



Sustainability Report

2024-2025



الجامعة الألمانية الأردنية
German Jordanian University



Introduction

This report provides a review of The German Jordanian University's sustainability performance, baseline and action plan for the 2024-2025 academic year. As a continuation of the previous sustainability report produced by GJU, it contains all data used to determine the university's baseline. The report is published and released to all relevant stakeholders, including professional and academic staff, students, the local community, and international partners. This reflects the University's ambitious approach to sustainability.

This report has been submitted with the approval of the University's Management.

Sustainability Vision

The German Jordanian University is committed to achieving the UN's sustainable development goals within its academic and administrative operations and activities by building relationships with local, regional, and global partners.

Sustainability Approach

Sustainability is a pillar of GJU's Strategic Plan. Every aspect of operation must be adopted and show progress in meeting the university's sustainability policies and goals. A culture of sustainability has been fostered through the university hierarchy. This is shown within the different sections of this report.



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1. SITE AND INFRASTRUCTURE



Figure 1: University Campus.

1.1. UNIVERSITY INFORMATION

The German Jordanian University is a public university located in Amman, Jordan. It was established in 2005 as a joint project between the German and Jordanian governments, with the aim of providing high-quality education and fostering cultural exchange between the two countries. The university's founding principles revolve around promoting academic excellence, innovation, and intercultural understanding. GJU offers a range of undergraduate and postgraduate programs in various fields, including engineering, applied sciences, management, and humanities.

Throughout its history, GJU has achieved several notable milestones. In 2005, the university welcomed its first batch of students and started offering its academic programs. Since then, GJU has grown steadily, expanding its infrastructure and academic offerings.

One significant milestone for GJU was the establishment of the School of Applied Technical Sciences in 2009, which further enhanced the university's focus on applied sciences and engineering disciplines. Additionally, GJU has established partnerships with numerous German universities, facilitating student and faculty exchange programs and joint research projects.

Over the years, GJU has gained recognition for its commitment to academic excellence and innovation. The university has received accreditation from reputable international bodies, ensuring the quality of its programs. GJU also actively engages in research and development activities, contributing to advancements in various fields.

All GJU Bachelor students have the opportunity of spending one year in a German speaking country abroad during their study program. This is called German Year which includes a study semester at one of our many partner universities as well as an

internship semester in the German industry sector. All different sections of the international affairs department interlink and work together to make international exchange possible and sustainable at all levels, be it student exchange, administrative or academic exchange. The GJU German dimension, supported by the Project Office at HS Magdeburg-Stendal and is paramount in its contribution to GJU's general internationalization strategy.

The German Jordanian University (GJU) is a public, comprehensive university devoted to academic distinction in teaching, research, and community service. The conduct of research, scholarship, and creative activities is at the core of The University, including multiple missions of education, research, service, and outreach to the nation, the region, and beyond.

1.2.LOCATIONS AND CAMPUSES

The German Jordanian university has two campuses. The main campus is in Mushaqar, on the Amman-Madaba highway which houses most of the university's administration and undergraduate program. The second location is the collection of Buildings in Jabal Amman and houses the School of Architecture and Built Environment, the Graduate School and several university centers.



Figure 2: Mushaqar Campus.



Figure 3: Jabal Amman Campus.

1.3. FACILITIES

As the campus is new, a master plan was prepared for the whole campus area as shown in the figure below.

















Figure 4: GJU master plan.

The university includes academic buildings, administrative buildings, library, sports hall, nursery, health clinic, parking garages, and green spaces. The total area in the main campus is 195,644 m² while the total area in Jabal Amman (second campus) is 6103 m².

1.4. BUILT AREA AND USAGE

The following shows the different buildings on campus, their area and usage.

<p style="text-align: center;">Building A</p> 	<p style="text-align: center;">Building B</p> 
<p style="text-align: center;">Area: 463 m² Administrative Building</p>	<p style="text-align: center;">Area: 1137 m² Academic Building</p>
<p style="text-align: center;">Building C</p> 	<p style="text-align: center;">Building D</p> 
<p style="text-align: center;">Area: 3266 m² Academic Building</p>	<p style="text-align: center;">Area: 1370 m² Administrative Building</p>
<p style="text-align: center;">Building G</p> 	<p style="text-align: center;">Building H</p> 
<p style="text-align: center;">Area: 1520 m² Technology, Research, and Innovation Park (TRIP)</p>	<p style="text-align: center;">Area: 1020 m² Academic Building</p>

<p align="center">Building M</p>	<p align="center">Daret Othman (Jabal Amman campus)</p>
	
<p align="center">Area: 2246 m² Academic Building</p>	<p align="center">Area: 1500 m² Academic Building</p>
<p align="center">Health care center</p>	<p align="center">Engineering labs</p>
	
<p align="center">Area: 269 m² Health Care Center</p>	<p align="center">Area: 430 m² Engineering Labs</p>
<p align="center">Building F</p>	<p align="center">Sports hall</p>
	
<p align="center">Area: 1346 m² Administrative Building</p>	<p align="center">Area: 3185 m² Sports Hall</p>
<p align="center">Building E</p>	<p align="center">Building L</p>
	
<p align="center">Area: 1385 m² Administrative Building</p>	<p align="center">Area: 1651 m² Library</p>

Bank Building	Nursery
	
<p>Area: 460 m² Bank, HR and Finance Department</p>	<p>Area: 267 m² Nursery</p>
Alsabbagh	
	
<p>Area: 1437 m² Consolation and Training Center</p>	

As most buildings consist of several floors, actual land usage differs from built area as shown in the table below.

Table 1: Building Area and Land Usage.

Building Name	Land Usage (m ²)	Total Built Area (m ²)
A	463	1380
B	1137	5326
C	3266	12995
D	1370	1370
E	1385	1385
F	1346	1346
G	1520	1520
H	1020	6100
M	2246	8558
L	1651	4786
Sports Hall	3185	6050
Bank Building	460	1400
Engineering Labs	430	430
WASH Labs	208	208
Nursery	267	267
Health Care Center	269	269
Engineering and Maintenance	170	170
Supply	748	1005
Maintenance	150	150
Jabal Amman	1500	3200
Alsabbagh	665	1437
Total	23456	59352

1.5. VEGETATION

The main campus is in a very fertile area, surrounded by farms and fields. The goal of the university is to cover all areas not built with vegetation. The tables below show green areas on campus while the figures show a sample of campus vegetation.

Table 2: Area Usage.

Area Usage	Area (1000 m ²)	Percentage (%)
Planted Area	51	25.3
Open Space	90.22	44.9
Built Area	23.5	11.6
Roads and Pathways	36.7	18.2
Total	201.75	100

Table 3: Type and Number of Plants.

Type of Plant	Number of Plants	Percentage (%)
Forest Trees	4812	88.6
Ornamental plants and trees	618	11.4
Total Plants	5430	100



Figure 5: Main campus pathway.



Figure 6: Green area.



Figure 7: Green area.

1.6.FTE EMPLOYEE

To be able to quantify resource usage per employee, it is important to determine the Full Time Equivalent (FTE) Employee. A full-time employee or student for emission purposes is defined as a person that is present on campus for 40 hours a week, 49 weeks a year. Due to the nature of academic operation at GJU, this definition is only applicable to administrative staff, not to academic staff or to students. The FTE employees are as follows:

- 1) The university has 379 support staff, which work 40 hours a week, for 49 weeks a year. This is considered as the Equivalent Full Time Employ (FTE).

$$\text{Staff FTE} = 379$$

- 2) The university has 305 faculty members. Since assistant, associate, and professors have different loads, and an average teaching load of 11 credit hours will be assumed, another 8 weekly office hours are added, as well as 3 hours of meeting time. Thus, on average faculty members have 22 weekly hours of on campus presence. Two full semesters equal 32 weeks including examinations. Then the faculty FTE is:

$$\text{Faculty FTE} = 305 \times (32/49) \times (22/40) = 109.55$$

- 3) 145 faculty taught during the 2025 summer semester. The summer semester is 9 weeks including examinations, with average enrollment of 4.5 credit hours. Contact per week is assumed 15 hours/week.

$$\text{Summer Faculty FTE} = 145 \times (9/49) = 9.99$$

- 4) The university has 2601 students. On average, a student enrolls in 16 credits hours in a normal semester, adding 10 hours/week for breaks in between classes, and 4 hours for leisure, that is 30 hours/week. Two full semesters equal 32 weeks including examinations.

$$\text{Student FTE} = 2601 \times (32/49) = 1273.96$$

- 5) 1775 students enroll for the summer semester. The summer semester is 9 weeks including examination, with average enrollment of 7 credit hours. Contact per week is assumed 21 hours/week.

$$\text{Summer Student FTE} = 1775 \times (9/49) = 171.16$$

Then the university's FTE = 1944



2.ENERGY

2.1.FUELS AND ENERGY USE

Most energy used at GJU is electric energy. However, LPG is used for heating and diesel is used for the backup generators. The amount of LPG consumed during 2025 is summarized in the table below. No diesel was used during 2025.

Table 4: LPG Consumption in 2025.

Date	Invoice No.	Weight (Kgs)	Total Amount
08/01/2025	50915	7,860.100	5,776.466
19/01/2025	51051	9,549.300	7,017.876
28/01/2025	51183	7,899.000	5,805.054
10/02/2025	51649	5,953.500	4,317.300
17/02/2025	51756	7,801.200	5,657.196
26/02/2025	51901	9,360.300	6,787.809
10/03/2025	52351	8,000.100	5,856.393
06/12/2025	57271	9,060.200	5,807.316
14/12/2025	57375	7,599.900	4,871.308
22/12/2025	57482	7,949.900	5,095.647
Date	Invoice No.	Weight (Kgs)	Total Amount
TOTAL		81,034.500	56,992.365

2.2.ENERGY EFFICIENCY MEASURES

GJU intends to increase Energy Efficient by using more energy-saving appliances. All new purchases and installations must be star-rated. Currently, the two newest buildings (the sports hall and the library) completely rely on LED lighting, which reduces energy consumption from lighting by approximately 80%. As these are two of the largest buildings on campus, the area that is covered by LED lighting accounts for 20% of the campus-built area. Older buildings are being retrofitted as well, with 50% completed during the past 2 years.

Currently 14% of all split AC units are inverter based, that save energy. There are plans to replace the older units.

The university aims at reduction of CO2 through PV generations and smart campus initiative. This includes.

- Energy Efficiency Program.
- Program to change the lighting system.
- Program to change AC units.
- Program to increase PV generated energy.
- Smart campus initiative to better manage energy usage.
- All new vehicles will be electric, supplied by PV generated energy.

The images below demonstrate LED fixtures used on campus.

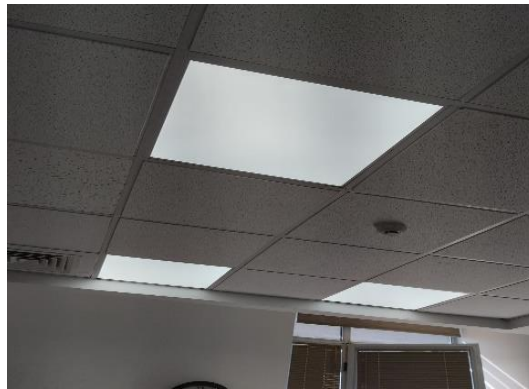


Figure 8: LED lighting in classrooms.



Figure 9: LED lighting in library.



Figure 10: LED lighting in offices.



2.3. RENEWABLE ENERGY SOURCES

GJU has a 2.11 MWp PV system installed at the main campus. The system has 6,699 315Wp PV panels and 73 inverters. The system generated 3,269,000 kilowatt-hours during the past year, covering 72% of the campus' electrical energy needs.

The system is installed as:

- 1) Car parking
- 2) Walkway shades
- 3) Rooftop



Figure 11: PV System car park.



Figure 12: PV system rooftop installation.



Figure 13: PV car park.

The system won the Emirates Silver Award for Energy for the year 2022 in its 4th cycle, organized by the Supreme Council of Energy in Dubai, with the participation of 187 projects from 16 countries, for the category of “Distributed Solar Energy – Large Scale”.

