Drexel University

Catalog 2005 / 2006

Table of Contents

The Richard C. Goodwin College of Professional Studies Undergraduate Programs

The Richard C. Goodwin College of Professional Studies

The mission of the Goodwin College of Professional Studies is to provide contemporary students with an academic foundation and practical education for their professional and personal advancement. The College is dedicated to scholarly activities and to educating students by means of programs delivered by committed faculty through creative and effective teaching/learning methods.

The Goodwin College (formerly known as the Evening College) has been recognized as a leading institution for adult and nontraditional learners since its inception. During its long history it has provided part-time students the opportunity to pursue baccalaureate degrees, by taking courses during the evening, in more than 20 different disciplines. In 1989 the Association of Continuing Higher Education honored the College for more than 50 years of outstanding achievement in the field of adult education.

Changing needs among adult and traditional students are driving new trends in higher education, and new societal needs have reshaped what was once the sole mission of the College. Today the College serves full-time and part-time students, traditional and non-traditional learners. Offering for-credit and non-credit courses and programs, it also serves corporations at their sites and students at remote locations through wireless technology.

The College also provides a range of continuing adult and professional education programs, certificates of proficiency, licensing and certification test preparation, and customer contracted training. The College abides by the continuing education unit (CEU) criteria for quality education.

The Richard C. Goodwin College of Professional Studies

Students can pursue studies leading to a baccalaureate degree in the following nine majors:

- Architecture
- Applied Engineering Technology
- Construction Management
- Communications & Applied Technology
- Culinary Arts
- General Studies
- Hospitality Management
- Industrial Engineering
- Sport Management

Degree requirements
Requirements for Goodwin degrees are provided by individual programs according to the requirements for each major, which are set forth in subsequent pages. The minimum number of credits required for the degree of Bachelor of Science varies from one program to another. All graduating students, regardless of the program, must have earned a grade point average of 2.0 or higher for all coursework undertaken at Drexel University.

Writing-Intensive Course Requirements
In order to graduate, all students beginning with the entering class of Fall 2002 must pass three writing-intensive courses after their freshman year. Two writing-intensive courses must be in the student's major. The third can be in any discipline. Students are advised to take one writing-intensive class each year, beginning with the sophomore year, and to avoid “clustering” these courses near the end of their matriculation. Transfer students need to meet with an academic advisor to review the number of writing-intensive courses required to graduate.

A "WI" next to a course in this catalog indicates that this course can fulfill a writing-intensive requirement. Departments will designate specific sections of such courses as writing-intensive. Sections of writing-intensive courses are not indicated in this catalog. Students should check the section comments in Banner when registering. Students scheduling their courses in Banner can also conduct a search for courses with the attribute "WI" to bring up a list of all writing-intensive courses available that term. For more information on writing-intensive courses, see the Drexel University Writing Program's Writing-Intensive Course page.

The Richard C. Goodwin College of Professional Studies

The College offers several degree completion options to students with busy schedules or wishing to complete previous studies.

Accelerated Degree Programs
These programs are designed for people who already have earned an associate's degree or equivalent and for working adults and professionals. The types of programs available are listed below:

- Corporate onsite degree completion
- Saturday Scholars Degree Completion Program

Part-time Evening Studies
The College offers several partnership programs with other colleges and schools at the University. These degree programs are housed in the respective day departments, and are offered in the evening for students who cannot attend classes during the day. Most degree course requirements are offered in the day and in the evening. Detailed program descriptions and curriculum requirements may be found by exploring the links below.

- Arts and Sciences
- Engineering
- Business
- Information Technology

Off-site Programs
The Goodwin College brings high quality Drexel courses and faculty members to your facility, offering your employees an exceptional and convenient education. Through Drexel, companies may choose to offer their employees programs and certificates at their place of work. The College works seamlessly with organizations to provide the support and training that their employees want and that management needs in order to maintain a competitive edge in their industry.
A Drexel education is a benefit that makes sense for both employers and employees. It enhances an organization's reputation, improves employee retention rates, and makes for a skilled and talented workforce.
Visit http://www.drexel.edu/goodwin/ for more information.

Drexel University and Burlington County College (BCC) programs
Drexel University and Burlington County College (BCC) have joined together to create a unique educational opportunity: Drexel at BCC. This partnership enables BCC students to earn a bachelor's degree from Drexel University while remaining on BCC's Mount Laurel campus. Currently available programs include:

- Applied Engineering Technology
- Computing Technology
- Construction Management
- Hospitality Management

For more information, visit the Drexel at BCC web site.

Architecture

The Part-Time Evening Program

The Part-Time Evening Program leads to a Bachelor of Architecture degree. The course of study usually takes seven years to complete, but students with transfer credits in studio design can accelerate their program. Since all courses are offered in the evening, students are expected to supplement their academic work with full-time employment in architectural offices. Please contact the Department of Architecture at 215-895-2409 for further information.

Architecture: Part-Time Evening Program

Bachelor of Architecture Degree: 209.0 credits.

Degree Requirements

Required courses

General education requirements		Credits
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
MATH 181	**Mathematical Analysis I**	3.0
MATH 182	**Mathematical Analysis II**	3.0
MATH 183	**Mathematical Analysis III**	3.0
PHYS 182	**Applied Physics I**	3.0
PHYS 183	**Applied Physics II**	3.0
PHYS 184	**Applied Physics III**	3.0
	Humanities and social science electives	9.0
	Free electives	12.0

Departmental requirements		Credits
ARCH 111	**Studio 1-1**	3.0
ARCH 112	**Studio 1-2**	3.0
ARCH 113	**Studio 1-3**	3.0
ARCH 121	**Studio 2-1**	3.0
ARCH 122	**Studio 2-2**	3.0
ARCH 123	**Studio 2-3**	3.0
ARCH 231	**Studio 3-1***	3.0
ARCH 232	**Studio 3-2**	3.0
ARCH 233	**Studio 3-3**	3.0
ARCH 241	**Studio 4-1**	4.0
ARCH 242	**Studio 4-2**	4.0
ARCH 243	**Studio 4-3**	4.0
ARCH 351	**Studio 5-1**	4.0
ARCH 352	**Studio 5-2**	4.0
ARCH 353	**Studio 5-3**	4.0
ARCH 361	**Studio 6-1***	4.0
ARCH 362	**Studio 6-2**	4.0

ARCH 363	**Studio 6-3**	4.0
ARCH 496	**Thesis I**	8.0
ARCH 497	**Thesis II**	8.0
ARCH 498	**Thesis III**	8.0

*Prior to taking this course student must meet the Department of Architecture's minimum studio advancement requirements. See the Department's Advising Guidelines web page page for more details.

Required professional courses		**Credits**
ARCH 14I	**Architecture and Society I**	3.0
ARCH 142 WI	**Architecture and Society II**	3.0
ARCH 143 WI	**Architecture and Society III**	3.0
ARCH 150	**Introduction to CADD I**	4.0
ARCH 153	**Introduction to CADD II**	4.0
ARCH 155	**Basic Architectural Drawing**	3.0
ARCH 156	**Graphic Communication I**	3.0
ARCH 161	**Architectural Construction**	3.0
ARCH 261	**Environmental Systems I**	3.0
ARCH 262	**Environmental Systems II**	3.0
ARCH 263	**Environmental Systems III**	3.0
ARCH 321 WI	**General Lecture Series I**	3.0
ARCH 322 WI	**General Lecture Series II**	3.0
ARCH 323 WI	**General Lecture Series III**	3.0
CIVE 261	**Materials and Structural Behavior I**	3.0
CIVE 262	**Materials and Structural Behavior II**	3.0
CIVE 263	**Materials and Structural Behavior III**	3.0

History and theory electives		**12.0 Credits**
Three or four of the following courses		
ARCH 341	**Theories of Architecture I**	3.0
ARCH 342	**Theories of Architecture II**	3.0
ARCH 343	**Theories of Architecture III**	3.0
ARCH 344	**History of the Modern Movement I**	3.0
ARCH 345	**History of the Modern Movement II**	3.0
ARCH 346	**History of Philadelphia Architecture**	3.0
ARCH 347	**Summer Study Abroad (6 credits)**	6.0
ARCH 348	**Studies in Vernacular Architecture**	3.0
ARCH 441	**Urban Design Seminar I**	3.0
ARCH 442	**Urban Design Seminar II**	3.0
ARCH 499	**Special Topics in Architecture**	3.0

