives. Students can provide their feedback on each course that they have taken, as regards the course content, effectiveness of instruction, and the teaching staff, by means of course evaluation questionnaires administered at the end of the academic semester. This feedback is analyzed by the department/graduate school administration, and follow-up evaluation meetings with the teaching staff are held when necessary. Salient points that require amendments in the program are placed in the agenda of the academic board. The improvements suggested by the boards are subject to the approval of higher boards (e.g., Faculty Board).

Examples:

- The **School of Foreign Languages** uses surveys, focus group meetings and interviews to gather relevant data on such issues as needs analysis, program evaluation, SWOT analysis, program design and renewal. Systematic analysis contributes to the decision making processes of the school (Evidence 3.2.1 SFL Stakeholder Opinions Report 2018 (in Turkish) and Evidence 3.2.2 SFL Curriculum Renewal Cycle Diagram).
- **Political Science and Public Administration Department** has identified benchmark universities (LSE, Science Po, Chicago University, Harvard University) against which the curriculum is compared on a continuous basis. The Curriculum Committee is making improvements based on obtained inputs from benchmarking. PSPA Department carried out a survey with graduates from public and private sector and academia for curriculum development purposes. (Evidence 3.2.3 PSPA Process for the Review of Program).
- ***Achieving Program Aims and Outcomes***

All syllabi include such information as pre-requisites, schedule of classes, objectives, outcomes, a matrix featuring learning and program outcomes, teaching principles, assessment and evaluation, course book(s) and lists of other sources.

Applications towards determination of Program Outcomes; examples from faculties, institutes, schools and departments

- All programs within each department in the **Faculty of Education** complete the NQF Matrix, matching for each of the courses within each program as needed making sure that each course contributes to program outcomes aligned with the Higher Education competencies.
- Program outcomes are mapped to NQF and documented as a matrix for each program within the **Faculty of Engineering**.
- In the **Department of Psychology**, an Education Commission has been constituted to evaluate NQF for undergraduate and graduate level programs. As a result the outcomes of

each course was matched with the program outcomes in a matrix, shared with the students in ODTÜSyllabus program.

- In the **School of Foreign Languages**, learning outcomes are formulated to address the needs of learners. They are organized in order to ease the comprehension and internalization of course content, ultimately inducing its application. They describe not only knowledge, but also skills and attitudes. It is made sure that learning outcomes guide instruction and assessment through systematic reference to them. The learning outcomes are described with reference to The Common European Framework of References (CEFR). It is of utmost importance that they are aligned with Turkish National Qualification Framework for Higher Education (NQF/TYÇÇ). There is emphasis on learner autonomy, improving learning competency and raising awareness in ethical values as highlighted in the NQF Matrix. Learning outcomes intended in each module or program are explicitly announced to learners in course materials and on department websites.

### ***Monitoring Mechanisms, Improvements, Stakeholder Involvement and Feedback***

At faculty, institute, school and program level, various mechanisms are employed to monitor whether the program outcomes are achieved. Improvements are made in cases when the monitoring and evaluation mechanisms reveal that the program outcomes are not achieved at a satisfactory level. Improvement measures are continuously monitored to ensure that they produce desired results. Improvements (renewals and modifications) and their results, are shared with internal and external stakeholders in university and faculty/institute/department/program websites, and through on-line and printed academic catalogues.

- In the **Faculty of Engineering**, student outcomes of all programs are systematically evaluated through the performance indicators that are defined by the respective ABET committee and approved by the Department Academic Boards. In the evaluations direct and indirect assessment tools are utilized (Evidence 3.2.4 METE Employer Survey Report 2018, 3.2.5 METE 2018 Student Exit Survey Report, 3.2.6 METE Student Outcomes Survey Sample 2018 for surveys and reports as conducted in Department of Metallurgical and Materials Engineering and 3.2.7 GE Surveys for Geological Engineering Department).
- In the **Faculty of Education**, these assessments are made formally using course evaluations student progress to degree completion as determined by their performance in the courses they complete and their performance in graduate work including qualifying exam results and the thesis work that they complete.
- In the **Faculty of Architecture**, the **Industrial Design Department** organizes regular meetings, workshops and group studies and stakeholder questionnaires to monitor the program objectives and outcomes. In 2018, ECTS workshop provided reassessment of a number of program lots. The **Department of Architecture** regularly monitored and evaluated the undergraduate and graduate programs in the meetings of the graduate programs, in the advisory board of the department, and in the general assembly meetings of the department. The teaching processes and outcomes of the Architectural Design studios are presented by the coordinators and instructors of the studio courses and discussed together with the participation of the academic staff including research assistants. A special committee, the Curriculum Development Committee, is created to assess and revise the existing curriculum of the undergraduate program. The Department of Architecture has recently applied to the national Accreditation Board of the Departments of Architecture (MIAK). An assessment meeting was organized with the students of the undergraduate program in January 2018, and the students' views are being considered in the development of the curriculum.
- The curriculum of English instruction is primarily the responsibility of the administration of the

**School of Foreign Languages**, working in tandem with the **Department of Basic English** and the **Department of Modern Languages**. The METU-SFL administration is responsible for ensuring that the curriculum, syllabi and the relevant teaching materials are designed, developed, implemented as well as evaluated in a systematic manner, consistently facilitating efficient and effective learning. For example, the renewal of the SFL English Proficiency Exam (EPE) was evaluated through not only statistical analysis (Evidence 3.2.8 Item Analysis Report (December 2018)) but also through the exploration of stakeholders' perceptions (Evidence 3.2.9 EPE Perception Report). In similar vein, the large-scale program evaluation report, which comprised both departments and led to improvements in the programs of both departments.

- In the **Institute of Informatics**, graduates are contacted via email and requested to fill in a survey or provide information on their work area, discipline, publications, patents, etc. Each department prepares an annual self-evaluation report, supported by data obtained about the student applications, acceptance and registration rate, number of graduates, their publications, etc. In response to yearly trends, improvements are made. For example, identifying a decline in the number of publications made by the students, the **Department of Information Systems** has recently made it compulsory for PhD students to submit a paper to an A-listed journal and receive a response other than strong reject, to be able to defend their theses.

### **Institutional Support for Accreditation Processes**

In addition to 13 undergraduate programs accredited by ABET, in the Faculty of Engineering; the Department of Psychology by Turkish Psychologists Association, in the Faculty of Arts and Sciences; and the Faculty of Economics and Administrative Sciences awarded with “EFQM Certificate of Determination”; in relation to **Strategic Objective# 5, Goal 6**, which encourages programs at all levels and fields to get accreditation from the reputable national and international agencies, the current progress of our departments are as follows:

- In **FEAS, The Department of Political Science and Public Administration** has been accredited by “European Association for Public Administration” in 2017. Business Administration Department is continuing its AACSB accreditation process and targeting completion by 2020.
- The **Department of Architecture** applied to the national Accreditation Board of Architecture (MIAK). An Advisory Board and a Preparation Committee are formed. A series of self-assessment meetings will be organized in the spring semester 2018-2019.
- In November 2018, the **School of Foreign Languages** made an application for “Pearson Assured Certification” (Evidence 3.2.10) with the hope that eligibility for accreditation will align SFL with international benchmark and will make it more visible worldwide. As part of this process, a quality advisor from UK visited the organization on December 6, 2018 and evaluated the quality processes. Subsequently, the school's dedication to quality has paid itself off; SFL and its departments have been officially accredited by Pearson Assured. The SFL also participated in the External Review of Preparatory Programs pilot study initiated by YÖKAK in 2018.
- Currently two programs are planning to get involved in the accreditation process in the **Faculty of Education**.

As mentioned above, the university set increasing the number of accredited programs as a strategic objective. To support units in their accreditation process, the university administration evaluates the proposed accreditation processes and accrediting bodies. If the university decides in favor of the accreditation—as accreditation is not regarded obligatory for all the programs—the units are supported financially in their accreditation processes. As a result, according to **METU Strategic Plan Goal #5.6**, the university set the number of programs undergoing accreditation processes as a performance indicator (*PI. 5.6.3*), and outperformed the target value with 18 programs currently

going through accreditation processes.

In facilitating accreditation procedures, to save financial and human resources, the university also required programs to prepare self-evaluation reports as measured by (PI. 5.6.2). In 2019, the university required all academic units to prepare Unit Self Evaluation Reports (U-SERs), as part of Institutional Self-evaluation Process ordered by CoHE. The Process is explained in detail in the Section on Quality Assurance Mechanism.

## Kanıtlar

- [3.2.1 SFL Stakeholder Opinions Report 2018 \(in Turkish\).docx](#)
- [3.2.2 SFL Curriculum Renewal Cycle Diagram.docx](#)
- [3.2.3 METE Alumni Survey 2018.pdf](#)
- [3.2.3 PSPA Process for the Review of Program.docx](#)
- [3.2.4 METE Employer Survey Report 2018.pdf](#)
- [3.2.5 METE 2018 Student Exit Survey Report.pdf](#)
- [3.2.6 METE Student Outcomes Survey Sample 2018.pdf](#)
- [3.2.7 GE Surveys.pdf](#)
- [3.2.8 Item Analysis Report \(December 2018\).docx](#)
- [3.2.9 SFL EPE Perceptions Report.docx](#)
- [3.2.10 SFL Pearson Assured Certification Letter.pdf](#)

## 3. Öğrenci Merkezli Öğrenme, Öğretme ve Değerlendirme

### 3.3. Student-Centered Learning/Education

Above all, the vice rector in charge of educational issues, **Center for Advancing Learning and Teaching**, and **Office of Instructional Technologies** work in coordination to ensure that the university carries out student centered teaching, learning, and evaluation activities.

**Center for Advancing Learning and Teaching** regularly conducts **Effective Teaching Seminars and Coffee Hour Sessions**, which provide an opportunity to share experiences about learner-centered course design, teaching methodologies, and evaluation and measurement techniques on annual basis. In addition, the Center provides the teaching faculty with private consultancy on how to make their classes more learner-centered and organizes seminars about learner-centered approaches at several departments upon their request.

**Office of Instructional Technologies** also gives seminars, individually to those instructors who are interested or to departments, on how to integrate technology into teaching and how to encourage active student participation, as well as supporting them with specific publications and materials they developed themselves.

Examples from academic units:

- In almost all courses in the **Faculty of Education**, student-centered instructional methods—such as micro teachings, student presentations, drama, case studies, individualized study, project-based learning, and problem-based learning—are incorporated.
- In the Faculty of **Economics and Administrative Sciences**, students learn what and why they learn through course content and objectives on course outlines shared via department websites. Student grading is a blend of individual and team based demonstrations of learning such as exams, case assignments, projects, other team activities.
- All of the engineering programs have courses that involve activities such as active learning exercises, projects, experiments that facilitate student-centered learning. Through these



activities, students acquire skills such as problem solving, life-long learning, effective communication and the ability to apply theoretical knowledge on practical engineering problems.

- The education system adopted has been student-centered since the foundation of the Departments in the **Faculty of Architecture**. In the Basic Design and Architectural Design Studios, students develop their design works with the guidance and monitoring of the instructor. They are also encouraged to do research, and required to do presentations based on their individual and/or group work in the other courses besides the design studios. Particularly in the Department of Industrial Design, students of the last year select a graduation project topic and conduct it in an industrial corporation under the supervision of a professor from the Department. At the end of this experience students share their views with a questionnaire to be used for the development of the course. First year students are asked to compose two letters in the beginning and at the end of the first semester on their expectations from the Department and their experience. These letters are seriously evaluated by the professors to create an effect on the curriculum and educational activities. In the same Department, the global studio course provides international and intercultural communication and team work through distance learning option. Another course named Collaborative Design is based on METU wise interaction between the students of various departments like engineering and administrative sciences. The students of the Industrial Design Department are very active in METU Design student group and its activities like exhibitions and fairs.
- In **School of Foreign Languages**, teaching English as a foreign language is intertwined with helping students develop the skills that they will need to survive in the academic and professional life of the 21st century. That is, teaching and learning activities are designed to make students collaborate, take on responsibility, think critically, use creativity, solve problems, and communicate effectively while building linguistic competencies. SFL attaches great importance to enabling individuals to take initiative, and equipping them with information literacy competencies, and lifelong learning skills. This is enabled through such mechanisms as the Self-Access Centre and the Learning Advisory System (initiated in 2018).

### *The Diffusion of Student Centered Learning Applications within the University*

#### **Course/Instructor Evaluation Surveys**

The surveys are conducted at the end of every semester, since 1993. Survey consists of two parts:

- In the first part, the students are asked to evaluate the course by answering 11 questions.
- In the second part, the students answer 11 questions on the performance of the instructor.

The average points from both parts and the ranking of the instructor within department/faculty/university is calculated and reported. Instructors also have access to comments regarding the courses and instructors, as collected with open-ended questions. Feedback from the surveys are analyzed by the instructor, department chair, and the dean in order to be able to make improvements, if necessary.

#### **Developing teaching staff's competency on student-centered and/or active learning**

**METU Center for Advancing Learning and Teaching (ÖGEM)** aims to support the improvement of learning and teaching environment of the university. Within this framework, METU ÖGEM implements programs to support academic development of students, provides services for faculty members in order to improve and enhance teaching, and arranges professional orientation programs

for new faculty members.