A 500kWp expansion project started in 2025 and is underway. The project should be completed by the summer of 2026 and will cover the remaining campus electrical usage.

An updated SCADA system has also been installed to better monitor generation and optimize consumption; the system was completed and is being commissioned as seen in the figures below.



Figure 14: PV SCADA User Interface.

2.4.ELECTRICITY USAGE

The image below shows the electrical infrastructure at GJU.



Figure 15: GJU Electrical System.

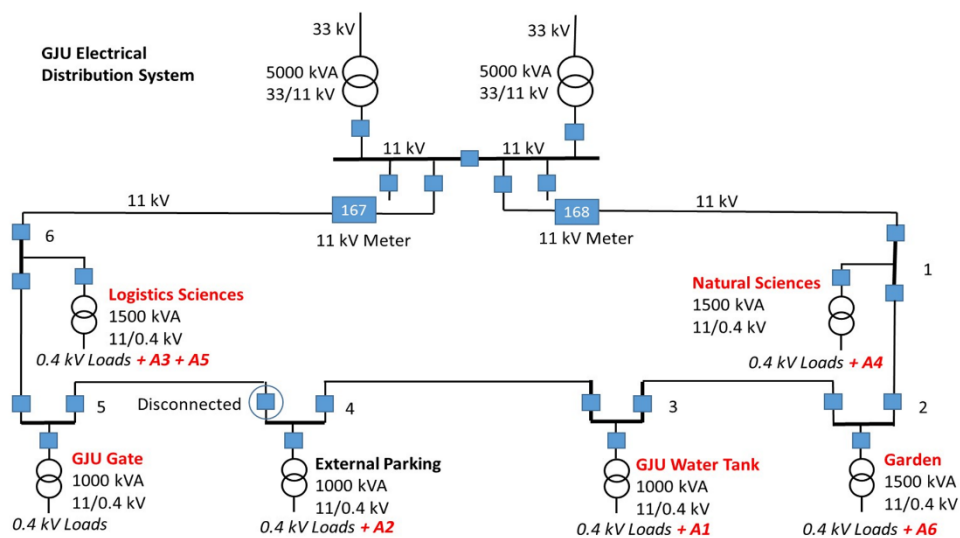


Figure 16: GJU Electrical one line diagram.

The university has an internal substation on the south side of the campus. This substation receives 33kV and steps it down to 11kV, the substation has two transforms, and GJU is billed at the 11kV voltage. This includes two meters at the main campus in addition to one meter in Jabal Amman campus. GJU manages the 11 kV network, that includes all wiring, and 6 transformers connected in a ring configuration.

Each transformer is also connected to a diesel backup generator for emergency usage. Every transformer is in a closed room separated into two parts: one for the transformer and the other for a backup diesel generator. The generators are connected to an ATS control system designed to feed emergency loads in case of any outage of the utility grid.



The figure below shows the system online diagram, also showing the location of PV connection. Data acquisition hardware is being installed at the 6 substation locations to better characterize load behavior for more optimized system operation.



The table below presents the monthly energy bills. The increase in energy bills in 2025 is attributed to the PV system expansion, which required system rewiring and resulted in a substantial portion of the system being taken offline for extended periods during the construction phase.



Table 5. Monthly Electric Bills

Meter #	Location		Month												
			Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
20168000167	Mushaqar	kWh	24750	14350	0	0	3050	54470	103770	118390	70380	56360	28960	30910	505390
		JD	8137	5468	1916	1911	2597	15779	28440	32194	19860	16255	9219	9714	151493
20168000168		kWh	71900	68170	4260	130	32730	28090	110770	133240	47300	58110	83120	112570	750390
		JD	20259	19299	2920	1949	10200	9011	30231	36002	13936	16707	23127	30689	214335
20216006074	Amman 1	kWh	26068	24553	17413	12665	18794	22849	24583	8021.742	20296	17828	15936	22517	231523
		JD	6704	6307	4437	3193	4798	5861	6315	8214	5192	4545	4050	5774	65396
20234013728	Amman 2	kWh	2324	2151	1024	966	981	1203	1869	2247	1289	934	1048	1675	17711
		JD	622	575	274	259	263	322	500	601	345	250	281	448	4746
20234014794		kWh	1117	1097	492	561	811	604	779	738	376	661	708	1205	9149
		JD	299	294	132	151	218	162	209	198	101	177	190	323	2137
20232128250		kWh	991	1182	848	661	635	630	786	793	657	644	761	1041	9629
		JD	265	316	227	177	170	169	211	212	176	173	204	279	2585

2.5. GREEN AND SMART BUILDING MEASURES AND RENOVATION POLICIES

The university has started a plan for a smart campus. This includes integrating SCADA systems with individual BMS systems, adding a level of intelligence to the system, through sensors and IT. All university buildings have:

- Building Management systems (BMS)
- Physical security
- Motion sensors in bathrooms and hallways
- Video surveillance/CCTV
- Indoor environment control (thermal comfort and air quality),

As most GJU buildings are considerable new, all constructions have considered sustainable measures during the construction phase. This includes double-glazed glass for thermal insulation and noise reduction; roof top insulation for thermal insulation and waterproofing; building orientation and installation of both window curtains and air curtains. All new building will follow the newly published and adopted Jordanian Green Building Guidebook.

Buildings (A, B, C, H, I) are connected to a Building Energy Management System (BEMS) to monitor and control the mechanical and electrical equipment of each building. The Figure below shows the BEMS located in building C. Building 'A' contains the main computer server of the university and because of that it also contains a 60kVA UPS system. Buildings (B, C, H, I) contain a 10kVA UPS system each.



Figure 17: Building (C) BMS.

3. SOLID WASTE

3.1. UNIVERSITY WASTE MANAGEMENT

GJU is contracted with a private company to remove waste. The current schedule is four trips a week. Weekly waste produced is approximately 28 tons. Waste is taken to the Al Ghabawi Landfill. In addition, the university has signed an agreement with a paper recycling company, which processed 10,292 kgs of paper during the second half of the year.

The images below demonstrate some of the solid waste initiatives on campus.



Figure 18: Recycling bins.



Figure 19: Paper recycling bin.



Figure 20: Outdoor recycling bin.

3.2. RECYCLING AND WASTE PRODUCTION REDUCTION PROGRAMS

The university has implemented several initiatives to reduce waste, including replacing single-use plastics with reusable alternatives, promoting paper reduction through digital transformation and e-learning platforms, and encouraging practices such as double-sided printing and the use of recycled materials.

Additional measures include installing paper recycling facilities, limiting printer usage, introducing online exams, and raising sustainability awareness through institutional campaigns and communication tools.



Figure 21: Glass bottle initiative

3.3. ORGANIC WASTE MANAGEMENT

Organic waste at the university mainly originates from food services and landscaping activities. Food waste is managed by outsourced contractors who handle its collection and disposal according to environmental regulations.

Plant and garden waste is reused on campus through composting and soil conditioning to support landscape maintenance and reduce the need for chemical fertilizers.

Overall, the university adopts effective reduction, reuse, and recycling practices, ensuring that most of the organic waste is treated or reused, while the remaining portion is safely managed by certified contractors



Figure 22: Organic waste / composting

3.4. INORGANIC WASTE MANAGEMENT

The university operates an integrated inorganic waste management program across all campus facilities, focusing on waste reduction, reuse, and efficient recycling.

Inorganic waste—such as paper, plastic, metals, and e-waste—is managed through a structured system that includes source segregation using recycling bins, formal paper recycling agreements, and safe handling of electronic waste by certified companies.

The program also promotes reuse through initiatives such as donation bins, while non-recyclable waste is transported to designated landfill sites. Overall, the system ensures that most of the inorganic waste is recycled or treated, reflecting effective and sustainable waste management practices

3.5. HAZARDOUS AND TOXIC WASTE MANAGEMENT

The university ensures the safe handling, storage, and treatment of hazardous and toxic waste generated mainly from laboratories and electronic equipment.

Waste is properly segregated, labeled, and stored in designated safety containers and secure facilities in accordance with environmental regulations. Biological waste is treated on-site using autoclave systems, while chemical and electronic waste is managed by certified contractors for safe disposal.

Through strict control measures, most of the hazardous waste is safely treated, and overall generation remains minimal.



Figure 23: Autoclave.



4. WATER

4.3. WATER SOURCES, REUSE, AND USAGE

For residential usage, the university relies on three water sources 1) Water Authority 2) Water well 3) Private Water Tank Trucks. The source used of is chosen based on availability. The well is 450 meters deep and was commissioned in 2012 and is managed by GJU. All sources of water supply a ground tank with a capacity of 1,200 m³, which is then pumped to a water tank at the top of the water tower, which has a capacity of 40 m³, which supplies the water network to the buildings and other demands.



Figure 24: Water Tank

A monitoring system was installed during the past year, as shown in the figures below. The total water consumption during the year was 29,781 m³.

Table 6: GJU water balance

Water Balance for 2025 in Main Campus							
Month	Accumulated Treated Water	Treated Water (m ³)	Untreated Water(m ³)	Cost of Withdrawn water	Water reaching the WWTP(m ³)	percentage of water reused(%)	Total Water Consumption (m ³)
January	0.00	0.00	1,230.00	1599	1,230.00	0.00	2,356.00
February	232.00	232.00	990.00	1287	1,222.00	18.99	1,965.00
March	438.00	206.00	495.00	643.5	701.00	29.39	2,966.00
April	543.00	105.00	1,590.00	2067	1,695.00	6.19	2,587.00
May	1,189.00	646.00	900.00	1170	1,546.00	41.79	3,761.00
June	2,364.00	1,175.00	90.00	117	1,265.00	92.89	2,608.00
July	3,948.00	1,584.00	0.00	0	1,584.00	100.00	2,755.00
August	5,389.00	1,441.00	0.00	0	1,441.00	100.00	2,488.00
September	6,243.00	854.00	0.00	0	854.00	100.00	1,588.00
October	7,756.00	1,513.00	210.00	273	1,723.00	87.81	2,065.00
November	9,017.00	1,261.00	240.00	312	1,501.00	84.01	1,810.00
December	10,559.00	1,542.00	300.00	390	1,842.00	83.71	2,832.00
Total	47,678.00	10,559.00	6,045.00	7858.5	16,604.00	62.06	29,781.00

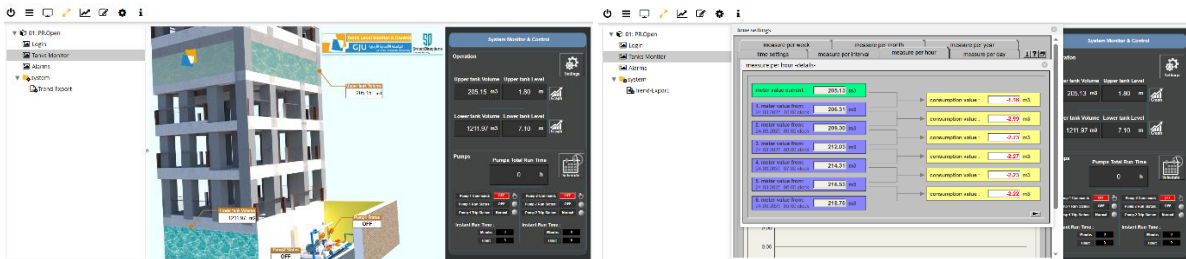


Figure 25: Water Monitoring System

In addition, water flow meters have also been installed, as can be seen in the below figure. This will allow for more precise and accurate monitoring and characterization of consumption behavior.



Figure 26: Water flow meters.

4.4. RAINWATER HARVESTING

The university takes advantage of four areas to harvest rainwater. As shown in the figure. Areas 1, 2 and 3 are soil areas, while area 4 represents all buildings' roofs.



Figure 27: Water harvesting areas.

The total area for the soil harvesting areas is $96,000 m^2$, with an estimated water absorption of 80%, while area 4 is $104,000 m^2$ with approximately 20% harvesting capacity. This result is $97,600 m^2$ of harvesting area, which is 48.8% of the total campus area, $505m^3$ of water may be stored in the storage tank.

