



Pharos University in Alexandria
Vice President for Graduate Studies & Research
International Ranking committee

THE Impact Ranking SDG9 Report

SDG

9

Industry, Innovation
and Infrastructure





SDG 9 Industry, Innovation and Infrastructure

Investments in infrastructure – transport, irrigation, energy and information and communication technology – are crucial to achieving sustainable development and empowering communities in many countries. Innovation through links to industry is explored.

Industry, Innovation and Infrastructure Events

Community Research Projects

PUA's administration has pledged to continue the journey and keep organizing its celebration to select the best community research projects, which aim to spread the competitive spirit among its students, and to commemorate its late founder, Mr. Muhammad Rajab (RIP). In this context, PUA held a final qualifier session for the best 3 community research projects for the academic year 2022/2023. This event was sponsored by the administration, and attended by vice presidents, deans and vice-deans, and experts from the labor market.

Accordingly, 7 PUA faculties competed for the first prize, namely the Faculties of Dentistry, Engineering, Tourism and Hotel Management, Physical Therapy, Applied Health Sciences Technology, Arts and Design, and Computer science and Artificial Intelligence.

However, the Faculty of Mass Communication's project, which was a documentary film, was displayed out of the competition. The Faculty of Engineering won first place with a project entitled "Smart Medical Drainage Bag". While the Faculty of Dentistry came in second place with a project entitled "Implementing dental caries preventive program among a group of adult cancer patients in Alexandria, Egypt." While third place went to the Faculty of Physical Therapy with a project entitled "Electromagnetic Field: A Physical Therapy Modality for Management of Acute Low Back Pain."





PUA's Engineering Visits 5th TransMEA'23

The Mechanical Engineering Department at PUA's Faculty of Engineering pays great attention to promoting the educational process and linking it to industrial technological developments.

In this context, the Department organized a visit for students from different academic grades to the 5th Smart Transport, Logistics, Infrastructure and Traffic Fair and Forum for the MEA Region (TransME'23). This event was held under the patronage of H. E. President Abdel Fattah El-Sisi at the Egypt International Exhibition Center in the Fifth Settlement.

Numerous local and international companies working in the fields of high-speed trains, metro, monorail, marine and land transportation, smart transportation, infrastructure, etc. participated in this international event which presented the transportation system in general in Egypt.

URL: <https://www.pua.edu.eg/puas-engineering-visits-5th-transmea23/>



PUA Wins Three Research Projects in the Innovation Catalyst and Change Makers Competitions 2023

PUA won three research projects in the 2023 Innovation Catalyst and Change Makers Competitions. These two competitions are presented by the Innovators Support Fund (ISF) of the Ministry of Higher Education and Scientific Research. PUA has won three research projects, which is the maximum number allowed in the first qualifiers, hence, surpassing many public and private universities.

It is also worth noting that the competition targets innovative students in Egyptian public and private universities in all different academic disciplines who have innovative ideas.

The research projects submitted by the PUA were selected by a committee formed according to the assignments of PUA's president.

The research projects that qualified for the final stage of the competition are of the following teams:

Qadroon Bekhtlaf Team (Different, yet capable team), from the Faculty of Health Sciences Technology.

Petro Team project, from the Faculty of Engineering

M.D.S Team, from the Faculty of Engineering

Further, it is worth noting that the fund provides financial support amounting to 40,000 Egyptian pounds for the winning projects in the final stage. This support is to be spent on purchasing the basic components of the project. Furthermore, Prof. Dr. Ramadan Abu Al Ela, Vice President for Community Service and Environmental Development congratulated the faculty members supervising these projects and the winner students.

URL: <https://www.pua.edu.eg/pua-wins-three-research-projects-in-the-innovation-catalyst-and-change-makers-competitions-2023/>





Sponsorship of the Academy of Scientific Research and Technology 2023

The project of PUA's Faculty of Engineering won sponsorship of the Academy of Scientific Research and Technology for 2023. This project represents a joint scientific collaboration between students of the Mechanical Power Engineering Program and the Industrial and Manufacturing Engineering Program. It also comes within the framework of engineering and technological integration to design, manufacture and use modern technology in the production of dry ice and its applications.

The proposed project consists of two successive phases; The first is the process of producing dry ice from carbon dioxide. The second stage, however, begins with the use of snow pellets resulting from blasting and slapping as an operational process.