In relation to the **Strategic Objective #5, Goal 5**, to improve pedagogical awareness level of faculty members, the Academic Development Program included an Effective Teaching Seminar as well as Peer Observation and Evaluation applications. The course evaluations are carried out during the semester for the entire teaching staff. Between September and December 2018, Effective Teaching Seminars are organized for research assistants.

In 2018, ÖGEM designed a trainer training program for faculty members which will be implemented in 2019. This program aims to raise pedagogical awareness among faculty members.

Besides, as mentioned further above in the report, projects to improve research capacity of students can also be mentioned as activities to improve the competence of faculty members in terms of providing a more learner centered approach to education.

### ***Calculating Course Credits based on Student Workload***

The efforts to determine European Credits Transfer System (ECTS) was completed in 2018, under the coordination of EPID. Representatives from each undergraduate program are trained through workshops, also supported with manuals regarding the process of ECTS calculation. These manuals are shared at <https://egitimplan.metu.edu.tr/kilavuzlar/>. ÖGEM also offered support and feedback for instructors throughout the process.

ECTS values for all undergraduate and graduate courses are shared in online academic catalog, accessible at: <https://catalog.metu.edu.tr/>.

Examples:

- In the **School of Foreign Languages**, the ECTS credits of the courses are determined by the department considering the time students spend to get ready for the course/exams/assignments both in and outside the classroom. The students are informed about the courses in detail following the course outline in the Syllabus Program, Department webpage and METU OpenCourseware. Every semester, in the first meeting with the students, the instructors distribute the course outline of the course to all the students in class. The students are also informed that they can find the soft copies of this document on the department's webpage.
- For all of the undergraduate programs in the **Faculty of Education**, the content of the programs are developed by and the ECTS (European Credit Transfer System) are determined by the Higher Education Council and the workloads are determined accordingly.
- Each department within the **Faculty of Education** worked on determining the workloads based on the ECTS credits for each course that is offered by each of the departments. Course coordinators take the lead in this process. This information is shared with all students and academics of the university through the METU Syllabus Program online and shared with all interested parties in department websites.
- The Departments of the **Faculty of Architecture** allocated ECTS credits to the offered courses in the programs. However, student surveys are not properly used in this process. Dissemination of the program and course info packs with objectives and acquisitions are done through department webpages and METU Course Catalogue contents in the Industrial Design and Architecture Departments. The City and Regional Planning Department share the educational objectives and acquisitions in national and international planning schools union meeting. The **Department of Architecture** notes that since the total ECTS credits of the undergraduate

program is calculated as 280 ECTS credits, the total credits had to be decreased to 240 ECTS credits despite the fact that the total work load expected from a student to graduate is higher in architectural education. The excess work load confirms the necessity to increase the minimum years of education in architecture to 5 years and 300 ECTS in conformity with the international requirements of equivalence.

### ***Student Input in Calculating Course Credits based on Student Workload***

In calculating ECTS credits, the units are conducting Student ECTS Workload Calculation Survey prepared by METU Education Planning Commission. The survey aims to calculate the number of hours spent in various components (theoretical lectures, applications, seminars, individual study, examinations, assignments etc.) for successful completion of a course, based on student opinions. In addition to this, faculties have different mechanisms to incorporate student opinions to ECTS calculations:

- In the **Department of Architecture**, self-assessment meetings are held with the undergraduate students and recent graduates. Questionnaires are applied to the students to assess the work load of the courses. The results of the student evaluation of the course loads are considered while the ECTS credits of the courses are revised. Furthermore regularly done course evaluation questionnaires are effective means to collect student views. FARCH incorporates a Student Office where students share their thoughts about operations and procedures in regard to the students. Dean and his assistants regularly meet with the student representatives and collect their views. The Faculty student representative is regularly invited to the Faculty meetings.
- In the **Faculty of Education**, all the departments implement course evaluations at the end of the semester to gather students' evaluations of the courses and some departments also conduct surveys and focus groups with their graduate students in particular to identify their needs and areas that need improvement. The faculty encourages students to make their general complaints to the faculty.
- In the **Faculty of Economics and Administrative Sciences** course evaluations are carried out as part of METU's student assessment programs. (Ask lists of average response rates, available suggestion systems; examples for improvements done; how performance of suggestion systems are traced i.e. suggestions, response time to suggestions, % of suggestions implemented, how long it took to implement suggestions)
- In the **Faculty of Engineering**, Ad Hoc meetings with the student representatives from Engineering Departments are held. Students are welcomed to schedule a meeting with the Dean and the Associate Deans. If there is any issue that needs further action relevant Faculty Committees are involved.

### ***Internship Workloads***

Internship workloads are calculated by the department, internship activities and applications are carried out by departments. Faculties and departments may announce internship announcements. Some of the departments appoint a faculty member as internship coordinators. Of the 41 undergraduate programs, 12 has compulsory/mandatory internship applications. Detailed information about internship requirements and ECTS credits can be found at [http://www.metu.edu.tr/tr/system/files/2015-2017\\_general\\_catalog\\_final.pdf](http://www.metu.edu.tr/tr/system/files/2015-2017_general_catalog_final.pdf).

Examples:

- CHEM 401 Summer Internship is the mandatory non-credit course that should be completed to be graduated from the **Department of Chemistry**, with two options:
  - International summer internships (International Companies & International Universities)

- or,
- National summer internships (National Companies & Government Agencies).

The summer internship program should not be less than 6 weeks. Additionally, each student should bring a sealed report from the supervisor. That program creates future contacts with well-reputable companies and universities. University of Minnesota, University of Chicago, UCLA, University of Texas at Austin, University of Washington are some of the locations that our graduates completed their mandatory summer internships. Henkel, Roketsan, TAI, Kavaklidere, Proctor and Gamble are national and international companies, government agencies that our graduates involved in summer internship programs.

- In the **Department of Psychology**, PSY300 Summer Internship is a must course aimed at helping students to obtain an understanding of professional application. The students are required to complete a 20-day internship in the same institution, and the following semester registering the course to presenting a report on the topic, involving a relevant literature review. The course is worth 6 ECTS credits, equivalent of 170 hours of workload (Evidence 3.3.1 PSY 331 Project Guide and 3.3.2. Department of Psychology Directive for Summer Internship).
- At the department of **Food Engineering**, summer internship is mandatory as in other engineering programs offering undergraduate degrees. Students are required to complete two internships upon completion of the 2<sup>nd</sup> and 3<sup>rd</sup> year at food processing facilities (Evidence 3.3.3 Food Engineering Internship Guide).
- Also see summer internship directive for Department of Metallurgical and Materials Engineering (Evidence 3.3.4 METE Directive for Internship).

### ***The Use of ECTS in International Student Exchange Programs***

In international student exchange programs, such as Erasmus and Mevlana, the transfer of ECTS credits of courses taken abroad is subject to department approval. Detailed information can be accessible at <http://ico.metu.edu.tr/programs>.

### ***Elective Courses***

In METU, elective can be categorized as follows:

- For all faculties except for the Faculty of Engineering
  - Departmental and Non-Departmental Electives
  - Free Electives
- For the Faculty of Engineering
  - Technical and Non-Technical Electives
  - Free Electives

Departmental electives are open only for departments' own students, yet departments may determine a quota for students from other departments. Other elective courses may be open to students from predetermined programs or all other programs. These elective courses are coordinated by the departments.

Studies regarding elective courses are carried out by related EPID workgroup. In order to help students access detailed information regarding the available elective courses, an "Elective Course Platform" is being developed in collaboration with the Directorate of Computing. Towards this end, information regarding elective courses were collected from the programs. This information will be transferred to the platform. Also mechanisms to keep the platform up-to-date is also in the planning phase.

The number of electives that can be taken in any semester/year and throughout the program is defined by the curricula. Students who are willing to take elective courses beyond the allowed number/credits, are allowed to take elective courses, but credits from these extra elective courses are not included in credits required for graduation. In METU, students can elect a wide array of courses from the Department of Fine Arts and Music, Department of Modern Languages and other departments.

**Strategic Objective #5, Goal 4** entails encouraging the students in taking electives from other disciplines by facilitating enrollment procedures and opening new courses. In the **Department of Modern Languages**, three new courses were offered in 2018. Some departments prepared a list of elective courses from other departments, which are available to their students.

As an exemplary practice, in 2018 Fall Semester, a new elective course was offered to all students by **Food Engineering Department**(FDE 100, Food Myths and Facts). This new course aims to teach food and its components to students and to encourage students think in different ways about the food choices they make. It is also aimed to guide the students on known ‘food myths’ that do not have any scientific base. The misinformation on foods spreading on the public is also addressed throughout the course. There is also a historical aspect where history about some foods are also presented. Since it was the first time this course was offered, to introduce it to the student’s social media tools were used and a short video was casted and posted to social media pages. Consequently, the course got significant attention from the students and in the 1<sup>st</sup> semester it was offered, 223 students registered for it. In spring 2019, it was offered again with a capacity of 253.

Electives courses also help students attain general program outcomes, not-specific to the field.

### ***Academic Counselling***

The academic counselling services to students at all levels are carried out by faculty members, the scope of this service is defined in academic rules and regulations (<http://oidb.metu.edu.tr/en/academic-rules-and-regulations>).

Following the 2015 study by ÖGEM on the effectiveness of academic counselling processes, the **Strategic Plan 2018-2022, Objective #4** envisioned the introduction of a new course METU 101, for the orientation of new incoming students to university life, and designing a new counselling mechanism for students at all levels. These new mechanisms has been studied by two different EPID work groups.

In 2018, METU appointed *Dean of Students*, who would monitor and students’ personal, cultural, social, scientific and professional developments, working on the solutions to their problems in cooperation with academic and administrative units, and aiming to provide them with an effective and efficient learning environment. The Dean of Students:

- The foundation and coordination of the activities of student societies under the Directorate of Cultural Affairs and the Office of Sports,
- Offering scholarships and aids to students from METU and other resources,
- Executing Rules and Regulations for Student Discipline at Higher Education Institutions,
- The Council of Student Representatives elections and activities.

### **Students’ Assessment and Evaluation Processes**

Students' assessment and evaluation processes, examinations evaluations and graduation requirements, are announced at Section III of Academic Rules and Regulations Governing Undergraduate Studies (<http://oidb.metu.edu.tr/en/middle-east-technical-university-rules-and-regulations-governing-undergraduate-studies>) for undergraduate levels and Academic Rules and Regulations Governing Graduate Studies (<http://oidb.metu.edu.tr/en/middle-east-technical-university-rules-and-regulations-governing-graduate-studies>) for graduate programs.

The process of matching of course learning outcomes with program outcomes has gained pace with the introduction of ODTÜSyllabus program in 2015. Towards this end, a series of manuals and seminars are offered, to help course instructors regarding course aims and outcomes, teaching methods and related assessment and evaluation methods. For those instructors who need further assistance, ÖGEM offers personal counselling in these issues.

Program outcomes designated for all programs are announced at <https://egitim.metu.edu.tr/pc>. Course outcomes are prepared in relation to program outcomes and announced at (<https://odtusyllabus.metu.edu.tr/>). Engineering programs with ABET accreditation measure program educational aims and outcomes in relation to questions in examinations, assignments, and other assessment and evaluation tools. The efforts to disseminate similar mechanisms for other programs is currently in progress.

### ***Attendance and Examinations***

The conditions regarding Attendance and Examinations are regulated by the following rules and regulations:

- Academic Rules and Regulations Governing Undergraduate Studies (<http://oidb.metu.edu.tr/en/middle-east-technical-university-rules-and-regulations-governing-undergraduate-studies>)
- Academic Rules and Regulations Governing Graduate Studies (<http://oidb.metu.edu.tr/en/middle-east-technical-university-rules-and-regulations-governing-graduate-studies>)
- School of Foreign Languages Rules and Regulations Governing The Department of Basic English Preparatory Class (<http://oidb.metu.edu.tr/en/middle-east-technical-university-school-foreign-languages-rules-and-regulations-governing>)

### ***Graduation Requirements***

The graduation requirements for each of the programs offered in METU are shared in detail, on <http://program.metu.edu.tr/en>.

### ***Mechanisms to Collect and Handle Student Complaints***

Students can share their complaints and grievances through different mechanisms:

- Satisfaction, Improvement and Feedback Form (<http://gs.metu.edu.tr/memnuniyet-iyilestirme-geribildirim-formu>) which is delivered to the Office of the General Secretary. The forms is also accessible via ODTU smartphone application. Filled forms are distributed to administrators and



units relevant to the topic of complaints, and students are offered feedback within a short time period.

- Students can deliver their complaints in to Registrar's Office through letters or emails.

In 2019, with the initiation of The Institutional Development and Planning Office, OGEM conducted a survey for students of all levels (1,600 preparatory, 5,000 undergraduate, and 2,400 graduate) with random sampling. The survey was also conducted with all international students (207 undergraduate and 433 graduate). The survey was sent via e-mail producing a response rate of 10% for preparatory level, 31% (16% for international students) for undergraduate and 21.5% (13.9% for international students) for graduate level. The results of the survey were shared with all the administrative and academic units involved. The students identified Campus Environment (28.25%), Quality of Education (20.62%), Domestic Reputation (18.71%) and the Faculty (11.53%) as the major strengths, and Student Support Services (%0.27), Graduate Network (2.47%), Research Projects and Publications (3.54%), Social, Cultural and Sports activities (5.08%) and International Reputation(5.86%) as the areas of improvement. The surveys will be executed on an annual basis. The summary of results survey results is shared in the Evidence 2.3.1.