4.5. WASTEWATER TREATMENT AND MANAGEMENT

The German Jordanian University operates an independent on-site wastewater treatment plant that is completely separated from the public sewage network. The plant receives all campus sewage and treats it through a multi-stage process that includes:

- Preliminary treatment: coarse and fine screening and grit removal.
- Primary treatment: sedimentation in settling tanks to remove suspended solids.
- Secondary treatment: biological degradation in the aeration tank to reduce organic matter.
- Tertiary treatment: advanced processes such as filtration, chlorination, and disinfection, ensuring the effluent meets high-quality standards for reuse.

The treated water is stored in a 400 m³ irrigation tank, while sludge is safely transported to the municipality's wastewater facility. Water quality tests confirm compliance with reuse standards, and the treated effluent is reused for landscape irrigation within the campus.

A schematic of the system—including the coarse and fine screen, aeration tank, settling tank, filtration, and chlorination units—is attached as supporting evidence.

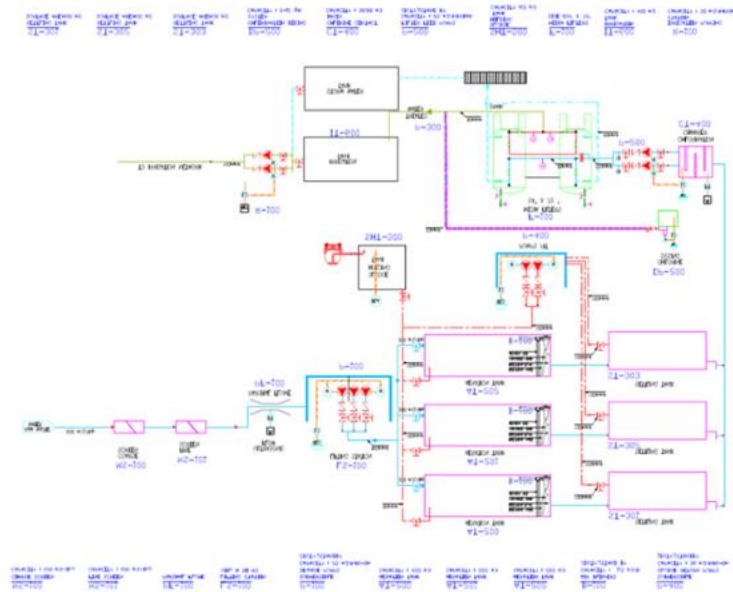
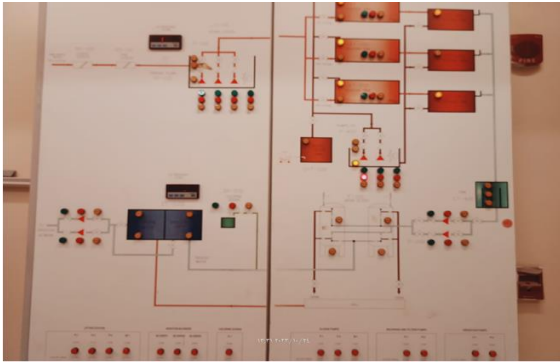


Figure.28 Wastewater treatment plant schematic



Coarse and fine Screen



Filtration and chlorination system



Aeration tank



Settling tank

Figure 29. Waste Water Treatment Plant Components

5. TRANSPORTATION

This chapter presents a comprehensive analysis of transportation patterns, sustainability performance, and road safety at German Jordanian University (GJU) for the reporting year 2025–2026. It integrates five data sources: a gate vehicle count survey, the GJU Transportation and Sustainability Survey (535 respondents) conducted by the Road Safety Center of Excellence (RSCE), external visitor traffic records (8,451 entries), a four-year fleet fuel and emissions analysis (2022–2025), and campus parking and green initiative documentation.

535 Survey respondents (students, staff & faculty — 2026)	8,451 Visitor vehicle entries (2025 campus gate records)	-28.7% Fleet fuel cost reduction (2022 to 2025)	81.7% Willing to switch mode (Yes or Maybe — 437 of 535)
44.0 t Est. fleet CO ₂ (2025) -19.6% vs 2022 baseline	58.7% EV/Hybrid vehicle share among surveyed respondents	68.6% Witnessed traffic incident near GJU campus	Bus system Top campus priority cited by 47.5% of respondents

Together, these sub-sections deliver a multi-dimensional, evidence-based picture of GJU's transportation footprint and provide the data foundation for the university's ongoing sustainability strategy.

5.1. UNIVERSITY COMMUTE OVERVIEW

German Jordanian University is located on the Madaba–Amman highway approximately 30 km from the capital. The geographic positioning means that virtually all students and employees commute to campus by motorized transport. To quantify daily patterns, the university conducted a gate vehicle count over a representative working week in 2025.

5.1.1 DAILY CAMPUS VEHICLE GATE COUNT

Table 7: Daily campus vehicle gate count by type and day — 2025 survey week

Vehicle Type	Sunday	Monday	Tuesday	Wednesday	Thursday	Weekly Total
Gasoline Cars	450	291	293	394	315	1,743
Hybrid Cars	195	95	214	173	126	803
Electric Cars	133	64	139	133	88	557
Personal Trucks	37	11	29	18	11	106
Large Trucks	17	3	1	10	6	37
Small Buses	27	9	20	24	23	103
Large Buses	25	7	17	16	11	76
Daily Total	884	480	713	768	580	3,425



The weekly gate count recorded **3,425 total vehicle entries across five working days**. Sunday is the busiest entry day (884 vehicles). Electric and hybrid vehicles together account for **39.7% of all private vehicle entries** — significantly above Jordan's national fleet average.

5.1.2 CONTRACTED BUS SERVICE — AL-BURAIJI TRANSPORTATION SERVICES

The university maintains an annual contract with Al-Buraiji Transportation Services Company to transport students and employees along five dedicated routes, all operating in both directions.

Table 8: GJU contracted bus service routes (Al-Buraiji Transportation Services)

Route	Total Distance	Key Stops (selected)
Consultations Line	32 km	University of Jordan → Al-Israa Hospital → Univ. Hospital → Al-Waha Circle → Kilo Circle → Seventh Circle → Gulf Gas Station
Areefa Mall Line	34 km	Areefa Mall → Al-Mashaghel Circle → Sports City → Al-Dakhiliyah → Fourth Circle → Abdoun Circle → Taj Mall
Salt Line	50 km	Al-Balqa University → Al-Magharib Bridge → Sports City → Al-Manaseer → Al-Dababneh → Ain Al-Basha → Umm Al-Nu'aj → Al-Kamaliah
Applied Science Line	36 km	Applied Science Circle → Princess Basma Circle → Sweileh → Civil Defense → Khalda Circle → Hussein Gardens → Al-Shaab Circle
Marj Al-Hamam Line	18 km	Al-Bardini Circle → Church Traffic Light → Al-Salam Gas Station

5.1.3 COMMUTE ORIGIN DISTRIBUTION

Distance data for a sample of 348 commuters were obtained by mapping self-reported starting locations to GJU using road distances. The Amman metropolitan area dominates, with Madaba and Marj Al-Hamam being the most significant non-Amman clusters.

Table 9: Selected commute origin points and distances to GJU (2025 sample, n = 348)

Origin	Distance (km)	Travelers	Origin	Distance (km)	Travelers
Madaba	7	47	Marj Al-Hamam	17	41
Na'ur	13	12	Al Salam Gas Station	12	12
Fuheis	32	13	Tabarbour	32	7
Irbid	112	9	Abu Nseir	37	6
Salt	46	14	Applied Sci. Univ.	39	5
Zarqa	58	8	Al Bayader	24	5
University of Jordan	29	18	Shumaysani	39	4

5.2. GJU TRANSPORTATION AND SUSTAINABILITY SURVEY

The Road Safety Center of Excellence (RSCE) at GJU administered a comprehensive Transportation and Sustainability Survey, collecting **535 complete responses** from students (81.1%), academic staff (9.5%), and administrative staff (9.3%). This is the most comprehensive primary data collection on GJU commuter behavior conducted to date.

5.2.1 RESPONDENT PROFILE

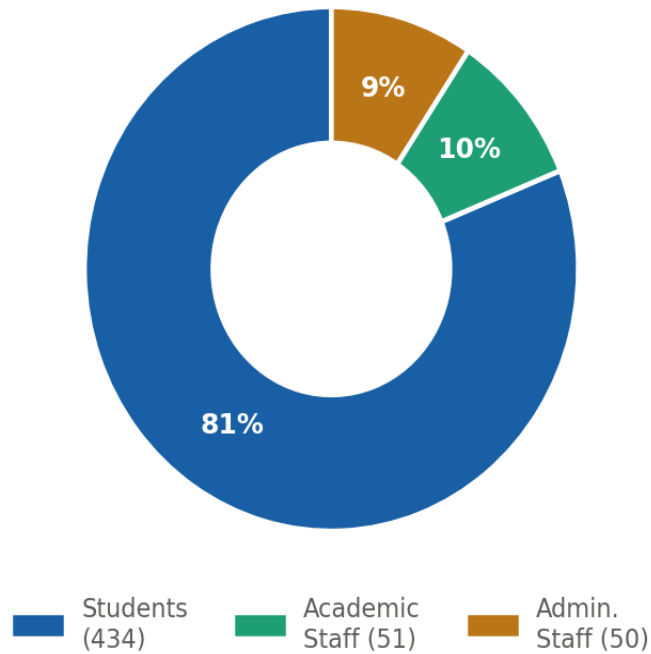


Figure 30: Respondent breakdown by GJU role (n = 535)

Table 10: Survey respondent profile

Role	Respondents	% of Total	Primary Mode
Student	434	81.1%	Private cars alone (42.6%)
Academic Staff	51	9.5%	Private cars alone (45.1%)
Administrative Staff	50	9.3%	Private car alone (48.0%)
Total	535	100.0%	

Table 11: Commute frequency distribution

Commute Frequency	Respondents	% of Total
5+ days per week	336	62.8%
3-4 days per week	152	28.4%
1-2 days per week	47	8.8%

62.8% of respondents commute five or more days per week. Private car use dominates all role groups. The university bus service serves 31.8% of students but only 7.8% of academic staff.

