



Bachelor of Science in Industrial Engineering

Undergraduate Handbook

Academic Year 2025-2026

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1. About the Program

Industrial and Systems Engineering Department

The Department of Industrial and Systems Engineering (ISE) at Rutgers University is dedicated to providing the highest quality, broad-based industrial and systems engineering education that integrates technical, scientific, and liberal arts foundations. The department delivers an outstanding undergraduate program leading to the Bachelor of Science in Industrial Engineering degree as well as advanced degrees at master's and doctoral levels, equipping graduates to pursue leadership roles in industry, research, and academia. More about the ISE Department at: <https://ise.rutgers.edu/>

Undergraduate Program in Industrial Engineering

The Bachelor of Science in Industrial Engineering degree curriculum is a four-year program that progressively develops student skills with courses in math, science, statistics, operations research and design, and important industrial engineering topics. Students follow a sequence of required major courses, and other related technical courses, and have the opportunity to pursue broader interests with technical and humanities/social science electives. As part of the program students also have the opportunity to pursue Internships, Co-Ops and research for credit. Students also have the opportunity to pursue related academic programs and engage in student organizations. The BS IE Program prepares students with diverse skills designed to enable professional success in virtually any industry and in a wide variety of job roles.

Accreditation

The Rutgers University program in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the commission's General Criteria and Program Criteria for Industrial Engineering.

More about ABET at: <https://www.abet.org/>

Educational Objectives

The current educational objectives of the Industrial Engineering program are:

1. Graduates will exceed the expectations of employers of Industrial engineers.
2. Qualified graduates will obtain advanced study if they so desire.
3. Graduates will obtain leadership positions in their profession and/or communities.

Student Outcomes (SOs)

Students from the Industrial Engineering program will attain (by the time of graduation)

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

2. Academic Advising

We are here to help you select courses, stay on track for graduation, understand academic policies, connect with opportunities and services, and cheer on your accomplishments.

Undergraduate Office

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3. BS IE Curriculum

The BS in Industrial Engineering curriculum is a four-year program that progressively develops student skills with courses in math, science, statistics, operations research, design, and many other important topics. Students are advised to pay close attention to course prerequisites that determine the required sequence for completing the courses. Students will not be able to register for courses without first completing the necessary prerequisites. Also, be aware that major courses are offered only once a year in the semesters shown below, so plan accordingly.

First Year

Industrial Engineering students follow the common first year course plan.

<https://soe.rutgers.edu/academics/undergraduate/engineering-curriculum#tab=panel-1>

35 Credits

Second Year

Fall

01:640:251 Multivariable Calculus (4)
01:750:227 Analytical Physics IIA (3)
01:750:229 Analytical Physics II Laboratory (1)
14:540:201 Work Design & Ergonomics (3)
14:540:202 Work Design & Ergonomics Laboratory (1) *
14:540:213 Industrial Engineering Laboratory (2) *
33:010:310 Accounting for Engineers (3)

17 Credits

Spring

14:540:343 Engineering Economics (3)
01:640:244 Differential Equations (4)
14:540:210 Engineering Probability (3) *
14:440:222 Engineering Mechanics: Dynamics (3) *
01:355:302 Scientific & Technical Writing (3)

16 Credits

Third Year

Fall

14:180:215 Engineering Graphics (1) *
14:332:221 Principles of Electrical Engineering I (3) *
14:540:338 Probability Models in Operations Research (3)*
14:540:382 Automation and System Design (3)*
14:540:383 Automation Laboratory (1)*
14:635:407 Mechanical Properties of Materials (3) *
14:540:320 Engineering Statistics (3) *

17 Credits

Spring

14:540:303 Manufacturing Processes (3) *
14:540:304 Manufacturing Processes Laboratory (1) *
14:540:311 Deterministic Models in Operations Research (3) *
14:540:384 Simulation Models in Industrial Engineering I (3) *
14:540:399 Design of Engineering Systems I (3) *
__:__:__ Technical Elective 1 (List B) (3) *