During the first stage, dry ice is produced in the form of small pellets of carbon dioxide by converting it under pressure and temperature of -78°C . this is done through a special design for pumping, pressing, and production in preparation for its use in the slapping process.

The second stage, which is the process of blasting and slapping with dry ice, represents one of the non-traditional methods of operation. It's developed for cleaning and finishing internal and external surfaces with folds and complex and delicate structures such as medical devices, electronic and electrical devices, and inside many organic food factories. This process is safe, non-toxic, and leaves no by-products or odor. In addition to being electrically non-conductive, it also guarantees sterilization along with its original function.

One of the secondary advantages of the proposed project is its contribution to the foundations of sustainability based on controlling the climate cycle of the fumes of the petrochemical industries and others. The fumes emit huge amounts of carbon dioxide, which are collected to reduce the harmful effects due to their concentration in narrow geographical areas. At the same time, it adds to the gas a new useful life cycle while reducing its harmful effects by distributing it to larger areas in a random manner.

URL: <https://www.pua.edu.eg/sponsorship-of-the-academy-of-scientific-research-and-technology-2023/>



PUA in the New Alamein Festival 2024

Under the patronage of the Ministry of Higher Education and Scientific Research, the United Company, Pharos University in Alexandria (PUA), and the Student Activities Sector of the Ministry of Higher Education and Scientific Research, PUA is participating with a group of its students representing all its faculties in the New Alamein Festival 2024 under the slogan “Alamein, the World.”

PUA’s contribution aims to engage university youth in the activities of new cities, allowing them to witness firsthand the development and achievements in these areas. This participation will provide students with an opportunity to observe the remarkable urban development across New Alamein City, reflecting the state’s commitment to progress in all fields, particularly urban development in new cities.



URL: <https://www.pua.edu.eg/pua-in-the-new-alamein-festival-2024/>



EPC Field Training

Pharos University in Alexandria (PUA) places significant emphasis on field training for its students, recognizing its essential role in developing their skills and preparing them to compete in the labor market. In line with this, PUA facilitated training programs for students from the Faculty of Engineering and the Faculty of Financial and Administrative Sciences at the Egyptian Petrochemicals Company (EPC). The training provided students with valuable experience and

enhanced their competencies, further reflected by the accredited certificates awarded upon successful completion. These certificates affirm the students' practical expertise, positioning them to compete with their peers from other universities. The training initiative was overseen by Prof. Dr. Mohamed Etman, Acting Vice President for Community Service and Environmental Development Affairs.





PUA Signs a Cooperation Protocol with Edulexa

Prof. Dr. Mohamed Etman, PUA's Acting Vice President for Community Service and Environmental Development Affairs, recently welcomed Mr. Mohamed Abdel Wahab Shalaby, Founder and CEO of Edulexa for Professional and Administrative Development, along with Mr. Mohamed Abdel Mohsen El-Naggar and Mr. Safi El-Rahman Ibrahim.



During their meeting, they explored various avenues for collaboration between PUA and Edulexa, focusing on mutual benefits for both parties. The discussions culminated in the signing of a cooperation protocol aimed at providing PUA students with advanced training, enhancing their skills through cutting-edge electronic programs and applications.

This initiative reflects PUA's commitment to preparing its students for the labor market by equipping them with the highest level of training, enabling them to compete effectively with graduates from other universities.



URL: <https://www.pua.edu.eg/pua-signs-a-cooperation-protocol-with-edulexa/>



Startup Olympics

Pharos University in Alexandria (PUA) has started the training camp for the Startup Olympics, which will last for two weeks. Within this framework, PUA prepared a training program for its qualified competing teams, which number 14 teams from various faculties, in addition to 9 teams from the Arab Academy for Science, Technology and Maritime Transport (AASTMT), and one team from the Egyptian-Japanese University (E-Just).

The final stage of this competition will be held on July 15, 2024, where all these teams will compete in the field of innovation and entrepreneurship to choose the top three places at the level of Alexandria universities. This event takes place under the auspices of the Innovators Support Fund of the Ministry of Higher Education and Scientific Research.

In addition, a comprehensive training program was developed in cooperation with Technospace, a leading innovation company, and an elite group of experts in the field of entrepreneurship. It is worth noting that Dr. Nabil Rashwan, PUA's coordinator for the Innovators Support Fund and the executive director of PUA's Innovators Support Center, personally supervises these events.