5.2.2 PRIMARY TRANSPORT MODE AND VEHICLE TYPE

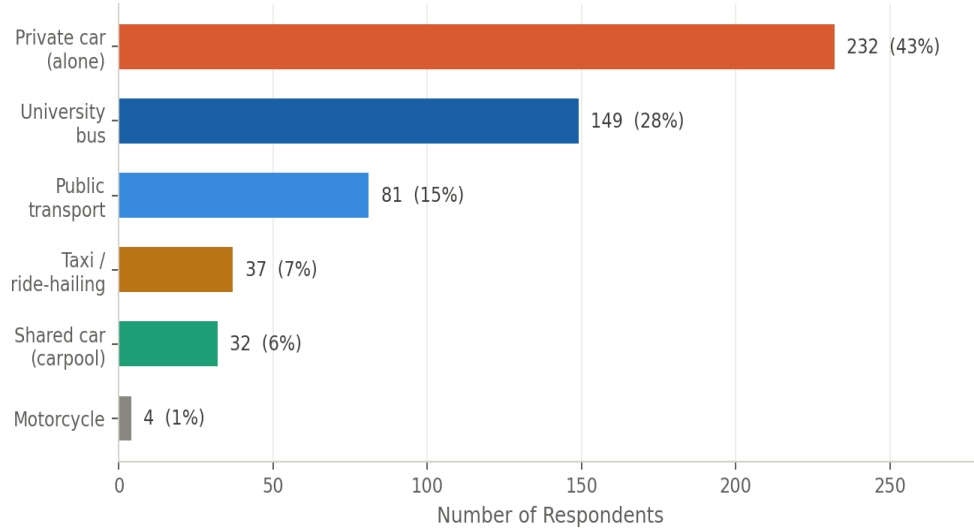


Figure 31: Primary transport mode to GJU campus (n = 535)

Table 12: Primary transport mode split

Transport Mode	Respondents	% of Total
Private car (alone)	232	43.4%
University bus	149	27.9%
Public transportation	81	15.1%
Taxi / ride-hailing	37	6.9%
Shared car (carpool)	32	6.0%
Motorcycle	4	0.7%

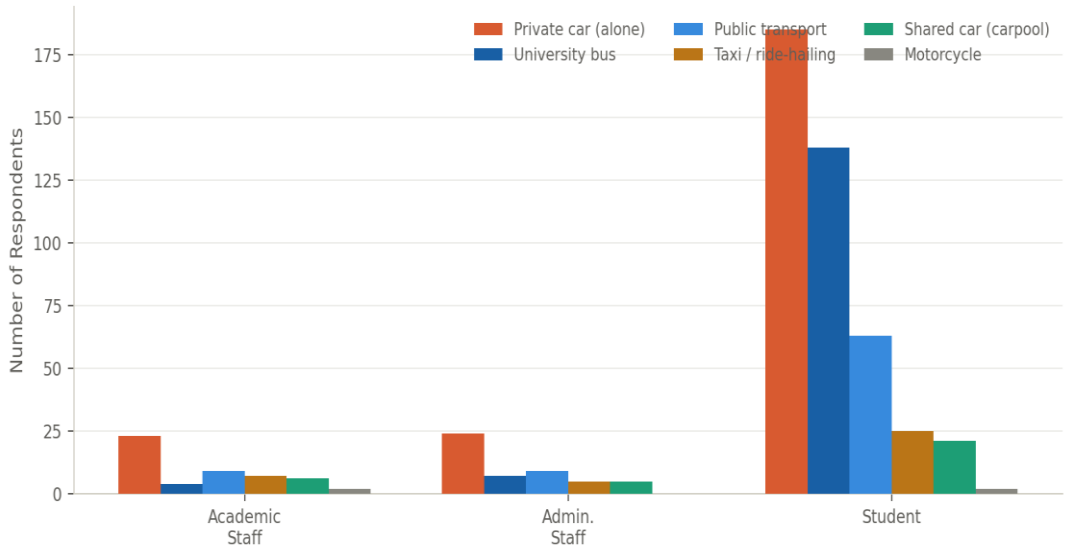


Figure 32: Transport mode by respondent role

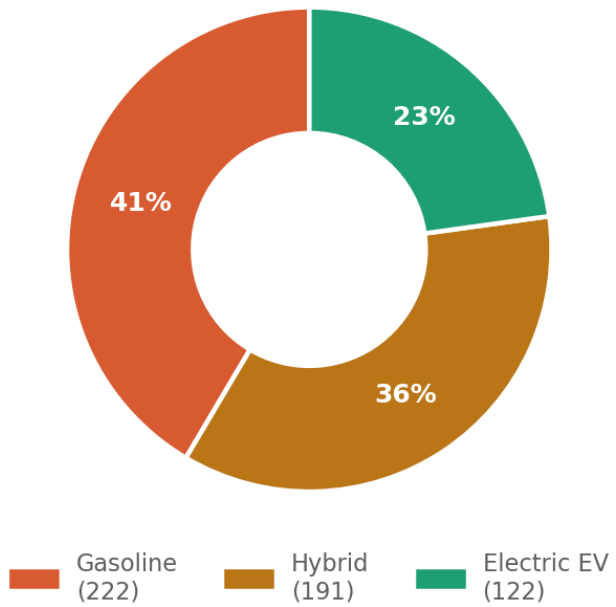


Figure 33: Vehicle type among all respondents (n = 535)

Table 13: Vehicle type among respondents

Vehicle Type	All Respondents	% of All	Car Users (264)	% of Car Users
Gasoline	222	41.5%	101	38.3%
Hybrid	191	35.7%	98	37.1%
Electric (EV)	122	22.8%	65	24.6%

58.5% of respondents own a hybrid or EV — far above Jordan's national fleet average. Among the 264 car commuters, 61.7% drive a hybrid or EV.

5.2.3 TRAVEL DISTANCE, TIME, AND MONTHLY COST

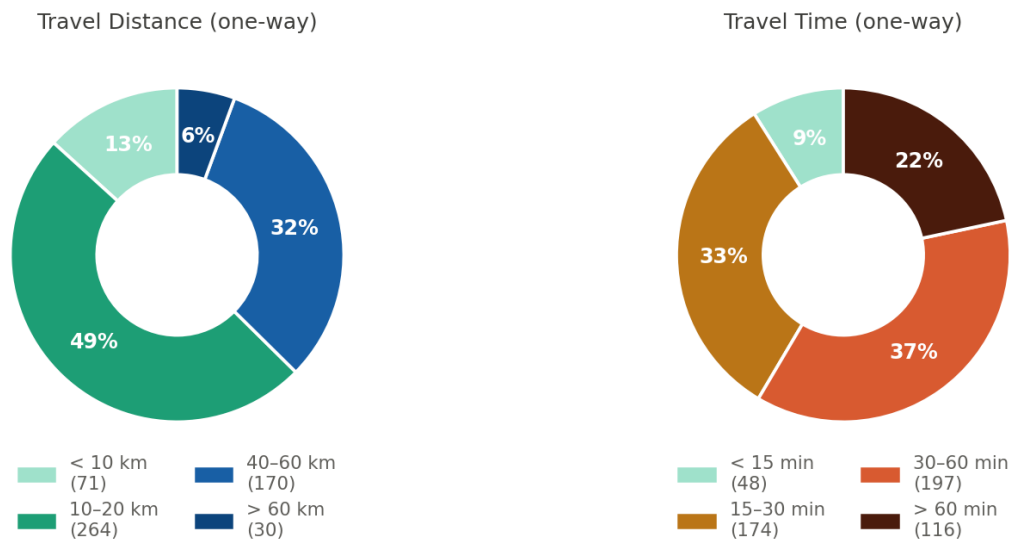


Figure 34: One-way travel distance (left) and travel time (right)

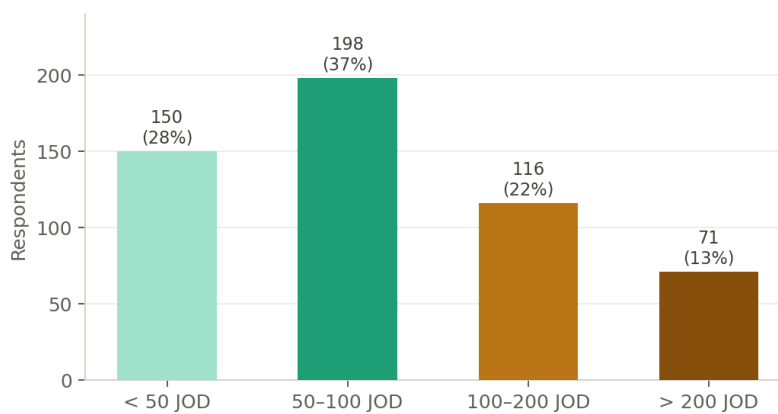


Figure 35: Monthly transportation cost distribution (n = 535)

Table 14: Monthly transportation cost distribution

Monthly Cost	Respondents	%	Cumulative
< 50 JOD	150	28.0%	28.0%
50–100 JOD	198	37.0%	65.0%
100–200 JOD	116	21.7%	86.7%
> 200 JOD	71	13.3%	100.0%

58.5% of respondents spend 30+ minutes each way; 21.7% spend over 60 minutes. This commute time burden drives private car preference. 65% spend under 100 JOD/month, but 13.3% spend over 200 JOD — a significant household burden that makes affordable alternatives a financial priority.

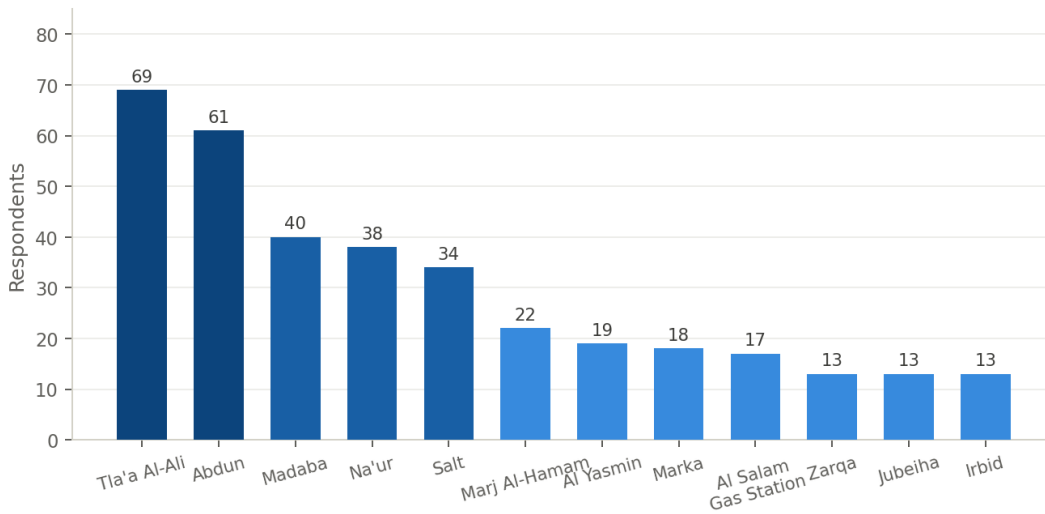


Figure 36: Top 12 commute origin locations (n = 535)

5.2.4 REASONS FOR MODE CHOICE

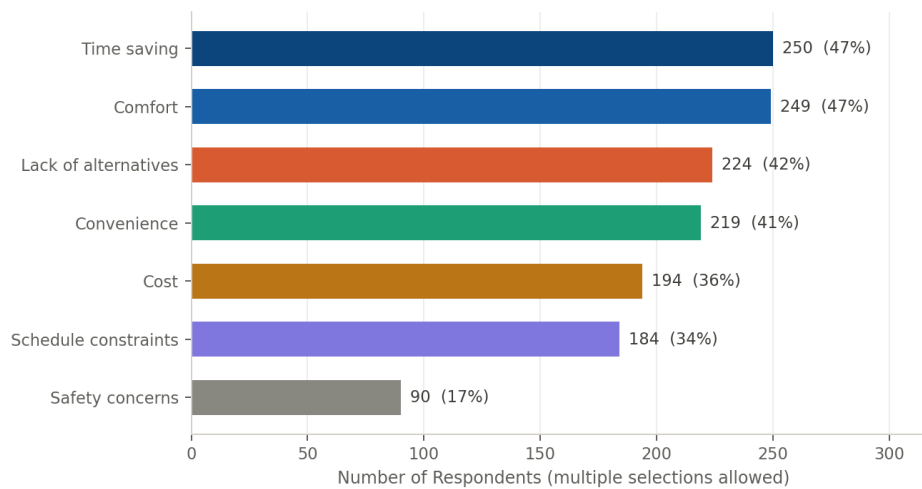


Figure 37: Reasons for current transport mode (multiple selections, n = 535)

Table 15: Disaggregated reasons for mode choice (multiple selections permitted)

Reason	Responses	% of Respondents
Time saving	250	46.7%
Comfort	249	46.5%
Lack of alternatives	224	41.9%
Convenience	219	40.9%
Cost	194	36.3%
Schedule constraints	184	34.4%
Safety concerns	90	16.8%

"Lack of alternatives" ranks third at 41.9% (224 respondents) nearly half the campus community is constrained into their mode, not freely choosing it. This is a direct mandate for expanded bus coverage and carpooling provision.