16 Credits

Fourth Year

14:540:400 Design of Engineering Systems II (3) *
14:540:433 Quality Engineering (3) *
14:540:434 Quality Engineering Laboratory (1) *
14:540:453 Production Planning and Control (3) *
14:540:487 Energy Systems Modeling & Opt (3) *
__:__:__ Technical Elective 2 (List B) (3) *

16 Credits

Spring

14:540:462 Facilities Layout and Materials Handling (3) *
__:__:__ Technical Elective 3 (List A) (3) *
__:__:__ Humanities/Social Sciences Elective (3)
__:__:__ Humanities/Social Sciences Elective (3)

12 Credits

***Course is included in “M” major average.**

Total credit hours:129 credits

Major credit hours total: 67 credits

4. Undergraduate Courses

Note: M denotes that the course grade is included in the major average.

14:540:201 Work Design and Ergonomics (3M)

Corequisite: 14:540:202, *Prerequisite:* (01:640:151 or 01:640:191 or 21:640:135 or 50:640:121)

Man-machine analysis, motion economy, time study, predetermined time systems, work sampling; introduction to robotics, facilities layout, material handling; introduction to ergonomics and anthropometric, biomechanical, and human-machine interface models.

14:540:202 Work Design and Ergonomics Laboratory (1M)

Corequisite: 14:540:201, *Prerequisite:* (01:640:151 or 01:640:191 or 21:640:135 or 50:640:121)

Experiments in robotics, time study, work measurement, workplace design and the human-machine interface, facilities layout.

14:540:210 Engineering Probability (3M)

Prerequisite: (01:640:152 or 01:640:192 or 21:640:136 or 50:640:122)

Probability problems in engineering, conditional probability, discrete and continuous distributions, functions of random variables, and interval estimates.

14:540:213 Industrial Engineering Laboratory (2M)

Prerequisite: (01:640:151 or 01:640:191 or 21:640:135 or 50:640:121) AND (14:440:127)

Introduction to programming, fundamental data types, flow control, and functions; arrays, pointers, and do loops; algorithms and flow charts; GUI concepts.

14:540:220 Applied Algorithms in Industrial Engineering (3M)

Prerequisite: 14:440:102

Applied linear models, linear algebra, algorithms, pseudo-coding and programming for industrial engineering applications.

14:540:293/294 Undergraduate Research for Sophomores (BA, BA)

Prerequisite: Permission of the department

Individual research project under the guidance of a faculty adviser in a specific area of industrial engineering. No more than 3 credits are awarded per semester.

14:540:303 Manufacturing Processes (3M)

Corequisite: 14:540:304, *Prerequisite:* 14:635:407

Properties of engineering materials; metals, polymers, ceramics and composites, bulk and sheet forming, traditional and non-traditional material removal processes, polymer processing, laser and energy-beam processes, additive layered manufacturing processes and micro/nano fabrication processes. Basic and computerized machine tools. Process chains, planning and process optimization. Engineering metrology and product quality.

14:540:304 Manufacturing Process Laboratory (1M)

Corequisite: 14:540:303, *Prerequisite:* 14:635:407

Experiments on machine tools: lathes, drilling machines, milling machines, and CNC milling machines; robot workplace design and computer control of machine tools.

14:540:305,306 Honor Candidacy Problems (0,0)

Prerequisite: Permission of the departmental chairperson. Prerequisite for industrial engineering students who wish to be James J. Slade Scholars.

Extensive reading and study in a particular problem area of industrial engineering under the guidance of a faculty member.

14:540:311 Deterministic Models in Operations Research (3M)

Prerequisite: (01:640:244 or 21:640:314 or 50:640:314)

Elements of modeling and problem solving. Use of a software package like LINDO, EXCEL to solve real-life industrial engineering problems. Linear programming, duality, sensitivity analysis, integer programming, transportation, and assignment problems.

14:540:320 Engineering Statistics (3M)

Prerequisite: 14:540:210

Statistical estimation, confidence intervals, testing hypotheses, and engineering applications throughout the course.

14:540:338 Probability Models in Operations Research (3M)

Prerequisite: (14:540:210) AND (01:640:244 or 21:640:314 or 50:640:314)

Modeling and decision making under uncertainty. Markov chains, Poisson processes, inventory models and queueing systems.

