Graduate Programs - I

List of Programs
Program areas are in italics; concentrations are indented below the programs.

THE CHARLES V. SCHAEFER, JR. SCHOOL OF ENGINEERING

Chemical, Biomedical, and Materials Engineering Department

- Biomedical Engineering, M.Eng., Ph.D.
- Chemical Engineering, M.Eng., CH.E., Ph.D.
  - Chemical Engineering
  - Polymer Engineering
- Materials Engineering, M.Eng., Ph.D.
  - Microelectronics and Photonics Science and Technology (Interdisciplinary)

Civil, Environmental, and Ocean Engineering Department

- Civil Engineering, M.Eng.*, C.E.*, Ph.D.*****
  - Geotechnical/Geoenvironmental Engineering
  - Hydrologic Modeling
  - Stormwater Management
  - Structural Engineering
  - Water Resources Engineering
- Construction Management, M.S. (Interdisciplinary)*
- Environmental Engineering, M.Eng.*, Ph.D.*****
  - Environmental Control Process
  - Groundwater and Soil Pollution Control
  - Inland and Coastal Environmental Hydrodynamics
- Maritime Systems, M.S.*
  - Environmental Engineering
  - Structural Engineering
  - Management
  - Marine Transportation
- Ocean Engineering, M.Eng.*, Ph.D.*****
  - Coastal Engineering
  - Hydrodynamics
  - Naval Architecture
  - Oceanography

Electrical and Computer Engineering Department

- Computer Engineering, M.Eng., CP.E., Ph.D.
  - Computer Systems
  - Data Communications and Networks
  - Digital Systems Design
  - Image Processing and Multimedia
  - Information Systems
  - Information Systems Security
  - Intelligent Systems
  - Real Time and Embedded Systems
Electrical Engineering, M.Eng., E.E., Ph.D.
- Autonomous Robots
- Computer Architecture and Digital System Design
- Embedded Systems
- Microelectronics and Photonics Science and Technology (Interdisciplinary)
- Signal Processing for Communications
- Telecommunications Systems Engineering
- Wireless Communications

Networked Information Systems, M.Eng.
- Data Communication Networks
- Information Networks
- Multimedia Information Systems
- Multimedia Technologies
- Network Systems Technologies
- Networked Information Systems: Business Practices
- Secure Network Systems Design

Mechanical Engineering Department

- Mechanical Engineering, M.Eng.**, M.E.**, Ph.D.**
  - Manufacturing Systems
  - Product Design
  - Pharmaceutical Manufacturing
  - Thermal Engineering
- Integrated Product Development, M.Eng.**
  - Armament Engineering
  - Electrical and Computer Engineering
  - Manufacturing Technologies
  - Systems Reliability and Design
- Product Architecture and Engineering, M.Eng.**
- Pharmaceutical Manufacturing M.Eng.**, M.Sc.**

Systems Engineering and Engineering Management

- Engineering Management, M.Eng., Ph.D.
- Systems Engineering, M.Eng., Ph.D.

THE ARTHUR E. IMPERATORE SCHOOL OF SCIENCES AND ARTS

Chemistry and Chemical Biology Department

- Chemical Biology, M.S.
  - Bioinformatics
- Chemistry, M.S., Ph.D.
  - Analytical Chemistry
  - Chemical Biology
  - Organic Chemistry
  - Physical Chemistry
  - Polymer Chemistry

Computer Science Department

- Computer Science, M.S.***, Ph.D.*****
  - CyberSecurity
  - Quantitative Software Engineering
- Quantitative Software Engineering, M.S.*

Mathematical Sciences Department

- Applied Mathematics, M.S.
- Mathematics, M.S., Ph.D.*****
- Stochastic Systems Analysis and Optimization, M.S.
- Financial Engineering, M.S.
Physics and Engineering Physics Department

