



iE&M

interdisciplinary Engineering & Management

Student Handbook



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Clarkson
UNIVERSITY
*defy*convention

INTERDISCIPLINARY ENGINEERING AND MANAGEMENT

Clarkson University
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<http://www.clarkson.edu/iem>

PROFESSIONAL OBJECTIVE:

Career growth and flexibility in areas related to manufacturing, project engineering, field service engineering, supply chain systems integration, and technical entrepreneurship.

EDUCATION:

Bachelor of Science, Interdisciplinary Engineering & Management

- **Science & Mathematics** – Calculus, Differential Equations, Physics, Chemistry, and Statistics
- **Engineering** – Computer Applications, Electrical Engineering, Fluid Mechanics, Materials Processes, Statics, and Thermodynamics
- **Management** – Accounting, Business Law, Corporate Finance, Economics, Information Systems Management, Operations, Marketing, and Organizational Policy
- **Liberal Studies & Technical Communications** – Knowledge Area courses, Psychology, and Public Speaking

SPECIALIZATIONS:

Students can also earn a minor in Environmental Science, Quality-based Project Management, or other areas; a concentration in Global Supply Chain Management; or follow tracks to specialize in an area such as Construction Management or Technical Sales.

EMPLOYMENT:

Graduates secure positions in four general areas:

Project Management – Construction Management, Contract Administration, Cost Engineer

Supply Chain Management – Design, Customer Service, Distribution, Transportation, Systems Integration

Sales & Marketing – Technical Sales, Technical Marketing, and Consulting

Manufacturing & Production – Industrial and Project Engineer, Production Supervision, Project Planning, Quality Control, Inventory Control and Procurement

ALUMNI STATISTICS: (Based on 2001 Survey Results)

Over 3,500 alumni since 1958

A significant number own or have owned businesses

47% are employed in areas of Sales, Marketing, and Procurement

20% are employed in areas of Manufacturing and Production

REFERENCES:

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WELCOME to Interdisciplinary Engineering & Management at Clarkson University

It is my pleasure to welcome you to the Interdisciplinary Engineering & Management (iE&M) program at Clarkson University. Clarkson's Interdisciplinary Engineering & Management (iE&M) program is ideal for those who desire breadth and flexibility in a career centered on leadership and technology. The major was established in 1954 to meet the growing needs of industry for individuals with strong skill sets in both engineering and business. Graduates are prepared to integrate the rapidly changing technical and managerial aspects of an organization.

The iE&M program utilizes Clarkson's traditional strengths, stressing engineering principles and technical problem-solving in conjunction with quantitative and qualitative managerial decision-making. Students receive a balanced education involving course requirements from each of the major disciplines of engineering, business, science, and liberal arts. The carefully planned curriculum is taught by faculty within their respective areas, with the exception of the year-long project-based learning experience for first-year students, which is taught within the iE&M program.

I hope you enjoy your college education at Clarkson and encourage you to make the best of your experience here. This handbook has been created to help answer questions you might have. If the information you are seeking isn't in this book, consult the references listed at the end, see your advisor, Andréa Severson in BH Snell 117, or stop by my office in BH Snell 121.

I look forward to attending your graduation. Best wishes for a successful college career.

Sincerely,

Amy K. Zander, Ph.D., P.E.
Director, Interdisciplinary Engineering & Management

A Vision of a Clarkson Education

The Clarkson University educational experience is designed to provide talented and ambitious students with the knowledge and skills necessary to achieve positions of leadership within their chosen profession. The combination of Clarkson's strong technologically rich curricula and state-of-the-art teaching and research facilities, coupled with an unparalleled commitment to a friendly learning environment and to students' personal development, uniquely prepares Clarkson graduates to excel in their chosen professions and to lead rewarding and creative lives.

In addition to a mastery of the core knowledge within his or her field, a Clarkson education provides each student with the opportunity to:

- solve real-world, open-ended problems that require creativity and risk taking, including participation in state-of-the-art research under the direction of distinguished faculty;
- develop and refine exceptional communication skills with an awareness of potential cultural differences;
- work productively within and lead interdisciplinary and multi-disciplinary teams possibly composed of members with diverse interests and backgrounds;
- obtain outstanding capabilities in utilizing computing and other 21st century technologies;
- learn through instruction and guidance by nationally recognized faculty who have a commitment to both teaching and research that has made Clarkson a nationally ranked university

A Clarkson student's education is greatly enhanced by a personal and friendly learning environment, within a small, residential, nationally recognized University, which:

- places students at the center of the educational process and where all employees have a commitment to creating an environment that contributes positively to students' overall educational experience;
- draws undergraduates, graduate students, faculty and staff together into a cohesive and stimulating learning community, wherein an atmosphere of scholarship and spirit of research is cultivated;
- supports the acquisition of knowledge through advanced electronic and information technology and innovative instructional approaches;
- provides personal advising and interaction with faculty and staff as well as supportive relationships among students;
- offers many leadership opportunities through co-curricular groups and activities;
- respects and learns from its community of diverse people, backgrounds and cultures

Together, these provide a unique educational experience that is directed toward developing the whole person.

Interdisciplinary Engineering & Management Program Educational Objectives

These program educational objectives were developed with input from alumni, employers, faculty and staff, industry leaders and students. They describe the career and professional accomplishments that the iE&M program is preparing graduates to achieve. It is our goal that upon graduation you will be able to define yourself according to these objectives.

1. iE&M graduates apply technical problem solving skills to develop innovative and effective solutions to complex problems.
2. iE&M graduates lead multi-disciplinary teams to success by managing team dynamics.
3. iE&M graduates effectively communicate information for decision-making both orally and in writing to both technical and non-technical audiences.
4. iE&M graduates continuously balance simultaneous demands of today's working environment through multi-tasking capabilities of planning, organizing, managing and controlling resources.
5. iE&M graduates combine engineering and business core knowledge to apply quantitative and qualitative methods to process analysis in business systems.
6. iE&M graduates make timely, ethical and useful decisions in response to organizational challenges.

Interdisciplinary Engineering and Management Program Outcomes

These program outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge and behaviors that you will acquire in your studies throughout the program.

Students will:

1. have the ability to apply calculus-based math, laboratory science and engineering principles to technical problem-solving
2. gain the knowledge and abilities to lead multi-disciplinary teams
3. understand development and maintenance of relationships among people within and across organizations
4. build a skill set in written and oral communication through coursework, projects, and extracurricular activities
5. balance academic disciplines in science, engineering, business and humanities to prepare for the changing workplace
6. understand financial and information flows within and across organizations
7. learn both quantitative and qualitative analysis methods
8. apply a foundation of business and management principles to making timely, ethical, useful decisions
9. learn to lead and manage organization change

Students will attain:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

**Interdisciplinary Engineering & Management Curriculum
(Class of 2010 and later)**

Total Credits		120	Suggested Course Sequence (other sequences are possible)	
Math and Science		31		
CM 131	Chemistry I	4	Fall Year 1	Spring Year 1
CM 132	Chemistry II	4	EM/EC150	EC 151
MA 131	Calculus I	3	EM 120	EM 121
MA 132	Calculus II	3	UNIV 190	MA 132
MA 231	Calculus III	3	MA 131	PH 132
MA 232	Differential Equations	3	PH 131	KA
MA 383	Applied Statistics	3	FY 100	
PH 131	Physics I	4		
PH 132	Physics II	4	Fall Year 2	Spring Year 2
Engineering		21	EM/AC205	MA 383
ES 220	Statics	3	ES 220	PY 151
ES 250	Electrical Science	3	MA 232	COMM217
ES 260	Materials Science	3	EM/IS 211	LW 270
ES 330	Fluid Mechanics	3	CM 131	CM 132
ES 340	Thermodynamics	3		
EE 264	Digital Design	3	Fall Year 3	Spring Year 3
ES 456	Inter. Process Eng. & Design	3	ES 250	EE 264
Engineering Management		23	MA 231	ES 330
EM 120	Team-based Design	3	EM/OS286	FN 361
EM 121	Technological Entrepreneurship	2	ES 260	EM/OM331
EM/EC150	Microeconomics*	3	MK 320	UNIV course
EM/AC205	Accounting for Decision Analysis	3		
EM/IS211	Intro to Enterprise Info Systems	3	Fall Year 4	Spring Year 4
EM/OS286	Organizational Behavior I	3	ES 340	EM/OS432
EM/OM331	Operations & Supply Chain Mgmt	3	CUSB	ES 456
EM/OS432	Organizational Policy & Strategy	3	KA	CUSB
Business		18	Elective	Elective
EC 151	Macroeconomics	3	Elective	
FN 361	Corporate Finance	3		
LW 270	Law & Society	3		
MK 320	Principles of Marketing	3		
CUSB	Business elective (2)	6		
Clarkson Common Experience		15		
UNIV 190	Clarkson Seminar	3		
PY 151	Introduction to Psychology	3		
KA	Knowledge Area Course	6		
KA	University Course	3		
Other		12		
COMM217	Public Speaking	3		
XX	Electives (3)	9		
FY 100	Transitions	1**		

