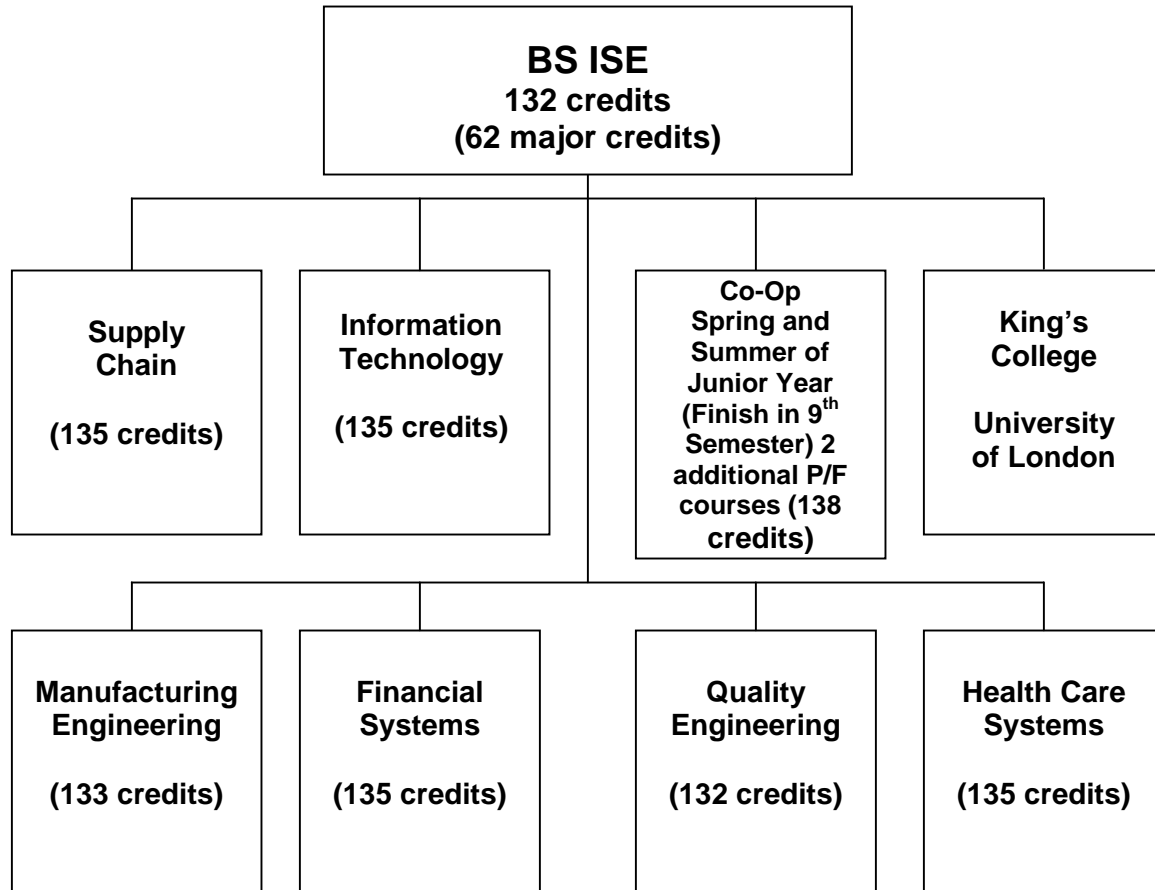


6. INDUSTRIAL AND SYSTEMS ENGINEERING UNDERGRADUATE TRACKS

The ISE program provides tracks that enable students to choose a specialization area in order to emphasize specific areas of interest. The ISE curriculum offers six tracks as shown and explained below:



ISE Undergraduate Tracks

Supply Chain Track

Requires (9) credit hours.

LIST A: (Select two)

14:540:484 Design of an Enterprise- Spring

16:540:520 Supply Chain Eng. (3.0 GPA or with the instructor's permission) -Fall

16:540:530 Forecasting and Time-Series Analysis (3.0 GPA or with instructor's permission) -Fall

LIST B (Select one)

14:180:538 Freight Transportation Systems-Spring W-6:40-9:30

22:010:623 Enterprise Resource Planning Systems-Spring-Th-6:40-9:30

Financial Systems Track

Requires (9) credit hours.

(2) required courses:

16:540:530 Forecasting and Time Series Analysis
33:390:300 Introduction to Financial Management (Fall, Spring)

Select one:

33:390:380 Investment Analysis (Spring)
33:390:400 Corporate Finance (Spring)

Manufacturing Engineering Track

Requires a total of (7) credit hours.

14:540:486 Automated Manufacturing Systems
14:540:487 Automated Manufacturing Systems Laboratory (*co-requisite*)

Select one:

14:540:475 Introduction to Pharmaceutical Manufacturing
14:540:485 Industrial Information Systems
14:150:330 Introduction to Nanomaterials Science and Engineering (*open to school 14*)

Quality Engineering Track

Requires a total of (6) credit hours.

01:960:384 Intermediate Statistical Analysis (offer every Fall, Spring)

Select one

01:960:463 Regression Methods (offer Fall semester)
01:960:490 Introduction to Experimental Design (offer Spring semester)
14:540:580 Quality Management (for 3+ students or permission of instructor)
14:540:530 Forecasting and Time Series Analysis (for 3+ students or permission of instructor)

Healthcare Systems Track

Requires a total of (9) credit hours.

01:220:316 Health Economics
HSAP 0519 Managing Health Care Delivery Organizations
14:540:485 Information Systems

Prerequisites for 220:316

01:220:200 Econ Prn can be used as pre-req. for 220:316
14:540:343 Eng. Economics
Engineering Calculus
Undergraduate Engineering Probability & Statistics.

No prerequisites for HSAP 0519.

Information Technology Track

Requires a total of (9) credit hours.

List A (Select one)

14:540:485 Manufacturing Information Systems
14:540:542 Enterprise Integration (3+ students or Instructor's consent)

List B (Select one)

14:332:423 Telecommunications Networks
14:332:452 Introduction to Software Engineering
04:547:331 Networking and Internet Technologies
04:547:410 Electronic Commerce
04:547:420 Economics of Information Technology
22:010:622 Internet Technology for Business
22:010:623 Enterprise Resource Planning

Co-op in ISE

The co-op internship provides the student with the opportunity to practice and/or apply knowledge and skills in various industrial and systems engineering environments. This co-op internship is intended to provide a practical engineering experience to the student's undergraduate education by integrating prior course work into a working engineering environment. In addition to receiving compensation for their on-site job experience, students earn credits for the educational benefits of the experience. The 6 co-op credits are in addition to the 132 credit hours required for graduation. Students who choose the co-op internship option will complete their undergraduate degree requirements in the 9th semester.

Study Abroad

The Department is in the process of initiating a study abroad program with King's College, University of London for qualified students majoring in industrial engineering. Extensive study abroad programs in several countries are available to industrial engineering students through the Rutgers Study Abroad Office.

Five Year BS/MBA Program

A special joint program offered by the School of Engineering and the Graduate School of Management is available for qualified industrial engineering students. The program offers the opportunity to obtain the Master of Business Administration degree within one calendar year of completing the baccalaureate degree requirements.

Five Year Dual Degree Program

A five-year, dual-degree program offered by the School of Engineering is available to qualified industrial and systems engineering students. This program is offered in cooperation with three liberal arts colleges in New Brunswick: Douglass College, Livingston College, and Rutgers College. This program leads to a Bachelor of Science degree in industrial and systems engineering and a Bachelor of Arts degree from the cooperating liberal arts college in any major in which that college confers the BA degree.