URL: <https://www.pua.edu.eg/startup-olympics/>



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ICNTSE-2024

At Pharos University in Alexandria, Egypt Organized by Faculty of Engineering Pharos University in Alexandria, Egypt KTH Royal Institute of Technology Stockholm, Sweden ICNTSE 2024 will bring together leading researchers, academicians, engineers, and scientists in the domain of interest from around the world. We warmly welcome prospected authors to submit their research papers to ICNTSE 2024



Faculty of Engineering
Pharos University in
Alexandria, Egypt



ICNTSE 2024

The Fourth International Conference on
New Trends in Sustainable Energy
"Sustainability in the Digital Era"
25-26 November 2024



KTH
Royal Institute of Technology
Stockholm, Sweden

URL: <https://www.pua.edu.eg/faculty-of-engineering/conferences-2/icntse-2024/>



A Field Visit to the Bus Building

Within the scope of the fruitful and constructive cooperation with the Egyptian Armed Forces, the Architectural Engineering Department at PUA's Faculty of Engineering organized a field visit to the bus building in the New Administrative Capital. This visit, which included the junior students (8th semester), came within the Executive Designs course (4).

The students were received by some military leaders who explained to them the project's idea and various components. The project area stretches over 1,500 acres, divided into eight mixed-use buildings (service, commercial, and administrative). The project also includes 8 bus stops, a bus service and maintenance center, and parking spaces for cars and buses.

In addition, during the visit, the students learned how project's technical works are executed, modern systems used in sanitation works, methods of distributing and installing electricity works, air conditioning works, and fire-fighting systems in different areas, and how to coordinate between these systems. The general goal of this visit, however; was to link the theoretical academic studies with the practical experience.



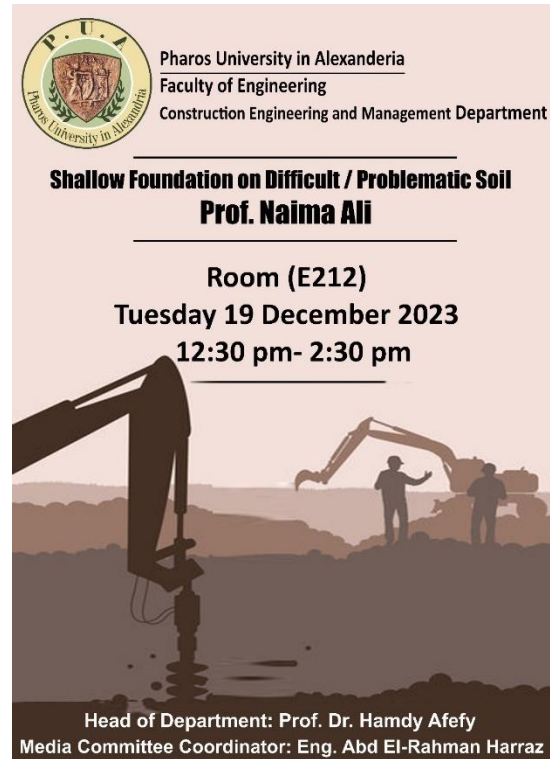
URL: <https://www.pua.edu.eg/a-field-visit-to-the-bus-building/>



Shallow Foundations on Difficult/Problematic Soils

The Construction Engineering and Management Department at PUA's Faculty of Engineering recognizes the paramount importance of scientific symposiums aimed at providing students with both foundational and advanced engineering insights. In adherence to this principle, the Department orchestrated a scientific forum titled "Shallow Foundations on Difficult/Problematic Soils," delivered by Prof. Dr. Naima Ali, a distinguished faculty member within the Construction Engineering and Management Department.

Given the proliferation of urbanization due to population expansion, the extension of infrastructure networks, and the encroachment onto arid and semi-arid terrains, this subject presents a formidable challenge for geotechnical engineers during the foundational phase. Consequently, the seminar delved into the principal challenges encountered by engineers in foundation design, strategies for navigating problematic soil conditions, and the pertinent stipulations of the Egyptian Code. Moreover, it elucidated real-world examples of encountered issues and their corresponding solutions. Moreover, the seminar garnered significant interest from both students and teaching assistants alike.