14:540:343 Engineering Economics (3)

Economic decisions involving engineering alternatives, annual cost, present worth, rate of return, and benefit-to-cost; before and after-tax replacement economy; organizational financing; break-even charts; unit and minimum-cost public sector studies.

14:540:382 Automation and Systems Design (3M)

Corequisite: 14:540:383, Prerequisite: (01:640:244 or 21:640:314 or 50:640:314) AND (01:750:227)

Programmable automation applied to manufacturing. Computer architecture, sensors and automatic data acquisition, computer control of actuators, continuous and discrete control of processes, computer integration, and local area networks.

14:540:383 Automation and Systems Design Laboratory (1M)

Corequisite: 14:540:382, Prerequisite: (01:640:244 or 21:640:314 or 50:640:314) AND (01:750:227)

Use of microcomputers and industrial controllers in controlling machines and processes. Assembly language programming, ladder logic programming, and interfacing controllers to sensors and actuators. Experiments in manufacturing applications.

14:540:384 Simulation Models in Industrial Engineering (3M)

Prerequisite: 14:540:338

Modeling and analysis of industrial and service systems using ARENA, simulation modeling perspectives, discrete event and continuous simulation, simulation languages, statistical aspects of simulation.

14:540:385 Industrial Informatics (3M)*Prerequisite: 14:540:320*

The course focuses on acquiring hands-on experience in the organization, modeling, and analysis of raw data to extract pertinent information and actionable insights for industrial and engineering systems. Covered topics include database management using structured query language programming, data processing, analysis, and modeling using statistical programming software, as well as the design and implementation of data science solutions and forecasting methods through project-based learning and case studies from manufacturing, materials engineering, and energy systems.

14:540:393/394 Undergraduate Research for Juniors (BA, BA)*Prerequisite: Permission of the department*

Individual research project under the guidance of a faculty adviser in a specific area of industrial engineering. No more than 3 credits are awarded per semester.

14:540:399 Design of Engineering Systems I (3M)*Prerequisites: (14:540:338) AND (14:540:382) AND (14:540:383)***OPEN TO 540 STUDENTS ONLY**

Design principles, material selection, design for assembly, design for manufacturing, and the effect of environmental issues on product design.

14:540:400 Design of Engineering Systems II (3M)*Prerequisite: (14:540:303) AND (14:540:304) AND (14:540:384) AND (14:540:399)***OPEN TO 540 STUDENTS ONLY**

A team approach to the redesign of a “real-life” product. Alternative engineering plans for improved designs will be developed and implemented. Both written and oral reports will be completed.

14:540:433 Quality Engineering (3M)*Corequisites: 14:540:434, Prerequisite: 14:540:320*

Statistical methods for monitoring and improving product quality and decreasing variation. Factorial experiments, variables, and attribute control charts, acceptance sampling, on- and off-line process controls.

14:540:434 Quality Engineering Laboratory (1M)*Corequisite: 14:540:433, Prerequisite: 14:540:320*

Practical application of quality engineering methodologies, statistical software, gage studies, online process control, design of experiments to improve product design, industrial manufacturing processes, and system design.

14:540:450 Artificial Intelligence in Decision Making (3M)*Prerequisite: 14:540:385*

This course provides students with quantitative and hands-on training in AI and ML techniques in various decision-making problems that arise in industrial systems applications.

14:540:453 Production Planning and Control (3M)*Prerequisites: (14:540:311) AND (14:540:338)*

Coordination of activities of both manufacturing and service systems. Systems design, input and output; planning and scheduling. Decision-making problems employing mathematical techniques of linear programming. Sequencing jobs on machines and line balancing techniques.

14:540:461 Engineering Law (3M)

Open to Juniors and Seniors

Legal and ethical aspects of engineering; bids, awards, and negotiated contracts. Liabilities to the public and to employees, contract labor law. Contracts, patents, copyrights, trademarks, and engineering specifications.