Professional electives		**Credits**
Any three of the following courses*		
ARCH 157	**Graphic Communication II**	3.0

ARCH 421 WI	**Environmental Psychology and Design Theory**	3.0
ARCH 431	**Architectural Programming**	3.0
ARCH 432	**The Development Process**	3.0
ARCH 435	**Management Seminar I**	3.0
ARCH 436	**Management Seminar II**	3.0
ARCH 451	**Advanced Drawing**	3.0
ARCH 455	**Computer Applications in Architecture I**	3.0
ARCH 456	**Computer Applications in Architecture II**	3.0
ARCH 461	**Technology Seminar I**	3.0
ARCH 462	**Technology Seminar II**	3.0
ARCH 465	**Energy and Architecture**	3.0
ARCH 499	**Special Topics in Architecture**	3.0
CIVE 400	**Structural Design I**	3.0
CIVE 401	**Structural Design II**	3.0
CIVE 402	**Structural Design III**	3.0
CIVE 464	**Acoustics and Noise Control in Buildings I**	3.0
CMGT 462	**Construction Management I**	3.0
CMGT 463	**Value Engineering II**	3.0
CMGT 363	**Estimating I**	3.0
PHTO 110	**Photography**	3.0
VSST 111	**Figure Drawing I**	3.0
VSST 202	**Multimedia: Space**	4.0
VSST 301	**Painting I**	4.0
VSST 311	**Sculpture**	4.0
	Other approved engineering courses	3.0

* History and theory electives can also be used to satisfy professional elective requirements.

Writing-Intensive Course Requirements
In order to graduate, all students beginning with the entering class of 2002/01 (fall, 2002) must pass three writing-intensive courses after their freshman year. Two writing-intensive courses must be in a student's major. The third can be in any discipline. Students are advised to take one writing-intensive class each year, beginning with the sophomore year, and to avoid “clustering” these courses near the end of their matriculation. Transfer students need to meet with an academic advisor to review the number of writing-intensive courses required to graduate.

A "WI" next to a course in this catalog indicates that this course can fulfill a writing-intensive requirement. Departments will designate specific sections of such courses as writing-intensive. Sections of writing-intensive courses are not indicated in this catalog. Students should check the section comments in Banner when registering. Students scheduling their courses in Banner can also conduct a search for courses with the attribute "WI" to bring up a list of all writing-intensive courses available that term. For more information on writing-intensive courses, see the Drexel University Writing Program's Writing-Intensive Course page.

Architecture

Bachelor of Architecture Degree: 209.0 credits

Part-time Evening Program

Recommended Plan of Study:

First year

(Fall)		Credits
ARCH 111	**Studio 1-1**	3.0
ARCH 155	**Basic Architectural Drawing**	3.0
ENGL 101	**Expository Writing and Reading**	3.0
(Winter)		
ARCH 112	**Studio 1-2**	3.0
ARCH 156	**Graphic Communication I**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
(Spring)		
ARCH 113	**Studio 1-3**	3.0
ARCH 161	**Architecture Construction**	3.0
ENGL 103	**Techniques of Analysis Evaluation**	3.0
(Summer)		
ARCH 150	**Introduction to CADD I**	4.0
	Total credits	31.0

Second year

(Fall)		Credits
ARCH 121	**Studio 2-1**	3.0
ARCH 14I WI	**Architecture and Society I**	3.0
MATH 181	**Mathematical Analysis I**	3.0
(Winter)		
ARCH 122	**Studio 2-2**	3.0
ARCH 142 WI	**Architecture and Society II**	3.0
MATH 183	**Mathematical Analysis II**	3.0
(Spring)		
ARCH 123	**Studio 2-3**	3.0
ARCH 143 WI	**Architecture and Society III**	3.0
MATH 182	**Mathematical Analysis III**	3.0
(Summer)		

ARCH 153	**Introduction to CADD II**	4.0
	Total credits	31.0

Third year

(Fall)		**Credits**
ARCH 231	**Studio 3-1***	3.0
PHYS 182	**Applied Physics I**	3.0
	Humanities or social sciences elective	3.0
(Winter)		
ARCH 232	**Studio 3-2**	3.0
PHYS 183	**Applied Physics II**	3.0
	Humanities or social sciences elective	3.0
(Spring)		
ARCH 233	**Studio 3-3**	3.0
PHYS 184	**Applied Physics III**	3.0
	Humanities or social sciences elective	3.0
	Total credits	27.0

*Prior to taking this course student must meet the Department of Architecture's minimum studio advancement requirements. See the Department's Advising Guidelines web page page for more details.

Fourth year

(Fall)		**Credits**
ARCH 241	**Studio 4-1**	4.0
ARCH 261	**Environmental Systems I**	3.0
CIVE 261	**Materials and Structural Behavior I**	3.0
(Winter)		
ARCH 242	**Studio 4-2**	4.0
ARCH 262	**Environmental Systems II**	3.0
CIVE 262	**Materials and Structural Behavior II**	3.0
(Spring)		
ARCH 243	**Studio 4-3**	4.0
ARCH 263	**Environmental Systems III**	3.0
CIVE 263	**Materials and Structural Behavior III**	3.0
	Total credits	30.0

Fifth year

(Fall)		**Credits**
ARCH 351	**Studio 5-1**	4.0
ARCH 321 WI	**General Lecture Series I**	3.0
	History/Theory elective	3.0
(Winter)		
ARCH 352	**Studio 5-2**	4.0
ARCH 322 WI	**General Lecture Series II**	3.0
	History/Theory elective	3.0
(Spring)		

ARCH 353	**Studio 5-3**	4.0
ARCH 323 WI	**General Lecture Series III**	3.0
	History/Theory elective	3.0
	Total credits	30.0

Sixth year

(Fall)		**Credits**
ARCH 361	**Studio 6-1***	4.0
	History/Theory elective	3.0
	Free elective	3.0
(Winter)		
ARCH 362	**Studio 6-2**	4.0
	Professional elective	3.0
	Free elective	3.0
(Spring)		
ARCH 363	**Studio 6-3**	4.0
	Professional elective	3.0
	Free elective	3.0
	Total credits	30.0

*Prior to taking this course student must meet the Department of Architecture's minimum studio advancement requirements. See the Department's Advising Guidelines web page page for more details.

Seventh year (Thesis)

(Fall)		**Credits**
ARCH 496	**Thesis I**	8.0
	Professional elective	3.0
(Winter)		
ARCH 497	**Thesis II**	8.0
	Free elective	3.0
(Spring)		
ARCH 498	**Thesis III**	8.0
	Total credits	33.0

Applied Engineering Technology

The Bachelor of Science (B.S.) degree in Applied Engineering Technology provides an integrated educational experience directed toward development of the ability to apply fundamental knowledge to the solution of practical technological problems.

All students enrolled in the program are required to take general education courses including mathematics, the sciences and liberal arts. During their sophomore year, students need to choose one of the three available concentrations, namely electrical, manufacturing, or mechanical engineering technology. These concentrations consist of core fundamental courses, technical electives, free electives and a three-term senior design project reflecting industrial practices.

The AET program distinguishes itself from traditional engineering programs by placing emphasis on the application of theory, by integrating most courses with laboratory experience, and by incorporating faculty with extensive industrial experience.

The AET program includes full-time and part-time enrollment options. Students pursuing the full-time option can opt for a four-year program with a six-month internship or a five-year program with an eighteen-month co-op period.

Applied engineering technology graduates are uniquely qualified to serve in a variety of functions requiring traditional and nontraditional technological skills. The program also prepares students for graduate study in a variety of fields including engineering management, business administration, and health technology.

Applied Technology

Dual Degree Program

The Goodwin College of Professional Studies offers a Dual Degree Program with Delaware County Community College (DCCC) leading to concurrent A. S. and B. S. degrees in appropriate areas of study.

Through a unique articulation agreement, students can earn a Bachelor of Science in Applied Engineering Technology from Drexel as well as an Associate of Applied Science Degree at DCCC in Automated Manufacturing/Robotics, Machine Tool Technology, or Mechanical Technology. Students will be enrolled at both Drexel and DCCC, working concurrently on both degrees.

As an added benefit to the Dual Degree Program, students can earn certifications recognized by industry and required by employers for entry into the workforce. DCCC currently offers four certificates of competency and one certificate of proficiency in advanced manufacturing. Each certificate program, usually completed in six months to one year, provides credits that automatically apply to a student's degrees.