5.2.5 ENVIRONMENTAL AWARENESS AND SUSTAINABILITY ATTITUDES

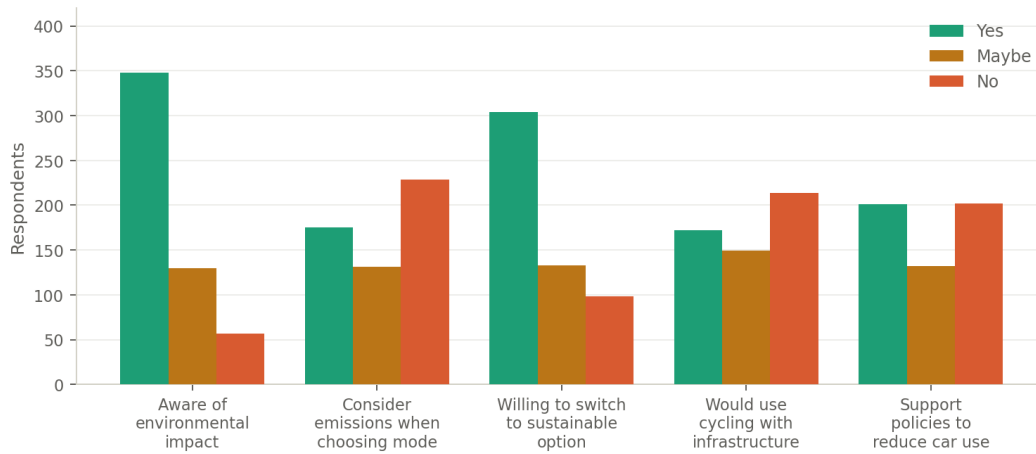


Figure 38: Environmental awareness and sustainability attitude responses (n = 535)

Table 16: Environmental awareness and sustainability attitude responses

Question	Yes	Maybe	No
Aware of environmental impact	348 (65.0%)	130 (24.3%)	57 (10.7%)
Consider emissions when choosing mode	175 (32.7%)	131 (24.5%)	229 (42.8%)
Willing to switch to sustainable option	304 (56.8%)	133 (24.9%)	98 (18.3%)
Would cycle with safe infrastructure	172 (32.1%)	149 (27.9%)	214 (40.0%)
Support car-reduction policies	201 (37.6%)	132 (24.7%)	202 (37.8%)

81.7% of respondents (437 of 535) would be willing or possibly willing to switch to a more sustainable transport option if one were available — confirming high latent demand for sustainable alternatives. An awareness–action gap is also evident: 89.3% are aware of their commute's environmental impact, yet only 32.7% factor emissions into their decisions. Also, **60.0% of respondents would use on-campus cycling infrastructure** if it were made safe — a strong economic case for investment in cycle lanes.

5.2.6 ROAD SAFETY PERCEPTIONS

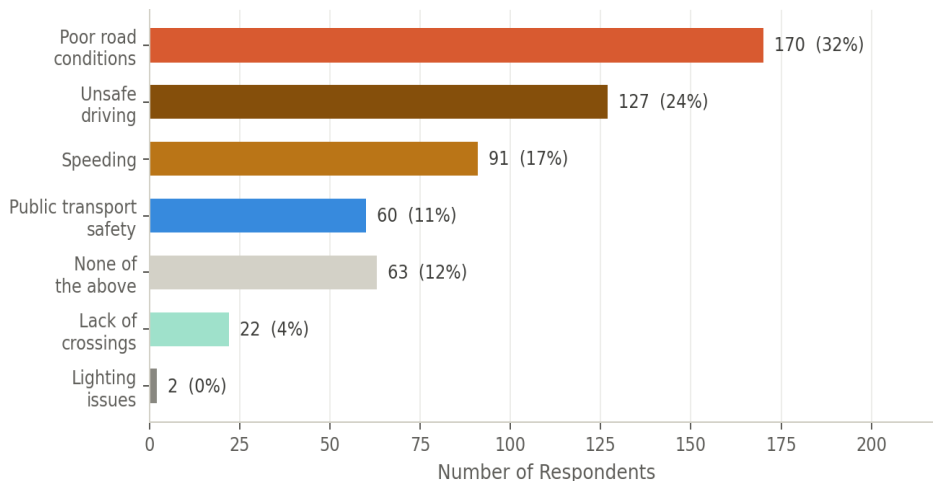


Figure 39: Main road safety concerns reported by respondents

Table 17: Road safety perception and incident experience summary

Indicator	Result
Feel safe traveling to/from GJU — Yes	310 (57.9%)
Feel safe traveling to/from GJU — Maybe / No	225 (42.1%)
Experienced or witnessed a traffic incident near GJU	367 (68.6%)
Top safety concern	Poor road conditions (170, 31.8%)
Second concern	Unsafe driving behavior (127, 23.7%)

68.6% of respondents have personally experienced or witnessed a traffic incident near GJU — validating the campus road safety challenge as a documented, widespread reality directly relevant to the RSCE's mandate.

5.2.7 CAMPUS INITIATIVE PRIORITIES

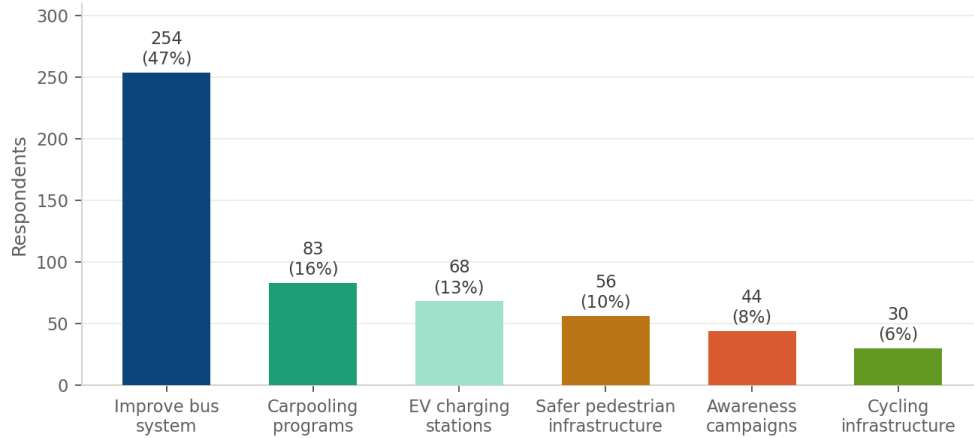


Figure 40: Transportation initiatives respondents want GJU to priorities

Table 18: Campus transportation initiative priorities

Initiative	Respondents	% of Total
Improve bus system	254	47.5%
Carpooling programs	83	15.5%
EV charging stations	68	12.7%
Safer pedestrian infrastructure	56	10.5%
Awareness campaigns	44	8.2%
Cycling infrastructure	30	5.6%

Improving the university bus system is the overwhelming top priority at 47.5% more than all other initiatives combined. EV charging stations rank third (12.7%), consistent with the 22.8% EV ownership rate.

5.3. EXTERNAL VISITOR VEHICLE TRAFFIC — 2025

In 2025, GJU recorded **8,451 external visitor vehicle entries** at campus gates, captured by the gate management system with entry date, time, exit time, and gate location.

5.3.1 MONTHLY DISTRIBUTION

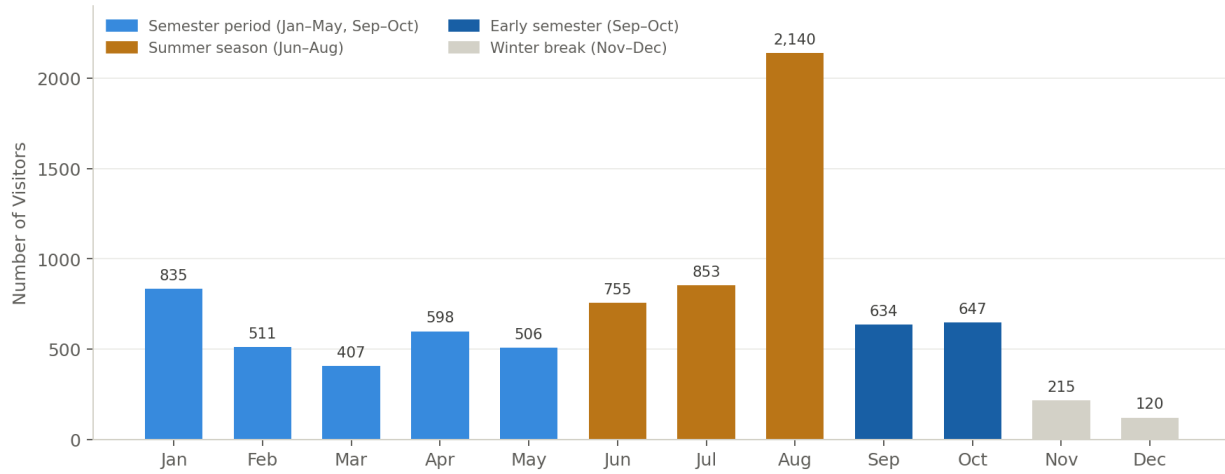


Figure 41: Monthly visitor volume at GJU campus gates, 2025

Table 19: Monthly external visitor vehicle entries — 2025

Month	Visitors	% of Annual
January	835	9.9%
February	511	6.0%
March	407	4.8%
April	598	7.1%
May	506	6.0%
June	755	8.9%
July	853	10.1%
August	2,140	25.3%
September	634	7.5%
October	647	7.7%
November	215	2.5%
December	120	1.4%
Total	8,451	100.0%

August alone accounts for 2,140 entries (25.3% of the annual total). The summer season (June–August) draws 3,748 visitors — 44.3% of annual traffic — likely driven by open days, RSCE events, and partner visits.

5.3.2 DAY-OF-WEEK AND DURATION PATTERNS

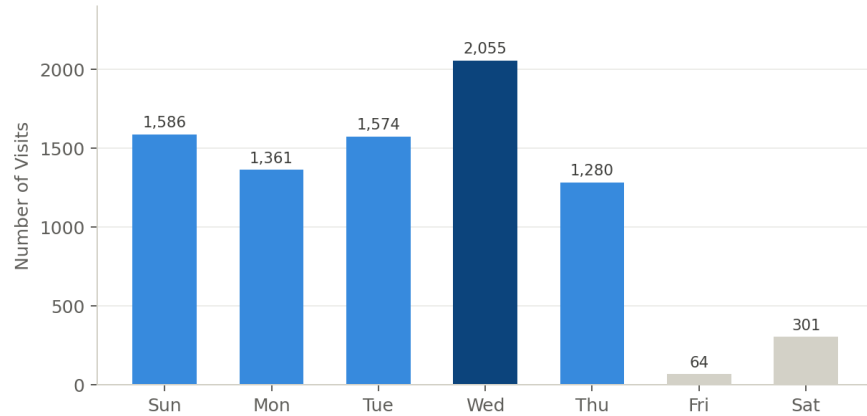


Figure 42: Visitor entries by day of the week, 2025

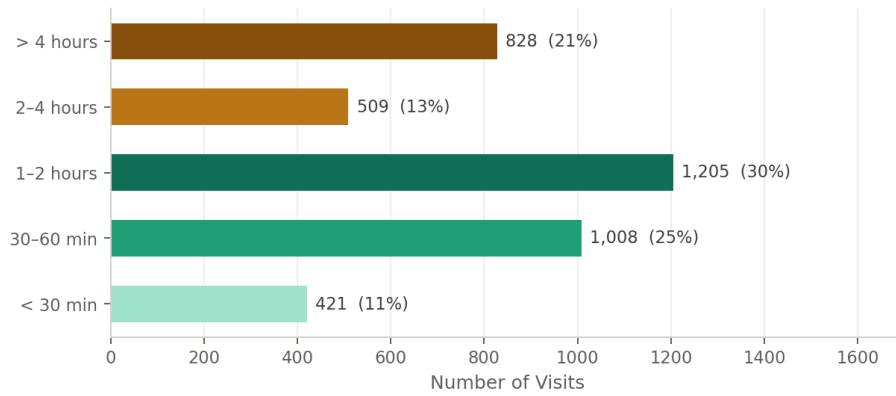


Figure 43: Visit duration distribution (3,971 timed records), 2025

Table 20: External visitor distribution time 2025

Duration Bracket	Visitors	% of Timed Records
< 30 minutes	421	10.6%
30–60 minutes	1,008	25.4%
1–2 hours	1,205	30.3%
2–4 hours	509	12.8%
> 4 hours	828	20.9%
Total (timed)	3,971	100.0%

Wednesday is the busiest visitor day (2,055 entries, 24.3%). **66.3% of visits last under two hours** — confirming most visits are brief and transactional.