- Engineering Physics, M.Eng.**
  - Engineering Physics
  - Engineering Physics (Applied Optics)
  - Engineering Physics (Solid State)
  - Microelectronics and Photonics Science and Technology (Interdisciplinary)
- Physics, M.S.**, Ph.D.**
  - Physics
  - Nanoscale Science and Technology (Interdisciplinary)

THE WESLEY J. HOWE SCHOOL OF TECHNOLOGY MANAGEMENT

- Executive Master of Business Administration in Technology Management, E.M.B.A. in TM
- Executive Master of Technology Management, E.M.T.M.
- Master of Business Administration in Technology Management, M.B.A. in TM
  - Engineering Management
  - Financial Engineering
  - Global Technology Management
  - Information Management
  - IT in Financial Services Industry
  - IT in Pharmaceutical Industry
  - Project Management
  - Telecommunications Management
  - Pharmaceutical Management
  - IT Outsourcing

- Management, M.S.****
  - General Management
  - Global Innovation Management
  - Human Resource Management
  - Information Management (also Ph.D.****)
  - Project Management
  - Technology Management (also Ph.D.****)
  - Pharmaceutical Management
  - Technology Commercialization

- Information Systems, M.S.****
  - Computer Science (Interdisciplinary)***
  - E-Commerce***
  - Entrepreneurial IT***
  - Financial Services
  - Global Innovation Management
  - Human Resource Management
  - Information Management (also Ph.D.****)
  - Information Security
  - Information Technology Outsourcing
  - Integrated Information Architecture (Interdisciplinary)
  - Pharmaceuticals
  - Project Management
  - Quantitative Software Engineering (Interdisciplinary)
  - Systems Engineering (Interdisciplinary)
  - Telecommunications Management

- Telecommunications Management, M.S.
  - Business Track
  - Global Innovation Management
  - Management of Wireless Networks
  - On-line Security, Technology and Business
  - Project Management
INTERDISCIPLINARY

Interdisciplinary, M.S.**, M.Eng.**, Ph.D.**

All Interdisciplinary students select two program areas.

* GRE is only required for international students and those applying for a fellowship or assistantship.
** GRE is recommended but not required.
*** GRE is required for international students, those applying for a fellowship or assistantship and those without an academic Computer Science background.
**** GMAT or GRE is required for Ph.D. students, international students and those applying for a fellowship or assistantship.
***** GRE is required.

Graduate Certificate Programs

All credits earned toward Graduate Certificates may be applied toward a Master's degree.

Most Graduate Certificates are four graduate courses.

THE CHARLES V. SCHAEFER, JR. SCHOOL OF ENGINEERING

• Chemical, Biomedical, and Materials Engineering Department
  — Biomedical Engineering
  — Microdevices and Microsystems (Interdisciplinary)
  — Microelectronics (Interdisciplinary)
  — Pharmaceutical Manufacturing Practices (Interdisciplinary)
  — Photonics (Interdisciplinary)

• Civil, Environmental, and Ocean Engineering Department
  — Applied Coastal Oceanography
  — Atmosphere and Environmental Science and Engineering
  — Construction Accounting/Estimating
  — Construction Engineering
  — Construction Law/Disputes
  — Construction/Quality Management
  — Environmental Compatibility in Engineering
  — Environmental Hydrology
  — Environmental Process
  — Geotechnical Engineering
  — Hydraulics
  — Inland and Coastal Environmental Hydrodynamics
  — Multi-Hazard Engineering
  — Soil and Groundwater Pollution Control
  — Ocean Engineering
  — Ship Hydrodynamics
  — Soil and Groundwater Pollution Control
  — Structural Engineering
  — Surface Water Hydrology
  — Water Resources Engineering
  — Water Quality Control

• Electrical and Computer Engineering Department
  — Autonomous Robotics
  — Digital Signal Processing
— Digital Systems and VLSI Design
— Microelectronics and Photonics (Interdisciplinary)
— Multimedia Technology
— Networked Information Systems
— Real-Time and Embedded Systems
— Satellite Communications Engineering (Interdisciplinary)
— Secure Network Systems Design
— Wireless Communications