URL: <https://www.pua.edu.eg/shallow-foundations-on-difficult-problematic-soils/>



Courses that Support Industry, Innovation and Infrastructure

No	Faculty in Pharos University	Course name	Course code	SDG of relevance
1	Tourism and Hotel Management	Entrepreneurship in Hospitality Industry (Elective)		SDG9
2	Mass Communication	Communication and Development	COM 103	SDG 1 - SDG 2 - SDG 7 - SDG 9 -SDG 11
3	Mass Communication	Electronic media Laboratory	EMED 300	SDG 4 -SDG 9
4	Mass Communication	Journalism Laboratory	JOR 300 - PRS 300	SDG 4 -SDG 9
5	Mass Communication	Marketing communication Laboratory	MC 300	SDG 4 -SDG 9
6	Mass Communication	Advertising &Public Relations Laboratory	PR 300	SDG 4 -SDG 9
7	Mass Communication	Public relations in industrial and educa	PR 407	SDG 9
8	Mass Communication	TV production Laboratory	PTV 300	SDG 4 -SDG 9
9	Mass Communication	Documentary film and programs production	PTV 302	SDG 9
10	Mass Communication	TV product marketing	PTV 400	SDG 9
11	Mass Communication	Production of television drama	PTV 403	SDG 9
12	Tourism and Hotel Management	Introduction to Tourism and Hospitality	THM 201	SDG 1 - SDG 3 - SDG 4 - SDG 8 - SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
13	Tourism and Hotel Management	Franchising in Tourism and Hospitality	THM 211	SDG 9 - SDG 12
14	Tourism and Hotel Management	Quality Mgt. in Tour&Hospital Enterprise	THM 271	SDG 8 - SDG 9 - SDG 11 - SDG 12
15	Tourism and Hotel Management	Tourism Transportation	TM 312	SDG 9
16	Tourism and Hotel Management	Industry Internship (1)	TM 391	SDG 8 - SDG 9 - SDG 12 - SDG 16 - SDG 17
17	Tourism and Hotel Management	Industry Internship 2	TM 392 - TM 493 - TM 494	SDG 8 - SDG 9 - SDG 12 - SDG 16 - SDG 17
18	Tourism and Hotel Management	Tourism Project 1	TM 481 - TM 482	SDG 8 - SDG 9 - SDG 11 - SDG 12 - SDG 17
19	Tourism and Hotel Management	Entrepreneurship in Hospitality Industry	HM 419	SDG 9
20	Tourism and Hotel Management	Resort and Condominium Management	HM 411	SDG 7 - SDG 9
21	Tourism and Hotel Management	Hospitality Facilities Planning&Design	HM 451	SDG 6 - SDG 7 - SDG 9 - SDG 11
22	Tourism and Hotel Management	Hospitality Project 2	HM 482	SDG 7 - SDG 9
23	Tourism and Hotel Management	Creative Awareness	GEN 201_T	SDG 9
24	Tourism and Hotel Management	E-Marketing for Tourism and Hospitality	THM 421	SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
25	Tourism and Hotel Management	Real Estate Valua. for Tour.&Hospital.	THM 444	SDG 9
26	Tourism and Hotel Management	Airline Reservation System&Ticketing	TM 331 - TM 332	SDG 9
27	Tourism and Hotel Management	Travel Agency and Front Desk Management	TM 333	SDG 9
28	Tourism and Hotel Management	Hotel Management Information Systems	HM 313	SDG 9
29	Tourism and Hotel Management	Automated Travel Systems	TM 431	SDG 9
30	Tourism and Hotel Management	Tourism Managemet Technology Application	TM 441	SDG 9
31	Arts and Design	Field Training	FT 001	SDG 4 - SDG 5 - SDG 9 - SDG 12
32	Arts and Design	Permanent and Mobile Exhibitions	AD 311	SDG 9 - SDG 11
33	Arts and Design	Visual Composition	MA 221	SDG 4 - SDG 9
34	Arts and Design	Digital Imaging	MA 251	SDG 9 - SDG 11
35	Arts and Design	Digital Illustration	MA 253	SDG 9 - SDG 11
36	Arts and Design	Video Editing (1)	MA 255	SDG 4 - SDG 9
37	Arts and Design	Video & Animation Design and Theory	MA 331	SDG9 - SDG 11
38	Arts and Design	Sound Design	MA 362	SDG 9 - SDG 11
39	Arts and Design	Productivity printing technology	G 365 - G 366	SDG 9 - SDG12