In addition to these general mechanisms, issues requiring special attention are handled with relevant units, in order to provide more instant and effective feedback, and take measures when necessary. These units include the Disability Support Office and Gender Equality Support and Sexual Harassment Prevention Unit (CİTÖB).

In addition to university wide mechanisms and units, academic units have their own mechanisms to handle student complaints. For example, in the **School of Foreign Languages** strictly adheres to a complaints and appeals policy, in its commitment to providing a quality service for in an open and accountable way that builds the trust and respect of our stakeholders. One of the ways in which we do this is by listening and responding to the views of our teachers, students and administrative staff.

- **Complaints:** Feedback received in the form of complaints is handled without delay. Many complaints being informal, concerns are resolved quickly by enabling mediation between the complainant and the source of the complaint. If concerns cannot be resolved informally, there is a formal complaint procedure for a fair and satisfactory resolution. The complainant bring their written complaint to the Assistant Chairperson responsible for students affairs (in case the complainant is a student), or to the Chairperson (in case the complainant is a teacher) within 7 days of the issue arising. The Chair or Assistant Chair may try to negotiate and mediate between the parties involved. In case the issue cannot be resolved, the complaint is forwarded to the Director of SFL and tried to be resolved between the parties involved. In cases where the complaint requires disciplinary action, the procedure is started by the Director and dealt with according to the rules and regulations pertaining to students or staff. Utmost importance is given to confidentiality.
- **Appeals:** If a student is dissatisfied with the assessment process and/or a decision reached by a formal assessment on their academic work, they may make an appeal following a formal procedure. In the case of METU-EPE, an appeal must be submitted online at the link which becomes operational when the grades are announced on the METU-EPE webpage. Appeals may be lodged within four months after an assessment. The appeals process will normally be completed within a month's time frame. The student will be able to view the result of the review via the METU-EPE webpage, which is accessible with the student ID number/application number.

- [3.3.1 PSY 331 Project Guide.pdf](#)
- [3.3.2 Department of Psychology Directive for Summer Internship.pdf](#)
- [3.3.3 Food Engineering Internship Guide.pdf](#)
- [3.3.4 METE Directive for Internship.pdf](#)

#### 4. Öğrencinin Kabulü ve Gelişimi, Tanıma ve Sertifikalandırma

##### 3.4. Student Enrollment, Development, Recognition and Certification

###### *Acceptance Criteria for Incoming Students*

###### *Undergraduate Programs*

Admissions to undergraduate programs are enabled only once a year, in the fall semester. The quota and acceptance criteria for Turkish citizens and international students differ.

###### *Students of Turkish Nationality*

The centralized admissions are regulated by Measurement, Selection and Placement Center (OSYM) with the Institutions of Higher Education Exam (YKS). The program quotas and other information regarding admissions is available at (in Turkish): <http://www.adayogrenci.metu.edu.tr/ankara/puan-ve-kontenjanlar>.

For students not admitted through centralized system, rules and regulations stated by relevant directives apply:

###### *For transfer students*

Directive for Student Transfers for Associate Degree and Undergraduate Programs: <http://oidb.metu.edu.tr/en/middle-east-technical-university-directive-student-transfers-associate-degree-and-undergraduate>.

###### *For Double Majors*

Directive for Double Major Programs:

<http://oidb.metu.edu.tr/en/middle-east-technical-university-directive-double-major-programs>

###### *For Minors*

Directive for Minor Programs:

<http://oidb.metu.edu.tr/en/middle-east-technical-university-directive-minor-programs>

###### *International Students*

Sixty different criteria, approved by the University Senate and COHE, are used to screen International students before admittance to METU. The Examination for Foreign Students for Higher Education Programs in Turkey (YÖS) is not accepted. The acceptable exams for undergraduate programs in METU are made available via this link. <https://iso.metu.edu.tr/en/application-requirements>.

The applications are carried out online within the specified dates. After preliminary evaluations eligible applications are passed to Education Commission consisting of Vice Rector responsible for Education-Teaching and Vice Deans) for final evaluation.

All applications to undergraduate programs were received between June 4<sup>th</sup> and July 11<sup>th</sup>, and processed by the selection and evaluation committee. From the 1,222 applicants to undergraduate programs, 420 were admitted of which 198 enrolled. All enrolled students attended an orientation program to ease their adaptation to both the university and the Turkish culture.

###### *Criteria for Graduate Programs*

The applications and admissions to graduate programs is open twice a year, however some of the

programs only accept applications and admissions in the Fall Semester. Application criteria for programs are announced in related graduate school and faculty/center websites. In general, application criteria include English proficiency certificate, ALES, GRE (or GMAT for business administration), and a minimum CGPA for previous degrees obtained.

The application criteria for graduate programs are announced in the graduate schools' websites:

- Graduate School of Social Sciences: <https://sbe.metu.edu.tr/en/application-criteria-programs>,
- Graduate School of Natural and Applied Sciences: <https://fbe.metu.edu.tr/en/application-criteria>,
- Institute of Applied Mathematics <http://iam.metu.edu.tr/application-and-admission>,
- Institute of Marine Sciences: <http://ims.metu.edu.tr/graduate-programs#applicationcriteria>,
- Informatics Institute <https://ii.metu.edu.tr/application-requirements>.

### ***Processes for Recognition of Prior Formal, Non-formal and Informal Learning***

For students enrolling to associate and undergraduate degree programs through lateral, vertical transfers, and centralized exam (and equivalent) the principles of course substitution can be accessed at <http://oidb.metu.edu.tr/en/middle-east-technical-university-directive-student-transfers-associate-degree-and-undergraduate>.

The University has clear processes related to the acknowledgement of prior learning, though it does not apply to all disciplines. For example, students, upon enrollment to the University, can submit certain documents certifying their competence in English language; they can take an official exam administered by METU-School of Foreign Languages or other universally accepted language examinations to prove their level in English language. Accordingly, the students can be placed at an appropriate level at the Department of Basic English, skip the one-year English preparatory program, or be exempt from the first compulsory English courses at the freshman level. Some action has also been taken towards the acknowledgment of prior learning in other freshman courses. Following a similar policy for mathematics courses is considered first. Then, the feasibility of similar procedures for physics and chemistry courses will be looked into.

Currently, METU does not have any process for the recognition of non-formal and informal learning at any level.

## **5. Eğitim-Öğretim Kadrosu**

### **3.5. Teaching Staff**

#### ***Appointment and Promotion***

The recruitment procedure consists of two steps:

- Candidates should satisfy appointment criteria and,
- Qualitative evaluation by a jury of faculty members, from both METU and other respectable universities.

METU appointment and promotion criteria is accessible at <http://pdb.metu.edu.tr/ogretim-uyesi-atama-ve-yukselme-kriterleri> (for Turkish citizens) <https://pdb.metu.edu.tr/tr/criteria-promotion-and-appointment> (for international staff).

#### ***Academic Development***

In order to support the professional development and increase the competence of newly appointed

faculty members in teaching, research and community service, METU introduced **Academic Development Program (AGEP)** consisting of 9 modules (<http://agep.metu.edu.tr/en/node/194>). The 7th AGEP application took place between February and June 2018, with the participation of 23 newly appointed faculty members. The mentoring application is attended by 6 faculty members.

The content of AGEP is revised to assure alignment with the university's goals and objectives. In 2018, two new modules are introduced, Module 8 on "Institutional Development and Institutional Communication," and Module 9 titled "Institutional Information Systems Applications" in relation to the strategic and quality management principles and supporting mechanisms employed in the University.

According to **METU Strategic Plan 2018-2022 Strategic Objective #18 (Goal 1)** the university aims to recruit and retain faculty member competent in teaching, research and community service. In relation this goal, academic units have determined short- and long-term needs in terms of human resources. In a similar vein, Strategic Objective #6 (Goal #2), entails academic, social, economic and cultural support for graduate and post-doctoral researchers, to reinforce human-infrastructure in becoming a research university at global standards. Towards this end, the university instituted Graduate Level Academic Support Office (<http://ladlab.ogem.metu.edu.tr/en/>) under ÖGEM, in 2018. The office organizes seminars and meetings to inform and support graduate and post-doctoral researchers, in gaining skills and knowledge necessary for doing high quality research. In 2018, the office organized four seminars.

The School of Foreign Languages Teacher Education Unit provided a 60-hour training program to its 6 newly recruited instructors in 2018. These instructors were observed and received feedback for a total of 30 class-hours. During this period, as part of the training program, the instructors did peer observations and reported these observations to the trainers. These instructors were also required to do action research. Apart from the newly recruited instructors, a total of twelve instructors were observed for developmental purposes. Furthermore, the School of Foreign Languages started to offer internationally recognized DELTA (Diploma in Teaching English to Speakers of Other Languages) training to eleven of its staff in 2018.

### **The Recruitment of Adjunct Faculty**

The adjunct faculty is selected on the basis of university wide procedures, starting with the presentation of the candidate to department board, evaluated by a jury of three faculty members, who pass their judgment with a report. With the suggestion of the department, and approval of the related faculty and institute the recruitment is finally approved by the Rectorate. In the **Faculty of Engineering**, adjunct faculty are generally selected among retired faculty members. The **Faculty of Architecture** follows a directive of rules and regulations for part-time professor employment, which is efficiently used in the assignment processes.

The monitoring process of courses given by adjunct faculty is the same as that of other courses.

## **6. Öğrenme Kaynakları, Erişilebilirlik ve Destekler**

### **3.6. Teaching Resources, Accessibility and Support for Students**

The food, accommodation, health, and counselling services, and sports and cultural activities are offered by the Directorate of Health, Culture and Sports,

#### ***Food and Accommodation***

The **Cafeteria** (with TSE-ISO-22000 Food Safety Certificate) serves lunch and dinner meals to 5,000 members/day on average (<http://kafeterya.metu.edu.tr/odtu-kafeterya>) with nearly 1,400 students receiving food assistance. With the donations from METU Night held in Istanbul, on May 12th 2018, the student dining halls went through an extensive renewal during the summer.

The **Directorate of Dormitories** (<http://yurtlar.metu.edu.tr/>) serves students with 19 dorm buildings, with a capacity of 7,358 students. In addition, graduate students guesthouse hosts 373 students. Dorms buildings are equipped with computer labs and study halls. The Directorate holds TSE-EN ISO 9001-2000 quality certificate for its services.

### ***Health and Psychological Counselling***

Certified with TSE-EN ISO 9001:2008 Quality Management System, **METU Medical Center** provides health and counselling services with 24 medical doctors, 12 nurses, 6 psychologists, and 3 psychological counselors.

### ***Sports and Recreational Facilities***

METU campuses host 40,000 square meters of outdoor, 5,000 square meters of indoor sports activity area; and 3,500 square meters of closed and 2,700 square meters open swimming pool.

Under the **Office of Sports**, there are 33 sports teams (<http://spormd.metu.edu.tr/en/metu-sports-teams>) and 16 sports communities (<http://spormd.metu.edu.tr/metu-sports-communities>);

The **Office of Cultural Affairs** hosts 77 student clubs and societies, carried out 596 activities (conferences, panel, talks, seminars, workshops, observations, symposiums, courses, concerts, exhibitions, etc.) (<http://kim.metu.edu.tr/en/student-clubs-and-societies>).

The list of activities carried out by sports teams, student clubs and societies are listed in Evidence 3.6.1.

### ***New Structures and Facilities***

#### **Classroom Buildings**

- The construction of new lecture hall began in March 2018 and completed in January 2019. The Lecture Hall hosts 4 auditoriums with a total of 1850-person capacity, 17 classrooms, and 2 halls with 250 person-capacity each (<http://basinda.odtu.edu.tr/?icerik=odtuden&oid=59>).
- The construction of the Faculty of Education Annex Building began on March 2018, and it is still under construction. The building hosts a 273-person conference hall, 17 classrooms and 25 office units.

Due to budget restrictions, the construction of new Student Center building did not begin as planned, in 2018.

### ***Support for International Students***

The support for international students is offered by **International Students Office** (<http://iso.metu.edu.tr>) and **International Collaborations Office** (<http://ico.metu.edu.tr/>) . **ÖGEM** also carries out studies that contribute to the academic development of international students.

### ***Services to Students with Disabilities***

Disability Support Office (<http://engelsiz.metu.edu.tr/en>) aims to provide students with disabilities at our university equal access to the facilities and services of the university; creating an environment supportive of disabled students' academic, social, personal, and vocational development.

**METU Disability Support Office** is responsible for providing equal access to resources and services of the university for students who have special needs because of specific disabilities, and establishing an environment that supports their development. METU Disability Support Office's working procedures and principles determined as reorganizing physical circumstances of the campus

depending on the special needs of students with disabilities and enhancing academic accessibility in accordance with the articles 11 and 12 of "Regulations on the Solidarity and Coordination of the Handicappers in the Institutions of Higher Education."

### ***Institutional Planning of Student Services and Support***

The institutional planning of services and support provided by our university to the cultural and art activities organized by the student clubs, which operate under the Office of Cultural Affairs affiliated to the Directorate of Health, Culture, and Sports, are regulated by related rules and regulations. Some of these rules and regulations are presented below:

The framework for establishment and working principles of cultural student clubs involve issues concerning the establishment of student clubs to fulfill METU students' cultural and social needs and provision of support to these clubs as far as possible according to the existing budget.

