



**SCHOOL OF  
COMPUTER SCIENCE  
& MATHEMATICS**  
KIMEP UNIVERSITY





## GREETINGS FROM THE DEAN

Greetings, future KIMEP students! Like many of you, I once stood at a crossroads, unsure where my journey would lead. Education has taken me on a remarkable journey, from Pakistan to the United Kingdom for my Ph.D., through seven enriching years in Oman, and now to Kazakhstan, where I am honored to serve as Dean of the School of Computer Science and Mathematics (SCSM) at KIMEP University. Along the way, I have worked with students from all over the world, and I have come to believe one thing: education is not just about knowledge—it's about transformation.

At the SCSM, we prepare students not only to understand the digital world but to shape it. Whether you are passionate about Artificial Intelligence, Internet of Things, Robotics, Data Science, Networking or Cybersecurity, our programs are designed to help you turn your interest into impact. With world-class faculty, an American-style curriculum, and a strong emphasis on practical, hands-on learning, we ensure that our graduates are ready to succeed on the national as well as global stage.

At the SCSM, we offer state-of-the-art laboratories equipped with the latest technologies. Our facilities include modern computer labs, as well as specialized labs in IoT and Robotics, Networking and Cybersecurity, Physics, and Chemistry all designed to provide you with essential hands-on experience that complements theoretical learning. At KIMEP, you will work closely with faculty on meaningful capstone projects and polish your professional skills through internships, club-sponsored competitions, and extensive hands-on laboratory activities built into the curriculum.

**Muhammad Arshad, PhD**  
**Dean and Associate Professor**



## REASONS TO APPLY FOR THE COMPUTER SCIENCE PROGRAM:

**Excellence in Education:** Our faculty comprises distinguished experts with terminal degrees from reputable Western institutions. The curriculum follows Accreditation Board for Engineering and Technology (ABET) standards and is taught in English, providing a solid foundation for your career in computer science.

**Diverse Specializations:** Customize your studies to your interests with concentrations in Data Analytics, Software Engineering, or Artificial Intelligence, equipping you with specialized skills tailored to industry demands.

**Foundational Strength:** Develop critical problem-solving abilities through a rigorous core curriculum anchored in science and mathematics, preparing you to confidently tackle real-world challenges.

**Cutting-Edge Facilities:** Study in our cutting-edge science building, which is equipped with student study areas, research spaces, and advanced laboratories, fostering innovation and hands-on learning.

**Dynamic Learning Environment:** Engage in co-curricular activities such as AI game programming competitions and projects in our Internet of Things & Robotics laboratory, enriching your learning experience and enhancing your skill set.

**Learning support:** Access resources effortlessly through our integrated learning management system, providing access to e-books, tutoring services, and learning support software, ensuring your success every step of the way.

**Extensive Network and Alumni Community:** KIMEP's rigorous curriculum and esteemed faculty provide students with the knowledge and skills necessary to excel in their fields, opening doors to prestigious institutions like MIT and others. KIMEP's extensive alumni network and partnerships with renowned institutions offer valuable connections and pathways for academic and professional advancement beyond graduation.

**Scholarship Opportunities:** KIMEP University offers a wide range of merit-based scholarships and annually provides various grants for students from Kazakhstan and other countries of Central Asia and beyond. In addition, students can apply for part-time, on-campus jobs.



## ABOUT THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE PROGRAM

The Bachelor of Science in Computer Science program at KIMEP University, offered within the School of Computer Science and Mathematics, is designed to provide students with a comprehensive understanding of computer science principles, theories, and practical skills. Through an ABET standards-based curriculum and hands-on learning experiences, students gain expertise in various areas of computer science, including software development, data analysis, cybersecurity, artificial intelligence, and more.

