NJIT

New Jersey Institute of Technology

Applied Science Master of Science Degree - *For Educators*

May be completed on-campus and online

30 credits

MS REQUIRED COURSES

Students must successfully complete 30 credits as outlined below.

Core Courses *(choose 3 courses to earn 9 credits)*

PTC 603	Identity, Technology & Comm.	Available Online
PTC 629	Theory and Practice of Social Media	Available Online
PTC 681	Technology in Class and Learning	Available Online
PTC 698	Digital Instruction Essentials	Available Online

Master's Project (3 credits) **or Master's Thesis** (6 credits)

Track Courses *(15-18 credits)* See tracks available on other side of page. Students must successfully complete 15-18 credits in a chosen track. An additional elective is needed if the master's project option is selected.

Program Advisor:

Dr. Andrew Klobucar, klobucar@njit.edu, 973-596-5724

How to Apply

Visit **apply.njit.edu** to start your application today!

35% Tuition Scholarship Opportunity

This NJIT award is available to K-12 teachers who are residents of NJ, NY, PA, or DE and enrolled in the Master's Degree or Graduate Certificate in Applied Science programs. The recipient will receive up to 35% of his/her tuition charge in scholarship. The award is renewable for the duration of the program. A copy of your teaching license or letter of employment as a teacher from your school district must be submitted to admissions@njit.edu prior to enrollment to be considered. You must be a U.S. citizen or permanent resident to be eligible. You must maintain a minimum cumulative GPA of 3.0/4.0. Additional information is available at njit.edu/online/ms-applied-science.

TRACKS

Business

Required Courses *(3 credits)*

- MGMT 620 Management of Technology Available Online

Additional Courses *(choose 4 courses to earn 12 credits)*

- ECON 610 Managerial Economics Available Online
- FIN 600 Corporate Finance I Available Online
- FIN 624 Corporate Finance II Available Online
- MGMT 635 Data Mining and Analysis Available Online
- MGMT 640 New Venture Management Available Online
- MGMT 650 Knowledge Management Available Online
- MGMT 691 Legal and Ethical Issues Available Online
- MGMT 692 Strategic Management Available Online

Computer Science

Required Courses *(6 credits)*

- CS 505 Programming, Data Structures & Algorithms Available Online
- CS 506 Foundations of Computer Science Available Online

Additional Courses *(choose 3 courses to earn 9 credits)*

- CS 610 Data Structures & Algorithms Available Online
- CS 630 Operating Systems Design Available Online
- CS 631 Data Management System Design Available Online
- CS 656 Internet & Higher-Layer Protocols Available Online

Engineering Management

Required Courses *(6 credits)*

- EM 636 Project Management Available Online
- HRM 601 Organizational Behavior Available Online

Additional Courses *(choose 3 courses to earn 9 credits)*

- ACCT 615 Management Accounting Available Online
- IE 673 Total Quality Management Available Online
- MIS 645 Information Systems Principles Available Online
- EM 634 Legal, Ethical and Intellectual Property Issues for Engineering Managers Available Online
- EM 637 Project Control Available Online
- EM 691 Cost Estimating for Capital Projects Available Online
- EM 632 Legal Aspects in Construction Available Online

Information Systems

Required Courses *(6 credits)*

- IS 601 Web Systems Development Available Online
- IS 663 System Analysis and Design Available Online

Additional Courses *(choose 3 courses to earn 9 credits)*

- IS 631 Enterprise Database Management Available Online
- IS 665 Data Analytics for Information Systems Available Online
- IS 676 Requirements Engineering Available Online
- IS 678 IT Service Management Available Online
- IS 680 Information Systems Auditing Available Online
- IS 681 Computer Security Auditing Available Online
- IS 684 Business Process Innovation Available Online
- IS 688 Web Mining Available Online

Engineering

Required Courses *(6 credits)*

- IE 604 Advanced Engineering Statistics
- IE 621 Systems Analysis and Simulation

Additional Courses *(choose 3 courses to earn 9 credits)*

- ECE 601 Linear Systems Available Online
- ECE 605 Discrete Event Dynamic Systems Available Online
- ECE 673 Random Signal Analysis I Available Online
- IE 618 Engineering Cost & Production Economics
- IE 672 Industrial Quality Control Available Online
- IE 673 Total Quality Management Available Online
- ME 616 Matrixs Methods in Mechanical Engineering
- ME 632 Mechanical Engineering Measurements
- ME 635 Computer-Aided Design
- BME 669 Engineering Physiology
- BME 670 Intro to Biomedical Engineering
- BME 675 Computer Methods in Biomed. Engineering

Graduate Certificates

Five courses (15 credits)
overlap with MS requirements

Successful completion of required courses and some additional courses to achieve 15 credits will result in an Applied Science graduate certificate in the corresponding track.

Architecture

Required Courses *(6 credits)*

- ARCH 545G Structures I Available Online Soon
- ARCH 548G Structures II Available Online

Additional Courses *(choose 3 courses to earn 9 credits)*

- ARCH 555G Architectural Graphics
- ARCH 500G Advanced Architectural Graphics
- ARCH 528G History of Architecture I
- ARCH 529G History of Architecture II
- ARCH 541G Construction I
- ARCH 542G Construction II
- ARCH 543G Environmental Control Systems I
- ARCH 544G Environmental Control Systems II
- ARCH 569G Building and Development

Chemistry

Required Courses *(6 credits)*

- CHEM 605 Advanced Organic Chemistry
- CHEM 661 Instrumental Analysis Laboratory

Additional Courses *(choose 3 courses to earn 9 credits)*

- CHEM 673 Biochemistry
- CHEM 777 Principles of Medicinal Chemistry
- EVSC 616 Toxicology for Engineers and Scientists
- EVSC 610 Environmental Chemical Science

Mathematics

Required Courses *(6 credits)*

- MATH 545 Introductory Mathematical Analysis
- MATH 546 Advanced Calculus

Additional Courses *(choose 3 courses to earn 9 credits)*

- MATH 611 Numerical Methods for Computation
- MATH 630 Linear Algebra and Applications
- MATH 660 Intro to Statistical Computing w/ SAS & R
- MATH 661 Applied Statistics

Physics

Required Course *(3 credits)*

- PHYS 611 Advanced Classical Mechanics

Additional Courses *(choose 4 courses to earn 12 credits)*

- PHYS 621 Classical Electrodynamics
- PHYS 631 Quantum Mechanics I
- PHYS 641 Statistical Mechanics
- PHYS 661 Solid-State Physics
- PHYS 607 Topics in Astronomy and Cosmology

Custom track

Students may develop an individual track in consultation with a graduate advisor. A coherent set of courses involving mathematics, computing, physics, chemistry, biology or engineering are expected.

Updated 2.1.2018