* Also is a Knowledge area course

** Required only for First Year students, credit not used toward graduation

Fall – Year 1

EM/EC150 Principles of Microeconomics – Introduction to microeconomics covering the role of the price system in and public policies toward the allocation of resources and the distribution of income. Included are the basic concepts of industry, supply and demand, technological change, private and social costs, market structures, analysis of firm behavior, household behavior and the gains from international trade.

EM120 Team-based Design and Innovation – The first in a two-course sequence, this course is required for all first-year students in the Interdisciplinary Engineering & Management (iE&M) Program. Students will undertake a year-long project to design, produce, and potentially commercialize a tangible product. Projects will require the application of both engineering and management principles, and the use of computer technology for the development and analysis of relevant prototypes. Personal computer applications integrated throughout this course include engineering design and test, spreadsheets, word processing, and the Internet. Course objectives are to help students appreciate the entire process of developing technology-based products, learn how to build and manage effective teams, develop a fundamental understanding of computer usage, and to introduce the multiplicity of concepts embodied in the IE&M degree program.

UNIV190 Clarkson Seminar – The Clarkson Seminar welcomes first year students into a world of cultures, histories, and the global forces that will shape their personal and professional lives beyond Clarkson. Students will learn to define issues within a broad cultural context and gain experience evaluating and interpreting literary and nonliterary texts. Seminar classes will be a small and thematically structured, with an emphasis on discussion, critical reading and thinking, extensive writing, and collaborative work.

MA131 Calculus I – Functions and graphs; derivative concept and formulas, including chain rule and implicit differentiation; integral concept; the Fundamental Theorem of Calculus; properties and applications of the derivative, including max-min problems and graph sketching; exponential, logarithmic, and inverse trigonometric functions.

PH131 Physics I – Calculus-based general physics course covering elements of Newtonian mechanics and thermal physics. Laboratory experiments keyed to the lectures to illustrate and demonstrate some of the physical principles and concepts.

FY100 Transitions to College – Focus on group work and team dynamics, this adjustment course is required for all first-year students. Introduces the mission and expectations of the learning process at Clarkson; builds communication and teamwork skills; and provides some fundamental content relating to wellness and relationships during the college experience. Discussion, team activities, leadership opportunities, and interaction with upperclass peer educators form the foundation of the course.

Spring – Year 1

EC151 Principles of Macroeconomics – An introduction to macroeconomics including the analysis of national income determination, monetary and fiscal policy, aggregate economic growth, and international economics. Price stability, balance of international payments and economic growth and development will also be examined.

EM121 Technological Entrepreneurship – The second in a two-course sequence, this course is a continuation of EM120 and is required for all first-year students in the Interdisciplinary Engineering & Management Program. Students will complete a year-long

project to design, produce, and potentially commercialize a tangible product. Projects will require the application of both engineering and management principles, and the use of computer technology for the development and analysis of relevant prototypes. Personal computer applications integrated throughout this course include engineering design and test, spreadsheets, database management, word processing, and the Internet. Course objectives are to help students appreciate the entire process of developing technology-based products, develop a fundamental understanding of computer usage, and to introduce the multiplicity of concepts embodied in the IE&M degree program.

MA132 Calculus II – A continuation of MA131. Properties and applications of the integral, including areas, volumes, arc length and differential equations; integration techniques, including parts, partial fractions, trigonometric substitution, and numerical integration; indeterminate forms; improper integrals; infinite series and Taylor Series; introduction to polar coordinates, complex numbers, and parametric equations.

PH132 Physics II – Calculus-based general physics course covering elements of electricity and magnetism, waves and optics. Laboratory experiments keyed to the lectures to illustrate and demonstrate some of the physical principles and concepts.

Knowledge Area Course – Details can be found following this section.

Fall – Year 2

EM/AC205 Introduction to Accounting for Decision Analysis – An introductory survey of accounting information to guide and improve decision making. Many course topics involve cost planning and control techniques used to evaluate and improve the financial performance of organizations and/or products.

ES220 Statics – Fundamental concepts of the statics of rigid bodies using a vector analysis approach; force systems, analysis of simple structures, centroids and centers of gravity, free body diagrams, equilibrium, friction and moments of inertia.

MA232 Elementary Differential Equations – Solutions and applications of first-order differential equations and linear differential equations with constant coefficients. Laplace transform methods. Introduction to matrix algebra, systems of algebraic equations, eigenvalues and eigenvectors, with application to systems of differential equations. Other topics may include modeling, engineering applications, or numerical methods.

EM/IS211 Intro to ERP Tools and Applications – This course provides an introduction to enterprise resource planning (ERP) and accounting in organizations. Students use SAP R/3 software to explore all the functional areas of a business including human resources, production, sales and accounting. After students are introduced to ERP and SAP R/3, the course focuses on recording, interpreting and communicating accounting information.

CM131 General Chemistry I – A general overview of chemistry, including principles and theories as well as descriptive chemistry of important elements and compounds. Laboratory experiments augment lecture topics to provide a small group hands-on learning experience.

Spring – Year 2

MA383 Applied Statistics I – Descriptive statistics, probability, sampling distributions (large and small), estimation, testing and linear regression. Other topics may include analysis of variance, quality control and categorical data analysis. This course will require use of statistical software. Interpretation of computer output and applications will be emphasized throughout.

PY151 Intro to Psychology – Emphasizes the scientific study of the human mind. Appropriate research methods and philosophical questions will be considered. Topics include the brain, memory, perception, development, personality, social behavior, emotion, motivation, psychological disorders, stress, and states of consciousness.

COMM217 Intro to Public Speaking – This lecture and laboratory course is designed to enhance the individual's effective public communication by giving him or her a variety of speaking roles in different situations. The objective of the course is to develop an awareness of the speaking potential of each student with emphasis on listening ability, nonverbal behavior, idea organization and effective use of language and visual aids.

LW270 Law and Society I – A course designed to provide a basic understanding of (1) the nature, functions and limitations of law and legal systems; (2) the basic relationship among justice, ethics, legal systems and social structure; and (3) the relationship among society, law and business activity. Further, it is designed to enlighten with respect to rules, principles, standards, and doctrines of law fundamental to a free enterprise system. The course covers the substantive areas of constitutional law, torts, contracts, and property and estate law.

CM132 General Chemistry II – A continuation of CM 131. Chemical principles, theories, and descriptive chemistry with laboratory experiments to provide additional exposure to lecture topics in a small group environment.

Fall – Year 3

ES250 Electrical Science – Network concepts, DC circuits; mesh and node equations, network theorems, operational amplifiers. Complex numbers, effective values, sinusoids and phasors. AC circuits: phasor diagrams, power. Time domain solution of first order circuits.

MA231 Calculus III – Vectors and vector-valued functions; functions of several variables; partial differentiation, including the chain rule, gradients, and maxima and minima; multiple integration, including polar, cylindrical, and spherical coordinates; vector calculus, including Green's, Divergence, and Stokes's Theorems.

EM/OS286 Organizational Behavior I – An introduction to the processes required to manage contemporary organizations with a focus on individual behaviors as they relate to the functions of planning, organizing, controlling, and leading. The most recent concepts of behavioral science in the practice of management are presented to assist the student in gaining understanding of the pervasiveness of the discipline in all types of organizations and processes. Topics include motivation, leadership, perceptions, personality theory, learning theory, personnel issues, stress management, organizational culture, and decision making.