For more information contact:

Goodwin College of Professional Studies
mknight@drexel.edu
215-895-0903

Delaware County Community College
Admissions Office
610-359-5050
admiss@dccc.edu

Applied Engineering Technology
Electrical Engineering Technology Concentration

Bachelor of Science Degree: 188.5 credits

Required courses

Humanities and social sciences requirements		**36.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
CIVE 240	**Engineering Economics**	3.0
COM 111	**Introduction to Corporate Communication**	3.0
COM 230	**Principles of Speech**	3.0
ECON 211	**Principles of Economics I (Micro)**	3.0
HIST 285	**Technology in Historical Perspective**	3.0
PHIL 315	**Engineering Ethics**	3.0
	Liberal studies electives	9.0

Basic Science requirements		**24.5 Credits**
CHEM 101	**General Chemistry I**	4.0
CHEM 102	**General Chemistry II**	4.0
CHEM 113	**Chemistry Laboratory I**	1.5
PHYS 182	**Applied Physics I**	3.0
PHYS 186	**Physics I-A**	2.0
PHYS 183	**Applied Physics II**	3.0
PHYS 188	**Physics II-A**	2.0
PHYS 184	**Applied Physics III**	3.0
PHYS 282	**Physics III-A**	2.0

Mathematics requirements		**17.0 Credits**
MATH 100	**Fundamentals of Mathematics**	4.0
MATH 110	**Precalculus**	3.0
MATH 121	**Calculus and Analytic Geometry I**	4.0
MATH 122	**Calculus and Analytic Geometry II**	4.0
STAT 261	**Statistics I**	3.0

Capstone course requirements		9.0 Credits
	AET 420A Project Design 1	3.0
	AET 420B Project Design 2	3.0
	AET 420C Project Design 3	3.0

Technical sciences requirements		16.0 Credits
CS 190	**Selected Computer Language**	3.0
MET 101	**Manufacturing Materials**	4.0
MET 380	**Special Topics: Introduction to AET 1**	3.0
MET 380	**Special Topics: Introduction to AET 2**	3.0
MET 380	**Special Topics: Introduction to Nanotechnology**	3.0

Technical specialty requirements		47.0 Credits
EET 201	**Circuit Analysis I**	4.0
EET 202	**Circuit Analysis II**	4.0
EET 205	**Digital Electronics**	3.0
EET 206	**Analog Electronics I**	4.0
EET 208	**Digital Electronics Laboratory**	2.0
EET 311	**Engineering Mathematical Analysis**	4.0
EET 313	**Signals and Systems I**	4.0
EET 317	**Analog Electronics II**	4.0
EET 319	**Programmable Logic Controllers**	4.0
EET 322	**Energy Conversion**	4.0
EET 323	**Electrical Systems Design**	3.0
EET 324	**Power Electronics**	4.0
EET 325	**Microprocessors**	3.0

Technical electives		18.0 Credits
Students select 18.0 credits from the following courses:		
EET 401	**Applied Micro-controllers**	3.0
EET 402	**Control Engineering**	3.0
EET 404	**Signals and Systems II**	3.0
EET 406	**Communications**	3.0
EET 407	**Power Systems**	3.0
EET 409	**Optical System Design**	3.0
MET 103	**Applied Mechanics**	4.0
MET 104	**Fluid Power**	4.0
MET 204	**Applied Quality Control**	3.0

Miscellaneous		2.0 Credits
UNIV 101	**The Drexel Experience**	2.0

Free electives	18.0 Credits

Recommended Plan of Study

BS Applied Engineering Technology

Electrical Engineering Technology

Bachelor of Science Degree — 5-yr co-op

Term 1		Credits
CHEM 101	General Chemistry I	4.0
ENGL 101	Expository Writing and Reading	3.0
CHEM 113	General Chemistry I Laboratory	1.5
MATH 100	Fundamentals of Mathematics	3.0
MET 380	Special Topics: Introduction to Applied Engineering Technology I	3.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*15.5*
Term 2		**Credits**
CHEM 102	General Chemistry II	4.0
ENGL 102	Persuasive Writing and Reading	3.0
MATH 110	Precalculus	3.0
MET 380	Special Topics: Introduction to Applied Engineering Technology II	3.0
PHYS 182	Applied Physics I	3.0
PHYS 186	Physics I-A	2.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*19.0*
Term 3		**Credits**
ENGL 103	Analytical Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 101	Manufacturing Materials	4.0
PHYS 183	Applied Physics II	3.0
PHYS 188	Physics 2-A	2.0
	Term credits	*16.0*
Term 4		**Credits**
COM 111	Introduction to Corporate Communication	3.0
MATH 122	Calculus II	4.0
EET 201	Circuit Analysis I	4.0
PHYS 184	Applied Physics III	3.0
PHYS 282	Physics 3-A	2.0
	Term credits	*16.0*
Term 5		**Credits**
HIST 285	Technology in Historical Perspective	3.0
EET 202	Circuit Analysis II	4.0
EET 311	Engineering Math Analysis	4.0
MET 380	Special Topics: Introduction to Nanotechnology	3.0
	Elective	3.0
	Term credits	*17.0*
Term 6		**Credits**
STAT 261	Statistics I	3.0
EET 205	Digital Electronics	3.0
EET 208	Digital Electronics Laboratory	2.0
EET 313	Signals and Systems I	4.0
	Elective	3.0
	Term credits	*15.0*

Term 7		Credits
ECON 211	**Principles of Economics I (Micro)**	3.0
PHIL 315	**Engineering Ethics**	3.0
CS 190	**Selected Computer Language**	3.0
EET 206	**Analog Electronics I**	4.0
EET 319	**Programmable Logic Controllers**	4.0
	Term credits	*17.0*
Term 8		**Credits**
COM 230	**Techniques of Speaking**	3.0
EET 317	**Analog Electronics II**	4.0
EET 322	**Energy Conversion**	4.0
EET 325	**Microprocessors**	3.0
	EET technical elective	3.0-4.0
	Term credits	*17.0-18.0*
Term 9		**Credits**
CIVE 240 WI	**Engineering Economics Analysis**	3.0
EET 323	**Electrical Systems Design**	3.0
EET 324	**Power Electronics**	4.0
	Two EET technical electives	6.0-8.0
	Term credits	*16.0-18.0*
Term 10		**Credits**
EET 114	**Distributed Systems**	4.0
	AET 420A Project Design I	3.0
	Elective	3.0
	EET technical elective	3.0-4.0
	Liberal Studies elective	3.0-4.0
	Term credits	*16.0-18.0*
Term 11		**Credits**
	AET 420B Project Design 2	3.0
	Elective	3.0
	EET technical elective	3.0-4.0
	Liberal Studies elective	3.0
	Term credits	*12.0-13.0*
Term 12		**Credits**
	AET 420C Project Design C	3.0
	Two electives	6.0
	Liberal Studies elective	3.0
	Term credits	*12.0*

	Total credits (minimum)	**188.5**

Applied Engineering Technology
Manufacturing Engineering Technology Concentration

Bachelor of Science Degree: 186.0 credits

Required courses

Humanities and social sciences requirements		**36.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
COM 111	**Introduction to Corporate Communication**	3.0
COM 230	**Principles of Speech**	3.0
ECON 211	**Principles of Economics I (Micro)**	3.0
ECON 212	**Principles of Economics II (Macro)**	3.0
HIST 285	**Technology in Historical Perspective**	3.0
PHIL 315	**Engineering Ethics**	3.0
	Liberal studies electives	9.0

Basic Science requirements		**23.0 Credits**
CHEM 161	**General Chemistry I**	3.0
CHEM 162	**General Chemistry II**	3.0
CHEM 164	**Chemistry Laboratory IA**	3.0
PHYS 182	**Applied Physics I**	3.0
PHYS 186	**Physics I-A**	2.0
PHYS 183	**Applied Physics II**	3.0
PHYS 188	**Physics II-A**	2.0
PHYS 184	**Applied Physics III**	3.0
PHYS 282	**Physics III-A**	2.0

Mathematics requirements		**18.0 Credits**
MATH 279	**Special Topics in Mathematics: Advanced Algebra**	3.0
MATH 279	**Special Topics in Mathematics: Trigonometry**	3.0
MATH 110	**Precalculus**	3.0
MATH 184	**Calculus and Analytic Geometry I**	3.0
MATH 185	**Calculus and Analytic Geometry II**	3.0

