BADYA UNIVERSITY

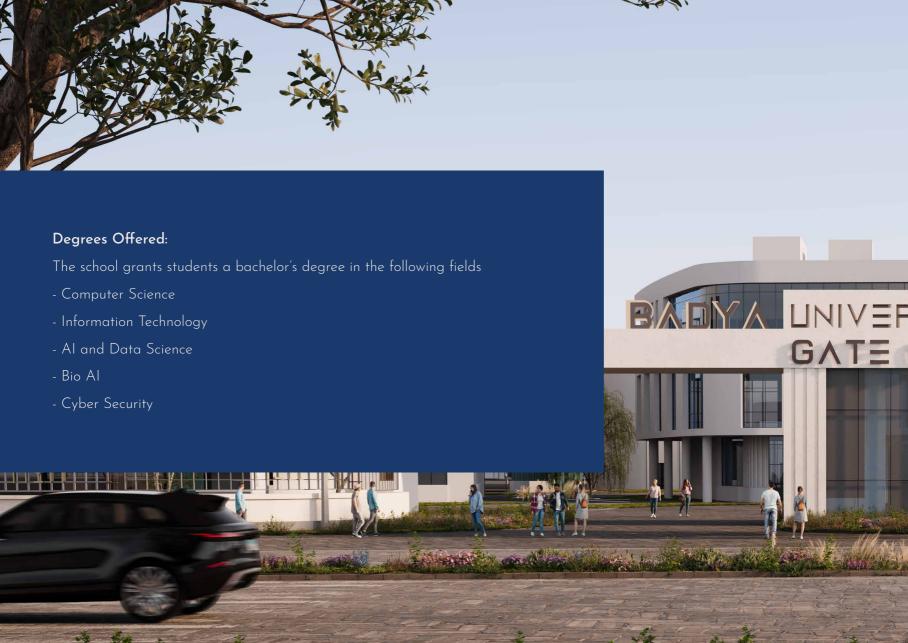# SCHOOL OF COMPUTING AND DATA SCIENCE

LEARN TO LIVE
LIVE TO LEARN

01

SCHOOL OVERVIEW

We are dedicated to achieving excellence in teaching, research, and development in the field of computing and data science. Our programs are designed to address the constantly changing needs of the tech industry and the complexities of our digital era.

- Duration of Study: Four years

- Credit Hours: 144 hours

Degrees Offered:

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

- Computer Science

- Information Technology

- AI and Data Science

- Bio AI

- Cyber Security

02

COMPUTER SCIENCE

Our Computer Science program balances theory with practical skills. Students will explore topics like algorithms, software development, systems and networking, databases, and theoretical computer science. This prepares them for various careers in software development, systems engineering, and more.

Problem Solving and Critical Thinking

Graduates will demonstrate their ability to solve complex computing problems and make informed decisions using computer science principles.

Programming Skills

Graduates will be proficient in various programming languages and techniques to create, build, and test software systems.

Systems Understanding

Graduates will understand how computing systems work, including software, hardware, and networks, allowing them to apply their knowledge in diverse technical environments.

Ethical and Social Awareness

Graduates will comprehend the ethical, legal, and social issues related to computing and will adhere to professional ethics and privacy standards in their work.

03

INFORMATION TECHNOLOGY

Our Information Technology program emphasizes the use of technology solutions to address business and organizational challenges. Students gain knowledge in network infrastructure, cloud computing, security, and information management, enabling them to design and oversee technology systems that support contemporary organizations.

Implementing Technology Solutions

Graduates will demonstrate the ability to implement and manage technology solutions that meet organizational requirements, including networks, databases, and web services.

System Administration and Management

Graduates will become experts in managing, configuring, and maintaining computer systems and networks to ensure smooth and secure operations.

Project Management

Graduates will apply project management principles to technology projects, covering planning, execution, monitoring, and closure, with a focus on time, budget, and quality.

Information Security

Graduates will understand and apply fundamental concepts of information security to protect data and mitigate risks associated with technology systems.