ES260 Materials Science and Engineering I – The bonding (ionic, covalent, metallic), microstructure (crystalline or amorphous) and defects in structure (vacancies, dislocations, precipitates or voids) determine the engineering properties of solids. Course coverage includes crystal structure, solid state diffusion, phase equilibrium and phase transformations of metals, ceramics and polymers. The electrical and mechanical properties are emphasized.

MK320 Principles of Marketing – Familiarizes students with various marketing terms, concepts, principles, institutions and practices. Topics covered include: buyer behavior, market research, product planning, pricing, distribution, personal selling and advertising. The changing nature of marketing and the trends in domestic and international marketing are also examined. Experiential exercises are an intrinsic and important part of this course.

Spring – Year 3

EE264 Introduction to Digital Design – An introductory course covering the fundamentals of computer system hardware. Topics include data representation using number systems and codes, Boolean algebra and logic, digital logic devices, combinational and sequential circuits, arithmetic logic units and simple processor organization including registers, memory, addressing and processing of machine instructions.

ES330 Fluid Mechanics – Basic principles of fluid mechanics. Topics include statics, forces on a plane and curve surfaces, kinematics of fluid motion, integral and differential representation of conservation of mass, balance of linear and angular momenta, the first Law of Thermodynamics, Bernoulli's equation, dimensional analysis, and elementary viscous flow. Frictional losses, simple pipeline analysis and steady channel flow are covered. Understanding of the physical phenomena is stressed and vector notation is used wherever suitable.

FN361 Corporation Finance – A study of the problems associated with the financial management of business organizations. Topics include: analysis of capital investments, valuation, capital structure, dividend policy decisions, security markets, short and long-term financing, management of current assets, mergers, leasing, and business failure.

EM/OM331 Operations/Production Management – An introduction to the planning, analysis, and control of production systems. Topics include product and service design, manufacturing processes, design of work systems, aggregate production planning, inventory models and MRP, just-in-time systems, facility layout, scheduling, project management, quality control, and work measurement. Students acquire problem solving experience using microcomputers and commercial software.

Knowledge Area Course – Details can be found following this section.

Fall – Year 4

ES340 Thermodynamics – The fundamental concepts of thermodynamics and their application to pure substances. Topics include: properties of pure substances; work, heat, energy and the First Law of Thermodynamics; technique of First Law Analysis; disorder, entropy and Second Law of Thermodynamics; technique of Second Law analysis.

CUSB Elective – Course from the School of Business (300-level or higher) that meets the needs of the individual student's curriculum.

University Course – A course which meets the requirements of two different Knowledge Areas, as discussed in the following section.

Elective (2) – Any two courses selected in consultation with your advisor or as determined by a specified concentration, track or minor.

Spring – Year 4

OS432 Organizational Policy and Strategy – A capstone course designed to integrate the functional areas and tools of management studied in previous courses. Emphasis is placed on the business environment in a global economy, industry analysis, tactical planning, and overall strategic planning, policy establishment and implementation.

ES456 Interdisciplinary Process Engineering & Design – This course is a culminating technical experience for students who have completed a foundation engineering science education (i.e. mechanical, chemical, and electrical courses that are required by traditional engineering majors). Primarily designed for the Interdisciplinary Engineering & Management (iE&M) program, this capstone course will require students to learn advanced engineering design principles that focus on solving complex systems-based problems. Concepts such as: design methodology, process flow, customer requirements and specifications, and advanced modeling techniques will be covered in detail during the first half of this course. The classroom lectures and assessments will be supplemented with a “real world” technical problem that requires application of the knowledge gained in previous engineering science courses, along with the process design principles described above. Requires both written reports and oral presentations.

Elective (1) – A course selected in consultation with your advisor or as determined by a specified concentration, track or minor.

Knowledge Area Courses

Students at Clarkson University are required to take five courses which cover each of the six specified Clarkson Common Experience Knowledge Areas; one University Course (UC) must span two Knowledge Areas. These Knowledge Areas are:

- Culture and Societies (CSO)
- Contemporary and Global Issues (CGI)
- Imaginative Arts (IA)
- Science, Technology & Society (STS)
- Economics and Organizations (EC)
- Individual and Group Behavior (IG)

The iE&M curriculum covers two of these Knowledge Areas. Introduction to Psychology fulfills the IG requirement and Microeconomics fulfills the EC requirement. The student must choose Knowledge Area courses to cover the remaining areas.

Name: _____

Date: _____

Other degree/major _____

Minor: _____

Concentration/Track _____

The projection of courses is an example. Students can vary the course sequence, bearing in mind course prerequisites.

YEAR	FALL	SPRING
1 (31hrs)	EM/EC 150 ¹ 3	EC 151 [▲] 3
	EM 120 [■] 3	EM 121 [■] 2
	MA 131 [▲] 3	MA 132 [▲] 3
	PH131 [▲] 4	PH132 [▲] 4
	UNIV 190 [★] 3	KA Course [★] 3
	FY 100 ² 1	
2 (32hrs)	EM/AC 205 [■] 3	MA 383/STAT [▲] 3
	ES 220 [◊] 3	PY 151 [★] 3
	MA 232 [▲] 3	COMM 217 [▼] 3
	EM/IS 211 [■] 3	LW 270 [▲] 3
3 (30hrs)	CM 131 [▲] 4	CM 132 [▲] 4
	ES 250 [◊] 3	EE 264 [◊] 3
	MA 231 [▲] 3	ES 330 [◊] 3
	EM/OS 286 [■] 3	FN 361 [▲] 3
	ES 260 [◊] 3	EM/OM 331 [■] 3
MK 320 [▲] 3	University Course [★] 3	
4 (27hrs)	ES 340 [◊] 3	EM/OS 432 [■] 3
	CUSB [▲] 3	ES 456 [◊] 3
	KA Course [★] 3	CUSB [▲] 3
	Elective [▼] 3	Elective [▼] 3
	Elective [▼] 3	

Courses printed above in BOLD are taught one semester per year.

CLARKSON COMMON EXPERIENCE[★] (15)
See reverse for more detail.

Contemporary & Global Issues (CGI)
1. _____ (3) _____

Cultures & Societies (CSO)
1. _____ (3) _____

Economics & Organizations (EC)
1. EC 150[■] (3) _____

Imaginative Arts (IA)
1. _____ (3) _____

Individual & Group Behavior (IG)
1. PY 151[★] (3) _____

Science, Technology, & Society (STS)
1. _____ (3) _____

Electives[▼] (9 hrs)

(3) _____

(3) _____

(3) _____

CUSB Electives[▲] (6 hrs)