STAT 261	**Statistics I**	3.0
STAT 262	**Statistics 2**	3.0

Capstone course requirements		**9.0 Credits**
	AET 320A Project Design 1	3.0
	AET 320B Project Design 2	3.0
	AET 320C Project Design 3	3.0

Technical sciences requirements		**29.0 Credits**
EET 101	**Circuit Analysis I**	4.0
CS 190	**Selected Computer Language**	3.0
MET 101	**Manufacturing Materials**	4.0
MET 102	**Industrial Electronics**	4.0
MET 103	**Applied Mechanics**	4.0
MET 104	**Fluid Power**	4.0
MHT 201	**Kinematics**	3.0
MHT 205	**Thermodynamics 1**	3.0

Technical specialty requirements		**31.0 Credits**
MET 201	**Introduction to Manufacturing Industries**	3.0
MET 202	**Computer Aided Drafting**	4.0
MET 203	**Machine Tool Processing**	4.0
MET 204	**Applied Quality Control**	4.0
MET 205	**Automation & Computer Assisted Machine Systems**	4.0
MET 206	**Automated Machines**	4.0
MET 207	**Manufacturing Processes**	4.0
MET 208	**Manufacturing Controls**	4.0

Technical electives		**12.0 Credits**
Students select three courses from the following:		
MET 306	**Zone Technologies**	4.0
MET 307	**Haz Mat for Manufacturing**	4.0
MET 308	**Maritime Contstruction**	4.0
MET 370	**Special Topics in Manufacturing**	4.0

Miscellaneous		**2.0 Credits**
	UGSD 180 College Success	2.0

Free electives	**23.0 Credits**

Recommended Plan of Study

BS Applied Engineering Technology

Manufacturing Engineering Technology

Bachelor of Science Degree — 5-yr co-op

Term 1		Credits
CHEM 101	General Chemistry I	4.0
ENGL 101	Expository Writing and Reading	3.0
CHEM 113	General Chemistry I Laboratory	1.5
MATH 279	Introduction to Technical Mathematics	4.0
MET 380	Special Topics: Introduction to Applied Engineering Technology I	3.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*16.5*
Term 2		**Credits**
CHEM 112	General Chemistry II	4.0
ENGL 102	Persuasive Writing and Reading	3.0
MATH 110	Precalculus	3.0
MET 380	Special Topics: Introduction to Applied Engineering Technology II	3.0
PHYS 182	Applied Physics I	3.0
PHYS 186	Physics I-A	2.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*19.0*
Term 3		**Credits**
ENGL 103	Analytical Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 101	Manufacturing Materials	4.0
MET 380	Special Topics: Introduction to Applied Engineering Technology III	1.0
PHYS 183	Applied Physics II	3.0
PHYS 188	Physics 2-A	2.0
	Term credits	*17.0*
Term 4		**Credits**
COM 111	Introduction to Corporate Communication	3.0
MATH 122	Calculus II	4.0
EET 201	Circuit Analysis I	4.0
PHYS 184	Applied Physics III	3.0
PHYS 282	Physics 3-A	2.0
	Term credits	*16.0*
Term 5		**Credits**
HIST 285	Technology in Historical Perspective	3.0
EET 311	Engineering Math Analysis	4.0
MET 201	Introduction to Manufacturing Industries	3.0
MET 202	Computer-Aided Drafting	4.0
MET 380	Special Topics: Introduction to Nanotechnology	3.0
	Term credits	*17.0*
Term 6		**Credits**
STAT 261	Statistics I	3.0
MET 102	Industrial Electronics	4.0
MET 104	Fluid Power	4.0
MHT 201	Kinematics	3.0

MHT 205	**Thermodynamics I**	3.0
	Term credits	*17.0*
Term 7		**Credits**
ECON 211	**Principles of Economics I (Micro)**	3.0
PHIL 315	**Engineering Ethics**	3.0
CS 190	**Selected Computer Language**	3.0
STAT 262	**Statistics II**	3.0
	MET technical elective	3.0
	Term credits	*15.0*
Term 8		**Credits**
COM 230	**Techniques of Speaking**	3.0
MET 203	**Machine Tool Processing**	4.0
MET 204	**Applied Quality Control**	4.0
	Elective	3.0
	MET technical elective	3.0
	Term credits	*17.0*
Term 9		**Credits**
CIVE 240 WI	**Engineering Economics Analysis**	3.0
MET 205	**Automation and Computer-Integrated Manufacturing**	4.0
MET 207	**Manufacturing Processes**	4.0
	Two MET technical electives	6.0
	Term credits	*17.0*
Term 10		**Credits**
MET 206	**Automated Machines**	4.0
	AET 420A Project Design I	3.0
	MET technical elective	3.0
	Liberal Studies elective	3.0-4.0
	Term credits	*13.0-14.0*
Term 11		**Credits**
MET 208	**Manufacturing Controls**	4.0
	AET 420B Project Design 2	3.0
	Elective	4.0
	Liberal Studies elective	3.0
	Term credits	*14.0*
Term 12		**Credits**
	AET 420C Project Design C	3.0
	Elective	3.0
	Liberal Studies elective	3.0
	Term credits	*9.0*
	Total credits (minimum)	**187.5**

Applied Engineering Technology
Mechanical Engineering Technology Concentration

Bachelor of Science Degree: 185.5 credits

Required courses

Humanities and social sciences requirements		**36.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
CIVE 240	**Engineering Economics**	3.0
COM 111	**Introduction to Corporate Communication**	3.0
COM 230	**Principles of Speech**	3.0
ECON 211	**Principles of Economics I (Micro)**	3.0
HIST 285	**Technology in Historical Perspective**	3.0
PHIL 315	**Engineering Ethics**	3.0
	Liberal studies electives	9.0

Basic Science requirements		**24.5 Credits**
CHEM 101	**General Chemistry I**	4.0
CHEM 102	**General Chemistry II**	4.0
CHEM 113	**Chemistry Laboratory I**	1.5
PHYS 182	**Applied Physics I**	3.0
PHYS 186	**Physics I-A**	2.0
PHYS 183	**Applied Physics II**	3.0
PHYS 188	**Physics II-A**	2.0
PHYS 184	**Applied Physics III**	3.0
PHYS 282	**Physics III-A**	2.0

Mathematics requirements		**17.0 Credits**
MATH 100	**Fundamentals of Mathematics**	3.0
MATH 110	**Precalculus**	3.0
MATH 121	**Calculus and Analytic Geometry I**	4.0
MATH 122	**Calculus and Analytic Geometry II**	4.0
STAT 261	**Statistics I**	3.0

Capstone course requirements		9.0 Credits
	AET 420A Project Design 1	3.0
	AET 420B Project Design 2	3.0
	AET 420C Project Design 3	3.0

Technical sciences requirements		24.0 Credits
EET 201	**Circuit Analysis I**	4.0
CS 190	**Selected Computer Language**	3.0
MET 101	**Manufacturing Materials**	4.0
MET 102	**Industrial Electronics**	4.0
MHT 220	**Applied Statics**	3.0
MHT 222	**Applied Dynamics I**	3.0
MHT 224	**Applied Dynamics II**	3.0

Technical specialty requirements		43.0 Credits
MET 105	**Fundamentals of Engineering Graphics**	4.0
MET 203	**Machine Tool Processing**	4.0
MHT 201	**Kinematics**	3.0
MHT 205	**Thermodynamics I**	3.0
MHT 206	**Thermodynamics II**	3.0
MHT 226	**Measurement Lab**	3.0
MHT 301	**Fluid Mechanics I**	3.0
MHT 310	**Applied Strength of Materials I**	3.0
MHT 312	**Applied Strength of Materials II**	3.0
MHT 314	**Thermo and Heat Transfer Laboratory**	3.0
MHT 316	**Fluid Mechanics Laboratory**	3.0
MHT 401	**Mechanical Design I**	4.0
MHT 402	**Mechanical Design II**	4.0

Technical electives		12.0 Credits
Students select four courses from the following:		
MHT 403	**Fluid Mechanics II**	3.0
MHT 404	**Advanced Materials**	3.0
MHT 405	**HVAC**	3.0
MET 204	**Applied Quality Control**	4.0
MEM 462	**Introduction ot Engineering Management**	3.0
MET 205	**Robotics and Mechatronics**	4.0

