



**Istanbul Gelisim  
Vocational School**



# **IGVS**

## **Monthly E-Bulletin**

**June**

**2024**

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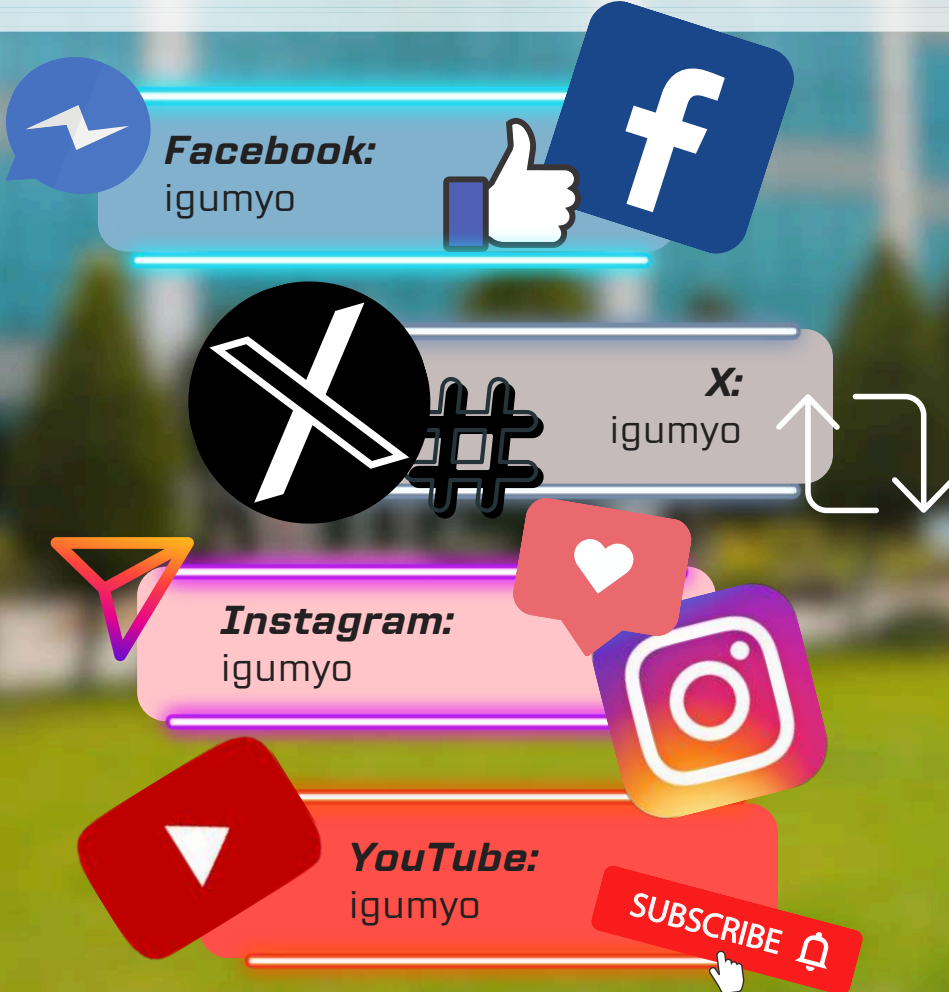
[myo.gelisim.edu.tr](http://myo.gelisim.edu.tr)

Dear Young People,

Istanbul Gelisim Vocational School, which started its education life in 2008, started to publish a monthly E-Bulletin as of 2021. We are very happy to bring you the June issue of our e-bulletin and to share with you the developments in our Vocational School. I believe you will enjoy reading our bulletin and I present my greetings and respect with the hope of meeting you in a new issue.

You can follow all the developments in our Vocational School on our social media channels.

Director of IGVS  
Assoc. Prof. Lokman KANTAR





*\* IGVS E-Bulletin has been  
prepared according to the Turkish  
Higher Education Quality Council  
(THEQC) criteria.*



# LEADERSHIP

## ACADEMICIANS FROM IGU ARE ON THE "BEST SCIENTISTS" LIST OF THE WORLD AND COUNTRIES!

Research.com, one of the world's leading research and academia portals, has announced the list of the "Best Scientists" of the world and countries. Istanbul Gelisim University academics were shown among the best scientists in Turkey and the world with their degrees in "Engineering and Technology", "Economy and Finance" and "Neuroscience".

Great success in the fields of "Engineering and Technology",  
"Economics and Finance" and "Neuroscience"!

Istanbul Gelisim University, which is modern, developing, producing and advancing with an understanding of quality education, stands out with its science, technology and R&D studies. According to the list created on the basis of the D-index created for the purpose of measuring, evaluating and monitoring the performance of scientists in terms of scientific productivity. 3 academicians from Istanbul Gelisim University were included in the list of "Best Scientists" with their successful work.

Istanbul Gelisim University Rector Prof. Dr. Bahri Şahin ranked 17th among 47 scientists from Turkey and 4020th in the world in the field of Engineering and Technology.

Prof. Dr. Kemal Sıtkı Türker from IGU Faculty of Dentistry achieved an important success by being 4th among 6 scientists from Turkey and 5870th in the world.

Asst. Prof. Dr. Festus Victor from the Faculty of Economics, Administrative and Social Sciences of IGU was the only scientist from Turkey to be ranked in the field of Economics and Finance, and he was ranked 1183 in the world.



# IGU's Great Success in TUBITAK 2023 Competency Map Report

Istanbul Gelisim University took place in 17 of 21 main research areas and 62 of 132 sub-research areas in the TUBITAK 2023 competency map. IGU has come to the fore among Turkish universities in terms of both quality and research intensity in 9 of the main research areas and 26 of the sub-research areas.

The fields in which our university stands out both in terms of research quality and research intensity. Its ranking among Turkish universities are given in the table below.

We thank all academic staff who contributed.

[Click](#) for TUBITAK 2023 Competency Map.