### **THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE PROGRAM offers the following majors:**

1. Data Analytics
2. Software Engineering
3. Artificial Intelligence
4. Cybersecurity



## Elective Specialized Courses

In addition to the core curriculum, students can choose from various elective specialized courses. These courses offer in-depth exploration of specific areas within computer science, allowing students to specialize in one of the following concentrations:

- 1 Data Analytics Concentration:** Exploring techniques and tools for analyzing large datasets, extracting meaningful insights, and making data-driven decisions. Course topics may include data mining, machine learning, data visualization, and predictive analytics.
- 2 Software Engineering Concentration:** Exploring software development methodologies, software design, testing, and maintenance.
- 3 Artificial Intelligence Concentration:** Exploring machine learning, natural language processing, computer vision, and robotics. Discovering how AI technologies are revolutionizing industries and shaping the future of computing.
- 4 Cybersecurity Concentration:** Exploring cybersecurity through network traffic analysis, infrastructure protection, and ethical hacking. Gaining hands-on experience with advanced tools to combat cyber threats, secure systems, and lead the fight for digital safety.

## Basic Disciplines Cycle

The Basic Disciplines Cycle forms the foundation of the Bachelor of Science in Computer Science program at KIMEP University. This category of courses provides students with essential knowledge and skills in mathematics, physics, chemistry, or biology, as well as fundamental concepts in computer science. Students will explore topics such as calculus, physics, discrete mathematics, linear algebra, statistics, and probability. Additionally, they will have the opportunity to gain hands-on experience through laboratory sessions and internships, further enhancing their understanding and practical application of these disciplines.

## Capstone Project

The Capstone Project is the culmination of students' academic journeys, where they apply their knowledge and skills to solve a real-world problem or undertake a research project under the guidance of faculty mentors. This hands-on experience allows students to showcase their abilities, demonstrate their readiness for the workforce, and make valuable contributions to the field of computer science.



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## ABOUT THE BACHELOR OF INFORMATION SYSTEMS

The Bachelor of Information Systems (BIS) program provides students with fundamental and advanced knowledge and skills in the field of information systems, software development and the management of information systems. Graduates of the program also acquire fundamental knowledge of accounting, finance, management and marketing.

### **THE BACHELOR OF INFORMATION SYSTEMS offers two majors:**

1. Big Data Analytics
2. Management Information Systems



**1 Big Data Analytics concentration:** Exploring data science, business analytics, and visualization to unlock insights from complex datasets. Mastering advanced tools and forecasting techniques to drive smarter decisions in business, technology, and engineering.

**2 Management Information Systems concentration:** Exploring ERP systems, data visualization, business intelligence, and project management. Gaining hands-on experience with SAP, blockchain, and emerging digital technologies to design, manage, and innovate enterprise solutions.



## PROFILES OF OUR DISTINGUISHED FACULTY MEMBERS

### **Dr. Muhammad Arshad**

- Ph.D. Computer Science, Liverpool John Moores University, UK
- Over 20 years of international academic and leadership experience in the UK, Pakistan, Oman and Kazakhstan:
- Department Chair
- Dean
- Curriculum innovation, and academic quality
- Evaluator for Program Accreditation
- Industry partnerships and international collaboration
- Student success strategies: retention, progression, and graduate outcomes

### **Dr. Aigerim Kalybay**

- Professor at the Department of Natural Sciences and Mathematics at KIMEP University.
- Holds a Candidate degree in Physical and Mathematical Sciences, awarded by the Ministry of Education and Science of Kazakhstan (defended at the Institute of Mathematics, Academy of Sciences, Almaty).
- Earned two PhD diplomas: in 2006 from Luleå University of Technology, Sweden (with a grant from the Royal Swedish Academy of Sciences), and later from L.N. Gumilyov Eurasian National University, Kazakhstan.
- Committed to high-quality mathematics education at KIMEP University and supporting the growth of SCSM by preparing students with strong analytical, problem-solving, and quantitative skills.





### **Dr. Aishabibi Dukenbayeva**

- Assistant Professor at the Department of Natural Sciences and Mathematics, KIMEP University.
- Holds a Ph.D. in Mathematics (Ghent University, Belgium and Kazakh National University, Kazakhstan) and an M.A. in Applied Mathematics (University of Southern California, Los Angeles, CA, USA);
- Recipient of the KIMEP University “Research Excellence Award (2025)”;
- Committed to strengthening KIMEP and SCSM as leading centers of academic excellence through research and innovative teaching.