All details related to the general rules about the operation of the clubs, the type of activities that can be planned, academic advisors, finding the activity venue, the activity posters, and the type and amount of services and financial support that the University can provide are comprehensively included.

The activities of students clubs working under the Directorate of Sports affiliated to Department of Health, Culture, and Sports are organized according to the rules set by the Directorate. For example, the 'Sports Hall Schedule Meeting', which has now been a METU tradition, is conducted by all club representatives and administrators from the Sports Directory.

Current IT services for students are improved and new ones are developed based on the expectations and complaints expressed by students, teaching faculty, and other members through surveys, focus group interviews, and **Satisfaction-Improvement-Feedback forms** and based on designers' projections. The METU Mobile application of 2017, the students' portal, and the expansion of wireless network coverage at the dormitories' area are some outcomes of this endeavor. Related demands become the aims of new projects within the expectations and priorities of users and administrators, and each project is assigned an activity label and included in the activity schedule.

### ***The Allocation of Budgets for Learning Resources and Student Support***

During budget planning process, student services (health, food, accommodation, studying, resting, working environments, recreational activities) are taken into consideration, along with technological improvements and the increasing need for integration of different areas.

The part of the budget on current expenditures are allocated to Faculties and Institutes on the basis of number of academic staff, educational area, indoor area, and student numbers. The units carrying out education and research may also ask for extra funds, which are met within the limits of institutional budget.

### **Kanılar**

- [3.6.1. List of Activities by sports teams, student clubs and societies.xlsx](#)

## **4. ARAŐTIRMA VE GELİŐTİRME**

### **1. Kurumun AraŐtırma Stratejisi ve Hedefleri**

#### **4.1. METU Research and Development Strategies**

In 2018-2022 Strategic Planning process, METU determined its research and development objectives, goals and strategies with the participation of representatives from all academic units (faculties, graduate schools/institutes, research and application centers), Technopolis and other



stakeholders in its research and development activities. In order to attain these goals, the university also determined the responsible parties, performance indicators aligned with the Research University performance indicator set as well as university- and unit-specific performance indicators, as found in the Unit Action Plans completely aligned with university goals, objectives and strategies, and the mechanisms to monitor and evaluate progress.

In **METU Strategic Plan 2018-2022** one of the strategic priorities, Holistic Approach, capitalize on the areas, where a university's primary fields of activity—education-teaching, research-development and community service, overlaps. In doing so, METU integrates these primary activities wherever possible and aims to unleash its full potential in mobilizing its resources (human, financial, physical, and information infrastructure) towards this end.

Briefly stated, **Strategic Objective #6** focus on improving its research and development infrastructure by investing on human resources at all levels—from undergraduate to graduate, from post-doctoral to experienced researchers—and improving its physical infrastructure (laboratories and equipment) and introducing mechanisms for more efficient use. **Strategic Objective #7** states that the university and its units facilitate basic research, while **Strategic Objective #8** sets developing technology, drive innovations and create value for industry and society with applied research as target. With **Strategic Objective #9**, METU volunteers to solve local and regional grand challenges, by collaborating with all parties involved. **Strategic Objective #10**, deals with improving the impact of its research output as measured by large scale sponsored research projects, high quality research by the faculty and graduate students.

The next section, summarizes the prioritized areas of METU's Research and Development strategy in relation to local and international collaborations, supports, as well as stakeholders involved. The following section present areas where education-teaching, research-development and community service overlaps.

### **Prioritized Areas in Research and Development**

In relation to **TÜBİTAK ARDEB 1000** program, METU identified 4 priority themes in 2015, and prepared strategy documents for each of the following areas:

1. Energy,
2. Aviation and Space,
3. Electronics- Microelectromechanical Systems (MEMS)
4. Biomedical

In addition, the strategies are aligned with following policies to achieve connection to local/regional/nation development goals:

- National Science, Technology and Innovation Strategy and Action Plan 2011-2016 (UBYTS),
- The Supreme Council of Science and Technology (BTYK) decisions,
- EU Innovation Scoreboard,
- Global Innovation Index

The developments in all these areas are monitored by Research Coordination Unit, and shared with the researchers within the scope of Academic Development Program (AGEP), targeting newly hired researchers.

METU also recognizes European Unions, Societal Challenges identified within its Europe 2020 vision as inputs to prioritized areas of research. These areas are addressed at university's 2018-2022 Strategic Plan under **Strategic Objective #8** and **#9**.

## ***Integrating Social Sciences and Humanities (SSH) with Natural Sciences and Engineering***

In response to Mainstreaming Social Sciences and Humanities (SSH), a strategic initiative to integrate SSH to each of the Horizon 2020 Societal Challenges, **METU Project Support Office SSH Unit** was formed in 2018. The mission of the Unit is to increase the number of projects in the SSH disciplines. The unit informs our researchers about national and international calls for research, activities and project fairs, and assisted them in applications, execution and audit processes in their research projects. As a result, out of 6 applications for H2020 projects (3 applications to Migration, 2 applications to Governance, and 1 application to Transformations subareas), 5 projects were entitled to TUBITAK Above-Threshold Awards. In addition, METU Project Support Office identified METU researchers investigating Migration issues, and the list of their studies, in preparation of Migration Research and Application Center.

In addition to supporting researchers from SSH disciplines, based on the premise that social sciences and humanities should be considered as a whole with natural sciences and engineering, the unit also helps researchers from the latter fields in identifying the socio-economic and cultural impact of their research projects. In responding to grand challenges, such as migration, sustainable development and clean energy, it is essential to create platforms and research centers that brings together researchers from these wide array of disciplines. Migration Research and Application Center is one of those initiatives. Also, SSH unit also contributes to the establishment of Social Sciences University of Ankara Sosyokent (<http://asbusosyokent.com/>), which aims to reinforce university-society relations in the field of social sciences and humanities.

Examples:

As a result, METU carries out numerous projects, with local and international partners, contributing to the local, national and regional development goals.

- **Blue Growth - "Marine and Maritime Research"** is a H2020 project carried out by researchers in Institute of Marine Sciences contributing to long term strategy formulation for marine and maritime development. (<http://ims.metu.edu.tr/slider/blue-growth-will-be-disseminated-throughout-turkey-metu>)
- **Marmara Sea Integrated Modelling System (MARMOD)** aims to develop plans for remediation of water quality according to environmental management and ecological approach specific to Marmara Sea, for sustainability of ecologic and socio-economic values at the present time and in the future. MARMOD Project owned by Ministry of Environment and Urbanization is being carried out by Middle East Technical University in collaboration with TÜBİTAK Marmara Research Center (TÜBİTAK-MAM), İstanbul University Institute of Marine Sciences and Management (İÜ-DBİE) and Dokuz Eylül University Institute of Marine Sciences and Technology (DEÜ-DBTE). (<http://marmod.csb.gov.tr/>)
- **Nature4Cities** is a H2020 project carried out by researchers at The Department of Business Administration, in collaboration with Çankaya Municipality. The project aims to develop a scientific and technical database and operational tool for the effectiveness of Nature Based Solutions applied in a framework which considers a holistic approach and, which integrates multiple stakeholders (<https://www.nature4cities.eu>).

The impact of research output to socio-economic and cultural fabric is measured through Strategic Plan and other related performance indicators. **METU Project Support Office SSH Unit** monitors the contribution of projects carried out in social sciences and humanities to these performance indicator values, such as value of project budgets and their outputs, separately.

## ***Policies and Applications Integrating R&D Processes with Education and Teaching***

METU 2018-2022 Strategic Plan, **Strategic Objective #6** guides METU in integrating research

practices to different level degree programs. These following examples are explained in detail, under Education and Teaching section of this report (under the heading Integration of Research-Development to Education and Teaching at Every Level). Briefly,

#### At undergraduate level (Goal 6.1):

- **AdmODTÜ** (<https://adimodtu.org.tr/>) fundraising mechanism, was structured to sponsor undergraduate level research projects. Of nearly 100 applications, 17 of them involving students from 22 undergraduate programs were found eligible for support.

Other application of undergraduate level research activities that have been continued are as follows:

- **Interdisciplinary Design Studio (IDS)** is offered to all undergraduate programs for the 8th time in Spring Semester 2018, as an elective undergraduate course, coordinated by **METU Design Factory** (<http://tf.metu.edu.tr/en/>).
- **Matter Magazine**

Developed by the **Department of Metallurgical and Material Engineering** the magazine only publishes research output by undergraduate students. In this sense, Matter is the first and only scientific journal at undergraduate level (<http://matter.mete.metu.edu.tr/>).

- **EEE STAR Program**

EEE Undergraduate Student Academic Research (STAR) Program is a one-year program that encourages a culture of undergraduate research (<http://star.eee.metu.edu.tr/>).

Undergraduate courses and projects in the departments of the Faculty of Education, Faculty of Architecture, and Faculty of Arts and Sciences.

At graduate level, in relation to Strategic Goal 6.2, initiatives to integrate education-teaching with research and development are as follows:

- In order to take advantage of university-industry cooperation with profound R&D implications; METU, ASELSAN and three Research Universities Gazi University, Gebze Technical University and İstanbul Technical University signed a Graduate Education Protocol in 2018. The program entails cooperation not only with ASELSAN, but also among participating research universities towards contributing to our defense industry in the fields of technology and engineering. The number of graduate students participating in the ASELSAN Academy program are increasing with the heightened involvement of METU. The program was evaluated in a workshop hosted by METU in Northern Cyprus. The program will be continued in 2019.
- International graduate joint degree programs (<http://www.metu.edu.tr/international-joint-degree-programs>) are a means to improve capacity of graduate research. Students are informed about international funds as well as exchange programs like Erasmus and Mevlana through <http://ico.metu.edu.tr/>. Some exchange program agreements are research based and students are encouraged to apply to these programs at the dissertation stage, which in turn enables them to find co- supervisors abroad.
- A variety of conferences, workshops, and academic projects are convened by our faculty members in order to foster a research culture in our students. Also, graduate student conferences and workshops are a means to develop research competence.
  - **Graduate School of Informatics** holds “Open Research Day” event, yearly, which is an opportunity for students to present their research as posters. Students are also supported via projects to attend international conferences to present their research.
  - Each student in the **Institute of Marine Sciences** gains practical experience in marine, physical and chemical laboratories and operational experience both in research cruises and

field studies. Besides, students participate in workshops and summer schools related to their field of study to gain research competence. In 2018, all METU-IMS students participated in a monthly or seasonal scientific cruises which mainly supported by i) ODTU-BAP II - DEKOSIM, ii) TUBITAK 1001 - Hydroelectric Plants and Possible Effects on Marine Ecosystems, iii) ODTU-BAP I - Erdemli Time Series Marine Surveys 2018, ODTU DOSIM - Integrated Marine Pollution Monitoring Program (2018 Summer-2019 Winter Period), iv) TUBITAK 1001 - Computer Modelling as a Tool for Determining the Fundamental Niche of Lessepsian Migratory Fishes in Mediterranean coast of Turkey projects. The presence of R&D firms in **METU Technopolis** constitute a significant opportunity for METU graduate students—as founders, co-founders or employees—whose research competence are developed via university-industry cooperation.

In addition to this, METU currently hosts 230 ÖYP students, who engage in research activities sponsored by ÖYP funds. In CoHE's 100/2000 Doctoral Scholarship Programs, METU ranks first with 142 sponsored students.

To encourage post-doctoral researchers in continuing their research in METU, at the beginning of their career, the university has taken an important initiative towards attracting international researchers. METU has become one of the two hubs of the **EURAXESS Researchers in Motion** initiative formed, with the support of European Commission, for attracting international graduate and post-doctoral researchers. The initiative aims to deliver information and support services to professional researchers in issues of researcher mobility and career development (<https://euraxess.ec.europa.eu/>). Towards this end, a workgroup was formed consisting of representatives of 15 different units. By 2018, EURAXESS Initiative is put into action, and METU took a step towards becoming a Researcher-Friendly University with efforts to identify HR Logo Standards in accordance with The Human Resources Strategy for Researchers (HRS4R). In receiving HR Logo, a sign that ensures that researcher recruitment is based on principles of transparency and merit, METU signed the “Declaration of Commitment” in November 2018, proceeding to HR Logo Implementation Phase. With this step, METU will have access to an international pool of qualified researchers, who will contribute to R&D activities on a project-basis. In 2018, aligned with the EURAXESS policies, Research Projects Coordination Unit – Post-doctoral Research Program (BAP-DOSAP) call for post-doctoral researchers opened for the first time in our university. The program is expected to support 10 post-doctoral researchers in 2019.

### **Policies and Applications Integrating R&D Processes with Community Service**

As mentioned above **METU 2018-2022 Strategic Plan Strategic Objective #8** aims developing technology, drive innovations and create value for industry and society with applied research. In doing so, METU sets strategies to improve its human resources in research, and motivate researchers in achieving their full potential, while effectively utilize its financial and physical resources to carry out scientific research, by also increasing its research income. Strategic Objective #9, on the other hand, sets to utilize METU's full research potential in solving local and regional problems, maintain and develop collaborations with all parties involved.