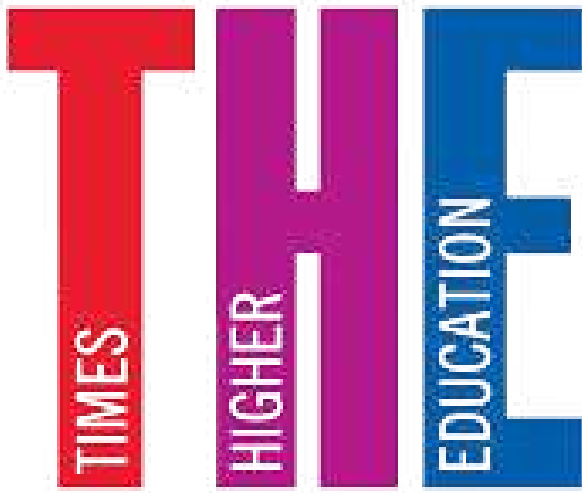
The ranking of research areas of Istanbul Gelisim University among Turkish universities in terms of quality and research intensity according to the TUBITAK 2023 Competency Map



Main Research Area	Sub-Research Area	Quality Ranking in Turkey	Research Intensity Ranking in Türkiye
Information and Communication Technologies	Information security	1	4
	Big Data	15	43
	Broadband Technologies	3	6
	Internet of Things	4	8
	Robotic	7	40
Social and Humanities	Law	1	8
	Economy	2	22
	Business Administration	4	23
	Public Administration	1	1
	Urbanization	1	27
	Mass Communication	7	45
	Politics and International Relations	1	9
	Sociology	1	24
	Transportation Rail way Systems	1	16
	Logistic	1	17
Environmental Sciences	Meteorology	1	11
	Coal	1	3
Energy	Bioenergy	15	71
	Energy Storage	2	55
	Solar energy	23	65
Physics	Statistical Physics	22	37
Aviation and Space	Aircraft Design	1	42
	Satellite and Launch Technology	3	65
Construction	Civil Engineering	3	35
Automotive	Electric and Hybrid Vehicle Technology	1	42
Basic Sciences	Mathematics	17	50



# IGU's big Times Higher Education (THE) success: 1st in the 'Accessible and Clean Energy' category!



World universities ranking organization Times Higher Education (THE) Impact Ranking 2024 was announced. Among the 2152 universities in the ranking, Istanbul Gelisim University (IGU) ranked 6th in the "Accessible and Clean Energy" category by increasing its success ranking from 12th last year to 6th this year, while it ranked 1st among the foundation universities in Türkiye.

A total of 2152 universities were evaluated with the addition of 447 universities to the number of applications, which was 1705 last year in the Times Higher Education (THE) ranking, the world's leading higher education rating agency based in the UK. Türkiye ranked 2nd in the Times Higher Education (THE) 2024 ranking, where 92 universities were rated.

Advancing with the vision of World University, IGU ranked 27th in Türkiye and 7th among the foundation universities in the Times Higher Education (THE) Impact Ranking 2024 list, IGU also ranked in the 801-1000 band worldwide.



In the ranking carried out in line with the 17 categories determined by the United Nations within the scope of the Sustainable Development Goals (SDG), Istanbul Gelisim University attracted great attention in 4 different categories with its studies in the field of education, innovative projects and contributions to society. IGU has achieved the following significant achievements:

- 6<sup>th</sup> in Türkiye in SDG-7 Accessible and Clean Energy category, 1<sup>st</sup> among foundation universities in Türkiye and 101-200<sup>th</sup> in the world,
- 12<sup>th</sup> in Türkiye in SDG-17 Partnerships for Purposes category, 5<sup>th</sup> among foundation universities in Türkiye, 401-600 worldwide,
- 28<sup>th</sup> in Türkiye in the SDG-3 Health and Quality Life category, 9<sup>th</sup> among foundation universities in Türkiye, 601-800<sup>th</sup> worldwide,
- 26<sup>th</sup> in Türkiye in the SDG-10 Reducing Inequalities category, 9<sup>th</sup> among foundation universities in Türkiye, 401-600 in the world,
- In the Impact Ranking, IGU ranked 27<sup>th</sup> in Türkiye, 7<sup>th</sup> among the foundation universities in Türkiye, and 801-1000 worldwide.



***"We are committed to continuing our work on energy efficiency"***

Abdülkadir Gayretli, Chairman of the Board of Trustees of Istanbul Gelisim University, pointed out that IGU ranks 1st among the foundation universities in Türkiye in the 'Accessible and Clean Energy' category. Gayretli continued his words as following: "While supporting the practices for the effective use of natural resources, we are proceeding with sensitivity on energy and waste management with a universal sense of responsibility. We remain committed to continuing our important work on energy efficiency and climate change."

***"We prioritize sustainability studies in all areas"***

According to the United Nations 17 Sustainable Development Goals, Istanbul Gelisim University (IGU) Rector Prof. Dr. Bahri Şahin made statements about the ranking in which it is aimed to evaluate the effects of ecological, economic and environmental sustainability practices on society. Prof. Dr. Bahri Şahin said, "As Istanbul Gelisim University, we develop projects by focusing on sustainability studies in all areas, especially environmental sustainability, with the aim of leaving a more livable world for future generations and achieving permanent success. We implement projects that provide added value in the field of university-industry cooperation, science, technology and employment in a way that benefits the society by adopting the 'Sustainable Development Goals'. Council of Higher Education (YÖK) Chairman Prof. Dr. Erol Özvar: "I fully believe that we will further increase our achievements in the future by focusing on the internationalization, academic productivity and research quality of our university and proceeding with responsible production and consumption awareness."



***"The steps we have taken together with world-renowned leaders are very valuable for a sustainable future"***

Participating in the 2024 THE Global Sustainable Development Congress held on June 10-13, 2024 at Queen Sirikit National Convention Center in Bangkok, the capital of Thailand, IGU Vice Rector for Quality, Accreditation and Internationalization Prof. Dr. Arda Öztürkcan: "It is the second international the event I attended this year after THE Asian Universities Summit. Our participation in congresses such as Greenmetrics, Zero Waste and THE and our breakthroughs in this field have brought many achievements to our university in the field of sustainability. In line with our goals, steps we have taken by meeting with world-renowned leaders for a sustainable future by participating in 2024 THE Global Sustainable Development Congress are very significant. Vice President of the Council of Higher Education (YÖK) Prof. Dr. Halim Haldun Göktaş announced that GSDC 2025 will be carried out in Istanbul. I would like to thank YÖK for this success."





SCIMAGO  
INSTITUTIONS  
RANKINGS

## *SCImago 2024 results have been announced: IGU is in the top 5 in the field of research!*

The results of "SCImago University Rankings 2024", which ranks the scientific research, innovation and social impacts of world universities according to SCOPUS publication and citation data, have been announced. Standing out with its work in research areas, Istanbul Gelisim University ranked 5th among Turkish universities in the field of research and 25th in all fields. It attracted attention with the results it received in the categories of Economy, Environmental Science, Business Administration, Energy, Social Sciences and Engineering.