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• Mechanical Engineering Department
  — Advanced Manufacturing
  — Air Pollution Technology
  — Computational Fluid Mechanics and Heat Transfer
  — Design and Production Management
  — Ordinance Engineering
  — Pharmaceutical Manufacturing Practices (Interdisciplinary)
  — Power Generation
  — Product Architecture and Engineering
  — Robotics and Control
  — Structural Analysis and Design
  — Vibration and Noise Control

• Systems Engineering and Engineering Management Department
  — Agile Systems Engineering and Design
  — Engineering Management
  — Systems and Supportability Engineering
  — Systems Engineering and Architecting
  — Value Chain Enterprise Systems
  — Systems Engineering Management

THE ARTHUR E. IMPERATORE SCHOOL OF SCIENCES AND ARTS

• Chemistry and Chemical Biology Department
  — Analytical Chemistry
  — Bioinformatics
  — Biomedical Chemistry
  — Chemical Biology
  — Chemical Physiology
  — Laboratory Methods in Chemical Biology
  — Polymer Chemistry

• Computer Science Department
  — Computer Architecture and Software Design
  — Computer Graphics
  — CyberSecurity
  — Database Systems
  — Distributed Systems
  — Elements of Computer Science ‡
  — Quantitative Software Engineering
  — Software Design
  — Theoretical Computer Science

• Humanities and Social Sciences Department
  — Professional Communications

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• Mathematical Sciences Department
  — Applied Statistics
  — Financial Engineering
  — Stochastic Systems

• Physics and Engineering Physics Department
  — Applied Optics
— Microdevices and Microsystems (Interdisciplinary)
— Microelectronics (Interdisciplinary)
— Photonics (Interdisciplinary)
— Satellite Engineering (Interdisciplinary)
— Surface Physics

THE WESLEY J. HOWE SCHOOL OF TECHNOLOGY
MANAGEMENT

— E-Commerce
— Engineering Management
— Entrepreneurial IT
— General Management
— Global Innovation Management
— Human Resource Management
— Information Management
— Information Security
— IT for Financial Services Industry
— IT for Pharmaceutical Industry
— Management of Wireless Networks
— Pharmaceutical Management
— Project Management
— Technology Management
— Technology Commercialization
— Telecommunications Management

‡ No credit is given toward the Master of Science in Computer Science for CS 550, CS 580, CS 590, and MM 502.

Corporate Site Graduate Programs

Air Crusaders – Bellmar, New Jersey
  • M.E. in Engineering Management

BAE Systems, CNI – Wayne, NJ
  • Electrical Engineering (M.Eng. in Electrical Engineering)
  • M.E. in Systems Engineering
  • Engineering Management (Graduate Certificate)

Boeing – Online for all Boeing locations
  • Project Management* (M.S. in Management)

Citigroup – New York, NY
  • M.S. in Information Systems* (MSIS)

Fort Monmouth – Eatontown, NJ
  • Computer Engineering* (M.Eng. in Computer Engineering)
  • Courses in Computer Science
  • CyberSecurity* (Graduate Certificate)
  • Electrical Engineering* (M.Eng. in Electrical Engineering)
  • Systems Engineering* (Graduate Certificate/M. Eng. in Systems Engineering)

General Dynamics – Florham Park, NJ
  • Interdisciplinary program offered by Department of
Physics & Engineering Physics (Graduate Certificate/M.S./M.E.)