### **Technology Transfer Office (METU-TTO)**

METU-TTO assumes a central position in delivering the output of R&D activity by METU researchers to the community's service. The execution of University-Industry Cooperation activities, management of intellectual property rights of created by the R&D activity of METU faculty, and their commercialization for both community's use and generation of income for further research are the main objectives of the unit. METU TTO focuses on three main strategies:

- To carry out activities to **improve Technology Readiness Level (TRL) of innovations** for the lowest TRL Level innovations (TRL1), collaborations with small- and medium scale enterprises were given primary importance.
- To **disseminate academic entrepreneurship among METU researchers** by supporting them set up businesses towards further development and commercialization of innovations found in the METU TTO portfolio.
- The relationships with the institutions already collaborated through companies and TTO groups, new projects will be made more sustainable though new projects within the scope of internationalization.

Within the framework of the knowledge and competencies of the university, strengthening existing structures and creating new ones, the growth strategy focusing on technology based entrepreneurship has been continued. In 2018, the activities and program such as YFYİ (*Yeni Fikirler Yeni İşler*), Animation Technologies and Game Development Center (ATOM), TÜBİTAK 1512 Individual Young Initiative Program (BİGG) TEKNOSTART, TeknoMENTORs program, Incubation Program and Investor-Entrepreneur meetings, Entrepreneurship and Innovation Platform are organized with increasing interest from participants.

**Growth Circuit**—an accelerator program and investment company founded by METU Technopolis, aiding initial-phase technological investments within the Turkish entrepreneurship ecosystem, towards accessing to international markets. In 2018, 20 technology start-ups received \$ 360,000 seed investment to share their products in USA to access international markets. Growth Circuit Ventures is aiding technology start-ups with \$ 25,000-250,000 investments, also establishing Turkey’s first co-working space sponsored by Technopolis, Cozone, within Technopolis Informatics Innovation Center (BİLİM) to host 350 members in a 2,300 square meter space.

**LABS OUT** is a research based (intellectual property focused) startup accelerator, with the objective to help identify, develop, and speed up the commercialization of university-based intellectual property through commercialization by licensing the technology to the new startups established by the inventors.)

In addition to carrying out high-quality research, sharing the institutional and individual knowledge and experience accumulated, with the different constituents of the society is another tradition and strategic objective of the university. Within the scope of **METU 2018-2022 Strategic Plan, Strategic Objective #11**, aims to increase the number and visibility of educational activities:

- **METU Continuous Education Center**(SEM - [http://www sem.metu.edu.tr](http://www.sem.metu.edu.tr)) brings together researchers of METU with the public.
  - In 2018, the sixth Intra-Semester Seminars (DAS) is organized as a three-day seminar series, with 64 different one-hour seminars, with the participation of 6 257 spectators/
  - Also, SEM also organized 102 (59 contracted and 43 public) seminars.
- Under the **School of Foreign Languages**, several public programs are carried out by the teaching staff (<http://www.dbe.metu.edu.tr/cert/>)
  - **Weekend / Week-Day Evening Courses** (General English, Pre-TOEFL, TOEFL-iBT, IELTS, Preparation for the YDS, YDS Test Group Conversation, Business English, and other languages). In 2018, 1 662 participants attended these courses.
  - **SFL Certificate Program** – open to those who aim to pursue graduate studies in English-medium universities and to academicians who wish to become more proficient users of English. The number of participants has reached to 423 in 2018.
  - **METU-EPE Refresher Course** –a two-week course for prospective METU undergraduate students. Applicants for graduate studies and prospective students of other English-medium universities may also register for this course.

Within the scope of same strategic objective, disseminating scientific knowledge and raising awareness to scientific thinking through **science communication** has become a key activity. In order to carry out this strategy, METU Science Communication Team (METU-BIG) was formed under the coordination of Advisor to the Rector responsible for Institutional Communication. In 2018, the team performed following activities:

- 600 news reports on print and broadcast media featuring research activities by METU faculty (<http://basinda.odtu.edu.tr/>)
- **METU Science Cafe**(<https://bilimkafe.metu.edu.tr>) as pioneered by METU, began in 2016, to bring METU researchers with the public in various cities around the country. Open to audiences from all age and professional groups, two organizations took place in 2018:
  - Istanbul – “Artificial Intelligence” by Dr. Şeyda Ertekin
  - Mardin – “Science in the Kitchen” Assoc. Prof. Mecit Halil Öztop
- 14 High School Seminars on in Ankara, İzmir, İstanbul, Aydın, and Mersin, and 3 other visits in cooperation with TÜBİTAK

These university-level policies give way to the following practices at faculty and department/program level:

- In the **Faculty of Education**, community service and research projects are carried out by each of the departments. Some examples of community service projects include:
  - Sait Ulusoy Zihinsel Engelliler Okulu community service project,
  - Bilgeleş community service project,
  - İlkyar robotics camps
- In addition, faculty members from all departments assist the scientific committees of the Ministry of Health, the Ministry of National Education, and the Ministry of Youth and Sports, and are involved in organizing national and international conferences in relevant fields, giving seminars to public and private schools, provide consultancy services to other institutions and individuals, cooperate with the Ministry of National Education on the changes in the field of education.
- The academic staff of the **Department of Architecture** take part in a number of national and international professional associations, institutions and organizations and do consultancy to the ministries and other governmental organizations as well as local governments; Joint training programs, student and teaching staff mobility and academic activities contribute to maintain strong relations with the national and international professional and academic institutions. The faculty members aims to find answers to contemporary urban and architectural problems through academic research and consultancies, contribute to raise awareness of the public on the problems of the built environment and conservation of cultural heritage by organizing symposia, conferences, exhibitions and by publishing articles and books to convey the research outcomes to the general public.
- The **Department of City and Regional Planning** turns the Planning Studio projects into collaborative projects with local governments. The department organizes symposia, meetings and exhibitions in academic and non-academic nature.

## 2. Kurumun Araştırma Kaynakları

### 4.2. Resources for Research and Development

In METU, on average, 100 national and 20 international sponsored and contract projects are initiated



(excluding BAP I, BAP II and Revolving Funds Projects).

By the end of 2018,

- 1,837 domestic and 157 international research projects are continued.
- International research projects include,
  - 143 EU projects with € 281 million in grants, and
  - 14 Erasmus+ projects with a budget of € 8 million.
- Domestic projects include
  - TÜBİTAK projects (₺116,707,499)
  - BAP projects (₺ 2,913,250) and
  - Revolving Funds Projects (₺ 10,867,952.21)

### ***International Research Funds***

The largest source of international research funds is **European Union Research Funding (Framework Programmes)**. Since 1984, European Community research and technological development activities have been defined and implemented by a series of multi-annual Framework Programmes (FP).

#### ***The 7th FP (2007-2013) and Horizon 2020 (2014-2020)***

In terms of number and the share of METU from budgets of projects are subject to fluctuations. In Horizon 2020 programme, it is evident that the number of projects initiated and share of METU is low in the early years, yet there is a significant increase in share of METU in the last couple of years, mostly due to second ERC project intimated in 2018. In terms of budget, a steady increase is only possible through increasing the number of project coordinators. Also, considering that the vast share of H2020 budget will be allocated in the last two years, the number of H2020 projects and budget is expected to increase. The chart showing the number and budget of projects, and METU share over the years presented in the evidences as Table 4.2.1. The Distribution of Framework Programmes and H2020 Project over years 2008-2018 (in number of projects, total value and METU share).

### ***Domestic Research Funds***

The primary sources of domestic research funds government institutions, particularly TÜBİTAK, the Presidency of Strategy and Budget (former Ministry of Development).

- **ARDEB 1001 - The Support Programme for Scientific and Technological Research:**For 2018 calls, METU ranks first in Turkey, with the largest number of supported research projects —with 83 projects (with a total budget of ₺ 30 million) initiated. Out of 105 applications, 42 of them are accepted (2 of them are under KUTUP theme).
- **ARDEB 1003 - Priority Areas R&D Grant Program**From 30 applications, 4 were supported, with 13 projects still in evaluation process.
- **ARDEB 1004 – Center of Excellence Support Program** Initiated in 2018, projects carried out by research and application centers focusing on solar energy and micro-electronic-mechanic systems (MEMS) are accepted.
- **BIDEB 2244 - Industrial Doctorate Programme:**Initiated in 2018, 11 of 12 applications are accepted, supporting 47 doctoral students in collaboration with 8 different industrial companies.
- **BIDEB 2232 – International Fellowship for Outstanding Researchers:**Within the scope of this program, METU contacted 12 researchers from different countries.
- In addition, in relation to priority areas specified within the scope of ARDEB 1000 call, METU Electronics-MEMS, Biomedical, Energy and Aviation-Space R&D Strategy documents were accepted by TÜBİTAK.

In 2018, the Presidency of Strategy and Budget funded 14 on-going projects with £32,320,000. In 2018, in response to the Research Infrastructure Project Call, METU applied with 11 new project proposals.

As seen on Table 4.2.2. The Research Income of METU over the years 2014-2018, presented in evidences, research income from domestically funded projects shows a slight decline in 2018, relative to 2017, mostly due to a decline in funding from BAP I and BAP II projects. In terms of acceptance rates of ARDEB projects, for 2008-2018 period, METU records a stable performance through the years. Also, for both March and September calls in ARDEB 1001 program, METU ranks first as the university with the largest number of funded projects.

### ***On-Going Research Collaborations***

#### ***Researcher Training Program (MIGEP)***

Within the scope of **MIGEP**, which was initiated in 2012 with the support of Ministry of Development involves six research and application centers—**BİLTİR**, **MEMS**, **MODSIMMER**, **GÜNAM**, **RÜZGEM** and **BİOMATEN**—in four areas—Energy, Electric-Electronics-Informatics, Automotive and Biomedical, METU hosts graduate 4 students who continue their education in 2018 (<http://ak.metu.edu.tr/migep/>).

#### ***TeknoTez Program***

Initiated in 2014, the program aims to increase university-industry-cooperation with companies in and outside METU Technopolis. In this program, thesis topics are determined in cooperation with companies, answering to R&D needs of the company or solving an existing problem faced by the company, in order to facilitate reciprocal knowledge between the university and the industry. The program is funded by the corporations involved in the program (<http://www.metu.edu.tr/researchers/teknotetz>).

#### ***Researcher Training Program for Defense Industry (SAYP)***

The program is a collaboration between the university and the defense industry (**ASELSAN**, **TUSAŞ** (**TAI**), **ROKETSAN HAVELSAN**, **FNSS**, **MİLSOFT** and **NUROL**); involving medium- and long term objectives of the defense industry companies, in relation to priority areas determined by the Presidency of Defense Industries, studied by graduate researchers in their dissertations. In 2018, 2 new projects were signed, 9 projects completed, and 26 ongoing projects with a total budget of TL 26 million.

Research projects are evaluated and selected, seeking correspondence between university's researcher pool and topics based on 5-year Development Plan goals, University Science Policy decided by University Board and National Science Policy. It is fundamental that these research projects contribute to universal and national body of science, as well as technological, economic, social and cultural development on Turkey.

### **The Stakeholder Involvement in R&D Activities**

The stakeholder involvement in R&D activities is facilitated and maintained by METU Research Coordination Unit. The unit consists of Project Support Office (PDO), Project Development Office, and Research and Application Centers Coordination Unit. METU PDO aims to disseminate the R&D projects sponsored by national and international institutions, assisting researchers in application, execution and audit phases. The Unit also cooperates with Technology Transfer Office (METU TTO)

In 2018, 9 being in collaboration with **TÜBİTAK**, 15 Research Information Day (RID) activities were organized, in order to promote national and international R&D support programs, accessing 500 researchers. Presentation material for the events are also shared on PDO website. Within the scope of RID 2018, an international expert, Nikolaos Floratos (founder of Key Innovations) are

invited for **Horizon 2020, Project Writing Training** consisting of three sessions titled (1) “Horizon 2020-101: Step-by-step Guide to Preparing a Successful H2020 Project” (2) “Horizon 2020-102: Writing the Impact Section of a Successful H2020 Project” and (3) “Horizon 2020-103: Writing Research Excellence and Application Sections of a Successful H2020 Project” and Project Writing Camp closed session with the participation of nearly 100 researchers.

In addition, there are also efforts by the academic units to enable stakeholder participation in research and development activities. For example,

- In the **Faculty of Education**, seminars that are open to both faculty members and students at all levels organized, where both the research projects and processes of getting the projects funded are shared and research and development as well as research funding opportunities that are available are shared with all stakeholders.
- The **Faculty of Engineering** provides funds for research-related travels of the faculty members and students to encourage the participation of all stakeholders to the research and development activities.
- The **Department of Industrial Design (FARCH)** conducts projects with industrial sector. The graduate students and assistants of the Department work in these projects and collaborate with the stakeholders in this sector. EU Seventh Framework and TÜBİTAK projects, national and international conference organizations in the CRP Department provide platforms for exchange with the stakeholders.
- The **Department of International Relations (FEAS)** organizes meetings with public institutions’ authorities, departmental seminars. The Department of Economics through variety of platforms (meetings, seminars) with internal and external stakeholders.

### **Monitoring Mechanisms for the Results of R&D Activities**

The data related to projects, papers, patents etc. are collected by the Research data and performance system, in calculating key performance indicators and in assessing the related goals of the Strategic Plan. Trends and comparisons are observed in biannual intervals.