(3) _____

(3) _____

Concentration/Minor/Track
Can overlap with electives/CUSB Electives

() _____

() _____

() _____

() _____

() _____

Degree Requirements

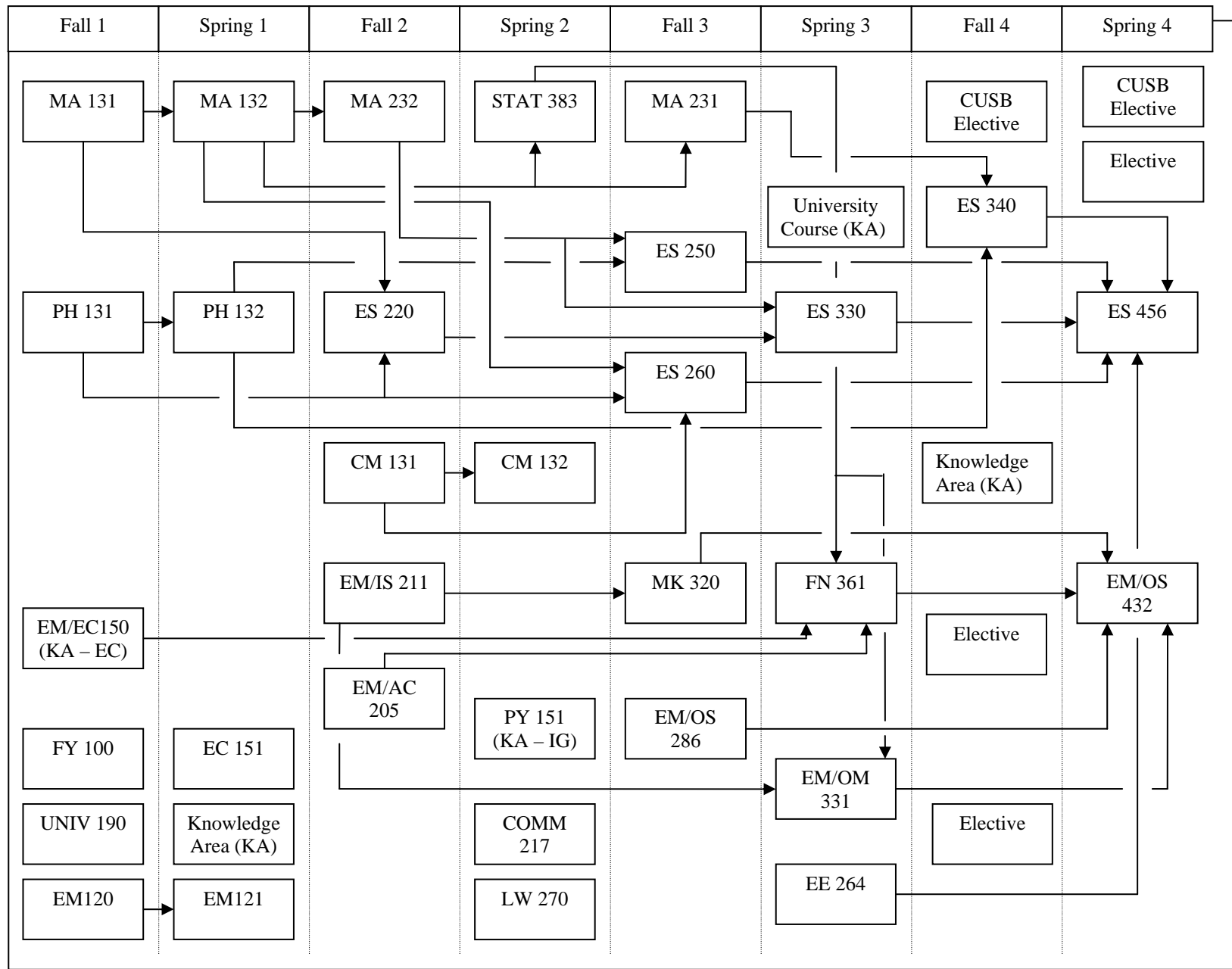
Math and Science [▲]	31
Engineering [◊]	21
Engineering Management [■]	23
Business [▲]	18
Clarkson Common Experience [★]	15
Other [▼]	12
Total Hours	120

SUBSTITUTIONS: If a student is transferring into iE&M from another program, the following are approved substitutions:

- CH 271=ES 340
- CM 103&105=CM 131
- CM 104&106=CM 132
- EC 350=EC 150
- EE 221, EE 261, or EE 331=EE 264
- ES 100&AE 212, or ES 100& ME 212, or ES 100&CE 212 OR SB 113 & SB 114 = EM 120&121.
- MA 282=MA 383

¹ Also is a Clarkson Common Experience course

² FY 100 is required for first-year students only and does not count toward degree requirements.



Minors

To complement and enrich bachelor's degree programs, Clarkson also enables students to assemble coursework in designated programs. Identified and approved by a vote of the faculty, such minors provide students with another area of specialization outside their major. Minors require 15 or more credit hours of specified coursework. Completion of an approved minor is indicated on a student's transcript. Many minor programs are available at Clarkson University. See the Clarkson Catalog for a complete listing of minors available.

Several minors are more commonly earned by iE&M students.

- Law Studies Minor
- Math Minor
- Quality-based Project Management Minor
- Psychology Minor

Concentration

Global Supply Chain Management is a concentration available to iE&M students.

<p>Global Supply Chain Management (Qualifies as a CUSB concentration)</p> <p><i>(Note: Because of the sequencing of these courses with the CUSB core requirements, we encourage students to work with the iE&M staff beginning in the sophomore year.)</i></p> <p>Application: Procurement, Logistician, Warehouse Manager, ERP Systems Integrator, Transportation, Materials Handling</p>	<p>EM/OM341 Global Sourcing and Supply Chain Design</p> <p>MK431 Supply Chain Distribution Channels</p> <p>IS428 E-business and Information Systems</p> <p>Choose <u>two</u> of the following:</p> <p>EM/OM351 Quality Systems Management</p> <p>OS466 Negotiation & Relation Mgmt.</p> <p>EM/SB361 Supply Chain Environmental Management</p>
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iE&M Tracks

The iE&M degree is a solid foundation in math, sciences, engineering, and business. This wide range of course coverage gives newly hired professionals the flexibility and versatility to take on many different roles — problem solver, consensus builder, analyst, risk manager, decision maker, and customer manager. The degree also allows a student to keep their options open right through graduation and exploration of several career paths.

However, some students come to the program with more of a technical or managerial focus (or develop a path during the first 2-3 years of their studies) and want to take courses in a more discipline-specific manner. For these students, we offer ten (10) focus areas (i.e., tracks), although three of the ten — Global Supply Chain Management, Product Development, and “Honors” — come with entrance restrictions.

Below is a brief description of these tracks. The “Typical Courses” listed for each concentration area take the place of “free” electives in the degree program. In many cases completion of a track will require a student to take more than the required 120 credits.

Academic/Professional Track	Typical Courses
<p>Chemical Engineering</p> <p>Application: Manufacturing or Technical Sales positions in Pharmaceutical, Refining, Beverage Industries</p>	<p>CH250 Chemical Process Calculations CM241 Organic Chemistry I IH309 Intro Occupational Health CHXXX Chemical Engineering Elective</p>
<p>Electrical and Computer Engineering</p> <p>Application: Manufacturing or Technical Sales positions in Electronics Distribution, Computer, Utility, Semi-conductor Industries</p>	<p>EE221 Linear Circuits EE261 Programming and Software Design Two (2) Electrical or Computer Engineering Electives</p>
<p>Mechanical/Aeronautical and Civil Engineering - Structural</p> <p>Application: Manufacturing, Project Management, or Technical Sales in Construction, Precision Machining, Aircraft</p>	<p>ES222 Strengths of Materials ES223 Rigid Body Dynamics (<i>Spring Only</i>) Two (2) Mechanical/Aeronautical or Civil Engineering Electives</p>
<p>Construction Management</p> <p>Application: Horizontal and Vertical Construction projects—estimators, assistant project managers, schedulers, expeditors, auditors</p>	<p>EM/OM480 Project Management (CUSB Elec) ES222 Strengths of Materials IH309 Introduction to Occupational Health OR IH330 Safety Management (offered Odd Falls only)</p> <p>Two of the following: CE405 Construction Management CE406 Construction Engineering CE407 Construction Estimating CE411 Construction Materials</p>
<p>Manufacturing Management</p> <p>Application: Production Supervisor, Warehouse Manager, Logistics, Transportation</p>	<p>EM/OM351 Quality Management ME390 Manufacturing Processes ME399 CAM</p> <p>One of the following: EM/OM341 Global Sourcing & Supply Chain Design MK431 Supply Chain Distribution Channels</p>
<p>Technical Marketing/Sales</p> <p>Application: Technical Sales in any Industry, Market Research, E-business</p>	<p>Four of the following: MK306 Personal Selling MK321 Consumer Behavior MK332 Marketing Research MK327 Business-to-Business Marketing MK431 Supply Chain Distribution Channels</p>

<p>Product Development</p> <p>Application: Facilitate both the technical and business intricacies of bringing new products to the global marketplace</p>	<p>ES305 Virtual Tools in Engineering Design EM/OM480 Project Management SB305 Cost Accounting</p> <p>One of the following: EM/OM351 Quality Management ME444 Advanced AutoCAD</p>
<p>Environmental Science and Policy</p> <p>Application: Environmental Remediation, “Green” Construction, Environmental Policy Analyst</p>	<p>Two Environmental Science/Eng courses from list: CM241 Organic Chemistry EV280 Env Science IH310 Intro to Industrial Hygiene CM303 Env Chemistry I CM304 Env Chemistry II BY323 Microbiology for Engineers CE413 Geology for Engineers CE480 Env Quality CE340 Intro to Env Engineering CE478 Solid Waste Management CE479 Water and Wastewater Processes CE481 Hazardous Waste Management</p> <p>And Two Env. Policy courses from list: EV225 Env, Tech, and Society LP371 Globalization LP391 Environmental Policy LP360 Environmental Ethics EV343 Environmental Lit and Policy EV428 Public Debate and the Environment EV430 Environmental Law EV360 Environmental Economics EV480 Env Philosophy Seminar LP350 The American West</p>

BEING A STUDENT

Professionalism

One adjustment to college is to think of yourself as a student – professional; a student who will be a professional engineering manager. Like any professional position, there are certain expectations that you must fulfill. The best way to meet these expectations is to keep on top of things; do not let yourself fall behind.