Hanover Marriott – Whippany, NJ

- M.S. in Information Systems (MSIS)
- Project Management (Graduate Certificate)

Courtyard by Marriott – Whippany, NJ

- Executive Master of Technology Management (EMTM)

Holiday Inn – Tinton Falls, NJ

- Executive Master of Technology Management (EMTM)

Inn at Woodbridge – Iselin, NJ

- Executive Master of Business Administration in Technology Management (EM.B.A.-TM)

ISO – Jersey City, NJ

- M.S. in Information Systems* (MSIS)

ITT – Clifton, NJ

- Computer Science* (M.S. in Computer Science)
- Electrical Engineering* (M.Eng. in Electrical Engineering)
- Project Management* (Graduate Certificate)
- Systems Engineering* (Graduate Certificate)

Johnson & Johnson – New Brunswick, NJ

- M.S. in Information Systems* (MSIS)

Langan Engineering and Environmental Services (Graduate Courses) – Elmwood Park, NJ

- Storm Water Management
- Earth Supporting Structures
- Soil Behavior and its Role in Environmental Applications

Lockheed Martin – Moorestown, NJ

- Computer Science* (M.S. in Computer Science)
- CyberSecurity* (Graduate Certificate)
- Information Management* (Graduate Certificate/M.S. in Management)
- Project Management* (Graduate Certificate/M.S. in Management)
- Quantitative Software Engineering* (Graduate Certificate/M.S. in Quantitative Software Engineering)
- Software Design* (Graduate Certificate)

Merck – Rahway, NJ (Rahway employees only)

- M.S. in Information Systems* (MSIS)

Merck – Whitehouse Station, NJ (White House Station employees only)

- M.S. in Information Systems* (MSIS)

Merck – Rahway, NJ (transmitted to Whitehouse Station, NJ and West Point, PA)

- M.S. in Information Systems* (MSIS)

Naval Air Engineering Station – Lakehurst, NJ
Systems Engineering (Graduate Certificate/M.Eng./Ph.D. in Systems Engineering)

**Pfizer – New York, NY**

- M.S. in Information Systems* (MSIS)

**Pfizer Global Manufacturing – Brooklyn, NY**

- Project Management* (Graduate Certificate)
- Pharmaceutical Management* (Graduate Certificate)

**Picatinny Arsenal – Dover, NJ**

- Integrated Product Development (Graduate Certificates/M.Eng. in IPD)
- Mechanical Engineering (Graduate Certificate/M.Eng./Ph.D. in Mechanical Engineering)
- Quantitative Software Engineering (Graduate Certificate)
- Courses in Computer Engineering, Electrical Engineering, and Systems Engineering
- Systems Engineering (Graduate Certificate/M.Eng./Ph.D. in Systems Engineering)
- Courses in CyberSecurity

**Schering Plough – Kenilworth, NJ**

- Pharmaceutical Manufacturing Practices* (Graduate Certificate)

**SETP – Columbia, MD**

- Systems Engineering* (Graduate Certificate/M.Eng. in Systems Engineering)

**UBS/PaineWebber – Weehawken, NJ**

- M.S. in Information Systems* (MSIS)

**Unilever Bestfoods North America – Englewood Cliffs, NJ**

- M.S. in Information Systems (MSIS)

**Verizon – Online via the Web and/or Web Conferencing for all Verizon locations**

- Engineering Management* (Master of Business Administration in Technology Management (M.B.A.-TM))
- Networked Information Systems* (M.Eng. in Networked Information Systems)
- Project Management* (M.S. in Management)
- Project Management* (Master of Business Administration in Technology Management (M.B.A.-TM))
- Telecommunications Management* (Master of Business Administration in Technology Management (M.B.A.-TM))
- Telecommunications Management* (Graduate Certificate/M.S. in Telecommunications Management)

**Verizon Wireless – Bedminster, NJ**

- Telecommunications Management* (M.S. in Telecommunications Management)

**Verizon Wireless – Orangeburg, NY**

- M.S. in Information Systems* (MSIS)
Verizon Wireless – Warren, NJ

- M.S. in Information Systems* (MSIS)

Program without asterisk: OPEN TO ALL STEVENS STUDENTS

* Program at this site is open only to employees of this company.