In addition to centralized mechanisms, faculties and departments may choose a narrow set of key performance indicators to monitor research outcomes:

- In the **Department of Industrial Design (FARCH)**, performance indicators of the thesis study and project outcomes are based on scientific and popular publications and presentations. Similarly, the Department of City and Regional Planning screens the research targets by means of the number of publications, communications, theses and dissertations.
- In the **Faculty of Education**, the performance indicators that are assessed each year include:
  - Number of courses offered in each of the departments that include activities which will enable students to participate in scientific inquiry
  - The number of undergraduate research opportunity announcements made to students.
  - Number of projects that involve the establishment or improvement of laboratories
  - Number of publications and conference papers with undergraduate students among the authors
  - Number of departments that take part in undergraduate research
  - Organizing science fairs for graduate students to present their research every year

At the end of each year, the faculty collects the publications that came out of each department that year to keep track of the publications of both faculty members and graduate and undergraduate students.

- The **Faculty of Economics and Administrative Sciences**, number of SCI, ULAKBIM journal

publications are used as performance indicators by all four departments and traced through online performance tracking systems. The Department of Economics (FEAS), priority research areas generally determined as issues related with national and world economy. The Department aims to enrich number of research areas as well as quality of research done, toward this aim departmental review meetings are annually carried out where potential areas of research are discussed.

- The **Faculty of Engineering** monitors the research objectives in relation to its strategic plan, which provides research objectives and related performance indicators. In line with the performance evaluation results (especially for unattainable targets), the precautionary mechanisms are not yet deployed.

### ***The Procurement and Effective Use of Funds***

Within the scope of METU Strategic Plan Strategic Objective #6, improvements in the way that laboratories and equipment for effective and efficient use were set as a strategic target, with a set of measures to develop research infrastructure, supporting units and personnel in a sustainable manner. Recognizing the evaluation of research outputs, as a significant input for a more efficient management of resources, the university utilized the SKYBIS infrastructure to monitor and evaluate research outputs in a timely and systematic manner.

In addition to increasing the number of sponsored and contracted projects, the use of funds from these projects to improve research infrastructure will be encouraged, and relevant rules and regulations will be modified especially in a way that the existing research infrastructure can be accessed by the researchers for a more effective use.

TÜBİTAK Institutional Shares constitute a significant portion of METU research funds. In order to facilitate efficient use of these funds towards improving R&D infrastructure, half of the University (Rectorate) share is allocated directly to departments, and the remaining half is spent on improving the infrastructure in university's common use (such as the Central Laboratory).

### ***Fiduciary Account Support***

Supported with the remaining balances from the international projects, Rectorate Fiduciary Account is a tool METU supports its researchers. This source is being used to cover travel expenses of the researchers attending in EU projects consortia meetings as well as to seamlessly continue projects with delayed payments. In 2018, the University Board decided in favor of increasing this support mechanism. For internationally sponsored R&D projects carried out by METU researchers, with an "overhead expenses" item in budget allocation, the %40 of this item can be used to meet research and research management requirements. This way, Fiduciary Account Support can be used more effectively in project preparation activities.

### ***Strategies to Increase External Research Funding***

Aligned with the METU 2018-2022 Strategic Plan, METU Research Ecosystem 2018-2022 Strategic Plan, aimed at executing the strategies in reaching our University's R&D objectives, was completed and put into effect in early 2018. This process is supported by Research Support Units (Project Support Office, Technology Transfer Office, BAP Coordination Unit, and Research and Application Centers Coordination Unit).

PDO - Social Sciences and Humanities (SSH) unit was formed. The duties and responsibilities of this office is explained in detail under previous section (on "Research Strategies").

Strategy documents for four prioritized research areas (Biomedical, Electronic-MEMS, Energy, and Aviation-Space) within the scope of TÜBİTAK ARDEB 1000 – Support Programme for Improving Research and Development Potential of Institutions of Higher Education were prepared and delivered in 2017. These strategy documents, featuring strategies, actions and related performance indicators for each of the fields, are of utmost importance for our university in developing physical

and human capacity, and acquiring high-impact R&D output towards national and international benefits. In 2018, TÜBİTAK prepared an evaluation report for METU in these four topics. The report was delivered to ARDEB 1000 group leaders, the plans to make necessary changes are underway. The communication with these ARDEB 1000 groups continues, by providing information on potential project consortia, project markets and activities.

In 2015, six Turkish universities that have the largest number of projects in the European Council Research and Innovation Framework Program—namely Boğaziçi, Bilkent, Istanbul Technical, Koç, Middle East Technical and Sabancı University—founded the **Alliance of Turkish Research Universities (TAUG)**. The objective of the Alliance is to increase the effectiveness of Turkish Universities in the European Research Area, and to that end, support the necessary changes in the higher education sector. In 2018, TAUG activities continued, with preparations for the visit by Jean-Eric Paquet, European Commission General Director responsible for Research and Innovation, which will take place in 2019.

In relation to open job market for researchers, EURAXESS-Researchers in Motion initiative (as explained in Section 4.1) is developed.

### **Incentives for Researchers to Apply for External R&D funds**

Opportunities for national and international funds, available calls for research, one-on one research call matching, training, activities, project markets and workshops and other research-oriented activities are announced via email from [research@metu.edu.tr](mailto:research@metu.edu.tr), or Project Support Office (PDO) website, (<https://pdo.metu.edu.tr/>) or, again via email from office's accounts ([pdo@metu.edu.tr](mailto:pdo@metu.edu.tr) and [pdossh@metu.edu.tr](mailto:pdossh@metu.edu.tr)).

For the newly recruited researchers, Academic Development Program (AGEP) features relevant modules on research management system, related administrative units and research agenda, and research-support programs in METU, in order to raise awareness regarding national and international research funds available, and increase the number of applications.

For those involved, meetings titled “Support programs to apply for during different phases of academic career,” were held, and informed about identifying TÜBİTAK, European Union and other national and international research projects they could participate, selecting calls and finding international partners. Also for those researchers who recently returned from abroad, one-on-one meetings towards research career planning—regarding the kind of projects to develop for constituting research networks, the programs to select for the first international research application experience, the role to take (coordinator or partner) in project applications etc.—are conducted. This method proved useful in recent years, and will be continued in 2019. Our institutional membership to one of the most effective H2020 support networks in Europe, *Vision 2020: The Crowdhelix Network* (<https://network.crowdhelix.com>), is continued in 2018, and studies to match our researchers with calls specific to their areas of interest are sustained. Areas of interest and research profiles of willing researchers, and research and application centers are announced in this platform, assisting them to develop research partnerships. PDO-SSH unit frequently uses this network.

In order for our university to most effectively benefit from, and increase participation of researchers to H2020 programs, and also to make the role of METU in this program more effective, PDO undertakes a variety of activities:

- For those researchers planning to apply Marie Skłodowska Curie Action – Individual Fellowships (MSCA – IF), as part of H2020 programme, the information package prepared particularly for METU was updated in relation to this call. In 2018, there are 16 MSCA – IF applications in evaluation. In addition to this 13 applications to MSCA Co-Circulation 2236 “Co-Funded Brain Circulation Scheme” were made under the supervision of 9 experienced

researchers.

- In 2018, METU undertook specialized activities in Horizon 2020 European Research Council (ERC) projects. Researchers were identified in relation to different ERC research calls, and one-on-one meetings were held with these researchers. Moreover, ERC project pre-evaluation and ERC interview supports are funded by the Fiduciary Account. As a result, 6 applications to ERC projects are delivered in 2018. Also, the second ERC project carried out in METU, NEOGENE was initiated with a budget of € 2.5 million.
- **PDO Social Sciences and Humanities (SSH) Unit** carried out its activities to encourage researchers to apply to external funds. In this respect, information regarding national and international calls for research, activities and project markets was provided, and they were assisted in application, execution and auditing phases of research. As a result of matching activities, 3 applications to Migration and 2 applications to Governance and 1 application to Transformations were delivered. Moreover, PDO SSH unit also assisted an application to US Embassy Grants Programme. Finally, the unit actively used a mailing list of SSH researchers in METU ([pdo-sosyal@metu.edu.tr](mailto:pdo-sosyal@metu.edu.tr)) and an email account ([pdossh@metu.edu.tr](mailto:pdossh@metu.edu.tr)) for sharing information regarding the priorities of PDO SSH unit and related topics.

In addition to activities carried out by the support departments, the academic units maintain different support mechanisms and incentives to help researchers seek external research funds:

- In **Faculty of Engineering**, for example, 80% of the faculty share of TÜBİTAK project budgets are directed to the project coordinator's department. This works as an incentive to encourage our faculty members to seek additional research funds and opportunities.
- In 2018 only, the **Faculty of Education** held several seminars where faculty members who received funding from different external sources shared their experiences and provided tips on how to prepare proposals that will receive funding. The Faculty also encourages faculty members to attend seminars and organizations about external funds, by informing them about the organizations beforehand. The external funds is another key performance indicator that the faculty closely monitors. The results are shared in Annual Activity Report of the Faculty.

### **The Contribution of External Funding to Strategic Objectives**

The 2018-2022 Strategic Plan, Strategic Objective #10 sets improving institutional research performance by increasing the number of large-scale projects (Goal 1). SP Performance Indicators related to this goal are

- the budget of sponsored projects per researcher (PI.10.1.1),
- the number of sponsored projects per researcher (PI.10.1.2),
- the number of projects carried out in international collaborations per researcher (PI.10.1.3)
- the total budget of projects carried out in international collaborations (PI.10.1.4)

In 2018, targeted values in all but one, (PI.10.1.2), performance indicators are satisfied.

In TÜBİTAK funds, **Project Acceptance Rate** (the ratio of accepted proposals to applications) reveals that METU has an outstanding performance. In 2018, ARDEB Projects, the acceptance rate is the highest for 3501 National Young Researchers Career Development Program with %56, followed by 1001 The Support Program for Scientific and Technological Research with 40%. **Table 4.2.3. METU - ARDEB Project Acceptance Rates (2018)** (as presented in the evidences) show the number of applications, the number of accepted projects and acceptance rates for ARDEB 1001, 1002, 1003, 1005, 3501 programs as well as international collaborations.

The overall performance of METU in ARDEB projects between years 2008-2018 is summarized in



Table 4.2.3. (presented in evidences). During this tim period an average of 224.2 project applications were made, with an aveage of 72.9 accepted projects, with 32.8% acceptance rate over the years.

According to the official results announced by European Commission on 28.07.2018, in terms of funds received, METU is the most successful research institution in Framework Programme 7 (Table 4.2.4.), and ranks 2nd in H2020 Programme (Table 4.2.5.) in Turkey. The total H2020 budget of METU reaches € 9 million by the end of 2018. Both tables are presented in the Evidences.

## Kanıtlar

- [Table 4.2.2. METU Research Income in Years \(2014-2018\).docx](#)
- [Table 4.2.3. METU ARDEB Project Acceptances Rates \(2008-2018\).docx](#)
- [Table 4.2.3. METU - ARDEB Project Acceptance Rates \(2018\).docx](#)
- [Table 4.2.4. EU FP-7 Research Grants for Institutions in Turkey \(2007-2013\).docx](#)
- [Table 4.2.5. EU H2020 Research Grants for Institutions in Turkey \(2014-2020\).docx](#)
- [Table 4.2.1. The Distribution of Framework Programmes and H2020 Project over years 2008-2018.docx](#)

## 3. Kurumun Araştırma Kadrosu

### 4.3. Research Staff

The METU research staff consists of faculty members, research assistants, graduate students, post-doctoral researchers and project assistants employed in EU projects.

The Criteria for Appointment and Promotion is announced at <http://pdb.metu.edu.tr/tr/criteria-promotion-and-appointment>. The criteria for desired competencies and their minimum satisfactory levels, are reviewed on a regular basis, considering the strength and weaknesses of the institution as well as in comparison to global benchmark universities, by the commission.

Contracted personnel, recruited within the scope of 4/b, research specialists, also serve as researchers in research and appliation centers and large scale projects (those supported by the Presidency of Strategy and Budget) are of significant importance to our university's research activities.

Sponsored research assistants employed in national research projects are generally selected from the related programs' graduate students.

**Post-Doctoral Researcher Program (DOSAP)** constitutes a major source of post-doctoral researchers supported by different institutions. The new BAP directive allows for post-doctoral researchers to be employed in BAP-supported projects.

In 2018, 95 postdoctoral researchers were recruited in our university within the scope of DOSAP. By the end of year, 39 postdoctoral researchers completed their studies successfully, the remaining 56 are continuing their studies. Moreover, in 2018, METU announced Scientific Research Projects Post-Doctoral Researcher Program (BAP-DOSAP) call for the first time, with 14 applications in response.

In the faculty/institute level, faculty human resources committees work on identifying researcher qualifications.

- An exemplary approach is taken by the **Faculty of Education** which assesses the requirements of the departments from a holistic view by enabling a sound communication between the human resources committee and the departments. The committee aims to address the needs of the departments by also considering the needs of the faculty as a whole. The committee is currently working on establishing faculty-wide standards in hiring processes.

- The **Faculty of Engineering**, on the other hand, does not have any initiative in this area other than collecting requests from the departments and conveying them to the President's Office. Educational and research strategies and needs determine the required skill for the new academic personnel. In the evaluation of the new applications, the research and educational abilities are assessed. The need of the faculty members is obtained based on the previous research that has been done by the department. They are decided at the faculty board meetings according to the needs of the department.