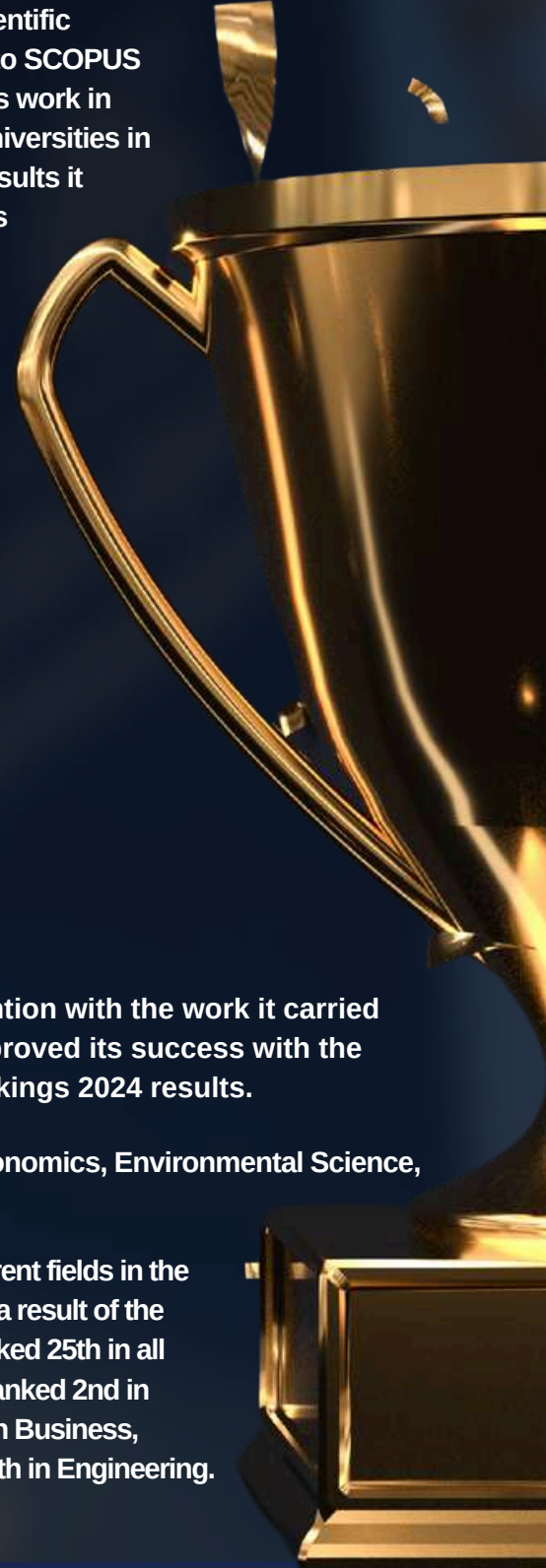
The results of "SCImago University Rankings 2024", which measures the social, scientific impact and innovation of universities around the world, have been announced. Aiming to give a general idea about universities by measuring their performance in terms of research, innovation and social impact, SCImago University Ranking helps students obtain information about a university's education quality, effectiveness and prestige.



Proceeding with the vision of "World University", IGU attracted attention with the work it carried out for its students and the opportunities it provided. It once again proved its success with the degrees it received in different fields in the SCImago University Rankings 2024 results.

Remarkable success among Turkish universities in the categories of Economics, Environmental Science, Business Administration, Energy, Social Sciences and Engineering!

Istanbul Gelisim University draws attention with its research studies in different fields in the 2024 results of SCImago, one of the university evaluation organizations. As a result of the evaluation made on SCOPUS research data, Istanbul Gelisim University ranked 25th in all fields and 5th in the field of research among Turkish universities. IGU also ranked 2nd in Economics, Econometrics and Finance, 4th in Environmental Science, 7th in Business, Management and Accounting, 8th in Energy, 13th in Social Sciences and 14th in Engineering.





# RUR 2024 results announced: IGU has risen 23 places in the overall ranking!

According to the results announced by Round University Ranking (RUR), one of the institutions ranking universities in the world, Istanbul Gelisim University rose 23 places in the world with 1099th. IGU, on the other hand, ranked 48th among universities in Türkiye and 18th among foundation universities.



Continuing to progress with the vision of "World University", Istanbul Gelisim University (IGU) has achieved a significant success in the international arena and increased its place in the RUR 2024 World Universities Ranking by 23 steps compared to last year. According to the list published by the RUR Rankings Agency for 15 years, IGU ranked 48th in Türkiye and 18th among foundation universities in Türkiye this year.

Round University Ranking (RUR), one of the prestigious organizations ranking world universities, announced the results of 2024. RUR, which evaluates the leading universities around the world according to a total of 20 indicators under the headings of teaching, research, international diversity and financial sustainability, bases its ranking on certain criteria. When determining the scores of universities, teaching and research dimensions are reflected in the total score as 40 percent, and international diversity and financial sustainability indicators are reflected in the total score as 10 percent.

According to the ranking explained in the indicators of Teaching, Research, International Diversity and Financial Sustainability, IGU ranked 1113th in the world in the 'Teaching' indicator and 15th among foundation universities in Türkiye. While maintaining its place in the 'Research' indicator last year, it ranked 1017th in the world ranking and 16th among foundation universities by increasing its score. IGU, which achieved global success with its internationalization strategies, continued its success in the 'International Diversity' indicator and ranked 730th in the world and 16th among the foundation universities in Türkiye, while it ranked 1106th in the world and 16th in the foundation universities in the 'Financial Sustainability' indicator.

## 10th Media Awards found their prize winners!



The awards were presented at the "10th Media Awards Ceremony" organized by Istanbul Gelisim University. In the ceremony, the doyen names of the media, art and sports world were awarded in 70 different categories with the votes of the students.



The 10th Media Awards Ceremony of Istanbul Gelisim University (IGU), which is traditionally held every year, was held. The award ceremony held at the Mehmet Akif Ersoy Conference Hall of the university was attended by the art, football and media community. Industry connoisseurs who came together with the students had the opportunity to share their experiences one-on-one with the students.



While Ali Limoncu received the Award for Adding Value to Turkish Sports; Bülent Emin Yarar received the Lifetime Honor Award in Art. The Lifetime Honor Award in Sports was given to Şansal Büyüka. Büyüka stated that it is very valuable to receive awards with the votes given by the students. In addition; TV Channel of the Year is TV8, Manager of the Year - Çağdaş Atan, while the Honorary Award in Music was given to Yavuz Bingöl. İhlas News Agency was selected as the Best News Agency.

Valuable names were awarded in 70 categories in 10 different fields, including honor, theatre, television, sports, newspaper/magazine, radio, cinema, music, digital and television series.

Abdülkadir Gayretli, Chairman of the Board of Trustees, said, "Our Media Awards Ceremonies have become a classic at our university. We will arrange it from now on too. Our purpose here is to host our superheros in our school and to bring them together with our students and teachers. We aim for our students to keep their dreams, ideals and goals great through them. It is very valuable for us that students follow their ideals and progress by keeping their dreams big. We make students think that each of them should have an idol and that 'I want to be like him/her in the future'".

[Click](#) to access the news source.



## IGU Opened Its Doors to High School Students with Open Day Events!

Within the scope of Open Day events organized by Istanbul Gelisim University, faculties, colleges and vocational schools introduced their departments. Various workshops were organized within the scope of the events, which attracted great interest from high school students.

