

B.S. in Engineering Technology, Manufacturing Engineering Technology

Manufacturing Engineering Technology students focus on courses which develop their background in fabrication, metrology, quality control, industrial statistics/six sigma, manufacturing management, plastics processing, and packaging. The subjects covered in the core curriculum include established and modern manufacturing processes, metrology, material science, applied manufacturing/engineering software, computer-aided design (CAD), computer-aided manufacturing (CAM), automated controls (Programmable Logic Controls (PLCs), microprocessors, robotics, electrical circuits and electronics principles, quality control, engineering economics, and production and operations management.

The Manufacturing Engineering Technology (MNET) program is a full four-year curriculum, which also provides an opportunity for transfer students with A.A.S. degrees in Mechanical Engineering Technology to complete their baccalaureate degree. In the case of all students, both four-year and transfer, a minimum of 120 credits is required for graduation. (see Curriculum)

Transfer From AAS program

NJIT has articulation agreements with a number of AAS programs in the state. A list of agreements can be found at <http://www.njit.edu/admissions/transfer-students> (<http://www.njit.edu/admissions/transfer-students/>). Students who expect to transfer to the junior year of the Bachelor of Science in Engineering Technology (B.S.E.T.) program would have their courses correlated to the existing MNET program curriculum: Manufacturing Engineering Technology (MNET) Program (<http://catalog.njit.edu/undergraduate/newark-college-engineering/technology/manufacturing-engineering-technology/>).

(120 credit minimum)

First Year

1st Semester

		Credits
MATH 138	General Calculus I	3
PHYS 102	General Physics	3
PHYS 102A	General Physics Lab	1
MET 103	Engineering Graphics and Intro. to CAD	2
ENGL 101	English Composition: Introduction to Academic Writing	3
CS 106	Roadmap to Computing for Engineers	3
ET 101	Introduction to Engineering Technology	0
FYS SEM	First-Year Student Seminar	0

Term Credits

15

2nd Semester

MATH 238	General Calculus II	3
PHYS 103	General Physics	3
PHYS 103A	General Physics Lab	1
MET 105	Applied Computer Aided Design	2
ENGL 102	English Composition: Introduction to Writing for Research	3
ECON 201 or EPS 202	Economics or Society, Technology, and the Environment	3

Term Credits

15

Second Year

1st Semester

MET 235	Statics for Technology	3
ECET 201	Circuits I	3
Select one of the following:		3
CHEM 301	Chemical Technology	3
Technical Elective		3
History and Humanities GER 200 level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/)		3
Technical Elective		3

Term Credits

15

2nd Semester

MET 205	Advanced Computer Aided Design	3
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MET 237	Strength of Materials for Technology	3
ME 215	Engineering Materials and Processes	3
Free Elective		3
MET 236	Dynamics for Technology	2
Term Credits		14
Third Year		
1st Semester		
COM 313	Technical Writing	3
MNET 303	Advanced Techniques in CAD/CAM	3
MNET 300	Concepts In Machining	3
MNET 315	Industrial Statistics	3
MET 303	Applied Thermodynamics	3
Term Credits		15
2nd Semester		
Select one of the following: *		3
CHEM 301	Chemical Technology	
Technical Elective		
ECET 329	Analog and Digital Electronics	3
MET 304	Applied Fluid Mechanics	3
MNET 318	Mnfg Process Design	3
Free Elective		3
Term Credits		15
Fourth Year		
1st Semester		
MNET 405	Numc Control Machn Tools	3
MNET 414	Industrial Cost Analysis	3
MNET 416	Production Scheduling	3
MNET 420	Quality Systems	3
MNET 425	Advanced Manufacturing Rotation	2
History and Humanities GER 300+ level (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/)		3
Term Credits		17
2nd Semester		
MET 415	Automatic Control Systems	3
MNET 422	Tool Design	3
Technical Elective		3
MNET 426	Manufacturing Project	2
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
Term Credits		14
Total Credits		120

* Chem 301 Chemical Technology is a required course to be taken either first semester sophomore year for NJIT sophomores, or second semester junior year for Upper Division Transfer Students.

Approved Technical Electives

Code	Title	Credits
IE 449	Industrial Robotics	3
IE 473	Safety Engineering	3
ECET 319	Electrical Systems and Power	3
MNET 421	Contracts & Specs	3
MNET 423	Motion & Time Study Tech	3

MNET 395	Coop Experience I	3
MNET 495	Cooperative Experien II	3
MET 205	Advanced Computer Aided Design	3
MET 307	Plastics Technology	3
ECET 210	Intro. to Microprocessors and Computer Architecture	3
MET 308	Plastics Processing Techniques	3
CPT 330	Software Web Applications for Engineering Technology I	3
CPT 341	Visual Basic.NET for Engineering Technology	3
MATH 322	Differential Equations for Applications	3

Additional courses from other departments may be substituted as Technical Electives after obtaining prior approval from the MNET Program Coordinator.

Approved Electives

Code	Title	Credits
MGMT 390	Principles of Business	3

Co-op

Co-op courses must be approved by the MNET Program Coordinator and Career Development Services. MNET 395 is taken as an elective for degree credit. Students taking a Full-Time Co-op may only register for a maximum of 9 credits including Co-op, but are fulltime.

See the **General Education Requirements** "Refer to the General Education Requirements for specific information for GER courses"