5.3.3 GATE DISTRIBUTION AND SEASONAL BREAKDOWN

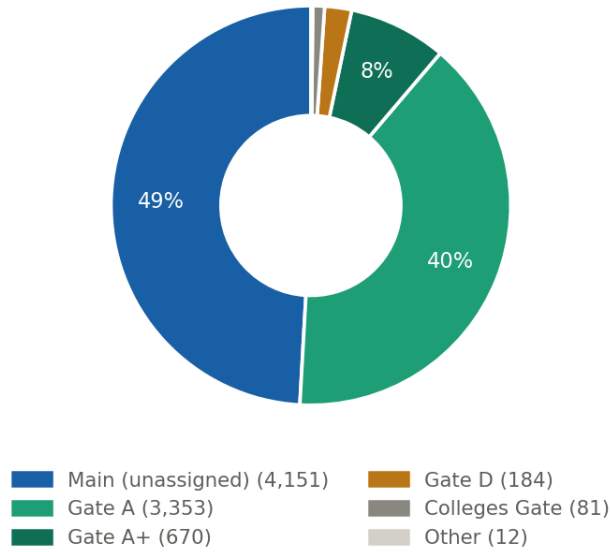


Figure 44: Visitor entry gate distribution — 2025

Table 21: External visitor entry gate distribution — 2025

Gate	Entries	% of Total
Main (unassigned)	4,151	49.1%
Gate A	3,353	39.7%
Gate A+	670	7.9%
Gate D	184	2.2%
Colleges Gate	81	1.0%
Other	12	0.1%
Total	8,451	100.0%

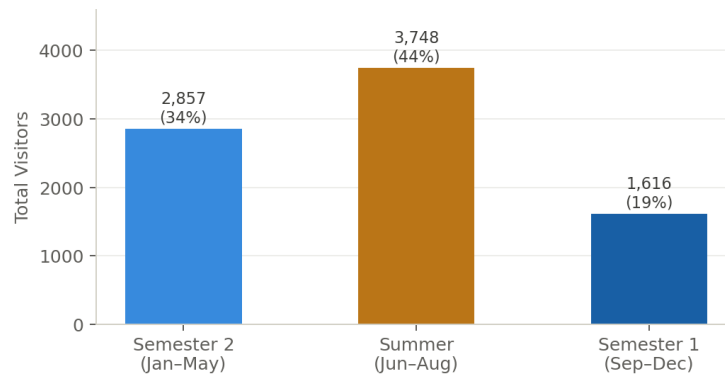


Figure 45: Visitor traffic by academic season — 2025

Gate A is the primary visitor entry point (39.7%). The 49.1% of records with unassigned gate codes should be resolved for 2026 by assigning specific codes to each physical gate in the management system.

5.4. UNIVERSITY FLEET FUEL CONSUMPTION AND OPERATIONS (2022–2025)

A four-year analysis of GJU's owned-and-operated vehicle fleet reveals **a consistent and significant downward trend in all fuel-related metrics** — driven by fleet right-sizing, introduction of electric vehicles, and improved route efficiency.

4.1 FOUR-YEAR FLEET SUMMARY

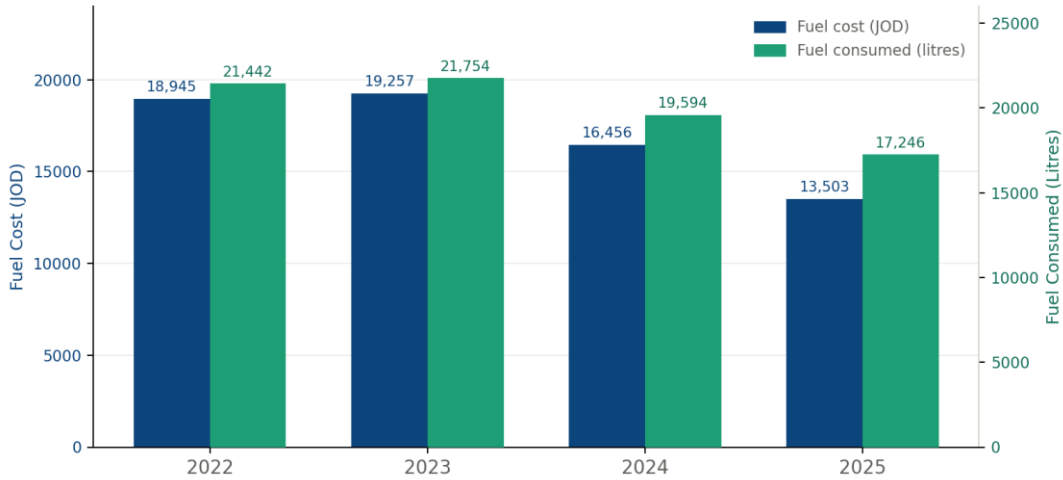


Figure 46: Annual fuel cost (JOD) and fuel consumption (liters), 2022–2025

Table 22: GJU fleet annual totals and four-year performance summary

Metric	2022	2023	2024	2025	Change
Fuel cost (JOD)	18,944.9	19,257.3	16,456.0	13,503.0	-28.7%
Fuel consumed (L)	21,442.2	21,754.1	19,593.6	17,245.8	-19.6%
Distance (km)	181,374	179,298	180,858	161,900	-10.7%
Active drivers	12	10	9	7	-41.7%
Movement requests	1,950	1,890	1,492	1,370	-29.7%
Est. CO ₂ (tons)	54.7	55.5	50.0	44.0	-19.6%
EV distance (km)	—	—	21,529	21,529	New

Fuel expenditure declined 28.7% from 18,944.9 JOD (2022) to 13,503.0 JOD (2025), while liter consumed fell 19.6%. The 580 fewer annual trips in 2025 vs 2022 correspond to an estimated saving of 7,308 liters and 18.6 tons CO₂.

5.4.2 ESTIMATED CO₂ EMISSIONS

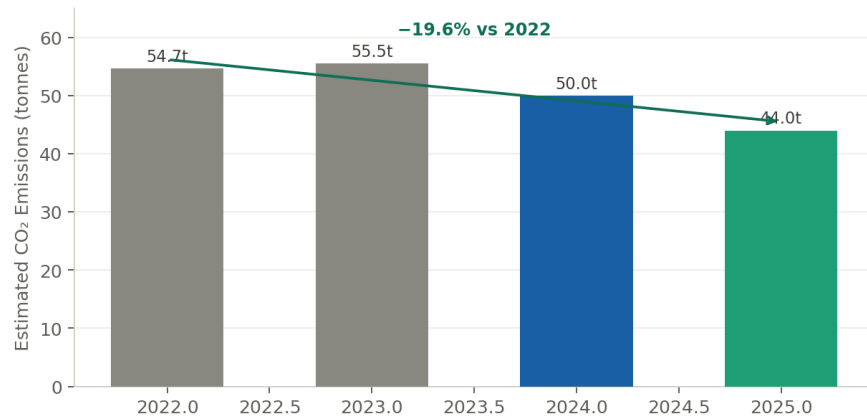


Figure 47: Estimated fleet CO₂ emissions by year, 2022–2025 (tons CO₂)

Table 23: Fleet CO₂ emissions estimates, 2022–2025 (blended factor 2.55 kg CO₂/L, Scope 1)

Year	Fuel (L)	Factor (kg/L)	CO ₂ (kg)	CO ₂ (t)
2022	21,442	2.55	54,678	54.7
2023	21,754	2.55	55,473	55.5
2024	19,594	2.55	49,964	50.0
2025	17,246	2.55	43,977	44.0
4-Year	80,036	2.55	204,092	204.1

Fleet CO₂ emissions decreased by 10.7 tons (–19.6%) from 2022 to 2025. The two EVs (VW ID-6 and Dong Feng Rich6-EV), charged by GJU's PV system, cover 21,529 km annually with zero tailpipe emissions.

5.4.3 FLEET EFFICIENCY AND OPERATIONS

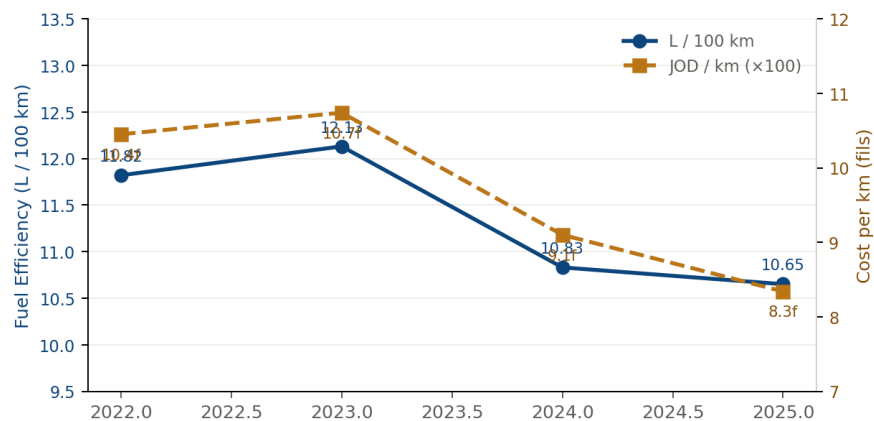


Figure 48: Fleet fuel efficiency (L/100 km) and cost per km, 2022–2025

Table 24: GJU fleet efficiency metrics, 2022–2025

Year	L / 100 km	JOD / km	JOD / trip	km / trip
2022	11.82	0.1045	9.72	93.0
2023	12.13	0.1074	10.19	94.9
2024	10.83	0.0910	11.03	121.2
2025	10.65	0.0834	9.86	118.2

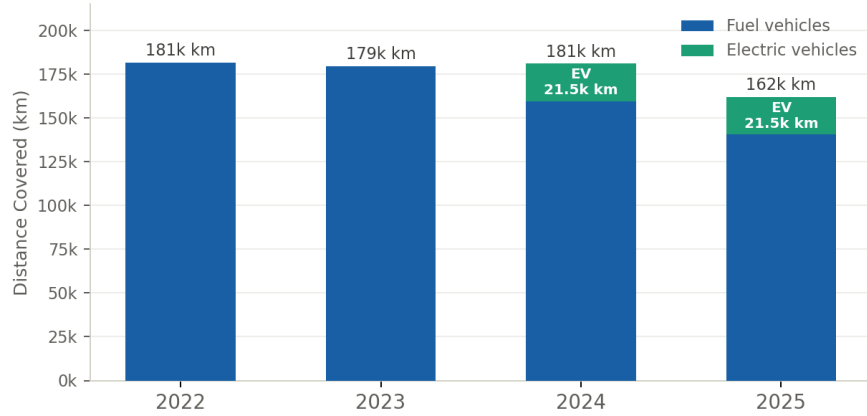


Figure 49: Annual fleet distance: fuel vehicles vs. electric vehicles, 2022–2025

5.4.4 VEHICLE-LEVEL BREAKDOWN — 2025

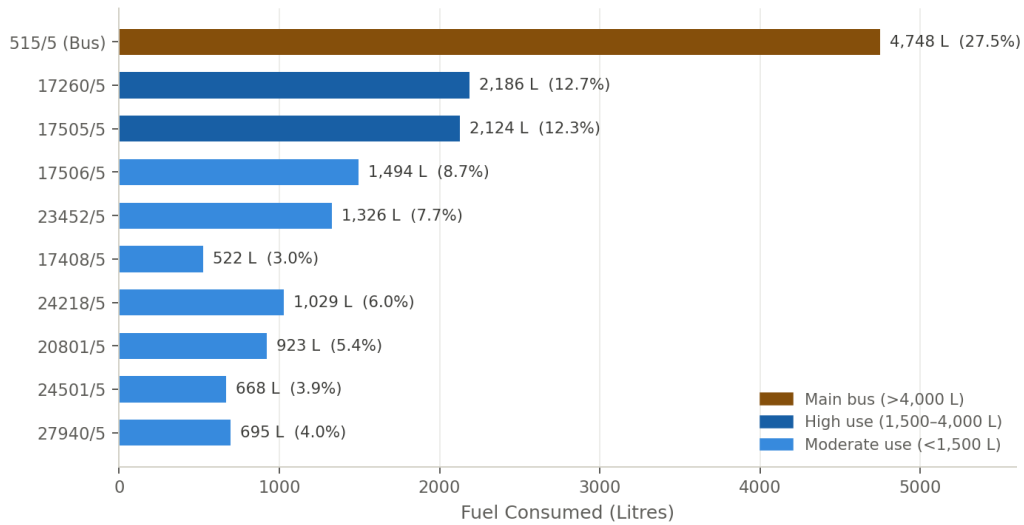


Figure 50: 2025 fuel consumption by vehicle (top 10 consumers)