IGVS opened its doors to high school students on May 30th with Open Day events. With the workshops organized, students learned about the departments they want to study.

High school students who attended the classes held during the Open Day Events stated that the event helped them decide on the department they would study. Students who learned about the departments stated that they were very satisfied with the events.



## IGU Cyber Academy Project offers employment opportunities!

'Cyber Academy Project' is being carried out within Istanbul Gelisim University on subjects such as artificial intelligence algorithms, programming languages and cyber security protocols.

The IGU Cyber Academy Project, implemented within Istanbul Gelisim University (IGU), aims to train individuals equipped for the sector in the fields of artificial intelligence, programming and cyber security. Within the scope of the project, 100 students' pre-registration has been approved, and there are 20 additional quotas in the training. The trainings will start in July and will last for six months in total. The project offers 60 people who successfully complete their training the opportunity to be employed in the sector.

Assist. Prof. Dr. Serkan Gönen, from the Department of Software Engineering at IGU Faculty of Engineering and Architecture, stated that they aim to provide students with practical skills as well as theoretical knowledge and said, "During the program, students will receive in-depth training on topics such as artificial intelligence algorithms, programming languages and cyber security protocols. In addition, various workshops and seminars will be organized so that they can follow current developments in the sector and gain experience with applied projects."



He stated that thanks to the trainings to be given by academics and industry professionals who are experts in their fields, students will both reinforce their academic knowledge and find the opportunity to develop solutions to the problems they may encounter in the sector and said, "With the evaluation processes and project presentations to be held at the end of the program, students' knowledge and skills will be measured and the most successful ones will be selected for employment."

[Click](#) to access the news source.



## IGU is the new member of IAESTE, which provides internship opportunities for students in more than 100 countries!

Founded in 1948 at Imperial College in London with the initiatives of 10 countries, Turkey joined IAESTE in 1955. IGU, which is a member of the International Association for the Exchange of Students for Technical Experience (IAESTE), an internship exchange program with more than 100 countries and only a few universities in Turkey, has added a new one to its activities carried out with the vision of 'World University'. IAESTE, which facilitates students to participate in international scientific studies, provides internship opportunities worldwide, especially in engineering and technical fields.

Speaking about the accreditation activities carried out by Istanbul Gelisim University in order for students to study freely without having to limit their dreams, IGU Vice Rector Prof. Dr. Arda Öztürkcan said, "In addition to the comprehensive education we provide at IGU, we also care about our students gaining international work experience. With 65 accredited departments, we are the 1st in Turkey and we bring our students together with the whole world on the way to internationalization."

Within the scope of the IAESTE project, IGU students will be able to experience different cultures by working as interns in many countries such as Australia, Belgium, Canada, Denmark, France, Germany, Japan, Norway, Portugal, Sweden, Switzerland, the United Kingdom and the United States. Thanks to IAESTE, experienced and qualified students from all over the world will come together at IGU.

Thanks to IAESTE, students will have the opportunity to work as interns with international qualifications. In addition to learning the working principles and projects of different countries, students will be able to improve themselves socially. Successful students studying at Istanbul Gelisim University (IGU) can work as interns abroad and return to the country as qualified employees with international competence, while interns from abroad will acquire working principles of IGU quality.

[Click](#) to access the news source.





Istanbul Gelisim Vocational School started education in 2008 with 9 programs and became a school that forms the core of Istanbul Gelisim University. It has shown rapid development since its establishment; it has reached 19 departments, 37 programs and 10,630 students. Evening education is provided in 21 of 37 programs.

Istanbul Gelisim Vocational School continues its educational activities with its experienced and strong academic staff. In addition to the permanent instructors, by employing the leading names of the sector part-time, the students are given the opportunity to learn their practical experience in business life.

Istanbul Gelisim Vocational School, which has moved to its new campus as of the Fall Term of the 2017-2018 Academic Year, has a total of 22 workshops, including Aircraft Maintenance Workshops, Mock-Up, Kitchen, Electric, Construction, Automotive, Serigraphy, Ceramics and Fashion workshops, in its new campus so that students can apply their theoretical education practically. Besides it offers a field of application with 7 Computer Labs, one of which is MAC.

Our School's Aircraft Technology Program has the Recognized School Approval Certificate from the General Directorate of Civil Aviation (SHGM) as well as the Flight Operations Specialist Training (Dispatcher) Authorization Certificate from the DGCA. Apart from our two programs authorized by DGCA, the licensing processes for the Approved Cabin Crew Basic Training Organization Certificate for Civil Aviation Cabin Services Turkish and English Programs and the Approved Ground Handling Training Organization Certificate for Civil Air Transport Management Turkish and English Programs are continuing at the DGCA.

Istanbul Gelisim Vocational School students can benefit from the educational and social activity opportunities available in all campuses of our university without interruption.



# OUR MISSION

To equip our students in all the programs with innovations in their fields, to keep them informed of current developments, to keep this process alive with scientific activities, and to support the scientific studies of lecturers. To be the solution for the need of qualified intermediate staff with the qualifications required by the sector, to have assimilated the latest technological developments, to have developed a practical side.



# OUR VISION

Our vision is to be one of the world's leading vocational schools with qualified academic staff and all the programs recognized by international institutions and organizations, and to train students who are demanded by the market and who are all employed after graduation.

*\* IGVS E-Bulletin has been prepared according to the Turkish Higher Education Quality Council (THEQC) criteria.*

# EDUCATION



## NEWS FROM IGVS

# A Seminar was Held on Food Quality Control and Food Safety

IGVS Food Technology Program Club organized a seminar on Food Quality Control and Food Safety. Students of the Food Technology Program and the Culinary Program attended the seminar. Moderated by Aslı MUSLU CAN, the seminar on "Food Quality Control and Food Safety" was attended by chief auditor food engineer Hande BOYHAN as a speaker. During the seminar, students were told how to maintain safe and high quality food production from field to fork / from farm to fork. A question and answer session was held at the end of the seminar. Thanks to Hande BOYHAN for an enjoyable and informative seminar.





# Applied Penetration Test Training was Held

Moderated by IGVS, Web Design and Coding Program Head Lect. Çisem Yaşar, the event titled "Applied Penetration Testing Training" was held with the participation of Cyber Security Consultant Kaan Bekar, who works at Privia Security.

In the flow of the event, the theoretical part of the event was completed with the participant introducing himself as one of the past graduates of our department, explaining the concepts of what is penetration testing, types of penetration testing, penetration testing stages, what is a hacker and types of hackers through sample scenarios. Afterwards, the application part of the event was completed with the solution of the vulnerable machine in a live environment on PriviaHub, their own server in Privia Security company. At the end of the event, the questions of the students were answered and the event was finalized with the presentation of a plaque by the event moderator Lect. Çisem Yaşar.