Also, go to classes prepared; have all your work and reading done, and have questions ready. Participate in the discussions, practice the problems the professors assign, and push yourself to do your best. Make the best of every opportunity presented to you. You are building the base for your professional career; build a strong base.

The professors may not always cover in class everything you need to know, so study beyond the lecture. You will find that the professors are more like guides, and you have to be both the teacher as well as the student more than you had to in high school. That is not saying they do not want to help or teach; they are just forcing you to take a stronger part in your education. They are preparing you for the professional world, where there are no obvious teachers. For you to compete successfully with your peers once you enter the work-force, you need to achieve a basic level of competence in many areas. Many courses build upon other courses to achieve this basic level. Therefore, it is essential that certain topics are covered in courses to ensure your ability to compete successfully. By completing the required courses in the School of Business and Engineering, you will obtain a strong background for your chosen area of study. Through the selection of elective courses, backgrounds in more specific areas of Business and Engineering (i.e., a minor, concentration or track) can be obtained.

Near the end of each semester your professors will give you a “course evaluation form” to fill out. Your constructive comments regarding the course and the professor are taken seriously. Each professor’s salary increases, tenure, and promotion are influenced by the information on the course evaluation forms.

In addition to your evaluations, there is constant peer review of faculty in our School. The review consists of evaluations by other faculty who sit in on classes to evaluate the teaching abilities of the faculty member under review. Reports from these reviews are used to evaluate the teaching abilities of the faculty member under review. Reports from these reviews are used as a basis to improve teaching performance, if necessary.

Code of Ethics

Clarkson values personal integrity. Matriculation at Clarkson carries with it the obligation that a student will not claim as his or her own, the work of another, or any work that has not been honestly performed, will not take any examination by improper means, and will not aid and abet another in any dishonesty.

Violations of the Code of Ethics are regarded as most serious offenses and render the offenders liable to severe disciplinary action. Alleged violations of the Code of Ethics are dealt with according to the section of the Academic Integrity Committee found in “Clarkson’s Regulations.”

ADVISING

Your academic advisors for your studies in iE&M are:

Andréa Severson, BH Snell 117, aseverso@clarkson.edu, 315-268-6579

Dr. Amy K. Zander, BH Snell 121, zander@clarkson.edu, 315-268-3849

Advisor – Student Relationship

You may visit with your academic advisor at any time. Be sure to e-mail or call ahead for an appointment, so they can be prepared for your meeting.

What is the Advisor’s Responsibility?

Your advisor is here to help you. Help may include career advice, help in choosing courses, or assistance dealing with personal difficulties. Your advisor will meet with you during course selection week. The advisor prepares for these meetings by knowing the curricular requirements. That means knowing substitute courses, course options available, and the best courses for certain areas of interest. Finally, the advisor must know you, the student. Knowing your goals and interests will help her to suggest courses that suit you and your academic interests. After discussing your courses your advisor will sign your course selection form.

What is the Student’s Responsibility?

Completion of the necessary requirements for the degree falls to the student. You are responsible for knowing and completing all graduation requirements for the program. You are responsible for registering for courses each semester and attending and completing the coursework.

It is your responsibility to seek assistance whenever you are unsure or uncertain about the answer(s) to any questions you may have concerning your academics. Always do this in a timely fashion as to not jeopardize your academic standing and meet any deadline, which may or may not be required. You can always meet with your advisor by calling ahead and making an appointment so that your advisor will be prepared for your meeting.

Be sure to seek help when you need it. There are a number of places to go for assistance.

Academic Help

Professor
Advisor
Academic Support Center
Teaching Assistant
Help Sessions

Personal/Social Help

Peer Counselor or R.A.
Student Development Center
Advisor
Student Life Office

CLARKSON SERVICES

Clarkson has a number of services for those seeking academic or personal help. These include:

Student Administrative Services Center (SAS)

The Student Administrative Services Center (SAS) combines the activities of the Bursar's, Registrar's, and Financial Assistance Offices and is located in the central area of Cuble-Reynolds and Ross-Brooks dormitory. **This office can be contacted at 268-6451.**

Each student is assigned to one representative based on the student's last name. Therefore, students have one person to whom they can turn for most of their administrative needs. If there is a need to contact SAS, students and their parents should ask to speak with their student services representatives.

If your last name

begins with the following ...

A - Ck

Cl - Gh

Gi - K

L - Nf

Ng - Sl

Sm - Z

ask for or send e-mail to:

Mary Jones

jonesm@clarkson.edu

Gerri Snyder

snyderg@clarkson.edu

Tina Martin

martint@clarkson.edu

Barbara Russell

russellb@clarkson.edu

Sue Jones

jonessd@clarkson.edu

Diane Stone

stonedm@clarkson.edu

Student Support Services (SSS)

The Academic Support Center located in Price Hall (2nd floor, Ormsby entrance) offers services related to educational development, tutoring, student support and accommodations for people with disabilities. Seminars are offered on topics such as time management, stress control, study strategies, reading improvement, etc. For appointments or further information call 268-2209/3881.

The Counseling Center (2nd floor of Price Hall, Thomas entrance) offers personal counseling. Issues that are addressed include understanding your personality, relationships, stress control, alcohol and drug awareness, dealing with shyness, depression and many other personal concerns. For appointments or further information on this service call 268-2327.

International Student Advising

International student advising is available in Price Hall, 2nd floor (Thomas entrance). The service includes orientation and special advising concerning such topics as: visa status requirements, and work regulations, for example. For further information on this service or appointments call 268-7970/2327.

Extracurricular Activities

Potsdam offers many extracurricular activities. The Associated Colleges of the St. Lawrence Valley publishes a calendar of "Special Events" every month.

Drop/Add Course Instructions and Tips for using PeopleSoft

Amending Schedules the First 2 Weeks of the Semester through PeopleSoft

During the first 2 weeks of class a student can drop and add courses on-line using PeopleSoft. Keep in mind that students whose academic program falls below 14 credit hours are ineligible for academic honors (i.e. Dean's List). In addition, students that fall below 12 credit hours will not be considered full-time which may impact health insurance and/or financial assistance.

PeopleSoft schedule change acceptance criteria:

- ✓ All holds on the student's PeopleSoft account have been released
- ✓ When applicable, there is a current PeopleSoft Enrollment Appointment
- ✓ The class is open
- ✓ All pre-requisites or co-requisites have been met
- ✓ There are no time conflicts
- ✓ Instructor approval/permission is not necessary
- ✓ Credit hours do not exceed 19

Before attempting any changes, it would be beneficial to review the glossary of terms and enrollment tips included in this document.

