YOUR DEGREE	WHAT YOU'LL LEARN	YOUR CAREER POSSIBILITIES	CURRENT NJIT RESEARCH	THE NJIT EDGE
BS in Applied Physics from College of Science and Liberal Arts	Study physics and how it applies to such industries as optical science and photonics, biophysics, astronomy/astrophysics and microelectronics.	Conduct research and develop new devices and processes at a range of research and development firms, federal agencies and in higher education.	Solar and terrestrial physics, photonics, imaging, biophysics, material science and condensed matter physics.	Undergraduate research is encouraged. Choose from three concentrations: optical science and engineering, astronomy and astrophysics, and biophysics. A double major with computer science is also available. This is a joint degree program with Rutgers-Newark.
5-year BArch or 4-year BS in Architecture from New Jersey School of Architecture	Learn studio design, reinforced through courses in history, building science, social concerns and architectural technology.	Create new environments and manage existing ones in architecture, real estate development, construction, urban planning or computer animation.	Architectural design, urban design, infrastructure planning.	NJIT is a pioneer in the use of architectural computing. Many faculty members are practicing architects in New Jersey and New York. Resources include a library with 13,000 books and 78,000 slides, an imaging lab that offers the latest software and a model shop. The program is NAAB-accredited.
BFA in Art* from New Jersey School of Architecture	Communicate ideas using multiple analog and digital media while working individually or in teams on projects such as interactive art installations, architectural and land sculpture, and digital process art.	Fuse traditional and digital media in such careers as installation art production, set design, public sculpture, interactive art, immersive environment production, museum exhibition production and digital art.	Students become members of the Idea Factory, a laboratory housing the latest equipment with which to invent, design, prototype and test ideas. Sponsored by industry, it focuses on real-life design projects submitted by our sponsors.	Fine arts study at NJIT takes advantage of the presence of technology, exploring the intersection between traditional and new media. It focuses on the effective depiction and communication of ideas using multiple media.
BS in Bioinformatics from College of Computing Sciences	Understand the fundamentals of bioinformatics, computer science and biology, along with appropriate science and math knowledge and related interdisciplinary studies.	Analyze and manage highly specialized information in biotechnology, pharmaceutical, biomedical and related industries.	Controlled medical vocabularies, semantic networks, computational biology, genomics and microarray data analysis, biomolecular modeling and simulations, data mining.	One of NJIT's newest programs, bioinformatics draws on the university's strengths in computing, science and math.
BA or BS in Biological Sciences from College of Science and Liberal Arts	Investigate biology from an interdisciplinary perspective with an emphasis on mathematics, computer science, physics and chemistry.	Conduct research in government labs, pharmaceutical companies, biotech firms or universities. Excellent preparation for advanced study, including medical school.	Neural dynamics, neuroimmunology, mathematical neurophysiology, enzyme design, computer-aided drug design, and complex ecological systems.	Includes one of the largest groups of biomath researchers in the country. The Undergraduate Biology and Math Training Program offers summer research opportunities. Students have done research in chemistry, biomedical and mathematics departments at NJIT and at UMDNJ.
BS in Biomedical Engineering from Newark College of Engineering	Draw from chemical, electrical and mechanical engineering, as well as from materials science, physics and biology in this interdisciplinary program.	Design medical devices like artificial hearts, pacemakers and surgical lasers for pharmaceutical and medical device firms. Or go into management or medical administration.	Stem cell applications in tissue regeneration, vision and neural engineering, bioMEMS, motion analysis and rehabilitation engineering, biomaterials and biopolymers.	The program incorporates a studio-style education that emphasizes active learning. Research facilities, teaching studios and labs are fully equipped with the latest instrumentation. More than 500 biomedical firms are located within 50 miles of campus, making biomedicine the state's largest industry.
BS in Business from School of Management	Explore a cross-disciplinary approach that combines business knowledge with computing skills and information-age technologies, along with the building of teamwork and presentation skills.	Take on a management role in e-commerce, telecommunications or the Internet, or take on a technology-focused position in a traditional company.	Biomedical management, IT development and management, international business, new media, enterprise development, global project business, relationship alignment management, collaboration with other disciplines to solve business problems.	Choose among concentrations in e-commerce, finance, management information systems and marketing. Through the Kauffman Entrepreneur Internship Program, work in entrepreneurial businesses during the day and go to class at night to learn how to start and run a business.