AET Requirements		11.0 Credits

MET 380	**Special Topics: Introduction to AET 1**	3.0
MET 380	**Special Topics: Introduction to AET 2**	3.0
MET 380	**Special Topics: Introduction to Nanotechnology**	3.0
UNIV 101	**The Drexel Experience**	2.0

Free electives	**11.0 Credits**

Recommended Plan of Study

BS Applied Engineering Technology

Mechanical Engineering Technology

Bachelor of Science Degree — 5-yr co-op

Term 1		Credits
CHEM 101	General Chemistry I	4.0
ENGL 101	Expository Writing and Reading	3.0
CHEM 113	General Chemistry I Laboratory	1.5
MATH 100	Fundamentals of Mathematics	3.0
MET 380	Special Topics: Introduction to Applied Engineering Technology I	3.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*15.5*
Term 2		**Credits**
CHEM 102	General Chemistry II	4.0
ENGL 102	Persuasive Writing and Reading	3.0
MATH 110	Precalculus	3.0
MET 380	Special Topics: Introduction to Applied Engineering Technology II	3.0
PHYS 182	Applied Physics I	3.0
PHYS 186	Physics I-A	2.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*19.0*
Term 3		**Credits**
ENGL 103	Analytical Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 101	Manufacturing Materials	4.0
PHYS 183	Applied Physics II	3.0
PHYS 188	Physics 2-A	2.0
	Term credits	*16.0*
Term 4		**Credits**
COM 111	Introduction to Corporate Communication	3.0
MATH 122	Calculus II	4.0
EET 201	Circuit Analysis I	4.0
PHYS 184	Applied Physics III	3.0
PHYS 282	Physics 3-A	2.0
	Term credits	*16.0*
Term 5		**Credits**
MET 105	Fundamentals of Engineering Graphics	4.0
MET 203	Machine Tool Processing	4.0
MET 380	Special Topics: Introduction to Nanotechnology	3.0
MHT 220	Applied Statics	3.0
	Elective	3.0
	Term credits	*17.0*
Term 6		**Credits**
STAT 261	Statistics I	3.0
MET 102	Industrial Electronics	4.0
MHT 201	Kinematics	3.0
MHT 205	Thermodynamics I	3.0
MHT 222	Applied Dynamics I	3.0
	Term credits	*16.0*

Term 7		Credits
ECON 211	**Principles of Economics I (Micro)**	3.0
CS 190	**Selected Computer Language**	3.0
MHT 206	**Thermodynamics II**	3.0
MHT 224	**Applied Dynamics II**	3.0
MHT 226	**Measurement Laboratory**	3.0
	Elective	3.0
	Term credits	*18.0*
Term 8		**Credits**
COM 230	**Techniques of Speaking**	3.0
PHIL 315	**Engineering Ethics**	3.0
MHT 301	**Fluid Mechanics**	3.0
MHT 310	**Applied Strength of Materials I**	3.0
MHT 314	**Thermo and Heath Transfer Laboratory**	3.0
	Term credits	*15.0*
Term 9		**Credits**
CIVE 240 WI	**Engineering Economics Analysis**	3.0
MHT 312	**Applied Strength of Materials II**	3.0
MHT 316	**Fluid Mechanics Laboratory**	3.0
MHT 401	**Mechanical Design I**	4.0
	MHT technical elective	3.0
	Term credits	*16.0*
Term 10		**Credits**
MHT 210	**Mechanical Design II**	4.0
	AET 420A Project Design I	3.0
	MHT technical elective	3.0
	Liberal Studies elective	3.0
	Term credits	*13.0*
Term 11		**Credits**
HIST 285	**Technology in Historical Perspective**	3.0
	AET 420B Project Design 2	3.0
	MHT technical elective	3.0
	Liberal Studies elective	3.0
	Term credits	*12.0*
Term 12		**Credits**
	AET 420C Project Design C	3.0
	Elective	3.0
	MHT technical elective	3.0
	Liberal Studies elective	3.0
	Term credits	*12.0*
	Total credits (minimum)	**185.5**

Communications and Applied Technology

Overview

The Bachelor of Science in Communications and Applied Technology is a multidisciplinary program designed for individuals who want to increase their knowledge of all aspects of business communications and relevant communication technologies, while understanding the business principles that are necessary to achieve corporate goals. The major offers a multidisciplinary approach combining theoretical and applied learning principles and encompasses the spectrum of internal and external communications that organizations utilize in their management and marketing functions. The program is tailored to meet the needs of people who sell, communicate, and manage in industries that are heavily customer oriented and are involved in or affected by world markets. The goal of the program is to increase students' understanding of communication, management, applicable technology, business, the world economy, and relationships within their corporate culture.

Program Goals:

• Combine communications and technology skills training with study of sound business fundamentals.

• Hone written, oral, and interpersonal communication skills for effectiveness in a variety of organizational settings, with both internal and external audiences.

• Expand written communication skills including research and design skills to produce reports, proposals, web sites, and other corporate documents.

• Provide conceptual understanding of various principles of management and organizational processes.

• Develop problem-solving, conflict-management, and decision-making skills

• Examine factors that explain international movement of persons, goods, services, financial capital, and technology across national boundaries.

• Understand legal and ethical issues in business communication, technological advancement, employer-employee relations, obligations to customers, and foreign populations.

Assessment of Prior Learning

The Goodwin College of Professional Studies will grant transfer credit for American Council on Education (ACE)-evaluated corporate training offered by professional associations such as the American Institute of Banking, the American College, and the College for Financial Planning as well as for industry certifications such as Microsoft Certified Professional. ACE-evaluated military training will be considered as well. In addition, credit by examination earned via College-Level Examination Program (CLEP), Defense Activity for Nontraditional Education Support (DANTES), Thomas Edison College Examination Program (TECEP), and Excelsior College Examinations (ECE) will also be assessed. All credits earned through assessment of prior learning are subject to advisor approval.

Curriculum

To complete the Bachelor of Science degree in Communications and Applied Technology, students must earn a minimum of 180 quarter credits comprising the following:

English Composition
Humanities
Social Sciences
Physical Sciences
Mathematics
Corporate Communication
Customer Operations
Information Systems

Communications and Applied Technology

Program Delivery Options
An attractive feature of the degree-completion program in Communications and Applied Technology is the flexible delivery options. This program can be completed in a variety of formats so that students can complete their degree in the design that best fits their lifestyle.

- *On-campus option.* Students who prefer to study on Drexel's main campus in University City may do so during the day, evening, or on Saturdays. All but five of the courses can be completed during the day. Evening study is available in both traditional and accelerated formats. Finally, students who already have an associate's degree or equivalent credits may complete their degree entirely on Saturdays through Drexel's innovative Saturday Scholars program, providing virtually no interruption to their weekday routine. Please visit the Saturday Scholars Program web site for more information.

- *Online option.* Students who desire a quality Drexel education but who do not live or work in close proximity to the university can now complete their degree entirely online. The same distinguished Drexel full-time and adjunct faculty that teach on campus also teach online courses using the same syllabus and learning objectives. Please visit the Drexel E-Learning web site for more information.

- *Off-site option.* Drexel University has developed numerous alliances with corporations in the Delaware Valley who desire to provide their employees with a Drexel education with the convenience of taking class at their workplace. Classes are held at the company's facilities, right after work, one night per week, for fours hours a night. To learn more about how Drexel can deliver a quality education at your work site, please visit the Goodwin College of Professional Studies web site.