## Erasmus+ cooperation from the Maritime and Port Management Program



A bilateral cooperation agreement (Erasmus+ Agreement) was signed on 11.06.2024 with Prof. Dr. Assen Zlatarov University, Department of Transport Engineering, one of the well-established universities in Bulgaria and located in the city of Burgas, within the scope of student and lecturer mobility as Maritime and Port Management Program.

# In-Course Activity Regarding Applied Penetration Testing Was Held



In the Advanced Internet Programming course taught by Lect. Çisem YAŞAR, Head of the Web Design and Coding Program Program at IGVS, a penetration test was carried out by Information Security students on the web page projects made by the students during the semester. In addition to the communication of software developers and security expert candidates, students were offered the opportunity to test in a live environment in order to close the gaps in the websites.

In this way, web design students were enabled to see the vulnerabilities in the web pages they have made and to produce solutions on how to close them. At the same time, it was ensured for Information Security students to see and apply the penetration stages in a live environment, to be involved in the process, and to interact with the software developer in front of them. It was advantageous for both programs to get to know each other, to prepare the ground for what kind of environment they expect in the sector and to see the importance of the projects they have done.

# Technical Trip from Logistics Program

Within the IGVS, Logistics programme, a technical trip was organised to UPS Türkiye and Netaway Global Logistics companies on 27.05.2024. In this technical trip, the warehouses of the companies were visited and our students had the opportunity to see the theoretical knowledge they had seen in the lessons in practice. Many activities carried out in the warehouse were shown to our students practically by the warehouse authorities and this valuable information turned into extremely important gains for our students. These technical trips, which enable them to see the practice closely before internship and business life, constitute a prediction for our students in terms of the areas they will want to work in the sector.





# Activity for Information Security Management System Establishment Processes

Within the scope of the Information and Network Security II course taught by Lect.Tuğba SARAY ÇETİNKAYA from the Information Security Technology Program, an in-class activity titled “Processes of Establishing ISO27001 Information Security Management System in an Institution” was held.



With the participation of Bilal Karakılıç, who works as a System Specialist and Unit Quality Representative at Istanbul Gelisim University IT Department, an interview was held about the ISO27001 Information Security Management System installation process that our students have seen during the semester within the scope of Information and Network Security II course. Bilal Karakılıç gave information about the practical applications in the ISO27001 installation process and audits.

In this way, our students were provided with information about how the processes and documents examined in the course are applied for an organization in business life, internal audit and internal auditing. We would like to thank Bilal Karakılıç for his support.

## A Technical Trip was Held by the Food Technology Program

A technical trip was organized by the IGVS, Food Technology program club on Friday, May 24. Students of Food Technology Program, Food Quality Control Program and Bakery and Pastry Program participated in the technical trip to Selüz Flavor and Essence Factory. During the trip, detailed information was given on natural and artificial flavor production, quality control process, application applications and R&D studies. We would like to thank Ahmet YİĞİDER, Deputy General Manager of Selüz flavor and essence factory, and all its employees for their support and hospitality.



# Technical Tours Were Held to Evolog Logistics and Çatalca Logistics Center

IGVS Logistics Program organized a technical trip to Evolog Logistics on 23.05.2024. The technical trip started with a briefing given in human resources. Learning the mission and vision of Evolog Logistics, the company's position in the sector, its goals and values was inspiring for the students and helped them better understand the overall structure of the company. Following the briefing, the students visited Evolog Logistics' warehouses and received comprehensive information about warehouse management, handling processes and inventory tracking. In particular, they had the opportunity to see in practice the critical role of information technologies used in warehouses and instant tracking of inventory, optimization of storage areas and minimization of error rates. They then visited the

Çatalca Logistics Center. They received detailed information on how export and import processes are managed at this center. They received valuable information about customs procedures, international trade procedures and effective management of these processes. At the logistics center, they also had the opportunity to see Evolog Logistics' large fleet of vehicles. They received comprehensive information about how the fleet is regularly maintained, how detailed transportation planning is and how important these elements are for on-time delivery and cost optimization. Thanks to this technical trip, the students had the chance to see that the effective management of all logistics processes requires a great deal of knowledge and experience.





# Web Design and Coding Program Held a Mobile Application Event

Moderated by IGVS Web Design and Coding Program Head Lect. Çisem Yaşar, the event titled "Let's Ask a Knower: What is the Role of Flutter in the Mobile Application Development Process?" was held with the participation of Mobile Developer Ulaş Başkirişçi. The event focused on the important role of Flutter in the mobile application development process.

In this process, we tried to find solutions to the following questions that may arise in the minds of the participants. These are

- What is Flutter?
- A detailed explanation about the basic principles and functioning of Flutter.
- Multi-platform support and its advantages in the application development process.
- Flutter's Role in Mobile Application Development Process. Fast development process and efficiency provided by having a single code base.
- Performance and advantages of compiled code.
- Live refresh and fast feedback loop features.
- Consistent user experience material design principles and the importance of Flutter in creating user-friendly interfaces.
- Flutter's role and applications in the corporate world.
- Examples of how large companies and organizations have adopted and implemented Flutter.
- The benefits and gains of using Flutter in the corporate world.
- Speaker experience and progression process.



# In-class activity from the Information Security Technology Program

The "Wireless Networks and Security" course taught by Lect. Tuğçe Yüksel at IGVS, Information Security Technology Program ended with the event titled "Infiltrating the Target is Art, Time to Take the Flag in the Cyber Arena!" on Thursday, May 30th. In the first part of the event held at Prof. Dr. Aziz Sançar Conference Hall, Cyber Security Researcher Burakali Öztürk shared his experiences and observations in the field of cyber security and provided detailed information about current threats and attack methods. He also explained how artificial intelligence plays a role in cyber security and how this technology will evolve in the future. The "Capture The Flag" competition was organized in the second part of the event.



50 participants participated in the event, where students had the opportunity to apply what they had learned about cyber security and network technologies in practice and competed fiercely. During the competition, participants collected points by trying to solve security problems prepared at various levels of difficulty. At the end of the competition, Abdulaziz Hoccoğlu, a first-year student of the Information Security Technology Program, came first, leaving all his competitors behind. At the end of the event, which provided a great opportunity for students to improve themselves by putting their theoretical knowledge into practice, Lect. Tuğçe Yüksel, Head of the Program, presented a plaque of appreciation to the speaker Burakali Öztürk and the award to our student Abdulaziz Hoccoğlu, who came first at the end of the competition.