14:540:462 Facilities Layout and Materials Handling (3M)

Prerequisite: (14:540:201) AND (14:540:202) AND (14:540:303) AND (14:540:304)

Fundamentals of the design, layout, and location of industrial and nonmanufacturing facilities. Selection of machines and material handling equipment and their efficient arrangement. Emphasis on quantitative methods. Warehouse layout. Facility location theory.

14:540:487 Energy Systems Modeling and Optimization (3M)

Prerequisite: (14:540:311)

This course addresses the design, analysis, modeling, and optimization of selected energy systems (including conventional fossil fuels and renewable wind and solar). This course will provide the basis for applying mathematical modeling and optimization techniques in energy systems. A set of projects and case studies focused on modeling and optimization of a variety of energy systems will be assigned to students and discussed in detail. The course will have hands-on experience with data collection, experimentation, simulation, and optimization tools as they apply to energy systems.

14:540:490 Introduction to Reliability Engineering (3M)

Prerequisite: 14:540:210

Fundamentals of reliability engineering, system reliability modeling and estimation, and reliability testing. System availability and maintainability, and design for resilience. Laboratory and hands-on experience in reliability testing, data acquisition, monitoring, and modeling.

14:540:491, 492 Special Problems

Prerequisite: Permission of the department

Studies topics in industrial engineering of special interest.

14:540:493/494 Undergraduate Research for Seniors (BA, BA)

Prerequisite: Permission of the department.

Individual research project under the guidance of a faculty adviser in a specific area of industrial engineering. No more than 3 credits are awarded per semester.

14:540:496, 497 Co-op / Internship in Industrial Engineering (3,3)

Prerequisite: Permission of the department, Graded Pass/No credit.

Work Study Experience.

5. Technical Electives

The Industrial Engineering curriculum requires a total of three (3) Department/Technical Electives from approved lists. Technical electives are STEM related courses in technical areas synergistic with Industrial Engineering. Note: The previous lists, List A and List B, have been merged to form one unified list. The approved lists provide a broad choice of technical electives in the following categories:

Unit	Elective Categories
010	Accounting
117	Bioenvironmental Engineering
119	Biological Sciences
125	Biomedical Engineering
136	Business Analytics
155	Chemical and Biochemical Engineering
160	Chemistry
180	Civil and Environmental Engineering
198	Computer Science
220	Economics
332	Electrical and Computer Engineering
375	Environmental Sciences
382	Entrepreneurship
390	Finance
440	General Engineering
540	Industrial and Systems Engineering
550	Landscape Architecture
635	Materials Science and Engineering
640	Mathematics
650	Mechanical and Aerospace Engineering
750	Physics
799	Supply Chain
960	Statistics
971	Urban Planning and Design

The full list is provided on the website.

<https://ise.rutgers.edu/technical-electives>

All ISE (540) undergraduate and graduate courses may fulfill the Department/Technical Elective requirements. Students interested in taking an ISE graduate course must obtain permission from the Undergraduate Director. Undergraduate students typically require a 3.0 major average or greater to qualify for enrolment in a graduate course.

Students must satisfy prerequisites for all courses.

Students taking courses outside the ISE department must obtain any special permission from the department offering the course to enroll.

6. Humanities/SS Electives

Rutgers School of Engineering requires students to complete 18 credits of humanities/social sciences (H/SS) electives, including 14:540:343 Engineering Economics (3 credits) and 01:355:101 College Writing (3 credits) which are required humanities/social science courses. Students have the opportunity to select 4 H/SS elective courses from an approved list of non-STEM related courses. When properly selected, these courses can broaden your education and may also be applied to other programs such as a minor or second major.

At least 6 credits of the electives must be at the 200/300/400 level.

The complete list of over one thousand elective courses is published in Degree Navigator. The list of courses available each semester (fall/spring) is published in the Rutgers Schedule of classes under Core Code, SOE: Approved Humanities/Social Science Classes (SOEHS).

Consult with your advising dean if you have any questions about completing the H/SS requirements.