BS in Business and Information Systems* from the College of Computing Sciences	Learn concepts in business topics including accounting, finance, financial products, business operations, and marketing, and information system topics such as databases, application development tools, Web design, software use and evaluation, management information and decision support systems.	Prepare for careers in finance, insurance, marketing, telecommunications, consulting, and the pharmaceutical industry. Proximity to the New York City financial markets makes the program well suited for those who wish to pursue an information systems career in the financial world.	Undergraduates can work alongside faculty in cutting-edge research in such areas as the SmartCampus project, emergency management information systems, e-customer relations, and multimedia group collaboration.	The program draws on the rich technological resources of New Jersey's science and technology university. With one of the most computing-intensive campuses in the world, NJIT has pioneered in the applications of new technologies as learning tools.
BS in Chemical Engineering from Newark College of Engineering	Build a foundation in chemical engineering by mastering the principles of chemistry, physics, biology and mathematics.	Bring your engineering skills to positions in government, academia and such industries as pharmaceuticals, health care, food processing, polymers and biotechnology.	Particle technology, polymeric materials, polymer physics, membrane technology, pharmaceutical engineering, homeland security, green manufacturing.	A significant number of undergraduates have conducted award-winning research and have published results with their faculty mentors in respected journals. Current research expenditure in the department exceeds $2.5 million per year. The program is ABET-accredited.
BS in Chemistry from College of Science and Liberal Arts	Learn how chemistry can be used to solve problems through an emphasis on laboratory skills, science, mathematics and engineering subjects.	Solve challenges in energy generation, environment, polymers and more in industries such as pharmaceuticals, petrochemical or pollution control.	Analytical and environmental chemistry at industrial and microchip scales, synthesis of organic and inorganic materials in green solvents, computer-aided drug design, laser diagnostics of elementary processes, kinetics.	A range of technical electives allows you to narrow your chemistry focus. Faculty members have expertise in areas including energy, fuels, pharmaceuticals, petrochemicals, materials, environmental chemistry and pollution control. Undergraduate research is encouraged.
BS in Civil Engineering from Newark College of Engineering	Explore advances in high-strength concrete, hydraulics and water resources engineering and transportation. Learn to solve open-ended design problems as early as freshman year.	Plan, design, build and maintain roads, bridges, buildings, water supplies and more with an engineering or construction firm or government agency.	Disaster routing, bridge structures, pipeline corrosion, noise walls, geomatics, remote sensing for environmental analysis, traffic analysis, critical infrastructure, water quality.	Faculty members include dedicated teachers, researchers and engineering practitioners. Undergraduate teaching labs include the Geotechnical, Hydraulics, Computer Design, Construction, and GIS/Remote Sensing Labs. A senior capstone has you tackle a real-world engineering problem.
BA or BS in Communication and Media from College of Science and Liberal Arts	Learn excellent speaking, writing and visual skills with a firm understanding of technology and science and a mastery of current technological tools.	Use words and images to share information and knowledge in positions in technical communication, journalism, advertising, grant writing, medical reporting and more.	Technical communications, technology-enhanced teaching and learning.	Choose from three concentrations: literature (with an option in education), media arts, and professional and technical communication (with an option in journalism). The program includes a co-op work experience and a senior capstone course in which you produce a substantial original work.

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BS in Computational Sciences* from the College of Science and Liberal Arts	The program emphasizes topics such as numerical computation, high-performance computing, scientific computing, and modeling and simulation.	Opportunities exist in many industries, including pharmaceuticals, chemicals, and electronics; in government, especially the Department of Defense and NASA; and in education and research, including medical and environmental research.	Grant-supported NJIT researchers are using computational methods to study such diverse topics as a treatment for cocaine addiction, ocean acoustics to detect submarines, ecology, neurosciences, and the effects of space weather on aviation and telecommunications.	Active participation in the program by more than 40 NJIT mathematical sciences faculty produces a stimulating learning environment. The program offers students a unique opportunity to learn from leading experts in the field, and to participate with faculty in research sponsored by government agencies and industry.