# Department of Computer Technologies 2024 Project Exhibition

Istanbul Gelisim University Vocational School Computer Technologies Department 2024 project exhibition was held with the visit of valuable participants. During the day, the projects prepared by the students were visited by our stakeholders and invited guests consisting of experts in their fields. Our rector Prof. Dr. Bahri Şahin, who participated in our year-end exhibition, which included our Computer Aided Design and Animation, Computer Programming, Computer Technology, Information Security Technology and Web Design and Coding programs in our department, added value to the event by listening to the works in the exhibition one by one. We thank him for his support. We would like to thank IGU Scientific Research Projects Coordinatorship, IGU Technology Development Center Directorate, IGU Computer Engineering Department, IGU Management Information Systems Department, IGU Electrical and Electronics Engineering Department, Quantum Patent A.Ş., Avcılar Municipality Innovation Center Coordinatorship, IMM Avcılar Employment Office and IGU Vocational School lecturers for their opinions and support. Finally, we would like to thank our Computer Technologies Department lecturers for their support and contributions during the planning and organization of our exhibition.



# Department of Computer Technologies 2024 Alumni Reunion

Istanbul Gelisim University Vocational School Computer Technologies Department 2023-2024 Alumni Meeting event was held. On the occasion of the event organized with the participation and contributions of IGU Alumni and Membership Coordinatorship, our graduate students came together and had conversations about their post-graduation experiences. In addition, our current students had the opportunity to meet with our graduates from our Computer Aided Design and Animation, Information Security Technology, Computer Programming, Computer Technology and Web Design and Coding Programs in our Computer Technologies Department and share their experiences. We would like to thank Dr. Mustafa ÖZAN, Director of IGU Alumni and Membership Coordination Office, for his support in the Department of Computer Technologies Alumni Gathering and our Computer Technologies Department lecturers for their support and contributions during the planning and organization process of the event.





# Basic Survival Awareness Training Held

IGVS Occupational Health and Safety Program Faculty Member PhD Kaan KOÇALI organized a "Basic Survival Awareness Training" with the participation of Mr. Hakan Erdoğan on June 27.

The following topics were covered in the training:

- What is an emergency? What is life in nature? What is Survival?
- What are the principles and principles of survival?
- Let's use our 5 sense organs correctly in nature.
- How will we dress in nature?
- What should be in our bag?
- What are advancement techniques and emergency response techniques in nature?
- How to navigate and leave a sign?
- The concepts of shelter as action and shelter as space.
- What are fire lighting techniques?
- How to protect from wild animals and family safety?
- How should nutrition and first aid be provided in emergency scenarios?



The poster is for a seminar titled "TEMEL HAYATTA KALMA EĞİTİMİ" (Basic Survival Awareness Training) organized by IGÜ MYO İş Sağlığı ve Güvenliği Programı. The speaker is Hakan Erdoğan, and the moderator is Dr. Öğr. Üyesi Kaan Koçali. The training is scheduled for 14:00 on 27 Mayıs 2024 (Pazartesi) at Istanbul Gelisim Meslek Yüksekokulu, G Blok - 305 Nolu Sınıf. The poster includes the logos of Istanbul Gelisim University and IGÜ, and mentions the Ministry of Health and Sports (Sağlık, Kültür ve Spor Daire Başkanlığı) and the Ministry of National Education (Millî Eğitim Bakanlığı).

*\* IGVS E-Bulletin has been prepared according to the Turkish Higher Education Quality Council (THEQC) criteria.*



The full text of the article titled "An Investigation of the Digital Literacy Skill Levels of Ceit Teacher Candidates" by Lect. Çisem YAŞAR from IGVS Web Design and Coding Program has been published in the "International Journal of Educational Social Sciences". [Click](#) to access the article.

IGVS, Occupational Health and Safety Program Faculty Member PhD Kaan KOÇALI's article titled "Workplace Inspections in Turkey Conducted within the Scope of ILO Labor Inspection Convention" was published in the field indexed journal "Asya Studies - Academic Social Studies". [Click](#) to access the article.

## R & D



IGVS, Electronics Technology Program lecturer Ali ÇETİNKAYA's work titled "Automatic Eraser System for Inked Boards" within the scope of intellectual property rights has been registered by the Turkish Patent and Trademark Office (TPMK) with the registration number "2022 018280". [Click](#) to access.



Assist. Prof.Dr. Kaan KOÇALI, one of the academicians of Istanbul Gelisim Vocational School, Occupational Health and Safety Program, received the “Top Researcher Award” at the “International Research Awards on Cybersecurity and Cryptography” event held in India.

Lect. Aslı MUSLU CAN from IGVS, Food Technology Program made a poster presentation on “The Effect Of Fermentation On Free And Insoluble-Bound Phenolics Of Apple Pomace” at the International Food Innovation and Sustainability Congress organized by Yıldız Technical University between 16-18 May 2024.



Assist. Prof. Dr. Kaan KOÇALI, one of the academicians of Istanbul Gelisim Vocational School, Occupational Health and Safety Program, visited Megjunaroden Slavjanski Univerzitet “Gavrilo Romanovich Derzhavin” Sveti Nikole in North Macedonia between 6-10 May 2024 within the scope of Erasmus Staff Training Mobility. He received information on Systems and Risk Theory, Quality Work Environment, Equipment and Product Safety, Workplace Ergonomics and Professional Risk Management Training.

The work of Lect. Çisem Yaşar from the IGVS, Web Design and Coding Program, titled “DEVICE THAT EASENS THE HAND ROPE METHOD” within the scope of intellectual property rights, has been registered by the Turkish Patent and Trademark Office (TPTO) with the registration number “2023 003573”. [Click](#) to access.



# SOCIAL CONTRIBUTION



*\* IGVS E-Bulletin has been prepared according to the Turkish Higher Education Quality Council (THEQC) criteria.*

## Metals in Sustainability

**Lect. Yasemen KARAMAN**  
Machine Program

In these days when natural resources are increasingly depleted and we are faced with environmental problems, the amount of waste generated by the material throughout its entire life is increasing day by day. For this reason, the understanding of material reuse and recycling gains importance in many areas.

The understanding of sustainability offers an approach that is sensitive to the needs of present and future generations in line with the available data, regardless of the climate, social, economic and technological conditions in which raw material and energy resources are protected. A lot of content has started to be created in terms of design thinking about the understanding of sustainability, which has become popular with the environmental problems triggered by the inability to establish a balance between production and consumption. The reason for this is the rapidly increasing population in cities, construction and unconscious use of resources in the formation of environmental problems. Since materials and resources are not unlimited, the need to use waste in different ways arises. Solid wastes, which are increasing in quantity, are substances that are unwanted after consumption and have the potential to adversely affect the environment and society and need to be disposed of regularly. In addition, solid wastes are defined as "domestic solid wastes, medical solid wastes, hazardous solid wastes, construction waste and rubble (structural wastes)". Construction waste and non-structural waste can be reused or recycled as appropriate.