### **Dr. Altynay Kadyrova**

- Holds a Ph.D. in Computer Science from the Norwegian University of Science and Technology (NTNU).
- Has experience in international companies and research institutions across Europe, Japan, and South Korea.
- Collaborated with organizations such as Canon Production Printing Netherlands B.V., University of Leeds, and Fraunhofer Institute for Computer Graphics Research.
- Passionate about research and technology, poised to contribute to computer science at KIMEP University.

### **Dr. Nurgissa Yessirkegenov**

- Associate Professor at the Department of Natural Sciences and Mathematics at KIMEP University.
- Holds a Ph.D. in Mathematics (Imperial College London, UK).
- Recipient of several prestigious international awards, including the Santander Mobility Grant (UK, 2017), the Romberg Grant (Germany, 2017), the Doris Chen Merit Award (UK, 2018), the Doris Chen Mobility Grant (UK, 2018), the Axioms Prize (Switzerland, 2018), the Early Career Fellowship from the London Mathematical Society (UK, 2019), and the Scopus Awards Kazakhstan 2023 by Elsevier. Honored with national awards, including the Best Researcher Award 2024 from the Ministry of Science and Higher Education of Kazakhstan and the State Youth Award “Daryn” (2021). Member of the International ISAAC Committee (International Society for Analysis, its Applications and Computation).
- Dedicated to promoting excellence in mathematics research and education at KIMEP University while supporting the development of SCSM as a center for analytical and quantitative skills.



### **Dr. Anel Ibrayeva**

- Seasoned Senior Data Scientist with a rich academic background and extensive professional experience in computer science.
- Holds a Ph.D. in Informatics Engineering with a specialization in Artificial Intelligence from the University of Algarve.
- Demonstrates a proven track record of delivering innovative solutions across various sectors.
- Expertise includes Time Series Predictive Modeling, Deep Learning, and Data Analysis.
- Led impactful projects in energy efficiency, customer experience analysis, and predictive modeling for tele-communications and insurance industries.
- Contributions are poised to enrich the learning experience and prepare students for the dynamic landscape of computer science and data analytics.

### **Dr. Haslinda Ibrahim**

- Holds a Ph.D. in Integrated Computing from the University of Arkansas at Little Rock.
- Brings a wealth of experience from both academia and industry.
- Previously served as an Assistant Professor at KTO Karatay University and as a Research & Teaching Assistant at the University of Arkansas at Little Rock.

### **Dr. Lee Garner**

- Distinguished Professor at Algarve University, Portugal.
- Holds a Ph.D. in Computer Science from the University of Strasbourg, France.
- Specializes in reconnaissance, formal calculus, and cryptography.





### **Mr. Nurlan Karimzhan**

- Senior Lecturer at the School of Computer Science and Mathematics, KIMEP University, Almaty.
- Holds an M.Sc. in Electronic Business Technologies from Carnegie Mellon University (Bolashak scholarship) and a Master's in Information Systems from Kazakh National Technical University named after K.I. Satpayev.
- Expert in software architecture, ERP systems integration, mobile robotics, and programming (C++, Java, Python, SAP ERP).
- Recipient of multiple awards, including 1st Place at Carnegie Mellon Graduate Project Competition (2011), Certificate of Commendation from the Minister of Education and Science (2017), and SAP BTP Nomad HackFest 2024 "Best Team Work" award as team leader.
- Committed to advancing IT education and preparing students with strong technical, problem-solving, and innovative skills for global competitiveness

### **Dr. Uldana Baizyldayeva**

- Associate Dean of School of Computer Science and Mathematics at KIMEP University.
- Holds PhD in Information Systems from K.I. Satbayev Kazakh National Technical University joint research with University of Aveiro, Portugal.
- Has international teaching experience with the Erasmus teaching mobility program in the universities of Thomas Bata and Opole University of Technology. Has publications in indexed journals. Actively involved in Global universities' research project.
- Committed to fostering student capabilities for future challenges in computer science and data analytics in research and business through skill-based education. Strives to make the School of Computer Science and Mathematics one of the prestigious and recognizable.

**Discover Your Path to Success: Empowering the next generation of innovators, researchers, and problem-solvers in Central Asia!**



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Tuition and fees