BS in Computer Engineering from Newark College of Engineering	Explore a combination of electrical engineering, computer science and computer systems.	Develop, design and test computer systems for a range of applications, using hardware, software and engineering knowledge.	Optical networks, network security, QoS Routing and link state update, active queue management, traffic modeling and scheduling, ultra-wideband communications.	The program is fully accredited by ABET. Choose from three technical tracks: Computer communications, advanced computer systems and telecommunication. The program emphasizes real-world experience by bringing experts from leading industries to campus to mentor seniors in their design projects.
BA or BS in Computer Science from College of Computing Sciences	Learn to program, design, analyze and implement computer algorithms and software systems. Application areas include operating systems, databases, firewalls and Web servers.	Design, develop and work on software systems, applications, databases, networks, firewalls and servers in such fields as finance, pharmaceuticals and technology.	Database/data mining, image processing, pervasive and mobile computing.	The largest CS department among research universities in the metropolitan area. Known for the integration of technology throughout the curriculum and campus. The program is ABET-CAC accredited. An emphasis on hands-on learning includes opportunities for internships, co-ops and research.
BS in Computing and Business* from the College of Computing Sciences	Learn concepts in computer science and business to function effectively in designing, building, enhancing, and maintaining software systems and applications in the context of business environments such as the financial industry.	Prepare for careers that require a combination of business and computing knowledge, designing and developing software, designing databases, installing and running applications, ensuring security, protecting and managing networks, running computer systems, enhancing financial systems, developing and maintaining Web sites and e-commerce systems, and providing computing support for business functions such as trading and financial analysis.	Undergraduates can work alongside faculty in cutting-edge research in such areas as the SmartCampus project, emergency management information systems, e-customer relations, and multimedia group collaboration.	The program draws on the rich technological resources of New Jersey's science and technology university. With one of the most computing-intensive campuses in the world, NJIT has pioneered in the applications of new technologies as learning tools.
BA in Digital Design* from New Jersey School of Architecture	Work in teams to experience the challenges of designing, building and testing designs using collaborative methods. Along with the facilities available throughout campus, students have access to state-of-the-art Computer Aided Design (CAD) equipment and digital media laboratories.	Prepare for careers in such fields as game design, Web design, graphic design, digital video production, animation and motion design, virtual set design, and digital special effects.	Students become members of the Idea Factory, a laboratory housing the latest equipment with which to invent, design, prototype and test ideas. Sponsored by industry, it focuses on real-life design projects submitted by our sponsors.	NJSOA was the first architecture program in the nation to establish fully digital design studios. Since then, our faculty members have been recognized nationally as leaders in digital design education. All of our studios are now taught using a wide array of digital media.
BS in Electrical Engineering from Newark College of Engineering	Think analytically and creatively and communicate effectively with a foundation in mathematics, physical sciences, humanities and social sciences, along with depth in electrical engineering.	Design electrical devices in a range of fields, including integrated circuits, computing, biomedical instrumentation, energy conversion, power, microprocessors and more.	Communications and signal processing, computer architecture, computer networking, intelligent systems, microelectronics, silicon nano electronics.	Specializations include communication network, computers, controls, power systems, RF/microwave and fiber optics and telecommunications. Senior year includes a design project that incorporates research, design, cost analysis, construction and testing. The program is ABET-accredited.
BS in Engineering Science from Newark College of Engineering	Gain a strong background in engineering, mathematics and the life sciences with a focus on interdisciplinary problem solving.	Bring problem-solving skills to a wide range of fields, or use your degree as a foundation for legal or medical studies.		Program requires at least 30 credits in engineering courses. Create your own specialization in an area such as materials science or biomedical engineering or an area from one of NJIT's other colleges. The program offers an accelerated seven-year program in pre-medicine, pre-dentistry or pre-optometry.