Adding Classes (on-line)

1. Log on to PeopleSoft. Select PeopleSoft located in the left margin of the my.clarkson.edu page, then select Student Self-Service. The log-in page will appear next. Enter your User ID and Password.
2. Select Academics.
3. Select Enroll in a Class.
4. Select the current term.
5. Select Add Classes.
6. Enter the 4-digit class number for each class that you wish to add. If you don't have the number, you can do a search by selecting the Magnifying Glass next to the Class Number box. Be sure the class entered is an enrollment component – a credit bearing course.
7. The Class Enrollment Options page will automatically appear if there are any related components (such as a lab/discussion). In the designated box, enter the course number of the related component section that fits your schedule. If you are not sure of the meeting times, select the magnifying glass to choose from the available sections. Once a selection has been made, select OK at the bottom of the page to return to the Enroll in a class page. If there is only one related component section offered, enrollment will be done automatically and the Enrollment Options Page will not appear.
8. The Class Enrollment Options page is also used to enter permission numbers for any course that you have obtained special permission to take. If the page does not come up automatically, select the course number in the Subject/Catalog field on the Enroll in Class Page. The Class Enrollment Options page will appear. Enter the permission number in the designated box and select OK at the bottom of the page to return to the Enroll in a Class page.
9. The Enrollment Options page will also appear automatically if you are enrolling in a variable credit course. Use the designated box to alter the credit hours (the default is set to 1 credit hour). Select OK at the bottom of the page to return to the Enroll in a Class page.
10. The Add Status field on the Enroll in a Class page will read Pending until you hit Submit.
11. After reviewing your changes select Submit.

12. Check the Add Status fields to ensure each of your actions have been processed. If the status field indicates an error, then select it to learn more. If Status field says Success/Messages, the action was completed, however review the messages for more information (see Common Enrollment Messages).
13. If the chosen class section is full, select the Magnifying Glass next to the Class Number to see if any other sections are open. Consult with your advisor for additional course options.

Swapping Classes – Drops only if add is successful (on-line)

1. Log in and navigate to Academics (see Adding Classes instructions).
2. Select Enroll in a Class.
3. Select the current term.
4. Select Swap Classes.
5. In the box beside the class you wish to swap, enter the 4-digit Class Number that you wish to add; or find the class by selecting the Magnifying Glass next to the Class Number box.
6. If the class has a related component (i.e. lab or discussion), the Class Enrollment Options will automatically appear. Select the magnifying glass next to Related Component box to select a section, or enter the appropriate Class Number. If there is only one related section offered, enrollment will be done automatically and the Enrollment Options Page will not appear.
7. Hit OK on the bottom of the Class Enrollment Options screen to be returned to the Enroll in a Class screen.
8. Once back at the Enroll in a Class screen hit Submit.
9. Check the Add Status to ensure your action(s) have been processed. If status field indicates an error, then select it to learn more. If Status field says Success/Messages, the action was completed, however review the messages for more information (see Common Enrollment Messages).

Dropping or Updating Classes (on-line)

1. Log in and navigate to Academics (see Adding Classes for instructions).
2. Select Enroll in a Class.
3. Enter the current term.
4. At the bottom of the page select Drop/Update Classes.
5. Beside the class you are changing, select an enrollment action of Drop or Update *[we are not using Waitlist currently; Update will be used primarily to change credits for a variable-credit course.]*
6. When Update is chosen, the Class Enrollment Options page appears. Make all necessary changes and hit OK at the bottom of the page.
7. Back on the Enroll in a Class page, Hit Submit.
8. Check the Add Status to ensure your action(s) have been processed. If status field indicates an error, then select it to learn more. If Status field says Success/Messages, the action was completed, however review the messages for more information (see Common Enrollment Messages).

Amending Schedules after the First 2 Weeks of the Semester:

Must use an drop/add form

Dropping Classes

Students who wish to drop a class after the Drop Period (the first 2 weeks of the semester) can do so. The Extended Drop Period begins the 3rd week after the beginning of the semester and runs through the last day of class for that semester. During this time, students who wish to drop a class must complete a Drop/Add Form. A copy of a Drop/Add form is included within the forms section of this handbook. This form is available on the SAS website, at the SAS Office, or in your Advisor's Office. At the top of the form the appropriate term year, the students name, number, major(s), and local phone number must be entered.

The top portion of the form is to drop a class. The same information is required on the form as is required on PeopleSoft. The four digit Class Number, the Course Number, Section Number, and credit hours can be found in PeopleSoft, and on the SAS website in the Master Schedule of Courses. The Master Schedule is also available in paper at the SAS Office or in your advisor's office.

Once the course information has been recorded, the student must bring the form to the course instructor for his/her approval and signature. Once complete the student must bring the form to his/her advisor for approval to ensure there are no unforeseen repercussions to the student's degree progress. Upon approval, it will be the student's responsibility to deliver the signed form to SAS for processing.

Glossary and Enrollment Tips

Holds:

PeopleSoft will not allow enrollment if there are any Holds on a student's account. Enrollment is only possible when all holds have been removed. Contact the office noted on the Hold to determine what actions you need to take to resolve situation.

Navigation: Home > SA Self Service > Personal Portfolio > Home > Personal Portfolio>Holds

Enrollment Appointment:

Every semester before course selection, each student's PeopleSoft account is automatically assigned an academic Hold. In addition, each student also receives an Enrollment Appointment, a specific date and time, when he/she may begin enrolling in classes. Students can view their Enrollment Appointment on PeopleSoft (see navigation below). Before this appointment, every student must meet with his/her academic advisor to review his/her academic program and release the advisor Hold. After this is complete, the student may log on to their PeopleSoft account during their Enrollment Appointment - paying particular attention to the start date and time, as well as the end date and time – and begin enrolling in classes. Students will have the best chance of getting their classes when they enroll at the very beginning of their appointment time.

Navigation: Home>SA Self Service>Learner Services>Academics>View Enrollment Appointment.

Course Number:

The Course Number is the common departmental designator and number for a particular course. Example: EC151 = Principles of Macroeconomics.

Class Number:

The Class Number is 4-digit class number assigned to a particular class section for the current semester which can be found by looking in the printed or on-line Master Schedule of Courses. The Class Number can also be found on PeopleSoft when enrolling in a course by selecting the magnifying glass beside the Class Number box. This will provide a list of familiar Course Numbers to choose from. Upon selection, the corresponding Class Number will be automatically entered in the box.

Related Component:

Many classes have related components. Related components are those noncredit sections associated with a class offered for credit (ex. lab/discussion).

Master of Schedule Courses:

The Master of Scheduled Courses, a listing of all courses being offered for the semester, is available in several places.

PeopleSoft Navigation: Home > SA Self Service > Learner Services > Catalog >View Schedule of Classes

SAS Web page: <http://www.clarkson.edu/sas/master/>, then select the semester and Master Schedule.

Written: booklets are available with your advisor, in SAS, and at the Cheel Information Desk

Open Classes:

Check for available classes in to PeopleSoft.

Navigation: Home > Self Service > Course Catalog and Schedule > View Schedule of Classes.

Enter the number for the current term (use the magnifying glass if assistance is needed). Enter the Course Number in the next 2 boxes (i.e. MA – 1st box, 131 – 2nd box). This will return any open sections. Look for the number next to “Available” to see how many seats are open.

Closed Classes (closed, full or not offered):

Many courses are not offered every semester or can close quickly when they are offered.

Consequently, be prepared to look for alternatives (another section or another course altogether). This may require rearranging other classes, too. If this is a required course for this semester, seek guidance from your advisor.

Submit:

On PeopleSoft, when Submit is selected all changes on a student’s account are processed.

During course enrollment, if adding all class selections at once yields several enrollment errors upon submission, it may be easier to enter one course at a time in order of importance. Doing so will reduce the confusion. Note, however, if any classes have a co-requisite (a class that must be taken during the same semester) that class must be entered first or simultaneously.

View Results:

View your results to ensure all updates have been made correctly

- Select the View My Schedule link at the bottom of the page **OR**
- Return to Term Search; Return to Academics and select View My Weekly Schedule

SAS Assistance:

If students have questions, or are just not clear regarding the enrollment process, they should go to SAS for assistance. SAS can walk you through the process from beginning to end. Do not delay, because class selections are limited. Invest the time to understand the system and how it works, and you will find greater success in the future.

Common Enrollment Messages

Success/Messages means the enrollment was successful, but there is one or more of the following messages that should be reviewed:

Message: Repeatable Limit

This indicates that this course has been taken previously. Some courses (i.e. directed study) may be taken multiple times; however, most courses may only be repeated if a student received a grade of D+, D or F.