### **The Monitoring and Evaluation of the Competency Levels of the Research Staff**

The criteria for Appointment and Promotion for academic staff at METU which determines the minimum qualifications for appointment and promotion, has been differentiated in some way for each faculty, was accepted with the decision of the University Senate and approved by CoHE. These criteria and our performance evaluation system is the mechanism through which we preserve the quality of our researchers. The Appointment and Performance commission which was established in 2016 has been working in collaboration with the commission member's respective departments to update and improve these criteria. The recommendations that emerged will be finalized once discussed in the relevant councils.

Research competence of the academic staff is assessed yearly through the academic CV program, however due to inconsistencies between this independent program, the BAP portal, and the Higher Education Council's Academic Incentive Program, the university is transitioning into a new software system that integrates all the information under one system called AVESIS.

### **Opportunities and Support Mechanisms for Improving Research Competence**

There are several programs and offices that provide professional development opportunities and support services to further develop Faculty members' competencies in research. For young academicians recently hired there is the Academic Development Program (AGEP) which can be considered as an orientation program to help new faculty members adjust to the university culture, to learn more about effective approaches to teaching and conducting research and to encourage new faculty members to be productive through providing them some incentives for developing a research project. The program also includes modules on Research and Development and National and International Partnership programs.

**Project Support Office (PDO)** informs researchers of research opportunities that faculty members could benefit from. International and national projects support opportunities and open projects calls, trainings, workshops, and project fairs are all announced by the Project Support Office. Within the office there is also social sciences project unit that provides research support and information sessions on research funds available in the social sciences which has been developed recently in 2017. The project support office also assess the efficiency of the services provided for developing research competence through questionnaire they administer informally to receive the opinions and recommendations of faculty members. However there is not any formal mechanism in place currently to assess the effectiveness of these services.

### **Incentives for Research, Technology Development and Artistic Activities for Researchers**

In both individual and departmental performance evaluations research outcomes like publications and patents are the main factors considered. In the yearly performance evaluation process those academics that perform in the top 20% in each faculty are rewarded with the Performance Premium. Since 2017 within the 20% there is also a differentiation in premium at each 5% category to further encourage and increase researchers' productivity. In determining performance premiums research and

development projects particularly large-scale international projects are also highly valuable.

There are also incentives for young academicians (under 36 years of age) under the performance evaluation system where "METU Young Researcher Achievement Award" is given to young academicians by the METU Development Fund.

The Foundation also gives International Publication Awards for scientific books published by well-established publication houses and for research articles published in international journals that are indexed in SCI, SSCI or AHCI. Although currently there is a commission working on switching to the Q index.

Another incentive provided is extra conference travel funding to those academicians who had more than one publication in journals identified as acceptable in the appointment and promotion criteria. Since 2017 some changes were made to encourage researcher in the top ranked international journals in their fields but differentiating the types of rewards given depending on the impact factor of the journal that was published.

Incentives for graduate students include Performance and Thesis Awards and Academic Publication Awards. Aims of METU and Mustafa Parlar Thesis Awards are to ensure theses contribute to the development of our country, and the cultural and intellectual environment, and improve the research impact of the country (<http://parlar.org.tr/odul-yonetmeligi/>).

Graduate students are also encouraged in terms of academic success through performance and thesis/dissertation awards. In addition to this in line with the goals that have been identified in the strategic plan of the university and the faculties there is discussion of requiring doctoral students to have one publication before they can defend their thesis.

The Academic Writing Center provides face-to-face advisement to graduate students and academicians related article and thesis writing processes.

In addition to this The Graduate Student Academic Support Office (ÖGEM-LEAD) has served over 100 graduate students since it opened in Fall 2018 providing seminars related to conducting research and the thesis process and providing opportunities for graduate students to come together and share their work with their peers.

Although there are several incentive programs as described above, currently there is no mechanism in place at the university that assesses the effectiveness and sufficiency of the incentives provided. With the implementation of the integrated performance management system in the near future, we are planning to such an assessment.

#### **4. Kurumun Araştırma Performansının İzlenmesi ve İyileştirilmesi**

##### **4.4. Monitoring and Improving the Research Performance**

###### ***The Mechanisms for Measuring and Evaluating Effectiveness Level and Performance R&D Activities***

In determining the effectiveness of research and development activities of the university establishment of a commission which will be tracking the progress related to research and development activities in the university with the coordination of the related Vice Rector or Advisor is in the works.

The performance indicators related to the research and development goals of the university are currently being used to assess the progress made both in comparison to the world average and in comparison to some of the good examples in the world.

###### ***The Sharing of Results of Evaluations of R&D Activities***

The number of doctoral graduates are kept by the relevant graduate schools and are available in different annual reports that come out such as the Faculty and Graduate School Activity Reports, The Performance Program, and METU at a Glance.

However currently no record is being kept related to employment rates of our graduates after graduation both in the country and abroad. A graduate student network has been established called ODTÜM (the details of which were given under alumni relations in the Quality Assurance System).

The Research Activity Pamphlet which includes important statistics about research conducted and the significant research and development projects and related news is prepared yearly by the Research Coordination Office and published in May to be shared with both internal and external stakeholders. (<https://pdo.metu.edu.tr/yayinlar>).

Strategic Plan Monitoring and Evaluation reports published twice a year also features the related activities and Performance Indicator values, along with explanations and evaluations on a goal card basis.

### **The Contributions to Local, Regional and Global Economy**

The measurement of contribution of the university to the region, to the country and world economy is an issue that needs to be dealt with in depth. Currently the university is working on the key performance indicators and measurement methods related to this. To assess the contribution of research activities in terms of the size of the research outcomes/end products and the assessable impact such as financial gains, we are using the data available in the various data collection systems that we currently have. We follow up on the progress in six month periods.

In relation to relevant goals of the 2018-2022 Strategic Plan, such **Strategic Objective #8** on creating value and contributing to the economy through applied research activities and Performance Indicator values are monitored and evaluated. In 2018, of three performance indicators only one—PI.8.1.2 the number of international patents per faculty—reached the desired level. For the number of national patents per faculty (PI 8.1.3), the cumbersome procedure of international patent registration resulted in failure to meet the targeted value, with 51 pending applications. The number of on-going contracted projects per faculty (PI 8.1.1) also registered value below desired level, as METU researchers are allowed to carry out projects via Technopolis, resulting most of the contracted research projects accounted for under Technopolis, not METU.

### **National and International Ranking Systems**

The data provided to national and international ranking systems are organized and provided by Institutional Planning and Development Office. The office also shares the results of the relevant ranking systems with internal and external stakeholders in <https://kgpo.metu.edu.tr/en/world-and-national-rankings>. The office also prepares memorandums upon announcement of each ranking results to be shared with the University administration and interest stakeholders.

## **5. YÖNETİM SİSTEMİ**

### **1. Yönetim ve İdari Birimlerin Yapısı**

#### **5.1. University Administration and the Organization of Administrative Units**

The university administration in METU is carried out as depicted in the Organization Chart (Figure 5.1.1) provided in the evidences.

The Rector is assisted with Vice Rectors and Advisors, each responsible from a major area of administration.

The administrative organization is three-tiered, top administration (Rector, Vice Rectors, Advisors, Senate and the University Board) being the first tier. The second tier consists of Directorates (such as

Directorate of Strategy Development and Directorate of Computing) and Offices reporting directly to the Rectorate. Examples to the former include the Research Coordination Unit, the Institutional Development and Planning Office, International Collaborations Office, and Institutional Communications Office, each reporting to the Vice Rector or Assistant to the Rector responsible from that area as support units. The third tier consists of Office and Teams reporting directly to Directorates.

**Internal Assessment Action Plans** and Annual Implementation Reports are accessible at (in Turkish): <http://sgdb.metu.edu.tr/eylem-planlari-ve-gerceklesme-raporlari>.

## **Kanıtlar**

- [Figure 5.1.1 - METU Organization Chart.pdf](#)

## **2. Kaynakların Yönetimi**

### **5.2. Effective Management of Resources**

#### *Human Resources Management*

Within the scope of **METU 2018-2022 Strategic Plan, Strategic Objective #18** the University aims to recruit and retain academic and administrative personnel in relation to the areas of service (education-teaching, research-development, and community service).

#### *Academic Staff*

With its national and international recognition as a respectable university, METU attracts qualified researchers at the beginning of their academic careers. Despite the competitive opportunities and income offered by private universities, METU manages to attract talented researchers. Recruitment procedures are transparent, yet in order to make these processes more professional and competitive, new policies are being developed.

In relation to **METU SP Strategic Goal 18.1** academic units are asked to prepare HR Strategy Documents to identify their researcher and support personnel needs and criteria for appointment and promotion are being reevaluated by the commission, as explained in the following sections in this report.

In all academic units, the target is to recruit a new researcher for each faculty member retiring or leaving the University for other Reasons. The planning for the number and competencies of the academic staff is conducted by considering the revisions in the program, curricula, especially needs in the emerging subfields within the disciplines, as well as the number of student per faculty and other factors effecting the workload of the faculty members. Accreditation processes, strategic and quality management, and commission related to other administrative and academic issues constitute additional responsibilities to the faculty members.

Applications are evaluated by the department, and the resulting report is delivered to Faculty, Institute and the Rectorate for further evaluation and approval. The Process is carried out by Standard Evaluation Forms.

In addition to integrating and comprehensive career development and rewarding strategies, academic

staff are supported with other benefits (accommodation, daycare center, elementary and secondary education, and health services) Transparency, participation and communication are the major pillars of METU HR Strategy.

The Appointment and Promotion criteria for academic staff are explained under Education-Teaching and Research-Development sections.

The research performance of our university is negatively influenced with the decision not to appoint research assistants to interdisciplinary programs under Graduate School of Social Sciences and Graduate School of Natural and Applied Sciences. Recently, the appointment of faculty members in interdisciplinary programs to departments is suggested by CoHE. Yet, the departments are not willing to spare their already scarce resources for faculty members who would not contribute to their own programs and studies. Hence, problems in appointment and promotion faculty members in question are beginning to emerge.

In 2018, CoHE ordered the application of permanent staff (*norm kadro*) procedure for all universities in appointment and promotion. This positively affected thematic interdisciplinary institutes such as Informatics Institute, Institute of Applied Mathematics and Institute of Marine Sciences in hiring. On the other hand, for Graduate School of Social Sciences and Graduate School of Natural and Applied Sciences the programs are recognized as programs, not branches classified according to YÖKSİS. In order to overcome this issue, some of these programs will be reverted into branches, to facilitate hiring of new faculty members.

### ***Administrative Staff***

For newly recruited administrative staff, are appointed to positions in response to the needs of the institution, considering their education, training and past professional experiences. In order to facilitate their adaptation, in addition to Basic Training for Candidate Civil Servants, the academic and administrative organization of the university is explained within the scope of Preparatory Training. As part of this orientation, activities to improve the sense of belonging of the new personnel, such as the Campus tour. The newly appointed personnel is informed about duties and responsibilities by the unit, in addition to on-the-job training.

In relation to **METU SP Strategic Goal 18.2**, the university aims to improve the quality of personal training programs. In this respect the university continues its Administrative Personnel Development Program (IGEP), encourages the staff to improve their English proficiency with free courses offered by the School of Foreign Languages, and offers professional and personal development training programs.

### **Administrative Personnel Development Program (IGEP)**

Administrative Personnel Development Program (<https://igep.metu.edu.tr/>), is offered to personnel, employed under General Administrative Services, Technical Services, and Education-Teaching Services, with 5-to-20 years of service as a civil servant. This 74-hour program aims to support the professional development and the administrative competencies of the personnel, creating a pool of talent within the university. The participants are required to prepare a project proposal upon completion of the seminars offered by the faculty members. In 2018, IGEP-5 is carried out between April and November with the participation of 26 personnel. The project proposal is related to one of



the following topics:

- To facilitate a task carried out in their own unit,
- To improve existing services or introducing new services,
- A community service which will positively effect METU employees' well-being at work and social life.

### **English Proficiency Training**

As a university with English as the medium of education, administrative personnel is also supported in order to improve their proficiency in English. Towards this end, the School of Foreign Languages offers free language courses, to which all administrative personnel is encouraged to attend. The course hours are set to lunch hours for three-weekdays, with a half-day training on Saturdays.

### **Other Training Programs**

Directorate of Personal Affairs also offers training programs oriented towards personnel's professional and personal development on an annual basis. The programs are evaluated using surveys considering their content and expected outcomes, and revised on the basis of this feedback from participants. New programs are introduced in response to personnel's demands and training needs.

The Directorate of Personnel Affairs, Library and Documentation Directorate, Directorate of Student Affairs, and Directorate of Health, Culture, and Sports Directorate of Dormitories, Directorate of Sports and, Medical Center have ISO 9001 Quality Management System Certificates. Other directorates are in the process towards certification. The units with such certifications are required to perform a need analysis, by asking the administrators and the personnel for suggestions for training programs, and offer the necessary training programs. The Directorate of Personnel Affairs assist units in offering these programs.

In 2019, a survey carried out with the initiation of The Institutional Development and Planning Office, conducted by the researchers in Department of Business Administration, was sent via email to all 5,067 academic and administrative personnel employed in Ankara and Erdemli campuses. With a response rate of nearly 20% (1,067 respondents), the personnel rated their satisfaction level from METU as 80.4/100 (87.9 for academic and 69.5 for administrative personnel). The amount of pay, promotion, and sense of belonging were rated out of 4, and results were 2.19, 1.77 and 2.70 for academic personnel, and 1.71, 1.40, and 2.22 for administrative personnel, respectively. The employees are most satisfied with health services (68.8%), cultural activities (66.9%), sports activities (62.8%), library services and (76.8%), and IT services (74.7%). On the other hand, they regards key areas requiring improvement as lodgments (42.5%), shopping area (49.2%), food services (49.5%), sanitation (54%) and infrastructure, maintenance and repair (59.5%).