Communications and Applied Technology

Bachelor of Science Degree in General Studies: 180.0 credits

Required courses

English composition requirements		**9.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0

Mathematics requirements		**6.0 Credits**
MATH 181	**Mathematical Analysis I**	3.0
MATH 182	**Mathematical Analysis II**	3.0

Science requirements (Choose one sequence)		**6.0 Credits**
BIO 161	**General Biology I**	3.0
BIO 162	**General Biology II**	3.0
or		
CHEM 161	**General Chemistry I**	3.0
CHEM 162	**General Chemistry II**	3.0

Humanities Electives		**12.0 Credits**
	Four humanities electives*	12.0

***Africana studies, communication, fine arts (history of architecture, art film, music, theatre), foreign language, linguistics, literature, philosophy, women's studies, writing.**

Social Science Electives*		**24.0 Credits**
ECON 211	**Principles of Economics I (Micro)**	3.0
ECON 212	**Principles of Economics II (Macro)**	3.0
	Six additional social science electives**	18.0

****Anthropology, economics, history, political science, psychology, sociology.**

Free Electives	**40.0 Credits**
No more than 14 credits of free electives may be in business	

Business requirements		29.0 Credits
ACCT 111	**Financial Accounting**	3.0
BLAW 211	**Legal Issues in Decision Making**	3.0
ECON 340 WI	**International Business**	3.0
FIN 311	**Financial Management**	3.0
MKTG 301 WI	**Introduction to Marketing Management***	5.0
ORGB 300	**Organizational Behavior**	4.0
POM 300 WI	**Operations Management**	4.0
STAT 211	**Quantitative Methods for Research I**	4.0

Communications and Applied Technology		53.0 Credits
CAT 120	**Internet Foundations and Authoring**	4.0
CAT 200	**Strategies: Lifelong Learning**	3.0
CAT 201	**Interpersonal Communication**	3.0
CAT 220	**Web Methodology and E-Commerce**	4.0
CAT 301	**Project Management**	3.0
CAT 302	**Customer Service Theory and Practice**	3.0
CAT 303	**Client Relations Management**	3.0
CAT 360	**Applied Organizational Research**	3.0
CAT 491	**Senior Project in CAT I**	3.0
CAT 492	**Senior Project in CAT II**	3.0
COM 230	**Techniques of Speaking**	3.0
COM 240	**New Technologies in Communication**	3.0
COM 270 WI	**Business Communication**	3.0
COM 335 WI	**Writing for the World Wide Web**	3.0
COM 340	**Desktop Publishing**	3.0
COM 370 WI	**Advanced Business Writing**	3.0
PHIL 323	**Organizational Ethics**	3.0

Computing Technology

The Computing Technology curriculum centers on the application of software and hardware technology to solve real-world problems. Attention is given to maintenance and administration of information systems, with courses covering each of the major components of computer infrastructure: hardware, servers, Linux, Windows, networks, web, security, databases and OO programming.

The Computing Technology program is supported by seven state of the art computer labs in the Goodwin College building and faculty are selected based on their academic credentials and industry experience.

For additional information about this major, visit the Goodwin College of Professional Studies web site.

Computing Technology

Program Delivery Options
An attractive feature of the degree-completion program in Computing Technology is the flexible delivery options. This program can be completed in a variety of formats so that students can complete their degree in the design that best fits their lifestyle.

- *On-campus option.* Students who already have an associate's degree or equivalent credits may complete their degree entirely on Saturdays through Drexel's innovative Saturday Scholars program, providing virtually no interruption to their weekday routine. Please visit the Saturday Scholars Program web site for more information.
- *Online option.* Students who desire a quality Drexel education but who do not live or work in close proximity to the university can now complete their degree entirely online. The same distinguished Drexel full-time and adjunct faculty that teach on campus also teach online courses using the same syllabus and learning objectives. Please visit the Drexel E-Learning Computing Technology page for more information.
- The Drexel University and Burlington County College (BCC) option: Drexel University and Burlington County College (BCC) have joined together to create a unique educational opportunity: Drexel at BCC. This partnership enables BCC students to earn a bachelor's degree from Drexel University while remaining on BCC's Mount Laurel campus.

Computing Technology

Bachelor of Science Degree: 185.0 credits

Required courses

English requirements		**12.0 Credits**
COM 230	**Techniques of Speaking**	3.0
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0

Mathematics requirements		**9.0 Credits**
MATH 181	**Mathematical Analysis I**	3.0
MATH 182	**Mathematical Analysis II**	3.0
MATH 183	**Mathematical Analysis III**	3.0

Natural Science requirements		**9.0 Credits**
BIO 151	**Applied Biology**	3.0
CHEM 151	**Applied Chemistry**	3.0
PHYS 151	**Applied Physics I**	3.0

Liberal studies electives	**12.0 Credits**

Computing Technology requirements		**96.0 Credits**
CT 100	**Microcomputer Hardware**	3.0
CT 120	**Microcomputer Operating System**	3.0
CT 200	**Server I**	3.0
CT 320	**Server II**	3.0
CT 140	**Network Administration I**	3.0
CT 330	**Network Administration II**	3.0
CT 350	**Network Administration III**	3.0
CT 400	**Network Security I**	3.0
CT 210	**Linux I**	3.0
CT 310	**Linux II**	3.0
CT 410	**Linux III**	3.0
CT 340	**Operating System Architecture I**	3.0
CT 360	**Operating System Architecture II**	3.0

CT 380	**Operating System Architecture III**	3.0
CT 220	**Database I**	3.0
CT 375	**Database II**	3.0
CT 425	**Database III**	3.0
CT 430	**Database IV**	3.0
CT 435	**Database V**	3.0
CT 370	**OO Systems Analysis**	3.0
CT 290	**Client Side Programming**	3.0
CT 390	**Server Side Programming**	3.0
CT 405	**Enterprise Programming**	3.0
CT 230 WI	**Web Development I**	3.0
CT 240	**Web Development II**	3.0
CT 385	**Web Development III**	3.0
CT 392	**Web Development IV**	3.0
CT 395	**IT Security I**	3.0
CT 420	**IT Security II**	3.0
CT 431 WI	**Project Management**	3.0
CT 491 WI	**Senior Project I**	3.0
CT 496 WI	**Senior Project II**	3.0

Free electives	**47.0 Credits**

Recommended Plan of Study

BS Computing Technology

Bachelor of Science Degree — 4-yr non-co-op

Term 1		Credits
BIO 151	Applied Biology	3.0
ENGL 101	Expository Writing and Reading	3.0
CT 100	Microcomputer Hardware	3.0
MATH 181	Mathematical Analysis I	3.0
	Liberal Studies elective	3.0
	Term credits	*15.0*
Term 2		**Credits**
CHEM 151	Applied Chemistry	3.0
ENGL 102	Persuasive Writing and Reading	3.0
CT 120 WI	Microcomputing Operating Systems	3.0
MATH 182	Mathematical Analysis II	3.0
	Liberal Studies elective	3.0
	Term credits	*15.0*
Term 3		**Credits**
COM 230	Techniques of Speaking	3.0
ENGL 103	Analytical Writing and Reading	3.0
PHYS 151	Applied Physics	3.0
CT 200	Server I	3.0
MATH 183	Mathematical Analysis III	3.0
	Liberal Studies elective	3.0
	Term credits	*18.0*
Term 4		**Credits**
CT 230	Web Development I	3.0
CT 320	Server II	3.0
	Two electives	6.0
	Liberal Studies elective	3.0
	Term credits	*15.0*
Term 5		**Credits**
CT 140	Network Administration I	3.0
CT 210	Linux I	3.0
CT 240	Web Development II	3.0
CT 340	Operating System Architecture I	3.0
	Elective	3.0
	Term credits	*15.0*
Term 6		**Credits**
CT 310	Linux II	3.0
CT 330	Network Administration II	3.0
CT 360	Operating System Architecture II	3.0
CT 385	Web Development III	3.0
	Elective	3.0
	Term credits	*15.0*
Term 7		**Credits**
CT 220	Database I	3.0
CT 350	Network Administration III	3.0
CT 380	Operating System Architecture III	3.0
CT 392	Web Development IV	3.0

CT 410	**Linux III**	3.0
	Term credits	*15.0*
Term 8		**Credits**
CT 370	**OO Systems Analysis**	3.0
CT 375	**Database II**	3.0
CT 400	**Network Security**	3.0
	Two electives	6.0
	Term credits	*15.0*
Term 9		**Credits**
CT 290	**Client Side Programming**	3.0
CT 395	**IT Security I**	3.0
CT 425	**Database III**	3.0
	Two electives	6.0
	Term credits	*15.0*
Term 10		**Credits**
CT 390	**Server Side Programming**	3.0
CT 420	**IT Security II**	3.0
CT 430	**Database IV**	3.0
	Two electives	6.0
	Term credits	*15.0*
Term 11		**Credits**
CT 405	**Enterprise Programming**	3.0
CT 431	**Project Management**	3.0
CT 435	**Database V**	3.0
CT 491	**Senior Project I**	3.0
	Elective	3.0
	Term credits	*15.0*
Term 12		**Credits**
CT 496	**Senior Project II**	3.0
	Electives	14.0
	Term credits	*17.0*
	Total credits (minimum)	**185.0**

Construction Management

Construction management is a dynamic profession that is a combination of art and science.While an understanding of the technical aspects of construction is extremely important, it is also essential that construction professionals have knowledge of the business and management aspects of the profession.While construction has traditionally been a very conservative industry, the increasing rate of technological development and competition in the industry serves to accelerate the development of new construction methods, equipment, materials, and management techniques. As a result of these forces, there is an increasing need for innovative and professionally competent construction professionals. Students in this program receive broad academic, technical, business, and construction management courses that are designed to produce these well-rounded construction professionals.