Required Related Class

Many classes include more than one component (lecture, lab or discussion). One must enroll in all components. After selecting the enrollment component (the credit bearing component) on the Enroll in a Class page, enter the related component (the noncredit bearing component) on the Class Enrollment Options page that is presented. *Note, in many cases you will be automatically enrolled in the related component if there is only one section.*

The enrollment limit has been reached

The class is full. Some classes may appear to have seats available, but the class is full because seats have been reserved for students in specific majors.

Combined Section is Full

In some instances, two departments offer the same class and advertise it with their own designator. For example, Organizational Behavior is offered in both the School of Business and the School of Arts and Sciences – OS286 and PY286 respectively. While it may appear to have seats available, enrollment in both courses is added to determine if the class has reached capacity.

Requisites Not Met

This class has required pre-requisites or co-requisites, or possibly enrollment requisites specific to the class (for example ES100 where sections are tied to certain majors). To determine what requisites exist, go to the PS Catalog:

Home > SA Self Service > Learner Services > Catalog > View Course Catalog

Class Outside the Career of Study

Undergraduates cannot enroll in graduate level classes without permission from the instructor.

Multiple Enrollments Not Allowed

Students can only enroll in a class once for the term.

Maximum Term Unit Load Exceeded

Students can only enroll in the number of credit hours listed in his/her enrollment appointment. If a student would like to take additional credit hours he/she must meet with his/her academic advisor and SAS. A typical academic load is 19 credits hours for undergraduates.

Minimum Term Units

Students cannot drop below full-time credits, typically 12 credits for undergraduates. Seek guidance from your academic advisor and/or SAS to avoid academic program and financial assistance and insurance problems.

Guidelines for Completing Courses at Other Colleges/Universities

Where to Start?

Students interested in taking courses at another college/university must first consider **where** the course(s) will be taken, **how many** courses will be taken, and **what** classes they want to take. Once these items are addressed students have clear guidelines to follow.

Cross-Registration within the Associated Colleges of St. Lawrence Valley:

Cross-registering gives students an opportunity to expand the depth and variety of their academic program. Full-time Clarkson students interested in taking courses at SUNY Potsdam, SUNY Canton or St. Lawrence University can cross-register for up to 2 courses in an academic year (including summer) **as part of Clarkson's normal tuition**. Clarkson considers full-time to be a minimum of 12 credit hours in the fall/spring semesters and 6 credit hours any one summer session. Students can register for up to 19 credits without getting charged extra.

If you are interested in cross registering, first check with your advisor to ensure that the class you have selected will count towards your academic program. You must then seek the permission of the professor teaching the course at the other institution. You can do this via e-mail, phone or visit. You must complete a cross registration form which will require the professor's signature (an e-mail verification will suffice as a signature) and that of your advisors. Once your paperwork has been filed with SAS, your class will be registered as though you are taking a Clarkson course. The grade does transfer and will become part of your GPA calculation.

For complete Cross-Registration Regulations and application forms visit the Student Administrative Services (SAS) website: select Associated Colleges from the menu and look for the Cross-Registration link. A sample application form is also provided in this handbook.

Off-Campus Permission Form:

Students studying abroad or those interested in taking courses on a part-time basis at another campus can do so by completing an Off-Campus Permission form. A sample form is provided in this handbook under the important forms section.

Off-Campus Permission forms are available on the SAS website (under Forms) and in most academic offices. Students complete sections 1, 2 and 3, and should sign their name in section 5. One form must be completed for each course a student is taking off campus and a course description from the chosen school's catalog or website must be attached.

Students taking a Business Course off-campus must have the course approved by the Associate Dean of Business. Drop the form off with your advisor for this approval. Students taking a non-business course must have their form approved by the Clarkson department that offers a similar course (i.e. a statistics course must be approved by Clarkson's Math & Computer Science Department). This is necessary to ensure courses are equivalent in level/rigor to those offered by Clarkson. Once approved by the appropriate department, the form is brought to the student's academic advisor.

It is the student's responsibility to request an official transcript from the school attended and to confirm its receipt in SAS. Upon receipt, SAS will post transfer credit hours to a student's record for any course passed with a grade equivalent to Clarkson's "C" grade or higher.

However, SAS will record a grade of "T" to indicate that the course was taken at another academic institution and, therefore, the course will not be used in computing the student's GPA. To clarify, no letter grades will be transferred or appear anywhere in Clarkson's records.

CUSB Transfer Credit Criteria:

Clarkson's School of Business has specific criteria it uses to determine what transfer credit will be accepted. Please review the following list with your advisor before completing any Off-Campus Permission forms or enrolling in any courses off-campus.

Business courses at the 100 or 200 levels will be accepted from nearly any 2 or 4 year college or university.

To receive transfer credit for EM/AC205 - Introduction to Accounting for Decision Analysis, an equivalent course must be a blend of both Financial and Managerial Accounting. At many schools this requires two separate courses (Financial Accounting and Managerial Accounting).

Business courses at the 300 level or higher must be taken at a 4-year institution accredited by The Association to Advance Collegiate Schools of Business (AACSB). To obtain a listing of accredited schools visit the AACSB website:

<http://www.aacsb.edu/accreditation/accreditedmembers.asp>.

Individual courses for which there are no Clarkson equivalents will be evaluated on a case by case basis. If accepted, the course will appear on a student's transcript with either 001 or 002 after the course designator (ex. AC001).

001 identifies that no comparable class existed, but this could be used as a free elective in iE&M

002 identifies that no comparable class existed, but the course satisfies a curriculum requirement

Any other questions regarding transferring credit should be directed to your advisor.

Forms and Procedures (From the Perspective of the Student):

Off Campus Forms

- Student must obtain a course description from the off-campus university
- Take off-campus form and copy of course description to chair of department of course:

Business	Katherine Wears (or through your advisor)	Snell 329
Engineering	Dr. John Moosbrugger	CAMP 102
Lib. Arts	Dr. Dan Bradburd	Snell 267
Physic	Dr. David Wick	Science Center 251
Chemistry	Dr. Jim Peploski	Science Center 223
Science (other)	Dr. Peter Turner	Snell 305B
- See Andr ea Severson (Dr. Zander) with signed form and course description

Study Abroad

- Student must go to the Study Abroad office and see Barbara Brown-Shor (ERC 154) FIRST.
- Get course descriptions for the classes you will take at the university while abroad and complete off-campus permission forms for each
- Have forms signed by Ms. Brown-Shor
- Bring forms to Andr ea Severson for signature
- Take forms back to Study Abroad office

Co-Op

- See Barbara Brown-Shor in the Co-op/Study Abroad office (ERC 154)
- Bring paperwork to Andr ea Severson so she can assist in course planning
- Take paperwork to SAS representative for signature
- Then return all paperwork to Co-op office

Minor

- Student must take form to chair/director of program in which they wish to minor

Biology	Dr. Edward Moczydlowski	Science Ctr 155
Chemistry	Dr. Phillip Christiansen	Science Ctr 123
Comp Sci/Math	Dr. Peter Turner	Snell 305B
Communications	Dr. Bill Karis	Snell 165
Humanities/Soc.Sci	Dr. Dan Bradburd	Snell 267
Physics	Dr. David Wick	Science Ctr 251
Psychology	Dr. Bob Dowman	Science Ctr 173
Engineering	Dr. John Moosbrugger	CAMP 102
Law Studies	Katherine Wears	Snell 329
- Get copy of courses required to fulfill minor
- Bring paperwork back to Andr ea Severson for signatures

Cross Registration

- Take cross registration form to 1st day of class, or directly to professor to obtain permission and signature
- If the course is to replace a required course in your program, also complete an off-campus permission form
- Bring form to Andr ea Severson (no course description required)

Drop/Add

- Fill out top of form, and course information
- See instructor or department chair of the course
- Bring form to Andr ea Severson for signature

Degree Information

Double Majors/Dual Degrees/Second Degrees

1. A single Clarkson bachelor's degree with a double major is awarded when the student satisfies all curricular requirements for two bachelor's degree programs but does not qualify for a second degree or dual degree. A double major degree requires completion of all requirements for both programs prior to graduation.
2. A dual degree (that is, the simultaneous awarding of two Clarkson bachelor's degrees) is noted on a student's transcript when the student:
 - a. satisfies all degree requirements for at least two different Clarkson bachelor's degree programs,
 - b. has a minimum of 150 credit hours, including at least 30 credit hours unique to each program, and
 - c. the relevant academic deans, in consultation with the department heads or directors of the degree programs, judge the two degree programs to establish competencies in two essentially different areas.
3. A second bachelor's degree (that is, the non-simultaneous awarding of two Clarkson bachelor's degrees) is awarded when the student:
 - a. applies for readmission as a second degree candidate by sending a letter requesting readmission to the Student Administrative Service Center,
 - b. has a minimum of 150 credit hours, including at least 30 credit hours unique to each program,
 - c. has a minimum of 12 credit hours in residence after the semester in which all requirements of the first degree program were satisfied, with at least 6 credit hours of this work consisting of upper-division courses in the second degree program, and
 - d. receives the two degrees at two different commencements, with the portion of the work completed in residence after the awarding of the first degree.