BS in Engineering Technology from Newark College of Engineering	Learn to apply scientific and engineering knowledge and methods and technical skills to implement and expand technology.	Develop, manage and improve products, systems, manufacturing and engineering operational functions in a range of industries.		Degree options include concrete industry management, construction engineering technology, electrical and computer engineering technology, mechanical engineering technology or surveying engineering technology. Faculty members have many years of industrial experience.
BS in Enterprise Development* from the School of Management	Learn to initiate a new enterprise and deliver a new product; rediscover an entrepreneurial spirit within an existing enterprise; and seek innovation on the international stage of socioeconomic exchange and growth. All three areas are dealt with against a backdrop of concern for ethical ideas and systems.	Enterprise Development encompasses two types of careers—the entrepreneur who starts and runs a new business, and what is coming to be known as the intrapreneur, who develops new ventures and products within an existing company. Entrepreneurs hold positions such as small business owner, self-employed professional, franchise owner, consultant and business analyst.		Princeton Review ranked SOM among its "Best 282 Business Schools." NJIT is also home to the Enterprise Development Center, one of the nation's oldest and largest small business incubators specializing in hi-tech start-ups. EDC, home to nearly 80 companies, employs more than 300 people, many of them NJIT students and recent graduates.
BS in Environmental Science from College of Science and Liberal Arts	Build a well-rounded background in environmental sciences, drawing on chemistry, geology and biological sciences.	Take on technical positions in the environmental industry and environmental-related positions in law, business, sociology, health and political science.	Industrial waste streams, site decontamination, solvent replacement, volatile organic compound containment, computer-aided process design, systems analysis.	Options, each requiring 36 credits, include sustainable earth, biocomplexity, environmental policy studies and chemistry of the environment. The Otto York Center, the largest university-based hazardous waste management research facility nationwide, is based at NJIT.

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BA in History from College of Science and Liberal Arts	Master historical research and exposition methods while gaining a broad understanding of world historical trends and particular historical problems and regions.	Trace and preserve history in an educational or museum setting, or use your capabilities in such fields as media, government, law or business.	Race relations, history of technology and medicine, biomedical sciences and technology, urban history, medieval history, U.S. history, European history, Latin American history.	Special opportunities include original research and historical writing, internships with cultural institutions and access to Rutgers library holdings. There's an optional concentration in history of technology, environment and medicine. This is a joint program with Rutgers-Newark.
BS in Industrial Design from New Jersey School of Architecture	Understand how a product comes to be, from concept through manufacturing and everyday use—and create products ranging from salt shakers to furniture to medical devices.	Design a wide range of products and devices in an engineering or specialized design firm or manufacturing company.		This four-year program builds on the university's strengths in computer-aided design and computer-aided manufacturing. With sophisticated laser cutters, 3-D printers, CNC routers and special software, the Fabrication Laboratory lets you transform your ideas into three-dimensional prototypes.
BS in Industrial Engineering from Newark College of Engineering	After mastering product and production process design, work analysis and engineering management science, learn to design, improve, install and operate systems of people, materials and facilities needed by industry and throughout society.	Design and improve systems involved in the manufacturing of products or delivery of services in a range of businesses including manufacturing, service, research and development and public service.	Industrial and operations research, design for manufacturing, quality, assembly and concurrent engineering, robotics, global networking, logistics and simulation issues of small and medium-sized companies, multimedia, environmental and health/safety, medical engineering.	Choose among specializations in operations engineering, manufacturing engineering and process engineering. The program is ABET-accredited.
BS or BA in Information Systems from College of Computing Sciences	Apply computing methodologies to areas such as management, finance, marketing, medicine and environmental science.	Develop and manage applications and networks for such fields as science, accounting, marketing, production and healthcare delivery.	Systems design and information management, collaborative and learning systems, and human-computer interaction, emergency management information systems, e-customer relationship management, virtual team leadership.	The program's ABET-CAC accreditation has been earned by only 20 universities nationwide. The unusual 15-credit concentration requires five courses in an application or methodological area related to IS, such as management, medical information systems, graphic design and multimedia or accounting.