Program Delivery Options

The B.S. in Construction Management consists of 180 credits. All students enrolled in the program are required to take 75 credits correspond to the professional core. Students can earn a certificate in Construction Management upon completing 36 credits of coursework.

Program delivery options include:

- A traditional 5-year with co-op option
- A part-time study option
- The Drexel University and Burlington County College (BCC) option: Drexel University and Burlington County College (BCC) have joined together to create a unique educational opportunity: Drexel at BCC. This partnership enables BCC students to earn a bachelor's degree from Drexel University while remaining on BCC's Mount Laurel campus.

Construction Management

Bachelor of Science Degree: 180.0 credits

Required courses

English requirements		9.0 Credits
ENGL 101	Expository Writing and Reading	3.0
ENGL 102	Persuasive Writing and Reading	3.0
ENGL 103	Analytical Writing and Reading	3.0

Mathematics requirements		11.0 Credits
CS 161	Introduction to Computing	3.0
MATH 101	Math Analysis I	4.0
MATH 102	Math Analysis II	4.0

Science requirements		18.5 Credits
CHEM 101	General Chemistry I	4.0
CHEM 102	General Chemistry II	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 182	Applied Physics I	3.0
PHYS 183	Applied Physics II	3.0
PHYS 184	Applied Physics III	3.0

Business requirements		25.0 Credits
ACCT 115	Financial Accounting	5.0
ECON 211	Principles of Economics I (Micro)	3.0
ECON 212	Principles of Economics II (Macro)	3.0
FIN 361	Financial Management I	3.0
HRMT 363	Collective Bargaining	3.0
STAT 201	Statistics I	4.0
STAT 202	Statistics II	4.0

Humanities and social science	15.0 Credits

	Humanities and social science electives	

Professional core requirements		**75.0 Credits**
ARCH 261	**Environmental Systems I**	3.0
ARCH 262	**Environmental Systems II**	3.0
ARCH 263	**Environmental Systems III**	3.0
CIVE 240	**Engineering Economics**	3.0
CIVE 251	**Engineering Surveying**	3.0
CIVE 261	**Materials and Structural Behavior I**	3.0
CIVE 262	**Materials and Structural Behavior II**	3.0
CIVE 263	**Materials and Structural Behavior III**	3.0
CIVE 464	**Acoustics and Noise Control in Buildings I**	3.0
CMGT 161	**Building Materials and Construction Management I**	3.0
CMGT 162	**Building Materials and Construction Management II**	3.0
CMGT 261	**Construction Safety**	3.0
CMGT 262	**Building Codes**	3.0
CMGT 263	**Understanding Construction Drawing**	3.0
CMGT 264	**Construction Management of Field Operations**	3.0
CMGT 361	**Contracts & Specifications I**	3.0
CMGT 362	**Contracts & Specifications II**	3.0
CMGT 363	**Estimating I**	3.0
CMGT 364	**Estimating II**	3.0
CMGT 468	**Real Estate**	3.0
CMGT 461	**Construction Management I**	3.0
CMGT 462	**Construction Management II**	3.0
CMGT 463	**Value Engineering I**	3.0
CMGT 465	**Marketing Construction Services**	3.0
CMGT 467	**Techniques of Project Control**	3.0

Professional electives	**12.0 Credits**
Professional electives (CMGT 380: Special Topics in Construction Management: Supv. Tools is a recommended professional elective)	

Free electives	**15.0 Credits**

Recommended Plan of Study

BS Construction Management

Bachelor of Science Degree — 5-yr co-op

Term 1		Credits
CHEM 101	General Chemistry I	4.0
ENGL 101	Expository Writing and Reading	3.0
CMGT 161	Building Materials and Construction Management I	3.0
MATH 101	Introduction to Math Analysis I	4.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*15.0*
Term 2		**Credits**
CHEM 102	General Chemistry II	4.0
ENGL 102	Persuasive Writing and Reading	3.0
CMGT 162	Building Materials and Construction Management II	3.0
MATH 102	Introduction to Math Analysis II	4.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*15.0*
Term 3		**Credits**
ECON 211	Principles of Economics I (Micro)	3.0
ENGL 103	Analytical Writing and Reading	3.0
CMGT 261	Construction Safety	3.0
CMGT 263	Understanding Construction Drawing	3.0
PHYS 182	Applied Physics I	3.0
	Term credits	*15.0*
Term 4		**Credits**
CIVE 251	Engineering Surveying	3.0
ECON 212	Principles of Economics II (Macro)	3.0
STAT 201	Statistics I	4.0
CIVE 261	Materials and Structural Behavior I	3.0
PHYS 183	Applied Physics II	3.0
	Term credits	*16.0*
Term 5		**Credits**
ACCT 115	Financial Accounting Foundations	5.0
STAT 202	Statistics II	4.0
CIVE 262	Materials and Structural Behavior II	3.0
PHYS 184	Applied Physics III	3.0
	Term credits	*15.0*
Term 6		**Credits**
ARCH 261	Environmental Systems I	3.0
CIVE 263	Materials and Structural Behavior III	3.0
CMGT 361	Contracts and Specifications I	3.0
CMGT 363	Estimating I	3.0
FIN 361	Financial Management I	3.0
	Term credits	*15.0*
Term 7		**Credits**
ARCH 262	Environmental Systems II	3.0
CMGT 262	Building Codes	3.0
CMGT 362	Contracts and Specifications II	3.0
CMGT 364	Estimating II	3.0

CMGT 380	**Special Topics in Construction Management: Supervisory Tools**	3.0
	Term credits	*15.0*
Term 8		**Credits**
ARCH 263	**Environmental Systems III**	3.0
CIVE 240 WI	**Engineering Economics Analysis**	3.0
	Construction Management elective	3.0
	Liberal Studies elective	3.0
	Term credits	*12.0*
Term 9		**Credits**
CIVE 464	**Acoustics and Noise Control in Buildings**	3.0
CMGT 462	**Construction Management II**	3.0
CMGT 467	**Techniques of Project Control**	3.0
	Construction Management elective	3.0
	Liberal Studies elective	3.0
	Term credits	*15.0*
Term 10		**Credits**
CMGT 463	**Value Engineering**	3.0
CMGT 468	**Real Estate**	3.0
	Elective	3.0
	Liberal Studies elective	3.0
	Professional elective	3.0
	Term credits	*15.0*
Term 11		**Credits**
HRMT 330	**Collective Bargaining**	3.0
CMGT 465	**Marketing Construction Services**	3.0
	Elective	3.0
	Liberal Studies elective	3.0
	Professional elective	3.0
	Term credits	*15.0*
Term 12		**Credits**
	Two electives	8.0
	Liberal Studies elective	3.0
	Professional electives	6.0
	Term credits	*17.0*
	Total credits (minimum)	**180.0**

Construction Management

Certificate Programs

The Certificate Program was started at the request of two contractors' associations: the General Building Contractors Association and the Contractors Association of Eastern Pennsylvania. It is designed for people who have undergraduate degrees in other fields and are employed or wish to be employed in the construction industry. It is also used as a credential for people who are already working in the construction industry, but do not wish to pursue an undergraduate degree.The certificate program is a two-year program with the certificate awarded upon completion of 36 credits. Students interested in continuing their education after certification are able to apply their coursework and credits directly to the Bachelor of Science in Construction Management.

Program of Study:

- Building Materials and Construction Methods I
- Building Materials and Construction Methods II
- Contracts and Specifications I
- Contracts and Specifications II
- Estimating I
- Understanding Construction Drawings
- Construction Management I
- Construction Management II
- Value Engineering I
- Marketing Construction Services
- Techniques of Project Control
- Construction Management of Field Operations

Course substitutions or other electives may be taken with prior approval from a liaison for Construction Management.