Within 6 Hours

Students within 6 credit hours of meeting all graduation requirements may participate in commencement, and may finish course work off-campus. However, the off-campus permission forms must be completed and approved by the iE&M Director.

Classification of Students

- A student must complete at least 24 credit hours for Sophomore status.
- A student must complete at least 54 credit hours for Junior status.
- A student must complete at least 84 credit hours for Senior status.

Advance Placement/Transfer Credit

Advanced Placement or transfer credit can be granted to you. For further information and to get the credit applied to your transcript you need to contact a representative in the Student Administrative Services Center (SAS). It is best to do this as soon as possible in your first year.

Transfer credit from another college or university is also handled through the SAS Office. Before taking a course at another university, the Off-campus Course Work Permission form must be filled out.

CAREER CENTER

<http://www.clarkson.edu/career/>

Inventory your interests and build a career that you enjoy. Talking to your faculty mentor or advisor is a good way to see what is out in the work world. Many faculty have held industrial positions before entering teaching, or are working for industry or government as a consultant or researcher. If you are undecided about what major to choose, stop by the Career Center and inquire about their career tests. These will help you inventory your interests and choose a career path.

Make contact with the staff of the Career Center in the ERC during your first semester at Clarkson to find out what they can do for you. Also, attend the Career Fairs held at Clarkson each fall and spring semesters. Many company representatives and alumni attend the Clarkson Fairs. It is a great opportunity to learn about the opportunities available. You can inquire about internship and Co-op positions.

Clarkson offers programs to broaden your college experiences. Both the Cooperative Education and Study Abroad Programs require a student to be off campus for at least one semester. Participation in either of these programs requires that you have at least a 2.5 cumulative GPA for the Co-op Program and a 3.0 for the Study Abroad Program(s). Be certain to research curriculum requirements and speak to your advisor so that you can plan when a co-op or study abroad will best fit your schedule.

Cooperative Education Program (Co-op)

The Cooperative Education is a good way to get practical experience by working for a company for one semester (and possibly the summer months). To find out more about this program contact the Co-op Office located in the Career Center of the ERC Building. Please take note that written approval from iE&M is required before a student leaves on Co-op.

Study Abroad

Some students, usually in their junior year, participate in exchange programs that Clarkson has with universities in Australia, Sweden, England, Italy, France, Austria, New Zealand, Mexico, Germany, Hong Kong, Korea and Spain. To find out more details, contact the Career Center. The total number of credits transferred to Clarkson will not exceed 15. Students are expected to apply for study abroad through the Career Center during their sophomore year with the expectation to study abroad during their junior year. Prior to departure, an Off-Campus Course Work Permission form must be completed and approved for each course. In addition, “*Good Standing*” status is a requirement. For more information, visit the study abroad website at: http://www.clarkson.edu/career/student_resource/studyabroad.html

Resume, Internship and Job Search

The CC staff is very helpful and qualified to assist you with writing and designing your resume. It is wise to stop by early on in your college career to find out how to begin building the credentials for your resume. The CC can also help you with strategies and contacts for finding internships, co-ops and jobs. Their office also conducts mock interviews upon request.

Companies That Have Hired iE&M Majors In Recent Years

ABB Services	Johnson & Johnson
Accenture	Kaman Industrial Tech.
Action Automation	Kiewit Construction
Active Industries	Kodak Group
Advance Testing	LaCorte
Advanced Pneumatics	Lockheed Martin Corp.
ALCOA	Lutron
American Infrastructure	Makino
American Power Conversion	Manhattan Associates
Amphenol	MATCO Electronics
Anheuser-Busch	MetLife
Apple Computers	Mitten Fluidpower
Applied Industrial Tech.	MWH Americas
Arrow Electronics	Newark-in-One
AVNET	Northwestern Mutual Life
Bath Iron Works	NY Air Brake
Bausch & Lomb	Nyrock Machine Tool
Borg Warner	O'Brien & Gere
Brooker Engineering	Otis Elevator
Burt Process Equipment	Pacific Scientific
UTC (Carrier, Pratt & Whitney, Otis)	Panduit
Chemung Contracting	Parametric Tech.
Cives Steel	Parker-Hannifin
Cooper Industries	Phillip Morris
Corning, Inc.	Portsmouth Naval Shipyard
Cooper-Crouse Hinds	Price Waterhouse
Cutler-Hammer	Proctor & Gamble
Danaher Tool Group	Ralph W. Earl
Danfoss	Ranpak
Draper & Associates	Raymond
Dresser-Rand	Robson-Woese
Emerson Power Transmission	Rockwell Automation
Ernst & Young	Sager Electronics
Eveready	Saint Gobain-Norton Abrasives
Fastenal	Sensata Technologies
Frito-Lay	Siemens Building Technologies
Future Electronics	ST Microelectronics
General Dynamics	Suffolk Construction
General Electric (multiple business units)	TAC Americas
Goodyear	TECO Westinghouse
Goulds Pumps Inc.	Toomey Inst.
Grace Performance Chemicals	Torrington Corporation
Graham Manufacturing	Trane
Grainger	TTI
Grinnell	Tyco Industries
HADCO	UCAR Carbon
Harris Corp	United McGill
Hippotronics	US Army Corps of Eng.
Honeywell, Inc.	US Navy
Hubbell	US Patent & Trademark Office
IBM	WW Grainger Industrial Supply
Ingersoll-Rand Co.	Welch Allyn
ITT	Wyeth Ayerst
Johnson Controls Inc.	

SOCIETIES AND ACTIVITIES

Activities

Students take an active interest in their environment and have traditionally sought leadership positions throughout the campus community. The student directory, newspaper (the Integrator), and the Activity Fair can give you a complete picture of what activities are available.

American Society of Engineering & Management Society (ASEM)

- The iE&M Society is open to all students.
- The iE&M Society brings speakers, typically Alumni, on campus to discuss careers open to graduates. These meetings are excellent opportunities to gain insight into the type of career you may be interested in.
- Notices of upcoming meetings are emailed to all iE&M students. Watch for them.

Sigma Tau Iota

- Sigma Tau Iota is the Program Honorary Society. It is dedicated to serving and strengthening the growth and goals of the Program.
- The Society is open to junior and senior students with a 3.0 cumulative GPA or better, and who have been in the program for two semesters or more.
- Induction ceremonies are held once each year.

Awards and Scholarships

The Interdisciplinary Engineering and Management Program honors several deserving students each year with the following awards:

Extracurricular Activity Award
Joseph Scaturro Endowed Scholarship
Charles T. Mosier '72 Memorial Scholarship
Richard Brady '82 Legro Memorial Endowed Award
STAFDA Junior Award
STAFDA Senior Award

REFERENCES

Clarkson Undergraduate/Graduate Catalog –
http://www.clarkson.edu/catalog/documents/2008_09_catalog.pdf

Clarkson University Regulations – Contains academic and social regulations and the official policy statements of the University. You should be familiar with this pamphlet. The Dean of Student's Office maintains responsibility for University regulations. Any questions should be directed there. <http://www.clarkson.edu/studentaffairs/regulations>

Register of Courses – Lists titles and descriptions of current courses available at Clarkson.
<http://www.clarkson.edu/sas/master/documents/coursesjuly08.pdf>