BS in Information Technology from College of Computing Sciences	Examine the intersection of telecommunications and computing and apply them to solve hardware and software problems in the field of your choice.	Find solutions to technology-related challenges in a range of fields. Information technology is projected to be the fastest growing profession over the next decade.	Cybersecurity, computer forensics, and education development.	Choose among more than 20 concentrations including architecture, bioinformatics, e-commerce, history, network security, and robotics and automation engineering. For the senior capstone, work with one of NJIT's industrial partners or start-up companies.
BA in Interior Design* from New Jersey School of Architecture	Learn to make decisions and solve problems by researching and analyzing information, evaluating solutions through the language of visual art, creating exciting and unexpected solutions, and learning from peers and mentors in a studio setting.	In collaboration with other design professionals, the interior designer engages in commercial interior design, display and exhibit design, hospitality design, residential interior design, theater design, space planning, lighting design, interior architecture.	Students become members of the Idea Factory, a laboratory housing the latest equipment with which to invent, design, prototype and test ideas. Sponsored by industry, it focuses on real-life design projects submitted by our sponsors.	NJSOA offers a constellation of related programs. It is the largest architecture program on the East Coast and the only architecture school in New Jersey to house interior design, industrial design, digital design and fine arts all under one roof. Because Interior Design lives together with these other design programs, it enjoys an exciting, creative atmosphere in which the various design disciplines interact, exchange ideas and form synergies.
BS in International Business* from the School of Management	Study international trade, multinational enterprise development, foreign direct investment, international financial institutions, barriers to international trade, accounting and taxation, cross-cultural appreciation, alliance formation, and environmental concerns. Internships and foreign study programs will be important to the learning development of students in this degree program. NJIT has extensive affiliations with universities in Asia, Europe, Russia and South America.	The program is a passport to careers in multinational corporations both in the United States and abroad. It prepares students for careers in practically every field and type of organization including businesses, not-for-profits and governmental organizations.		SOM offers excellent business education; *Princeton Review* ranked it among its "Best 282 Business Schools." The school has a dedicated, engaged, multicultural faculty with extensive contacts in the international business community.
BS in Mathematical Sciences from College of Science and Liberal Arts	Build computational, analytical and problem-solving skills and learn to apply them to physical, biological and industrial problems.	Analyze and solve problems in a range of positions in business, government, engineering and the sciences, from cryptologist to software engineer to investment analyst.	Mathematical biology, mathematical fluid dynamics, linear and nonlinear wave propagation, scientific computing, statistics, ocean acoustics applied to national defense.	Concentrations include applied mathematics, applied statistics, mathematical biology, and mathematics of finance and actuarial science. Double majors are possible in areas such as biology and computer science. The Undergraduate Biology and Math Training Program offers summer research opportunities.
BS in Mechanical Engineering from Newark College of Engineering	Through a combination of theory, lab courses and design experiences, build a firm base in mathematics, basic sciences, humanities and social sciences, engineering sciences, mechanical-engineering design procedures and computer-based methods.	Design and create in such fields as aerospace, automotive, biomedical, computer-aided design, engineering and manufacturing, defense, HVAC, nano/micro technology, power and robotics.	Robotics and system integration, surface engineering, micro-flow control, plastics engineering, nanotechnology, engineered particulates.	Choose a 12-credit technical specialty emphasizing mechanical design, energy systems, manufacturing processes, materials engineering or biomedical engineering. Teaching labs encompass computer-aided design, instrumentation, materials and processing, thermo/fluids and engines. You'll learn technologies that combine computer-aided design and computer-aided manufacturing.
BS in Science, Technology, and Society from College of Science and Liberal Arts	Learn the foundation and impact of science and technology by examining the values, history, politics and economics of modern technological society, integrating the scientific and technical disciplines with the humanities and social sciences.	Bring an understanding of technology to a range of positions in law, medicine, technical communications, government, business, public policy, urban development, technology assessment and more.	Environmental ethics, technology, public policy.	Special opportunities include seminars on current issues, internship and co-op opportunities and combined BS/MS programs. Concentrations, each requiring 18 credits, include environmental studies; technology, culture and art; ethics and history of technology; and technology, public policy and globalization. This is a cooperative program with Rutgers-Newark.

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