### **Financial Resources Management**

In 2018, the budgets and expenditures related to functions are presented in Table 5.2.1. 2018 Budget and Expenditures in Relation to Economic Codes (TL) presented in the evidences.

In 2018, the ratio of expenditures to budget was 98.83% in personnel expenditures, 96.95% in social security premium payments, 90.19% in purchase of goods and services, 92.76% in current transfers, and 95.07% in capital expenditures. Compared to 2017, with a decline in purchase of goods and services, and current transfers, all other items registered an increase.

## Management of Physical Resources (Movable and Immovable Assets)

As a public institution, METU's management of movable and immovable assets is regulated by Public Financial Management and Control Law No. 5018, articles 44 through 48.

Procured goods and services are also obtained through either direct procurement or tender method in accordance with the relevant legislation. The State Supply Office (DMO) is the key supplier in a large number of goods. Other suppliers may vary from function to function, the list of suppliers and details of transaction are kept in university's records. For example, the information on suppliers for Scientific Research Projects (BAP) are kept in the BAPSIS software (bapsis.metu.edu.tr).

## Kantlar

- [Table 5.2.1. 2018 Budget and Expenditures in Relation to Economic Codes \(TL\).docx](#)

## 3. Bilgi Yönetimi Sistemi

### 5.3. Information Management System

The information and data regarding the areas of operation, is collected, analyzed and reported via area specific software and application

- **METU PORTAL** is modified and improved in order to facilitate access to information services (<https://portal.metu.edu.tr/>). The interface is designed to host services under main categories.
- For students, **Student Portal** is integrated to offer easy access to programs offered by the Student Affairs Information System, based on the Single-Sign-On (SSO) principle. Through the portal, students have access to online applications, academic and personal information, lists and reports.
- In order to support R&D processes, and the management of sponsored projects, and collection and evaluation of academic data ATÖSİS, AVESİS, BAPSİS and DAPSİS applications are procured and set up. The softwares are appropriated according to our University's own needs and considerations.
- In order to improve alumni relations ODTÜM Network is developed.

### The collection and sharing of Key Performance Indicators as supported by the Information System

Recognizing its importance in achieving institutional acceptance and proper execution of the Strategic Plan, a disciplined and systematic infrastructure was formed (SKYBIS). The efforts for performance database infrastructure for the definition of university strategic plan performance indicators, monitoring and evaluation of performance results was completed to a great extent. The testing of the system and extending its capabilities are continued.

SKYBIS allows users to monitor goals, objectives, strategies and performance indicators (and their target values on a 5-year period), and biannual actualizations, and general evaluations. Through Quality Coordinators appointed at every academic and administrative unit, some of the data is entered manually. The integration for the application with other systems used in institution is underway. Moreover, the application will allow the monitoring and evaluation of the data provided to international and national rankings and indices.

## **The Information Systems Support for Quality Management System**

Information System, involves elements supporting information collecting and reporting for quality assurance systems, as well as all data/information/demand inputs, approval, monitoring, alarming, related to activities in the fields of education, research and community service.

Besides research processes, the system offers an infrastructure that supports Budget Management processes. In this respect, the budget is allocated to units, budgeting transactions are carried out, and making addition additions, transfers and revisions as needed, allowing the monitoring of budget at both university and unit level.

The statistical data related to the annual report prepared by the Directorate of Student Affairs can be accessed by the authorized personnel through METUSIS/. Moreover, the Directorate's activities in relation to quality management processes are also prepared by the system.

Information on alumni, graduate theses, offered courses as well as academic performance evaluation reports are requested by the units are also shared with the relevant units.

**The information and data required for Internal and External Institutional Evaluation processes** are collected by The Institutional Development and Planning Office. In 2018, Quality Commission developed Unit Self Evaluation Reports (U-SERs) for qualitative data, while statistical data was collected automatically through Strategic and Quality Management System (SKYBIS) as much as possible. The mechanism through which U-SERs are employed in data collection and the preparation of Institutional Self Evaluation Report (I-SER) are explained in detail in Quality Assurance System section of this report.

The calendar for data collection is announced at <https://kldr.metu.edu.tr/> and <https://sp.metu.edu.tr> (accessible via password). The unit responsible for data collection, organization and management assisted Unit Quality Coordinators via weekly email bulletins, reminders, manuals and Frequently Asked Questions (FAQ). Further trainings and workshops are planned to increase effective use of the system.

## **The Security and Reliability of the Collected Data**

The responsibility for security, confidentiality and accessibility belongs to the Directorate of Computing, which is carrying out information security in accordance with the international standards. To this end, ISO/IEC 27001:2013 Information Security Management System certificate is held by Directorate of Student affairs and Directorate of Personnel Affairs. Within the scope of this certification, personnel security, asset management, access control, cryptology, physical and environmental safety, operation, communication, development and maintenance of system supply, supplier relations, information safety case management, business continuity, and accordance with legal framework activities are carried out. The attendance of related personnel attended the trainings, seminars and conferences. Through procurement of services related to penetration tests and source code analysis software and system security is increased. As a result, these system are managed with a continuous improvement approach. Through internal audit services, Information safety level is increased. As a result of these continuous improvement efforts, Confidentiality Agreements can be monitored more closely, completing the missing agreements with the companies and teaching assistants. A firewall equipment was also purchased and installed. Internal and external network traffic is analyzed through this equipment.

In order to secure the data stored in the management systems, business continuity structures are formed. In addition to two synchronized back-up storages, in cooperation with the Disaster Recovery Center, another storage is created and maintained outside the institution.

The printed materials are transferred to the digital archive, in order to protect the institutional

memory, with the help of a software procured by the Directorate of Library and Documentation.

#### **4. Kurum Dışından Tedarik Edilen Hizmetlerin Kalitesi**

##### **5.4. The Quality of Services Procured from Third Party Suppliers**

As a public institution, the services procured from third parties are subject to Public Procurement Law ([http://www.ihale.gov.tr/public\\_procurement\\_law-50-1.html](http://www.ihale.gov.tr/public_procurement_law-50-1.html)) and related directives.

Within the scope of the Decree Law No. 696. published in the Official Gazette dated 01 January 2018, 841 employees are transferred to permanent staff. In addition, 83 employees are transferred to permanent worker status, their salaries to be met by the Revolving Funds income.

Technical and administrative specifications of procured services are determined by the demanding unit, with the support of all relevant units, and legal procedures are carefully met during the procurement process.

#### **5. Yönetimin Etkinliği ve Hesap Verebilirliği, Kamuoyunu Bilgilendirme**

##### **5.5. Effectiveness and Accountability of the Administration**

METU at a Glance (<https://kgpo.metu.edu.tr/en/metu-glance>) presents up-to-date information regarding education-teaching, research-development, community service, and resources (human, financial, physical and information) for the last five-year period. Necessary data and information are collected through automated or well defined manual processes, and with IT support as embodied in the SKYBIS Platform.

Certain activity (Annual Report, Performance Program and Budget) and performance reports (Strategic Plan Monitoring and Evaluation Report, Institutional Self Evaluation Report) and are generated regularly and shared with the public. The information shared are objective as all the relevant evidence, data sources, formulas and calculations are shared with the regulating body, CoHE, a part of the external and internal audit processes, provided that the restrictions by Personal Data Protection Law 6698 are satisfied.

#### **6. SONUÇ VE DEĞERLENDİRME**

In 2018, METU carried out Strategic Plan Monitoring and Evaluation processes and university-wide Unit Self-Evaluation for the first time. Both processes were supported with information technologies to assist university administration in identifying key achievements, improvement needs and opportunities, along with key areas of success. Key findings of this year's evaluation are listed below:

##### **Education and Learning**

- The number of undergraduate students slightly increased, so as the number of international students and incoming exchange students recorded decline. Also, the average rank for preference registered a decline showing that METU is facing significant competition from other universities in attracting the most successful students as measured by centralized placement system. The program and university promotion methods are continuously improved. For international students, the decline can be explained by wider socio-political context, yet improvements have been carried out in terms of promotion of programs in international

platforms, application criteria, support services and processes.

- The number of graduate students is in a slight decline, yet the number of doctoral degrees granted recorded an increase. Average doctoral degrees granted per faculty is also increased in 2018, yet the number needs to be increased further. Studies to evaluate existing application numbers and acceptance rates is planned for the first half of 2019.
- Number of double major and minor students are increasing showing a heightened interest in interdisciplinary transitions between programs.
- Regular graduation rate for undergraduate students is in a steady decline. The regular graduation rate is drastically lower in in master's programs and even lower in in doctoral programs. The increasing number of undergraduate students taking a leave of absence and the increasing number of graduate students working is revealing the importance of student support mechanisms.
- In 2018, METU appointed the Dean of Students, who would monitor and support students' personal, cultural, social, scientific and professional developments, working on the solutions to their problems in cooperation with academic and administrative units, and aiming to provide them with an effective and efficient learning environment.
- The efforts to determine European Credits Transfer System (ECTS) for the courses offered was completed in 2018, under the coordination of EPID, with support by ÖGEM.
- EPID also carried out activities to introduce an orientation course, ODTU 101, and to improve existing academic counselling mechanisms.
- Almost all of the basic sciences courses were evaluated with face-to-face interviews with course coordinators, and surveys to gather student opinions. In 2019, the remaining courses will be evaluated, and findings will be used in carrying out necessary improvements.

## Research and Development

- As key performance indicators in assessing our university's research performance, following indicators registered positive growth in 2018:
  - Indexed publications per faculty,
  - Publications with international collaborations
  - Average citation
  - Journal impact factor

Similarly, despite the minimal decline in the number of international research collaborations per faculty, the project budget per faculty recorded an outstanding increase from 2017 levels. Further studies to analyze key variables, with respect to academic units, prioritized and other areas have been carried out by the Institutional Development and Planning Office.

- In order to support undergraduate students' research projects, the AdımODTÜ fundraising mechanism, was utilized, structured to sponsor undergraduate level research projects.
- To encourage post-doctoral researchers in continuing their research in METU, the university has taken an important initiative towards attracting international researchers. EURAXESS Researchers in Motion Initiative is put into action, and METU took a step towards becoming a Researcher-Friendly University with efforts to identify HR Logo Standards in accordance with The Human Resources Strategy for Researchers (HRS4R).

- In 2018, within the scope of DOSAP, postdoctoral researchers were recruited in our university. METU also announced Scientific Research Projects Post-Doctoral Researcher Program (BAP-DOSAP) call for the first time.
- In response to Mainstreaming Social Sciences and Humanities (SSH), as a strategic initiative to integrate SSH to each of the Horizon 2020 Societal Challenges, METU Project Support Office SSH Unit was formed in 2018. The mission of the Unit is to increase the number of projects in the SSH disciplines. SSH unit also contributes to the establishment of Social Sciences University of Ankara Sosyokent (<http://asbusosyokent.com/>), which aims to reinforce university-society relations in the field of social sciences and humanities.

## Quality Assurance and Administration System

- In 2018, METU started application of regular student, personnel and alumni satisfaction surveys. The surveys will be conducted annually, and mechanisms to share improvements made in response to survey outcomes will be introduced.
- The introduction of IT support for all processes, including Strategic Plan monitoring and evaluation and unit/institutional self evaluation processes is a major step in METU's quest to become a learning organization, in the light of carefully collected and analyzed institutional data at all fields and levels.
- In relation to structuring and maintaining mechanisms for communication with external stakeholders, the formation of an advisory board at university level is planned for 2019. Improvements to organizational structure of the university is also evaluated, for the effective utilization of resources.
- In all academic and administrative units, a quality coordinator is appointed to report data and information related to university's key areas of activity, within the framework of integrated strategic and quality management at both university and unit level. The workshops and seminars to train quality coordinators will continue throughout 2019 and 2020. To formalize the way in which data is collected, reported and analyzed, a joint directive for strategic and quality management processes (the monitoring and evaluation of the strategic plan, self-evaluation etc.) is being prepared by the Institutional Development and Planning Office. In order to respond to increasing demand for data and information from external and internal stakeholders in these issues, the infrastructure of related offices should be improved, and mechanisms to contribute to harmonious functioning of separate units in different subjects will be developed.
- As a university taking place in 10 different national and international ranking systems, METU's rank declined in all but two of the overall rankings. The continuous improvement in key performance indicators should help METU to improve its rank, however a thorough analysis of data provided to these ranking institutions, along with national and international benchmark universities would help the administration to understand the real factors causing such a decline. Necessary measures will be taken in collaboration with CoHE and other key stakeholders to improve our university's national and internal potential.
- In order to create a sustainable alumni monitoring and communication mechanism, ODTÜM network was put into service, with growing number of alumni registering and participating in the online activities.
- METU PORTAL is modified and improved in order to facilitate access to information services (<https://portal.metu.edu.tr/>), Student Portal is integrated to offer easy access to programs offered by the Student Affairs Information System, based on the Single-Sign-On (SSO) principle.
- In order to support R&D processes, and the management of sponsored projects, and collection and evaluation of academic data ATÖSİS, AVESİS, BAPSİS and DAPSİS applications are procured and set up. The software systems are appropriated according to our University's own needs and considerations.