Table 25: GJU fleet vehicle-level data — 2025 (selected vehicles)

Vehicle Reg.	Fuel Cost (JOD)	Fuel (L)	Distance (km)	% of Fleet
515/5 (Main bus)	4,459.1	4,748.5	37,075	27.5%
17260/5	1,499.3	2,185.5	12,954	12.7%
17505/5	1,446.9	2,124.5	11,794	12.3%
17506/5	1,022.4	1,493.8	11,093	8.7%
23452/5	910.7	1,326.0	12,433	7.7%
EV (58781 + 62002)	0.0	0.0	21,529	0.0%
Fleet total	13,503.0	17,245.8	161,900	100.0%

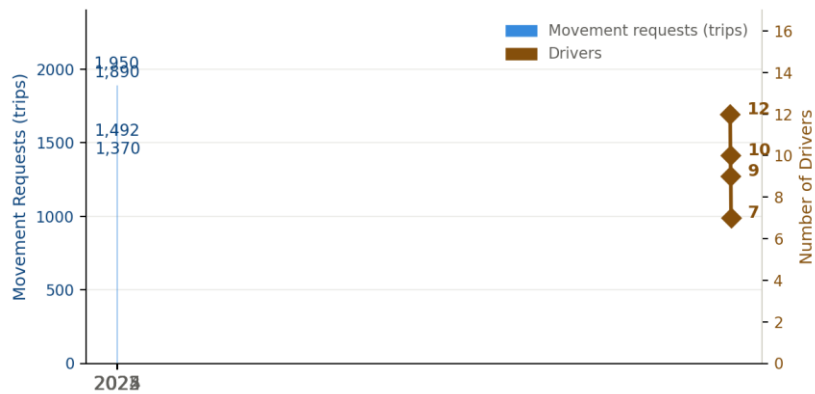


Figure 51: Fleet movement requests and active driver count, 2022–2025

Vehicle 515/5 (main bus) consumes 27.5% of all fleet fuel — making it the single highest-leverage target for efficiency improvement or electrification.

5.5. PARKING FACILITIES AND GREEN TRANSPORTATION INITIATIVES

5.5.1 CAMPUS PARKING AREAS

GJU provides **36,665 m² of total parking area** across two sites: 34,500 m² on the main campus and 2,165 m² at the Jabal Amman facility.

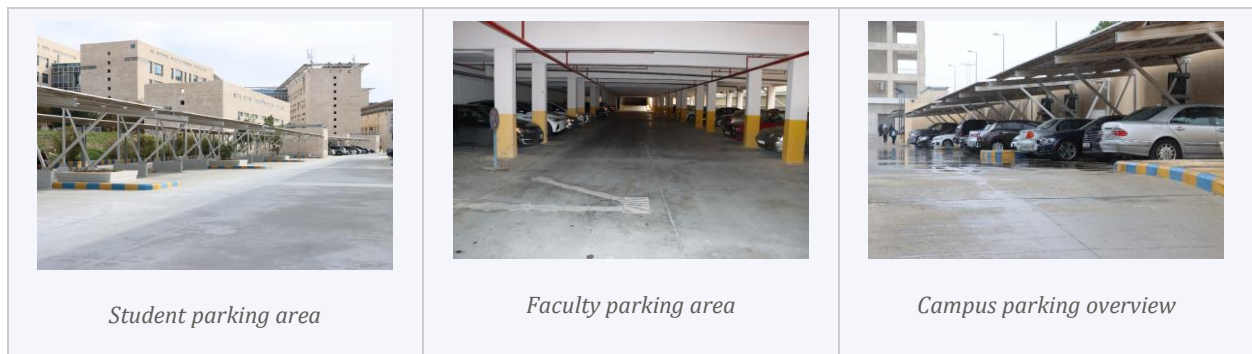


Figure 52: GJU campus parking: student (left), faculty (center), general overview (right)



Figure 53: Parking area in GJU.

Table 26: GJU campus parking area

Area 1	5125.27 m²
Area 2	789.98 m²
Area 3	829.09 m²
Area 4	483.34 m²
Area 5	410.45 m²
Area 6	681.92 m²
Area 7	2848.44 m²
Area 8	967.73 m²
Total parking area= 12136.22 m²	

Table 27: GJU campus parking area summary

Location	Area (m ²)	Primary Users
Main campus	34,500	Students, staff, visitors
Jabal Amman facility	2,165	Staff, visitors
Total	36,665	All GJU community

5.5.2 UNIVERSITY FLEET INVENTORY

The following table provides the complete GJU fleet inventory for the current reporting period.

Table 28: GJU vehicle fleet inventory (current reporting period)

Make	Model	Year	Category	Engine	Assignment	Fuel
Toyota	HiAce	2014	Ambulance	2700cc	Transport Services	Diesel
Mercedes	C200	2008	Small Passenger	1800cc	Transport Services	Gasoline
Opel	Vectra	2006	Small Passenger	1800cc	Transport Services	Gasoline
Toyota	Corolla	2019	Small Passenger	1800cc	Transport Services	Hybrid
Mercedes	E200	2020	Small Passenger	1991cc	University President	Gasoline
Mercedes	VEANO	2008	Minibus	3199cc	Transport Services	Gasoline
Volkswagen	ID-6	2023	Small Passenger	Electric	Transport Services	Electric
Toyota	HiAce	2006	Minibus	2494cc	Transport Services	Diesel
Toyota	Costar	2006	Medium Bus	4164cc	Transport Services	Diesel
Toyota	Costar	2006	Medium Bus	4164cc	Transport Services	Diesel
Toyota	Costar	2006	Medium Bus	4164cc	Transport Services	Diesel
IVECO	Lorry	2012	Goods / Tipper	2800cc	Transport Services	Diesel
Mitsubishi	L200	2009	Pickup	2500cc	Transport Services	Diesel
Toyota 4x4	Pickup	2015	Pickup	2494cc	Transport Services	Diesel
Mitsubishi	L200	2015	Pickup	2500cc	Transport Services	Diesel
Ford	Ranger	2015	Pickup	2200cc	Research Projects	Diesel
Nissan	Navara	2013	Pickup	2500cc	Transport Services	Diesel
Dong Feng	Rich6-EV	2022	Electric Pickup	Electric	Transport Services	Electric
EP	4IM	2011	Forklift	—	Transport Division	Diesel

5.5.3 GREEN TRANSPORTATION INITIATIVES

GJU has implemented and continues to develop the following green transportation measures:

- **Shared entry permit scheme:** the Deanship of Student Affairs enables every four students to share a single campus entry permit, reducing vehicle entries by up to 75% for participating groups.
- **Electric vehicle procurement and PV charging:** two EVs (Volkswagen ID-6 and Dong Feng Rich6-EV) have been added to the fleet, charged exclusively from GJU's rooftop photovoltaic system. Further EV purchases are planned for the current reporting year.
- **EV charging for the community:** a public tender has been released to provide EV charging services for the GJU community and the wider local population — responding to the 22.8% EV ownership rate among 2026 survey respondents.
- **Road Safety Center of Excellence (RSCE):** GJU houses the RSCE, a regional hub for transportation, safety research and policy. In 2026, the RSCE will be hosting the GJU Transportation Hackathon with PwC Jordan and engaged the Minister of Transport in safety advocacy.

5.6. CHAPTER SUMMARY AND STRATEGIC RECOMMENDATIONS

Table 29: Transportation chapter cross-section summary of key findings

Theme	Key Finding	Source
Campus commute	EV+Hybrid = 39.7% of gate entries	Gate count
Mode split	43.4% commute alone by car; 27.9% use university bus	Survey
Lack of alternatives	41.9% cite lack of alternatives as reason for current mode	Survey
Willingness to change	81.7% are willing or possibly willing to switch to a sustainable option	Survey
EV/Hybrid fleet	58.5% of respondents own hybrid or EV; 24.6% of car commuters drive EVs	Survey
Travel burden	58.5% spend 30+ min each way; 21.7% spend 60+ min each way	Survey
Visitor traffic	8,451 external entries; August = 25.3% of annual; 66% of visits < 2 hrs.	Gate system
Fleet emissions	CO ₂ fell from 54.7 t (2022) to 44.0 t (2025) — a 19.6% reduction	Fleet records
Fleet cost	Fuel cost fell 28.7%; efficiency improved from 11.82 to 10.65 L/100km	Fleet records
Road safety	68.6% of survey respondents have witnessed a traffic incident near GJU	Survey
Top priority	47.5% priorities improving the university bus system	Survey

RECOMMENDATIONS

Based on the integrated evidence across all five sub-sections, the following actions are recommended in order of expected impact:

- **Expand and improve the university bus service.** The Tla'a Al-Ali / Abdun / West Amman corridor accounts for ~24% of survey respondents and is the most natural candidate for an express shuttle. Frequency and schedule alignment are the highest-return single investment GJU can make in transportation sustainability.
- **Launch a formal carpooling platform.** A digital matching tool by origin zone and timetable requires minimal capital and directly addresses the 41.9% citing lack of alternatives.
- **Accelerate the EV charging station tender.** With 22.8% EV ownership among respondents and growing EV traffic, on-campus charging meets an immediate expanding need. PV alignment maximizes the sustainability benefit.
- **Commission a road safety audit of campus approaches.** The 68.6% incident witness rate is a clear trigger for a formal engineering review of the Madaba–Amman highway corridor by the RSCE.
- **Develop on-campus cycling infrastructure.** The 60.0% potential uptake justifies investment in cycle lanes and secure parking for intra-campus journeys.



- **Standardize visitor gate data collection.** Assign specific gate codes and add a vehicle type field (Fuel/Hybrid/EV) for 2026 — enabling full sustainability reporting on visitor transport emissions.



- **Target vehicle 515/5 for fuel efficiency improvement.** The main bus consumes 27.5% of all fleet fuel. Driver training, route optimization, and eventual electrification would yield the largest single CO₂ reduction in the fleet.



6. EDUCATION AND RESEARCH

6.1. COURSES AND PROGRAMS RELATED TO SUSTAINABILITY

All degree programs at the university offer courses that are related to sustainability; by incorporating sustainability into teaching, educators can empower students to become responsible and informed citizens who can make positive contributions to environmental and social well-being. GJU aims to integrate principles of sustainability into educational practices and curricula to promote an understanding of environmental, social, and economic issues among students. It involves equipping students with the knowledge, skills, and mindset necessary to address and solve complex sustainability challenges.

A mapping of all schools, departments and programs with the UN SDGs was completed, and a complete list of all courses offered related to Sustainability, and the SDGs can be found at the GJU GO Green Website.

<https://www.gju.edu.jo/content/sustainability-teaching-19974>

6.2. RESEARCH PROJECTS DEDICATED TO SUSTAINABILITY RESEARCH

The mission of the Deanship of Scientific Research (DSR) at GJU is to create an environment that fosters excellence in research, promotes ethical and responsible conduct, and actively contributes to the betterment of society through knowledge creation, dissemination, and innovation. GJU is committed to be a hub of intellectual exploration and a driving force for progress in various fields of study.

The mission of the Deanship of Graduate Studies (DGS) supports the growth and excellence of graduate studies, with a goal to become among the best internationally reputable institutes for graduate studies.