7. Internships & Co-Ops

The ISE department encourages students to participate in the Work-Study program, where they will acquire practical engineering work experience during their undergraduate education. Work experience allows the student to apply the lessons and skills learned in their coursework to various industrial and systems engineering environments. Students may earn course credit for their experience that can be used to satisfy a Department/Technical Elective.

Job Search

Students are responsible for securing their own job opportunities by applying directly to hiring companies. Rutgers Career Services <https://careers.rutgers.edu/> offers a range of support, including online job listings and face-to-face career events. The department also emails ISE students job posts when they are received. Students are encouraged to take advantage of all support resources and apply early to secure their own work experience opportunity.

Courses

14:540:496 Internship/Co-Op (3 credits) Grade (P, NC)

14:540:497 Internship/Co-Op (3 credits) Grade (P, NC)

Internships

An Internship Program is a short-term job where students typically work full-time during the summer or part-time during the fall/spring term and must accumulate at least 135 hours of work experience to receive credit. Students register for 540:496, submit weekly reports and a final report at completion of the Internship to receive credit. Students can earn credit for a second internship by registering for 540:497, following the same requirements as the first Internship.

Co-Ops

The Co-Op Program is usually a longer-term work experience, typically lasting for a period of 6 continuous months, including a summer and overlapping spring or fall term, and where the

student accumulates at least 270 hours of work experience to receive credit. Students typically register part-time during the overlapping term for both 540:496 and 540:497. Note that if a student reduces course loads during the Co-Op, they may take more than four years to complete the BS Industrial Engineering degree.

Max Credits

Students earn credit for a maximum of two technical electives, or a maximum of 6 credits applied towards their degree for any combination of Internship/ Co-Op experience and Research credits. Note that students are free to pursue as many Internships or Co-Op Program experiences as they desire during their undergraduate education; however, they can earn a maximum of 6 credits towards their degree.

Applying for Credit

Students applying for an Internship/Co-Op for credit should start by sending the Undergraduate Director a copy of the offer letter from their employer. Once the Internship/Co-Op is approved, the student registers with an SPN for the Fall or Spring term following their internship.

Note: Internship or Co-Op must be approved before the start of employment to receive credit.

8. Undergraduate Research

Research Courses for Undergraduates

The Rutgers Industrial and Systems Engineering Department provides undergraduates with an opportunity to earn credits for research. Undergraduates participating in research courses can use the credits to satisfy Technical Electives. A research course is an individual research project under the guidance of a faculty adviser in a specific area of Industrial or Systems Engineering. Interdisciplinary cooperation encouraged where applicable. Projects may be one or two semesters in length.

Fall Classes

14:540:293 Undergraduate Research for Sophomores

14:540:393 Undergraduate Research for Juniors

14:540:493 Undergraduate Research for Seniors

Spring Classes

14:540:294 Undergraduate Research for Sophomores

14:540:394 Undergraduate Research for Juniors

14:540:494 Undergraduate Research for Seniors

Students receive a standard letter grade (e.g., A, B+, B, C+, C, etc.) for the research.

Credits are arranged with the supervising faculty; corresponding to hours spent in research, typically equivalent to 45-89 hours (1 credit), 90-134 hours (2 credits), 135+ hours (3 credits).

Applying

Students interested in research for credit should contact a prospective faculty member before the term starts to inquire about available research opportunities for credit. The student may be asked to submit a specific proposal outlining research objectives, scope of work, schedule, and deliverables.

Get Permission to Register

Once students obtain permission from the instructor, the department issues a Special Permission Number allowing the student to register for a specific course section.

Max Credits

Students earn credit for a maximum of two technical electives, or a maximum of 6 credits applied towards their degree, for any combination of Internship/ Co-Op experience and Research credits.

Requirements

At a minimum, students deliver a poster presentation at a research forum or scheduled event. Other deliverables may be assigned by the faculty, such as an experiment, technical report, technical paper or technical presentation. There are usually no exams associated with the research course.

