



BADYA
UNIVERSITY

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Southern Wahat Rd. Badya City,
6th of October City



SCHOOL OF ENGINEERING

01 School Overview





Vision

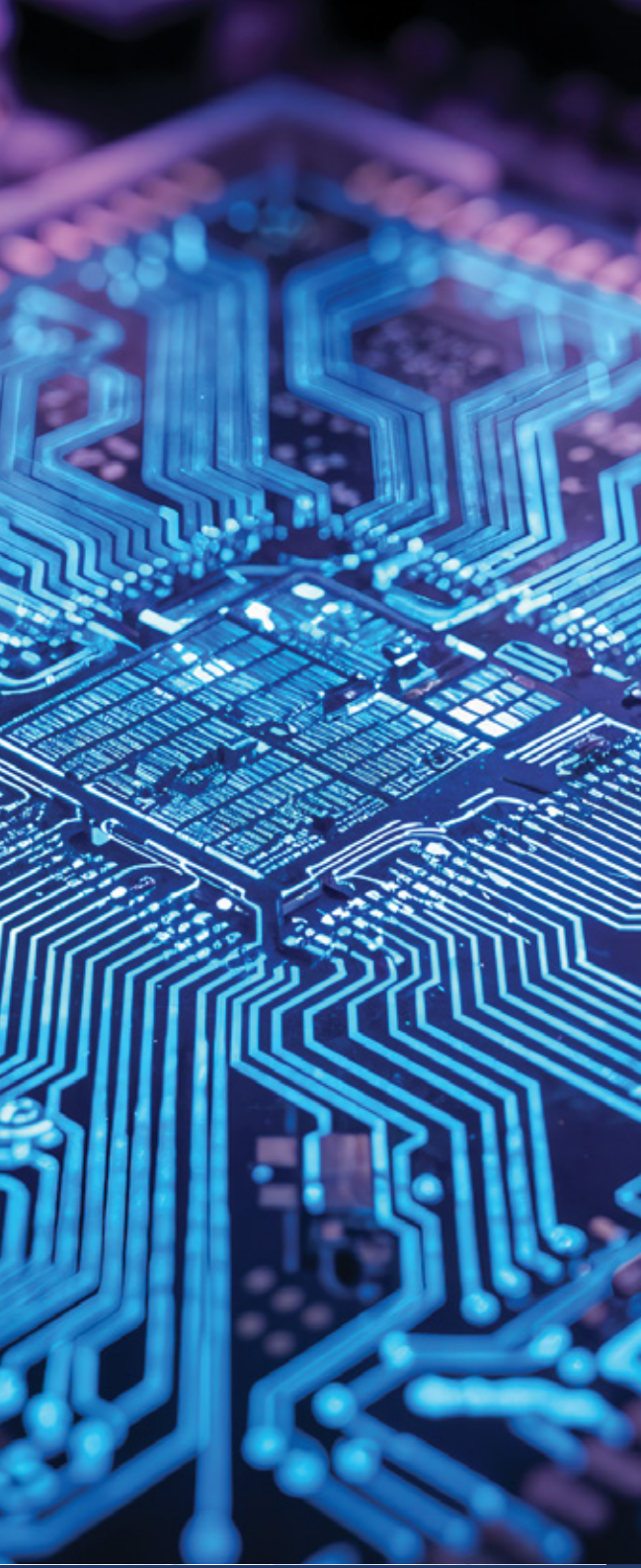
The School of Engineering at Badya University aspires to promote leadership and excellence locally, regionally, and internationally in engineering education, innovative scientific research, and community service, and to keep pace with technological developments. Badya University also aspires to ascend as the leading educational institution in our region.

Mission

The School of Engineering at Badya University is committed to prepare distinguished engineers capable of competing in the local, regional, and international labor market, while providing advanced educational programs that support digital transformation, artificial intelligence, and sustainable development, achieving excellence in scientific research and community service, and applying quality standards within a framework of human values and social responsibility.

02 Program Overview





Engineering Programs

- Intelligent and Sustainable Civil Engineering Program.
- Digital Architectural Engineering Program.
- Communications and Computers Engineering Program.
- Mechatronics and Intelligent Machines Engineering Program.
- Electrical Power and Renewable Energy Engineering Program

Intelligent and Sustainable Civil Engineering Program.

Graduates of this program possess a comprehensive, accreditation-aligned skill set that makes them highly competitive within the modern Architecture, Engineering, and Construction (AEC) industry. Civil Engineering Program develop modern engineering knowledge and skills in the design, construction, and management of smart and sustainable infrastructure projects. They support digital transformation through the application of advanced digital technologies such as Building Information Modeling (BIM), artificial intelligence, and data analytics in civil engineering applications. Instill the principles of sustainable development and promote environmental protection and efficient use of resources. They also can promote innovation, scientific research, entrepreneurship, and community service, while adhering to professional ethics, social responsibility, and quality standards

Digital Architectural Engineering Program.

The Digital Architecture program integrates cultural context, advanced architectural theory, and cutting-edge digital technologies to equip next-generation architects with the progressive design skills necessary to address emerging global issues. The curriculum offers a unique learning experience blending computational modeling, parametric design, and digital fabrication to create structurally optimized, sophisticated forms. Strongly rooted in architectural history and environmental heritage, the program places a distinct emphasis on green architecture and ecological conservation, utilizing advanced software, virtual reality (VR) techniques, and artificial intelligence (AI) building generators to deliver energy-efficient, sustainable urban and built environments in alignment with Egypt's Vision 2030.