The primary reason for recycling is environmental imperatives. Using unprocessed raw materials requires less energy during manufacturing than using processed raw materials, which is beneficial for the conservation of natural resources. Recycling metals leads to a 90% energy saving compared to metal remanufacturing. Recycling releases less carbon dioxide and harmful gases into the atmosphere than manufacturing new products. This is an important requirement for the protection of nature and resources. In addition, the economic value of scrap metal provides profitability with recycling. This enables businesses to reduce their production costs. The decrease in production costs has a positive impact on many issues, including employment.

When we examine the machine area as recycling, all of the metal or plastic materials released from the parts processed in lathe, milling, CNC can be recycled. The important point in the recycling of metals is whether they will lose their properties. Metals can be recycled over and over again while maintaining their properties. Among the materials, steel is the most possible material that is open to innovation by preserving its properties in recycling due to its ease of reprocessing and the opportunity to recover large structures. It is followed by aluminum, copper, silver, brass and gold among metals.





Around 400 million tons of metals are recycled worldwide. The most recycled materials are aluminum, and steel recycling is around 40 percent of steel production.

Aluminum cans have been shown to be the most recycled consumer product in the US. It can be said that wasting even a single aluminum can actually means wasting a can of gasoline.

In order to shape plastic material, plastic particles are again turned into scrap. These plastic wastes can be recycled in the same way. Not only waste materials, but also faulty products arise due to machine or employee error in production during the day, and these products can be recycled in the same way.

It has been revealed that the most recycled consumer product in the US is aluminum cans. It can be said that wasting even a single aluminum can means wasting a can of gasoline.

Metal recycling is recycled through different stages such as collection → sorting → classification → crushing and crushing → shredding → melting → cleaning → solidification → transportation for reuse.

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# Hydrogen-Powered Aircraft Engines

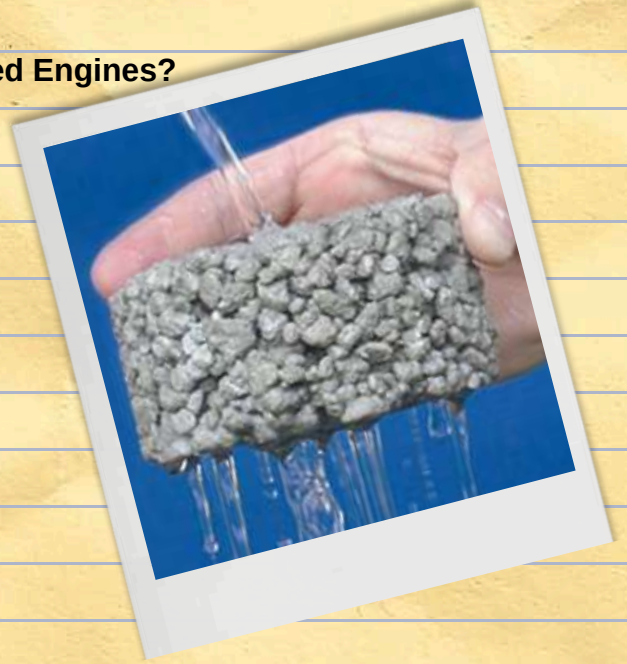
**Lect. Hamza EZGİN**

**Aircraft Technology Program**

With the increase in air pollution, zero-emission vehicles have started to enter our lives in many areas. In aviation, manufacturers first started this development with electric air vehicles, and in the near future we will see hydrogen-powered airplanes more frequently. Let's take a look at the developments of hydrogen-powered aircraft engines together.

## What is the Purpose of Building Hydrogen-Powered Engines?

As we all know, airplane engines use a special petroleum-based fuel called Jet A1. Airplanes that run on this fuel leave behind a cloud of white fog in the air, which is the exhaust gas from the plane's engine. This gas also harms the atmosphere with about 3.5% of it. Airplanes also have an impact on the atmosphere. To prevent damage to the atmosphere with zero emissions with the hydrogen-powered engine in the future.



## What are the Developments?

As climate change, which threatens the future of the planet we live on, continues to increase its impact every day, many different sectors are making moves for a greener future. Aviation, which plays an important role in carbon emissions, is one of these sectors. Although there are moves towards electric airplanes, batteries that can be charged with renewable energies such as solar and wind are still not suitable for long flights. Aviation companies are therefore turning to cleaner fuels and engines, such as hydrogen, which produces water vapor instead of carbon dioxide.





## 1. Rolls-Royce AE 2100-A

Rolls-Royce, one of the aircraft engine companies, together with the European airline EasyJet, has developed a hydrogen-powered engine for the aviation industry to make a difference in emissions.

In a statement, the two companies said that the engine was successful during the testing process. Rolls-Royce underlined that this engine is "the world's first modern hydrogen-powered aircraft engine". The test was conducted at an open-air facility at MoD Boscombe Down in the UK, using a converted Rolls-Royce AE 2100-A aircraft engine. In addition to the smooth ground tests, it was announced that the hydrogen fuel powering the engine was produced by the European Marine Energy Center at a center in the Orney Islands.



## 2. AIRBUS' 'Zeroe' Hydrogen Engine

Airbus has started work on a hydrogen-powered aircraft engine. For this purpose, Airbus has entered into an agreement with the aircraft engine manufacturer CFM International. The ZEROe concept was presented to the public. Trials will be carried out on an A380 aircraft from the concept. The hydrogen engine, which they call ZEROe, will be placed near the tail section of the aircraft. In the tail section of the aircraft, there will be fuel tanks containing liquid hydrogen. Before the flight trials, the engine will be tested on the ground for a long time by the CFM aircraft engine company. In 2025, flight tests with the A380 are scheduled to begin. In 2035, it is planned to enter flight service.

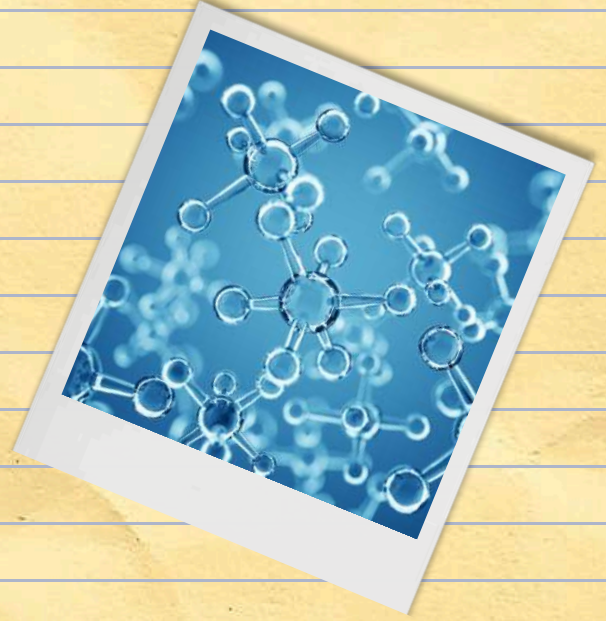




## What is a Hydrogen Fuel Engine?

Just like electric vehicles, hydrogen-fueled vehicles are powered by electricity. However, there is no battery inside hydrogen vehicles. These vehicles obtain their electrical energy from the hydrogen inside.