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
40	Arts and Design	Typography (1)	GD 471 - GD 472 - MA 271 - MA 371 - GD 571	SDG 4 - SDG 6 - SDG 7 - SDG 9 - SDG11 - SDG 14 - SDG 15
41	Arts and Design	Interior Design	D 221 - D 222	SDG 9
42	Arts and Design	Visual Studies	D 231 - D 232	SDG 4 - SDG 9
43	Arts and Design	Building Construction	D 361 - D 362	SDG9
44	Arts and Design	Technical Working Details	D 363	SDG9
45	Arts and Design	Working Details	D 365	SDG9
46	Arts and Design	Arts of Fantasy and Science Fiction	TD 535	SDG 9
47	Arts and Design	Marketing and Consumer Psychology	I 532	SDG9
48	Arts and Design	Detailed Drawings	ID 423 - ID 424 - ID 522	SDG 9
49	Arts and Design	Furniture Design	ID 425	SDG 9 - SDG 12 - SDG 11
50	Arts and Design	Graduation Project Research	ID 581	SDG 7 - SDG 9 - SDG 11 - SDG 13
51	Arts and Design	Graduation Project	ID 582	SDG 7 - SDG 9 - SDG 11 - SDG 13
52	Arts and Design	Materials Technology	MD 461	SDG 9
53	Finance and Administrative Sciences	Information Management	BT 316 - BT 422	SDG 9
54	Finance and Administrative Sciences	Research Project	BT 742 - BT 851	SDG 1 - SDG 2 - SDG 8 - SDG 9 - SDG 12 - SDG 13 - SDG 16



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
55	Finance and Administrative Sciences	Strategic Info. System	BT 852	SDG 9
56	Physical Therapy	Industrial Physical Therapy	PTEL 002	SDG 3 - SDG 9
57	Physical Therapy	Rehabilitation technology	PTEL 007	SDG 3 - SDG 9
58	Arts and Design	Advanced Motion Graphics	AV 421	SDG 9 - SDG 11
59	Arts and Design	Editing Esthetics	AV 433	SDG 9 - SDG 11
60	Arts and Design	Directing for the Screen	AV 566	SDG 9 - SDG 11
61	Arts and Design	Digital photography	TD 411 - MA 361	SDG 4 - SDG 5 - SDG 7 - SDG 9 - SDG 11
62	Arts and Design	Television Scenery Design	TD 421	SDG 7 - SDG 9
63	Arts and Design	Cinema Scenery Design	TD 422	SDG 9 - SDG 12
64	Arts and Design	Theatrical Scenery Design	TD 423 - TD 424	SDG 7 - SDG 9 - SDG 12
65	Arts and Design	Computer Aided Design	TD 425 - TD 426	SDG 9
66	Arts and Design	Costume Design	TD 427	SDG 9 - SDG 12
67	Arts and Design	Modern Art	TD 441	SDG 4 - SDG 9
68	Arts and Design	Audio and Visual	TD 461 - TD 462	SDG 7 - SDG 9
69	Arts and Design	Theatrical Techniques	TD 463	SDG 4 - SDG 9
70	Arts and Design	Digital Character Design	TD 521	SDG 7 - SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
71	Arts and Design	Scenography	TD 531	SDG 4 - SDG 9
72	Arts and Design	Musical Appreciation	TD 532	SDG 9
73	Arts and Design	Sociology & Psychology of Design	TD 533	SDG 7 - SDG 9
74	Arts and Design	History of Cinema	TD 541	SDG 7 - SDG 9
75	Arts and Design	Implementation Models (Maquette)	TD 561	SDG 9 - SDG 12
76	Arts and Design	Technology of Contemporary Theater	TD 562	SDG 7 - SDG 9
77	Arts and Design	Graduation Project Research	TD 581	SDG 7 - SDG 9 - SDG 12 - SDG 11
78	Arts and Design	Graduation Project	TD 582	SDG 7 - SDG 9 - SDG 12 - SDG 11
79	Arts and Design	Drawing	D 211 - D 212 - ID 411 - MD 411	SDG 9
80	Arts and Design	Geometric Projection	D 213	SDG 9
81	Arts and Design	Shading Theory	D 233	SDG 9
82	Arts and Design	Technical Equipment	D 366	SDG 6 - SDG 9 - SDG 12
83	Arts and Design	Applications of Art Works in Interior D	ID 571	SDG 9
84	Arts and Design	Landscape	ID 412	SDG 9 - SDG 11 - SDG 13
85	Arts and Design	Interior Architecture Theories	ID 431	SDG 7 - SDG 9 - SDG 11
86	Arts and Design	Landscape Architecture	ID 524	SDG 9 - SDG 11 - SDG 13
87	Arts and Design	Criticism & Analysis in Interior Design	ID 531	SDG 4 - SDG 9 - SDG 12