The International Projects Office (IPO) provides administrative support for faculty at GJU, promoting the university abroad, to enable successful execution of internationally funded projects.

Through these three entities, the university produces a wealth of research output average per annum over the last 3 years of 355 publications in addition to managing many internationally funded research projects. The Total research fund in 2023/2025 exceeded a million USD in external funding, in addition to 1.2 million JOD in GJU funding. A list of papers is available here:

<https://www.gju.edu.jo/content/sustainability-research-17059>

A list of projects is available here.

<https://www.gju.edu.jo/content/projects-9587>







7. COMMUNITY SERVICE AND OUTREACH



7.1. STUDENT CLUBS AND INVOLVEMENT



Student engagement at GJU is viewed as a cornerstone of holistic education, extending beyond the classroom to cultivate leadership, innovation, social responsibility, and lifelong learning. The activities documented in this report demonstrate a well-established ecosystem that supports student development while aligning with institutional sustainability goals.



During 2025, the Deanship of Student Affairs successfully organized 57 diverse activities, engaging a broad spectrum of students across disciplines. These activities included academic conferences, workshops, training programs, large-scale events, and community initiatives. The breadth and diversity of engagement reflect a strong culture of participation, with students actively contributing to and benefiting from a vibrant campus life that supports both personal and professional growth.

Academic engagement remained a key pillar of student development. The university hosted three on-campus conferences, attracting approximately 500 participants, alongside two external conference participations involving 77 students. These engagements provided valuable platforms for knowledge exchange, interdisciplinary dialogue, and exposure to emerging global trends. Students benefited from direct interaction with experts, researchers, and practitioners, enhancing their academic perspective and professional readiness.

A total of 10 seminars and 12 workshops were delivered, engaging nearly 960 participants. These sessions addressed critical and contemporary topics, including Artificial Intelligence, entrepreneurship, mental health awareness, and advanced engineering skills. The workshops were designed to bridge academic knowledge with practical competencies, equipping students with essential skills required in a rapidly evolving labor market. This reflects GJU's emphasis on experiential and skills-based learning as part of its sustainability and employability agenda.

Community engagement continues to be a defining feature of student life at GJU. In 2025, seven major initiatives were implemented, involving 725 participants and supported by 190 student volunteers. These initiatives encompassed charitable activities, environmental awareness campaigns, and community education programs. Through these efforts, students actively contributed to societal development while strengthening their sense of civic responsibility and ethical leadership.

Experience was further enhanced through eight organized field visits, involving 224 students. These visits provided direct exposure to real-world environments, enabling

students to connect theoretical knowledge with practical applications. Such initiatives play a critical role in developing problem-solving skills, industry awareness, and professional competencies, reinforcing GJU's applied education model.

The university hosted 15 large-scale events, attracting a total of 4,383 participants. These events included national celebrations, awareness campaigns, cultural activities, and student-led initiatives. These high-impact events significantly contributed to strengthening campus identity, fostering inclusivity, and enhancing the overall student experience. They also provided platforms for student expression, creativity, and leadership.

Student clubs at GJU represent a cornerstone of sustained engagement and student leadership. With approximately 1,000 students actively involved, the club ecosystem spans a wide range of domains, including technology, innovation, arts, culture, community service, and professional development. Clubs such as the Innovation Club, Community Service Club, IEEE Club, German Club, and others demonstrate particularly strong participation, reflecting high levels of student initiative and commitment.

This diverse and active network of clubs ensures continuity of student-led initiatives, promotes peer-to-peer learning, and fosters a culture of collaboration and innovation. It also plays a critical role in developing leadership capacities and enhancing institutional sustainability through ongoing student involvement.

Student participation in sports represents an essential component of sustainability through the promotion of physical health, mental well-being, and social interaction. During the academic year 2025/2026, a total of 570 students participated in various sports activities, including football, badminton, billiards, volleyball, chess, and fitness programs. These activities contribute to a balanced student life, reinforcing teamwork, discipline, and resilience.

The Deanship of Student Affairs continues to support a highly active Ushers Team, comprising approximately 160 students. This team plays a vital role in organizing and supporting university events, conferences, and official functions. Their involvement reflects a strong culture of volunteerism and leadership, providing students with hands-on experience in event management, coordination, and institutional engagement.

Student engagement at GJU contributes meaningfully to multiple dimensions of sustainability. The level and diversity of student engagement at GJU in 2025 demonstrates the presence of a robust and sustainable ecosystem that supports student development across academic, social, and professional dimensions.

The Deanship of Student Affairs plays a central role in enabling this ecosystem by providing opportunities, resources, and support structures that empower students to actively

participate and lead. Moving forward, this strong foundation positions GJU to further enhance its impact, strengthen its sustainability agenda, and continue fostering a dynamic and engaged student community aligned with the university's strategic vision.

7.2. FACULTY COMMUNITY OUTREACH AND SERVICE ACTIVITIES

GJU stands as a foundational driver of Jordan's socio-economic evolution. At GJU, faculty outreach is not a periphery activity; it is a core strategic pillar that aligns our academic depth with the Kingdom's national prosperity and global sustainability mandates. By bridging the gap between rigorous research and societal application, we ensure that our institutional expertise serves as a catalyst for sustainable development and industrial innovation.

To maximize our institutional footprint and deliver measurable value, our advancement strategy is anchored in three key pillars:

- **National Policy Contribution:** Shaping the legislative and socio-economic frameworks of Jordan through strategic consultancy and high-level governmental committee service.
- **Academic Quality Assurance:** Safeguarding global educational integrity and scholarly excellence, establishing GJU as a premier regional hub for academic standards.
- **Industry-Academic Integration:** Fostering a future-ready workforce and driving private-sector innovation through deep-rooted corporate partnerships and knowledge transfer.

These pillars provide the framework through which we translate our scholarly leadership into a powerful tool for national public policy.

The active involvement of our faculty in national research and governmental committees creates a critical bridge between theoretical frameworks and actionable public policy. By translating complex socio-economic data into strategic recommendations, GJU scholars empower the state to address pressing challenges in resource management and demographic equity.



Table 30: Strategic Policy Impact Analysis

Policy Area	Partner Organization	Strategic Impact (The "So What?")
Agricultural Labor Reform	Economic and Social Council (ESC) of Jordan	Advancing legislative frameworks for the protection and socio-economic inclusion of marginalized women workers in the Jordan Valley.
Gender-Inclusive Growth	ESC & USAID (Makanati Project)	Scaling economic empowerment by optimizing cooperative models to eliminate structural barriers to female-led entrepreneurship.
WEFE Nexus Governance	EU-Foundation (PRIMA/BONEX Project)	Mitigating regional resource scarcity by aligning governance with sustainable practice in the Wadi Mujib Basin through the Water-Energy-Food-Ecosystem nexus.

Evaluating Socio-Economic Outcomes

GJU’s policy interventions are specifically designed to empower Jordan’s marginalized demographics. By providing the evidentiary base for women’s economic independence through agricultural labor and cooperative reform, GJU is actively dismantling the barriers to female workforce participation. Furthermore, our leadership in the BONEX project addresses the existential threat of resource scarcity in the Mediterranean, ensuring that Jordan’s water and energy policies are both sustainable and socially just.

As part of our holistic "Community Outreach" pillar, GJU tracks cross-disciplinary initiatives, particularly from the School of Nursing—to demonstrate GJU’s unified impact on public welfare. 2025 Community Health & Welfare Milestones:

- **Q1-Q2 (Elderly Care & Basic Life Support):** Strategic service improvement planning at Wadi Al-Shita and Alzahraa Elderly Care Centers. BLS and emergency response training delivered at Al-Salt Secondary School.
- **May (Prevention & Awareness):** HPV prevention campaigns with Ibn Sina University and the "Don’t Be Fooled" anti-smoking campaign with the **King Hussein Cancer Center**.
- **June (High-Impact Clinical Service):** Facilitation of student participation in **Pediatric Surgeries** (cardiac and orthopedic) with **NGO La Chaîne de l’Espoir**, providing life-saving care to marginalized children.

- **July-September (Social Inclusion):** Hosting the **Kinderuni Workshop** for children's first-aid and delivering **Alzheimer's Health Workshops** in partnership with the Ministry of Social Development to improve patient care and early detection.
- **Q4 (Health Screenings):** World Diabetes Day blood sugar screenings with MedLab and the **Comprehensive Free Medical Day** in cooperation with **Saudi Hospital**, which provided multi-specialty check-ups for various marginalized community groups.

The activities detailed in this 2025 report represent a comprehensive fulfillment of the German Jordanian University's mandate as a public institution. Our faculty's dedication to the 2025 Sustainability Report goals has moved beyond the academic to the transformative—directly influencing national policy, industrial productivity, and community health.

8. CARBON FOOTPRINT

8.1. METHODOLOGY

Data was gathered from all relevant departments at the university. Data included electrical consumption, energy usage, university fleet usage, and contracted transportation fleets in addition to vegetation. A survey was carried out to estimate the number and types of vehicles used for personal transportation. Emission Factor obtained from <https://www.myclimate.org/> and official government figures.

8.2. CARBON FOOTPRINT FORM ENERGY USE, FUEL AND TRANSPORTATION CALCULATIONS

$$\begin{aligned}
 & \text{CO}_2 \text{ (electricity)} \\
 &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,537 \\
 &= \frac{1,255,780 \text{ kWh}}{1000} \times 0,537 \\
 &= 674 \text{ metric tons}
 \end{aligned}$$

Table 31: Emission Calculations

Annual Electricity Consumption	4,480,780 kWh
Non- Renewable Electricity Consumption	1,255,780 kWh
Electricity CO2 Emissions Factor	0.537
Electricity CO2 Emissions (t)	674
Fuel Bus Service	153000 liters
Fuel GJU Fleet	16643 liters
Fuel CO2 Emissions Factor	2.35
Fuel CO2 Emissions (t)	398.66
Electric Cars (personal) CO2 Emissions (t)	400
Conventional Cars (Personal) CO2 Emissions (t)	3200
Hybrid Cars (Personal) CO2 Emissions (t)	1400
Fuel (LPG)	81,034 kgs (150,060 liters)
Fuel (LPG) CO2 Emissions Factor	1.59
Fuel CO2 (LPG) Emissions (t)	239

8.3. CARBON SINK

In this study, the carbon sink aspect is also considered. GJU is well vegetated, and its campus is cultivated with various types of trees that serve as a carbon sink; its carbon sink was based on actual surveyed vegetation data. The method for calculating carbon sequestration by trees in urban and suburban settings was developed by the US Department of Energy and was used in estimating the amount of carbon sequestration. This required a detailed survey of plants, plant types and age of all vegetation on the campus. Information on the amounts and types of vegetation on the campus was obtained from the archive of JUST Agricultural Services Unit. Due to rounding, performing the calculations given in the equations below may not return the exact results shown.

$$(0.11 \text{ [percent of coniferous trees in sampled urban settings]} \times 23.2 \text{ lbs. C/coniferous tree}) + (0.89 \text{ [percent of deciduous trees in sampled urban settings]} \times 38.0 \text{ lbs. C/deciduous tree}) = 36.4 \text{ lbs. C/tree}$$

$$36.4 \text{ lbs. C/tree} \times (44 \text{ units CO}_2/12 \text{ units C}) \times 1 \text{ metric ton}/2,204.6 \text{ lbs.} = 0.060 \text{ metric ton CO}_2 \text{ per urban tree planted}$$

As the university has a total of 5430 trees, that results in a CO2 sink of 325 t

8.4. CARBON FOOTPRINT PER FTE

Country	Jordan
Number of FTE	1944
Days worked per year	280
Electricity CO2 Emissions (t)	674
Electric Cars (personal) CO2 Emissions (t)	400
Conventional Cars (Personal) CO2 Emissions (t)	3200
Hybrid Cars (Personal) CO2 Emissions (t)	1400
Fuel CO2 Emissions (t)	398.66
Fuel CO2 (LPG) Emissions (t)	239
Carbon Sink	325
Total CO2 Emissions 2023 (t)	5312.66
Total CO2 Emissions per FTE (t)	2.73





Thank You

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