Replacing fossil fuels such as gasoline and diesel with hydrogen is one of the best solutions to reduce carbon dioxide emissions. That's why some manufacturers are working to develop this technology further.



## Is Hydrogen Fuel Easy to Obtain?

Hydrogen fuel is not as easy to obtain as one might think. Cost and the lack of the necessary fueling stations are currently the two biggest obstacles to this technology.

Liquid hydrogen fuel is also thought to take up about four times more space than conventional aviation fuels, requiring airlines to completely reorganize the structure of aircraft to meet these requirements. It is also cumbersome to store because it requires high pressure, low temperature and chemical processes to store it safely. In addition, liquid hydrogen is a fuel that must be stored at ultra-low temperatures (-253C) and converted back into a gaseous state for ignition.

We will see more hydrogen-powered aircraft engines in the near future. Will these developments achieve the zero emission target? What do you think about hydrogen-fueled aircraft engines?

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# Hydrogen Powered Internal Combustion Engines and the Future

Lect. Mahmut Nedim TANSU  
Automotive Technology Program

Hydrogen fuel cell engines, often called hydrogen fuel cells, convert hydrogen gas into electricity through an electrochemical process. This technology is at the forefront of hydrogen-powered transportation due to its high efficiency. The most widely used type of fuel cell is the Proton Exchange Membrane (PEM) Fuel Cell, produced for example by Hyundai Motor Company. They use a solid polymer electrolyte. Hydrogen gas is split into protons and electrons at the anode. As protons pass through the membrane to the cathode, electrons pass through an external circuit, generating electricity. At the cathode, protons, electrons and oxygen combine to form water and heat. The reactions that take place are:

- Anode:  $H_2 \rightarrow 2H^+ + 2e^-$
- Cathode:  $2H^+ + 2e^- + 0.5O_2 \rightarrow H_2O + \text{heat}$



A key advantage of the technology is its high efficiency: Fuel cells convert chemical energy directly into electrical energy and have efficiencies that often exceed those of internal combustion engines. The only by-products are water vapor and heat, so all emissions are harmless to the environment and the ever more important "zero emissions" label is clearly feasible. Finally, the technology is scalable from small to large and is therefore suitable for all applications. Challenges that still hinder increased utilization are the high costs of fuel cell materials, especially platinum catalysts.



## Will We See a Hydrogen Truck Anytime Soon?

The 15-liter hydrogen internal combustion engine is expected to reach full production in 2027. Cummins has launched two hydrogen ICE concept trucks to date. One is a heavy-duty concept truck with the X15H and the other is a medium-duty concept truck powered by the B6.7H.

Targeting similar performance characteristics of a diesel engine compatible with existing transmissions, drivetrains and cooling packages, both concept trucks promise easy integration within a viable vehicle concept with no impact on load or space requirements. The heavy-duty truck is expected to have an operating range of over 500 miles and reach 500 HP. It has an 80 kg high-capacity hydrogen storage system at 700 bar pressure. The medium-duty truck engine is expected to reach around 290 HP and peak torque of 1200 Nm.

## Mercedes-Benz Genh2 Truck Breaks 1000 Kilometer Record with Liquid Hydrogen Fuel

Daimler Truck has reached a new milestone with its hydrogen fuel and battery-powered vehicles as part of its dual strategy with the hashtag #HydrogenRecordRun. Developed as a prototype, the Mercedes-Benz GenH2 Truck covered a distance of 1,047 km. Daimler Truck, one of the world's largest commercial vehicle manufacturers, has proven that hydrogen fuel cell technology will be a sustainable solution to achieve the zero carbon target in long-distance road transportation. The Mercedes-Benz GenH2 truck, which was developed as a prototype vehicle and approved for traffic on public roads, completed its test drive by covering a distance of 1,047 km with a single fill of liquid hydrogen fuel.





The Mercedes-Benz GenH2 truck, powered by a fuel cell system supplied by "cellcentric" and equipped with a liquid hydrogen fuel tank system, successfully passed the test drive under real road conditions and fully loaded with a total gross weight of 40 tons without emitting any carbon emissions. Dual strategy: Vehicles powered by hydrogen and battery technology.

As a signatory to the Paris Climate Agreement, Daimler Truck continues to work to fulfill its responsibilities in this regard. The company aims to introduce new carbon-neutral vehicles for transportation activities in global markets by 2039. Electric battery-powered trucks are seen as the ideal choice for distribution transportation and long-distance transportation activities based on regular practice on planned routes with convenient distances and charging options. However, driving systems based on hydrogen fuel are considered a better solution for more flexible and demanding applications, especially in heavy-duty transportation and long-distance haulage. Daimler Truck believes that meeting this energy demand quickly and cost-effectively is only possible through the effective use of both technologies. That is why it is pursuing a consistent dual strategy with hydrogen fuel and battery-powered vehicles. Daimler Truck plans to test the first fuel cell trucks with customers in the coming years. Series production models of Mercedes-Benz GenH2 trucks are scheduled to be introduced in the second half of the current decade.



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## CLUBS

## TALK!

## DISASTER AND EMERGENCY CLUB

Istanbul Gelisim University Disaster and Emergency Club is a student club established within the body of Istanbul Gelisim University Health, Culture and Sports Department (SKS). Club consultancy is carried out by Yasemin KILIÇ ERDİM, Head of Construction Department of Istanbul Gelisim Vocational School.



As Istanbul Gelisim University Disaster and Emergency Club, in regional, domestic and international emergencies and disasters, in all kinds of events and accidents that require search and rescue, Istanbul Gelisim University students, academic and administrative staff and the public before and during emergencies and disasters. and after (especially the first 72 hours after the disaster and emergency, which is called golden hours), informing, training and ensuring that they are ready for the exercises to be held, being a guide in their own region in case of disasters and emergencies, public and private institutions/organizations taking part in disasters and emergencies cooperation with non-governmental organizations, associations, communities and clubs, the establishment and organization of teams depending on the nature of the disaster and emergency, the accurate and fast transmission of this notification to the most authorized institutions as a result of receiving a disaster and emergency notification, training of trainers and volunteers actively within its own body. It aims to provide training and seminars on safe and healthy transfer to the scene, fire, forest fire, flood, building collapse, earthquake, all kinds of search and rescue, train accident car accident, workplace explosions, first aid, and planning in this direction, with the relevant institutions. correspondence and cooperation aims to establish solidarity and teamwork awareness by establishing effective and healthy communication among the members.

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