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
88	Arts and Design	Architectural Render	ID 551	SDG 9 - SDG 7 - SDG 11
89	Pharmacy Pharm-D(Clinical)	Information Technology	PCC 104 - PCC 404	SDG 9
90	Pharmacy Pharm-D(Clinical)	Overview Of spectroscopy	PCC E05	SDG 3 - SDG 9
91	Pharmacy Pharm-D(Clinical)	Good Manufacturing Practices	PPC E02	SDG 3 - SDG 9
92	Pharmacy Pharm-D(Clinical)	Pharmaceutical Nanotechnology	PPC E03	SDG 3 - SDG 9
93	Pharmacy	Instrumental Analysis	PC 307	SDG 9
94	Pharmacy	Analytical Quality Assurance and Control	PC 511	SDG 3 - SDG 9
95	Pharmacy	Pharmaceutical Technology	PP 409	SDG 3 - SDG 9
96	Pharmacy	Pharmaceutics III	PP 510	SDG 3 - SDG 9
97	Pharmacy	Unit Operations	PP 511	SDG 3 - SDG 9
98	Pharmacy	Advanced Instrumental Analysis	PC E12	SDG 9
99	Pharmacy Pharm-D	Pharmaceutical Analytical Chemistry I	PCD 101	SDG 3 - SDG 9
100	Pharmacy Pharm-D	Pharmaceutical Organic Chemistry I	PCD 102	SDG 3 - SDG 9
101	Pharmacy Pharm-D	Information Technology I	PCD 104	SDG 9
102	Pharmacy Pharm-D	Pharmaceutical Analytical Chemistry II	PCD 105	SDG 3 - SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
103	Pharmacy Pharm-D	Pharmaceutical Organic Chemistry II	PCD 106	SDG 3 - SDG 9
104	Pharmacy Pharm-D	Pharmaceutical Analytical Chemistry III	PCD 201	SDG 3 - SDG 9
105	Pharmacy Pharm-D	Instrumental Analysis	PCD 203	SDG 9
106	Pharmacy Pharm-D	Electroanalytical Methods	PCD 204	SDG 3 - SDG 9
107	Pharmacy Pharm-D	Information Technology II	PCD 402	SDG 9
108	Pharmacy Pharm-D	Analytical Quality Control of Pharmace.	PCD 501	SDG 3 - SDG 9
109	Pharmacy Pharm-D	Biotechnology	PMD 501	SDG 3 - SDG 9
110	Pharmacy Pharm-D	Pharmaceutical Technology I	PPD 401	SDG 3 - SDG 9
111	Pharmacy Pharm-D	Pharmaceutical Technology II	PPD 402	SDG 3 - SDG 9
112	Pharmacy Pharm-D	Good Manufacturing Practice	PPD 501	SDG 3 - SDG 9
113	Pharmacy Pharm-D	Pharmaceutical Nontechnology	PPD E02	SDG 3 - SDG 9
114	Engineering	Chemistry and Materials	EB 132	SDG 9
115	Engineering	Surveying	ES 254	SDG 9
116	Engineering	Geographical Information System (GIS)	EA 020	SDG 9 and SDG 11



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
117	Engineering	Linear Algebra	EB 104	SDG 4 – SDG 8 - SDG9 - SDG 11
118	Engineering	Numerical Analysis Using MATLAB	EB 207	SDG 4 – SDG 8 - SDG9 - SDG 11
119	Engineering	Introduction to Digital Logic Design	EC 121	SGD 8 – SGD 9
120	Engineering	Discrete Mathematics	EC 171	SGD 8 – SGD 9 – SDG 11
121	Engineering	Advanced Digital Logic Design	EC 222	SGD 8 – SGD 9
122	Engineering	Data and Computer Communications	EC 361	SGD 7 – SGD 8 – SGD 9
123	Engineering	Computer Networks	EC 363	SGD 7 – SGD 8 – SGD 9
124	Engineering	Computational Models	EC 372	SGD 7 – SGD 8 – SGD 9
125	Engineering	Electric Circuits	EE 291	SDG 9
126	Engineering	Digital Control System	EE 391	SDG 7 – SDG 9 - SDG11
127	Engineering	General Chemistry	EB 131	SDG 9
128	Engineering	Eng. Drawing & Descriptive Geometry (1)	EB 141	SDG 11 - SDG 9
129	Engineering	Engineering Mathematics (3)	EB 103	SDG 4 – SDG 8 - SDG9 - SDG 11
130	Engineering	Engineering Mathematics (4)	EB 204	SDG 4 – SDG 8 - SDG9 - SDG 11
131	Engineering	Engineering Materials	ES 101_E	SDG9
132	Engineering	Concrete Materials	ES 202_E	SDG 9 - SDG 11