9. 4+1 BS/Master's Program

Combined Degree Program

Rutgers IE undergraduates may elect to pursue a BS and a Master's degree simultaneously, by completing graduate courses as an undergraduate, and accelerating the time to complete the master's degree to one year or less. Graduate courses earned as an undergraduate (exceeding 120 credits towards the BS) may be applied to both the bachelor's degree electives and the master's degree. This approach offers significant advantages to streamline the overall process of completing the master's degree, including:

- Use grad classes (over 120 credits) for both BS and Master's degree
- Completing the master's degree in a reduced time, often 1-year or less.
- GRE requirement is waived
- No application fee
- No essay or recommendation letter

Eligibility

- Rutgers IE undergraduates
- GPA of 3.0 or higher
- Completed (or are completing) sixth semester
- Completed 96 credits of coursework.

Planning

Students are advised to plan early and consider enrolling in graduate courses in the Junior and/or Senior Year.

Graduate Handbook & Director

Students interested in planning their Master's should review degree and option requirements in the ISE Graduate Handbook and should consult with the Graduate Director with any questions on course requirements, electives, seminars, project, thesis, etc.

Applying

Apply for the 4+1 (5-year master's) degree online through the School of Graduate Studies (SGS). The application process is streamlined when selecting the 5-Year Master's.

<https://go.rutgers.edu/applynow>

Note: Under the Program Information, you should enter:

Applicant Type: **Degree**

Degree Type: **5-Year Master's**

Area: **Engineering**

Program Selection: **Industrial and Systems Engineering – 5 –Year (MS) New Brunswick**

Term: Enter the term to begin your residency, usually the first term after completing the BS.

10. Related Academic Programs

Minors, Second Majors, and Dual Degree Programs

Industrial Engineering students have the opportunity to broaden their skill sets outside of engineering with Minors, additional majors, and dual degrees. Often times you can choose courses so that they can be 'double-counted' – meaning that the courses will count towards a minor (or major, or dual degree), and count towards the Industrial Engineering degree. Many of the technical minors (math, computer science, life sciences, etc.) can often count for both the minor and as part of the technical electives for the engineering major. Industrial Engineering students often pursue minors in business or computer science, second majors, dual degrees or certificate programs from other New Brunswick schools (SAS, RBS, Bloustein, SCI, and SEBS). Students interested in one of these options are encouraged to discuss these options with an academic advisor and review the information at: <https://soe.rutgers.edu/majors-minors>

Aresty Research Center

The Aresty Research Center pairs students with faculty mentors to conduct either year-long research or summer research. First-year students, sophomores, and juniors with no previous research experience are eligible to apply. The Aresty Research Assistant program awards students three credits, graded P/NC, for the academic year, which can be counted towards the BS Industrial Engineering degree as a Technical Elective. Students can learn more at the following link: <https://aresty.rutgers.edu/about>

James J. Slade Scholar (Honors Program)

In the junior year, students with a GPA of 3.2 or better may apply for admission to this program. The program requires that you write a senior thesis. This program gives a student the opportunity

to do independent research while still an undergraduate. Also, this program gives the student recognition (at graduation and with a certificate) for outstanding achievement. For more information <https://soe.rutgers.edu/research/student-research/james-j-slade-scholars-program>.

Study Abroad Programs

There are many study abroad programs that are geared to engineering students at locations around the world. Industrial Engineering students may be able to transfer credits towards their degree. Anyone interested in the study abroad programs should contact the academic advisor and review information at: <https://soe.rutgers.edu/student-experience/study-abroad>.

11. Academic Policies

The Industrial and Systems Engineering department is guided by the academic policies and procedures established by the School of Engineering (SoE). The SoE deans and advisors are available to assist students of any class year to discuss policies and procedures. The Industrial and Systems Engineering Undergraduate Director is also available for advising in-person or by virtual appointment. Students should become familiar with School of Engineering Policies and Procedures at the following link: <https://soe.rutgers.edu/academic-advising-and-policies/advising-resources>

Industrial Engineering Degree Progression

A list of degree requirements is provided at the Degree Navigator (DN) page for each student. As you complete courses, they are automatically checked off as completed in DN. If you any discrepancy, please contact your academic advisor or the Undergraduate Director who will need to approve a request to update DN. To stay on track:

- 1) Prior to registration, review DN to make sure you understand what you have completed and what you have remaining.
- 2) Make sure you have the prerequisites for the current courses you want to take, and look ahead to make sure you are completing prerequisites for subsequent semesters.
- 3) Remember that major courses are offered just once a year, plan accordingly. Ideally follow the sequence of courses in the program curriculum to stay on track.
- 4) Graduating seniors should check DN to ensure that any additional courses, transfer credits, and electives have been recorded and checked off in DN as expected.
- 5) Contact the Undergraduate Director with any questions.