Communications and Computers Engineering Program.

The Communications and Computers Engineering program is a modern, interdisciplinary branch where computer programming, advanced networks, and communication engineering merge to prepare the system architects of the future. Designed to respond directly to shifting global market demands, the curriculum bridges the gap between hardware and software systems. Students gain strong technical theoretical knowledge and practical expertise in analyzing analog or digital signal transmission, programming embedded and real-time computing systems, and deploying advanced algorithms across modern digital architectures.

Mechatronics and Intelligent Machines Engineering Program.

The Bachelor of Science in Mechatronics and Intelligent Machines Engineering is an interdisciplinary program integrating mechanical engineering, electronics, control systems, robotics, artificial intelligence, and embedded computing to design, analyze, automate, and optimize smart systems. The program emphasizes cutting-edge cyber-physical production, automation, machine vision, and hardware-software integration. It balances strong theoretical mathematical and physical foundations with extensive hands-on laboratory work, real-world design projects, and specialized field training to prepare creative problem solvers for a rapidly changing industrial environment.

Electrical Power and Renewable Energy Engineering Program

The Electrical Power and Renewable Energy Engineering program is structured hierarchically to qualify graduates in both fundamental and modern engineering trends, building a strong mathematical and physics background before advancing to specialized power infrastructure courses. The curriculum delivers deep academic and professional insights into conventional and clean electricity networks, covering power generation, transmission, smart grids, and distribution economics. By adopting updated teaching and student-centric learning assessments, the program places a major emphasis on environmental conservation, energy efficiency, and demand-side management using industry-standard simulation software like MATLAB and Simscape.



03

Duration of Study & Degrees

- **Duration of Study: Four Years (including field training).**
- **Credit Hours: 144 Credit Hours.**

Degrees

The school grants students a bachelor's degree in the following fields:

- Mechatronics and Intelligent Machines Engineering
- Digital Architectural Engineering
- Electrical Power and Renewable Energy Engineering
- Communications and Computers Engineering
- Intelligent and Sustainable Civil Engineering



WHY JOIN
THE SCHOOL OF
ENGINEERING:

The School of Engineering at Badya University stands out for its dynamic, research-driven, and highly innovative environment, offering future professionals a unique opportunity to acquire deep theoretical engineering expertise alongside extensive practical application. Fully aligned with international ABET student frameworks and the Egyptian National Academic Reference Standards (NARS-2018), our programs are engineered to foster a culture of creative problem-solving, self-directed learning, and technical mastery. By combining cutting-edge infrastructure with industry-integrated field training, the school shapes visionary engineers prepared to lead digital transformations, spearhead sustainable development initiatives, and excel in competitive local and global marketplaces.





OPPORTUNITIES & ADVANCEMENT

The instructors at the School of Engineering is a distinguished group of professors and supporting academic staff from both within and outside Egypt. In addition, students benefit from practical training at major multi-national Companies, inside and outside Egypt.

Applied Learning Curriculum

Our school empowers students through a dynamic curriculum that combines rigorous theory, cutting-edge technical research, and intensive laboratory and practical field experiences, preparing them to excel seamlessly in their engineering careers.

Experience Learning Opportunities

The School of Engineering bridges the gap between the classroom and the industry. Students gain highly marketable, practical skills through real-world prototyping, architectural studio modeling, and hands-on internships with premier corporate partners.

Impactful Research Opportunities

Going far beyond standard classroom theory, the school provides an advanced, conducive research environment that integrates the latest global technological trends, smart manufacturing methodologies, and sustainable innovations. Supervised graduation capstone projects and rigorous multi-layered evaluations by internal and external experts ensure our graduates hold the advanced problem-solving skills demanded by modern industries.

Engaging Academic Community

Our school serves as a vibrant hub of professional engagement! We offer an expansive variety of scientific societies, tech design competitions, seminars, and collaborative events that inspire students to explore their niche interests, network with corporate leaders, and launch their engineering innovations before graduation.

Professional Development

The School of Engineering ignites true student potential by systematically fostering creative thinking, technological resourcefulness, and leadership acumen. Through specialized interactive technical workshops, advanced simulation labs, and industry-modeled challenges, our ultimate goal is to deliver exceptionally qualified, career-ready professionals.



UNMATCHED ADVANTAGES WITH INTERNATIONAL COLLABORATIONS

Collaborative Learning and Exchange

Our strategic partnerships with prestigious global universities enable students to engage in a variety of exchange programs, including semester-long exchanges, summer schools, and joint research projects. These opportunities provide direct exposure to international academic environments, fostering a global perspective in our students.

Specialized Study Tracks Abroad

Our “Global Semester” allows students to participate in specialized courses and projects at renowned international institutions. Focus areas include business analytics, return and risk assessment, and forecasting budgeting, providing students with the latest insights from leading technology and business hubs worldwide.

Enhanced Professional Development

Badya University facilitates internships at top-tier tech companies and startups both locally and internationally. These internships not only enhance practical skills but also prepare students to be competitive in a globalized job market.

Alumni and Industry Networking

Our extensive network of alumni and industry connections provides mentoring, career advice, and introductions to potential employers globally. This support system helps students navigate their careers with confidence and achieve professional success.

THANK YOU