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
133	Engineering	Construction Project Management	ES 203_E	SDG 9 - SDG 11
134	Engineering	Graduation Project (1)	ES 400-1	SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 11 - SDG 14
135	Engineering	Graduation Project (2) - Construction Management	ES 400-2	SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 11 - SDG 14
136	Engineering	Repair and Maintenance of Buildings	ES 403_E	SDG 9 – SDG 15
137	Engineering	Quality Control of Construction Material	ES 406	SDG 9 – SDG 15
138	Engineering	Advanced Topics in Materials	ES 311	SDG 9 - SDG 11
139	Engineering	Introduction to Electronic Circuits	EE 213	SDG 3 – SDG 7 – SDG 9 – SDG 11 – SDG 12 - SDG 13
140	Engineering	Micro-Electronic Devices and Circuits	EE 224	SDG 3 – SDG 7 – SDG 9 – SDG 11 – SDG 12
141	Engineering	Analog Integrated Circuits	EE 228	SDG 9 – SDG 11
142	Engineering	Digital Communications (1)	EE 255	SDG 9 – SDG 13
143	Engineering	Microprocessor Based System Design	EE 304	SDG 9 – SDG 11
144	Engineering	Communication Systems	EE 350	SDG 9 – SDG 11
145	Engineering	Mobile Communication Systems	EE 354	SDG 3 – SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
146	Engineering	Antenna Theory and Design	EE 364	SDG 9 - SDG 11
147	Engineering	Introduction to Computer Networks	EE 325	SDG 3 - SDG 9
148	Engineering	Digital Integrated Circuits	EE 338	SDG 3, SDG 7, SDG 9, SDG 11, SDG 12
149	Engineering	Engineering Perspectives and Technology	HU 121!!	SDG 3 - SDG 4 - SDG 7 - SDG 8 - SDG 9 - SDG 12 - SDG 17
150	Engineering	Engineering Environment and Society	HU 161!!	SDG 3 - SDG 5 - SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 11 - SDG 12 - SDG 13 - SDG 14 - SDG 15 - SDG 17
151	Engineering	Industrial Safety	HU 151!!	SDG 3 - SDG 8 - SDG 9 - SDG 17
152	Engineering	Eng.Drawing 2 & Descriptive Geometry	EB142	SDG 4 - SDG 7 - SDG 9
153	Engineering	Numerically Controlled Machines	EM327	SDG 9 - SDG 12
154	Financial and Administrative Sciences	Islamic Finance	BF858	SDG 1 - SDG 2 - SDG 3 - SDG 4 - SDG 5 - SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 10 - SDG 11 - SDG 12 - SDG 13 - SDG 14 - SDG 15 - SDG 16 - SDG 17
155	Financial and Administrative Sciences	Strategic Management 2 BT 850	BT850	SDG 9
156	Arts and Design	Drawing 2	D212	SDG 9



No	Faculty in Pharos University	Course name	Course code	SDG of relevance
157	Arts and Design	Permenant & mobile exhibition	AD311	SDG 9 - SDG 12
158	Arts and Design	Building Construction (2)	D362	SDG 3 - SDG 9
159	Arts and Design	Mosaic Art	AD313	SDG 12 - SDG 9
160	Arts and Design	Project	GD582	SDG 4 - SDG 6 - SDG 8 - SDG 9 - SDG 10 - SDG 16
161	Tourism and Hotels Management	Tourism and Hotel Economics	THM 241	SDG 12 - SDG 1 - SDG 9
162	Applied Health Sciences Technology	Analytical chemistry	HLAC 202	SDG 9

Publications that Address Industry, Innovation and Infrastructure

<https://www.pua.edu.eg/wp-content/uploads/2024/11/PublicationsSDG9.pdf>