Each student is ultimately responsible for monitoring and tracking their own progress as they work towards satisfying the degree requirements.

Major Average

The courses that are included in the major average are marked "M" on the IE curriculum. To graduate, your major average must be 2.0 or greater. If you fail a course and then repeat it, both grades are computed into your major average.

Every semester, compute and track your major average. Keep track of it carefully.

Please refer to this link on GPA calculations: <http://soe.rutgers.edu/oas/gpa-calculation>

Withdrawal From Courses

In the event a student encounters a major problem during a semester and cannot complete a course, they are advised to withdraw rather than do nothing and receive an F in the course. If necessary, withdraw from a course or courses during the semester and plan to take them again when you are ready. If you know you are unable to do the required work, you must let the university and instructor know of your difficulty. Further, there are many resources at Rutgers that can help you with your situation. Make sure you know your options to get help and potentially withdraw from a class if needed.

Note: If you fail a course, it is computed into your university and major averages. If you withdraw from a course by the required deadline, it is not computed into these averages.

Course Substitution

As a matter of policy, there are no course substitutions for ISE courses.

Prerequisite Override

As a matter of policy, there are no prerequisite overrides for ISE courses.

Special Permission Number

If a special circumstance arises where you may need special permission to join a class, you should contact the Undergraduate Advisor.

Academic Integrity

The Industrial and Systems Engineering Department expects each student to conduct themselves with the highest professional manner consistent with the Rutgers University Policy on Academic Integrity.

<https://academicintegrity.rutgers.edu/>

The ISE Department follows a policy where we do not hesitate to report offenses of cheating to the school or the university. A student who gives information to help another student cheat is considered guilty as well as a student who receives information. Note that copying from or giving assistance to others or using forbidden material on an examination is a level two violation. A possible sanction is suspension from the university for one or more terms with a notation of academic disciplinary suspension placed on the student's transcript.

12. Student Organizations

Alpha Pi Mu

Alpha Pi Mu is the Industrial Engineering Honor Society. Both academic excellence and leadership in service activities is emphasized for membership. Scholarship opportunities are also available. Faculty Advisor: Dr. Hoang Pham

Institute of Industrial and Systems Engineers (IISE)

The student chapter of IISE at Rutgers University is committed to the promotion of the industrial engineering profession. Professional activities include plant tours, industry speakers, alumni night, technical paper contests, and an engineering outreach program. Social activities typically include picnics, Freshman night, and a holiday mixer. By joining this society, each student receives a complimentary copy of ISE magazine with dues payment. Faculty Advisor: Dr. Randy Reagan

Society of Manufacturing Engineers (SME)

The student chapter of SME at Rutgers University is committed to the promotion of manufacturing engineering. There are plant tours, industry speakers, professional development conferences, certification, and scholarship opportunities. Social activities include joint picnics with IIE student chapter and meetings. Upon joining this society, each student receives a free subscription to Manufacturing Engineering with dues payment. Faculty Advisor: Dr. Randy Reagan.

Institute for Operations Research and the Management Sciences (INFORMS)

The goal of the student chapter of INFORMS at Rutgers University is to encourage interest in Operations Research, Analytics, and the Management Sciences, through seminars, social events, and visits to companies actively using such quantitative techniques. The Chapter also provides a forum for sharing information about educational and research opportunities, internships, and summer job possibilities. Faculty Advisor: Dr. Ezzat

Tau Beta Pi

Tau Beta Pi is the National Engineering Honor Society. Academic excellence and service to the University community are stressed. Membership is open to juniors and seniors who rank near the very top in their respective classes. Faculty Advisor: Dr. Elsayed