04

AI AND DATA SCIENCE

Our AI and Data Science program explores the integration of artificial intelligence (AI) and data science. Students gain extensive knowledge in machine learning, neural networks, statistics, and data analysis. Graduates are prepared to create AI-powered solutions and extract insights from extensive datasets, positioning them for careers as data scientists, machine learning engineers, and AI researchers.

Data Analysis and Modeling

Graduates will master statistical analysis, data mining, and machine learning techniques to analyze and interpret complex datasets effectively.

AI Systems Design and Use

Graduates will demonstrate their ability to design and utilize intelligent systems capable of learning from data and making decisions.

Ethical AI Usage

Graduates will understand the ethical considerations surrounding AI applications and advocate for their responsible use in society.

Data-Driven Decision Making

Graduates will use data science and AI methods to support evidence-based decision-making in various domains.

05

BIO-
AI

Our groundbreaking Bio AI program integrates AI with biology and healthcare. The curriculum merges principles from biology, computer science, and artificial intelligence to create technologies and solutions for addressing health diagnostics, treatment strategies, and biomedical research challenges.

Cross-Disciplinary Knowledge

Graduates will possess a strong understanding of both life sciences and artificial intelligence, allowing them to use computational approaches in analyzing biological data effectively.

Bioinformatics Proficiency

Graduates will excel in analyzing genomic and proteomic data using machine learning and data analysis methods to uncover valuable biological insights.

Healthcare Innovations

Graduates will demonstrate their capability to create AI-based solutions for healthcare, including diagnostic aids, treatment suggestion systems, and personalized medicine applications.

06

CYBER SECURITY

In our Cyber Security program, students learn to safeguard and protect information and information systems against unauthorized access, use, disclosure, disruption, modification, or destruction. The curriculum covers topics such as network security, cryptography, risk management, and ethical hacking, equipping graduates for roles in cybersecurity analysis, penetration testing, and information security management.

Risk Management

Graduates will assess, manage, and mitigate risks to ensure the integrity, confidentiality, and availability of information.

Defensive Strategies

Graduates will employ diverse cyber defense tactics and technologies to protect networks and systems from digital threats.

Response Proficiency

Graduates will excel in identifying, responding to, and recovering from security incidents and breaches.

Legal and Ethical Awareness

Graduates will recognize legal, ethical, and professional obligations in cybersecurity, including adherence to data protection laws and ethical hacking standards.

UNMATCHED ADVANTAGES WITH INTERNATIONAL COLLABORATIONS

Collaborative Learning and Exchange

Our strategic partnerships with prestigious international universities open doors for students to participate in exchange programs, including semester-long exchanges, summer schools, or joint research projects, providing direct exposure to the international academic environment.

Specialized Study Tracks Abroad

Our "Global Semester" allows students to engage in specific courses and projects at leading global institutions, focusing on areas like advanced computing, AI innovations, and technological advancements, gaining the latest insights from technology hubs around the world.

Enhanced Professional Development

Badya University connects students with internships at top tech companies and startups both locally and internationally. This not only enhances practical skills but also makes students more competitive in a globalized job market.

Alumni and Industry Networking

Our extensive network of alumni and industry connections can provide mentoring, career advice, and introductions to potential employers globally, helping students navigate their careers with confidence.

WHY JOINTHE SCHOOL OF COMPUTING AND DATA SCIENCE?

◆

Advanced Curriculum and Innovative Programs

Badya University offers cutting-edge programs in Computer Science, Information Technology, AI and Data Science, Cyber Security, and Bio AI. These programs are designed to equip students with the skills needed for successful careers in various tech industries.

State-of-the-Art Facilities and Industry Connections

The faculty is equipped with modern labs featuring up-to-date technology, supporting hands-on learning and research. Strong industry ties provide students with internships, industry expert lectures, and potential job opportunities, enhancing practical experience and employability.

Global Perspective and Research Opportunities

The curriculum emphasizes a global perspective, equipping students for success in an interconnected world. Students will delve into areas such as advanced computing technologies, ethical AI, and a wide range of computer science and technology fields, actively contributing to groundbreaking advancements.

Commitment to Societal Impact

Badya University's programs directly support Egypt's plan for a digital society. They focus on using technology to tackle social issues and promote digital inclusion.

BADYA
UNIVERSITY