Culinary Arts

The culinary arts program prepares students for leadership positions in the fine-foods segment of the hospitality industry. This baccalaureate degree in culinary arts is among the first of its kind in the United States. Prior to this program, chefs have been trained in vocational programs or apprenticeships. This program comprises approximately equal parts liberal arts, business and administration, hospitality management, and culinary arts. Upon completing the program, students have an understanding of how to design or create a desired environment, how to market it, and how to deliver it to the customer. Students also receive the equivalent of a minor in business administration as well as completing the first year of foundation courses required for an MBA degree at Drexel.

For more information, visit the Culinary Arts and Hospitality Management Programs web site.

Program Delivery Options

Drexel's program is composed of approximately equal parts of liberal arts, business administration and hospitality management courses. Students receive a minor in business, as well as completion of the first year of foundation courses required for an MBA degree at Drexel University. The degree in HM can be completed in several ways, each offering unique features

Traditional Four-year option, with one co-op experience:
This option includes one six-month period of full-time employment in the junior year.

Four plus One option BS/MBA combined degree, with co-op experience:
This option offers the greatest amount of education in the shortest time period due to its compressed structure.

Full-time Status Evening option without co-op experience:
To be eligible, students should have a minimum of two years full-time work experience related to students' majors, and a minimum of one year of college level work. Full-time students are eligible for full-time financial aid packages.

Part-time General Studies option without co-op experience:
Take classes anytime day, night, and in several instances on-line at your own pace. On average the evening part-time degree takes six years to complete.

London option:
Hospitality Management students are invited to spend a term in their sophomore, junior or senior year in the Study Abroad Program, Drexel in London, while earning up to 18 credits. The program's emphasis is on the global implications of and opportunities within the hospitality industry.

Drexel University and Burlington County College (BCC) option:
Drexel University and Burlington County College (BCC) have joined together to create a unique educational opportunity: Drexel at BCC. This partnership enables BCC students to earn a bachelor's degree from Drexel University while remaining on BCC's Mount Laurel campus. For more information about the B.S. in Hospitality , visit the Drexel at BCC web site.

Culinary Arts

Bachelor of Science Degree: 184.0 credits

General education requirements		Credits
COM 280	Public Relations	3.0
ENGL 101	Expository Writing and Reading	3.0
ENGL 102	Persuasive Writing and Reading	3.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 101	Introduction to Analysis I	4.0
MATH 102	Introduction to Analysis II	4.0
NFS 101	Introduction to Nutrition and Foods	3.0
HRM 210	Safety and Sanitation	4.0
UNIV 101	The Drexel Experience	2.0
	Arts and humanities electives	9.0
	Social science electives	6.0
	Free electives	12.0

Business minor courses		Credits
ACCT 115	Financial Accounting I	5.0
ECON 201	Economics I	4.0
ECON 202	Economics II	4.0
FIN 301	Introduction to Finance	5.0
MKTG 301 WI	Introduction to Marketing Management	5.0
ORGB 300	Organizational Behavior	4.0
POM 300 WI	Production and Operations	4.0
STAT 201	Quantitative Methods	4.0

Departmental requirements	Credits

HRM 110	**Introduction to the Hospitality Industry**	3.0
HRM 115	**Culinary Science**	3.0
HRM 120	**Principles of Food-Service Management**	3.0
HRM 130	**Tourism I**	3.0
HRM 150	**Customer Service**	3.0
HRM 215	**Commercial Food Production**	3.0
HRM 200	**Productivity Software for the Hospitality Industry**	3.0
HRM 230	**Design Application Seminar**	3.0
HRM 310	**Hospitality Accounting Systems**	3.0
HRM 320	**Hospitality Management Information Systems**	3.0
HRM 330	**Hospitality Marketing**	3.0
HRM 335	**Beverage Management**	3.0
HRM 410	**Laws of Hospitality Industry**	3.0
HRM 455	**Hospitality Human Resources**	3.0

Culinary arts requirements		**Credits**
CULA 200	**Professional Skills Laboratory I: Starch Workshop**	1.5
CULA 205	**Professional Skills Laboratory II: Butchery Workshop**	1.5
CULA 210	**Professional Skills Laboratory III: Baking Workshop**	1.5
CULA 215	**Foundations of Professional Baking**	3.0
CULA 220	**Patisserie I**	2.0
CULA 225	**Patisserie II**	2.0
CULA 230	**Major Techniques and Traditions**	3.0
CULA 235	**Professional Dining Room Management**	1.5
CULA 300	**Vegetarian Cuisine**	3.0
CULA 305	**The Italian Tradition**	3.0
CULA 310	**The French Tradition**	3.0
CULA 315	**The American Tradition**	3.0
CULA 320	**Advanced Culinary Studio**	3.0
CULA 325	**Garde Manger Lab**	2.0
CULA 400	**Directed Study With a Master Chef**	2.0
CULA 405	**Culture and Gastronomy I**	3.0
CULA 410	**Culture and Gastronomy II**	3.0
CULA 415	**Food Styling and Show Competition**	2.0
CULA 420	**Senior Design Project**	3.0
CULA 216	**A la Carte Cuisine**	3.0

Recommended Plan of Study

BS Culinary Arts

Bachelor of Science Degree — 4-yr co-op

Term 1		Credits
ENGL 101	Expository Writing and Reading	3.0
HRM 110	Introduction to the Hospitality Industry	3.0
HRM 130	Tourism I	3.0
HRM 200	Productivity Software for the Hospitality Industry	3.0
MATH 101	Introduction to Math Analysis I	4.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*17.0*
Term 2		**Credits**
ENGL 102	Persuasive Writing and Reading	3.0
HRM 150	Customer Service	3.0
HRM 210	Safety and Sanitation	3.0
MATH 102	Introduction to Math Analysis II	4.0
UNIV 101	The Drexel Experience	1.0
	Term credits	*14.0*
Term 3		**Credits**
ENGL 103	Analytical Writing and Reading	3.0
NFS 101	Introduction to Nutrition and Foods	3.0
HRM 120	Principles of Food-Service Management	3.0
HRM 410	Laws of Hospitality Industry	3.0
	Arts and Humanities elective	3.0
	Term credits	*15.0*
Term 4		**Credits**
ACCT 115	Financial Accounting Foundations	5.0
ECON 201	Economics I	4.0
HRM 115	Culinary Science	3.0
HRM 220	Purchasing/Hospitality Industry	3.0
HRM 230	Design Application Seminar	3.0
	Term credits	*18.0*
Term 5		**Credits**
ECON 202	Economics II	4.0
CULA 215	Foundations of Professional Baking	3.0
CULA 230	Major Techniques and Traditions	3.0
HRM 215	Commercial Food Production	3.0
HRM 310	Hospitality Accounting Systems	3.0
	Term credits	*16.0*
Term 6		**Credits**
CULA 205	Professional Skills Laboratory II	1.5
CULA 216	A la Carte Cuisine	3.0
CULA 220	Patisserie I	2.0
CULA 235	Professional Dining Room Management	1.5
CULA 315	The American Tradition	3.0
CULA 325	Garde Manger Lab	2.0
	Term credits	*13.0*
Term 7		**Credits**
STAT 201	Statistics I	4.0

CULA 200	**Professional Skills Laboratory I**	1.5
CULA 305	**The Italian Tradition**	3.0
	Culinary arts elective	3.0
	Arts and Humanities elective	3.0
	Term credits	*14.5*
Term 8		**Credits**
FIN 301	**Introduction to Finance**	5.0
CULA 225	**Patisserie II**	2.0
CULA 310	**The French Tradition**	3.0
CULA 405	**Culture and Gastronomy I**	3.0
	Culinary arts elective	3.0
	Arts and Humanities elective	3.0
	Term credits	*19.0*
Term 9		**Credits**
POM 300 WI	**Operations Management**	4.0
COM 280	**Public Relations**	3.0
CULA 210	**Professional Skills Laboratory III**	1.5
CULA 300	**Vegetarian Cuisine**	3.0
CULA 410	**Culture and Gastronomy II**	3.0
	Arts and Humanities elective	3.0
	Term credits	*17.5*
Term 10		**Credits**
ORGB 300	**Organizational Behavior**	4.0
CULA 400	**Directed Study with a Master Chef**	2.0
CULA 415	**Food Styling and Show Competition**	2.0
HRM 330	**Hospitality Marketing**	3.0
	Culinary arts elective	3.0
	Term credits	*14.0*
Term 11		**Credits**
CULA 320	**Advanced Culinary Studio**	3.0
HRM 320	**Hospitality Management Information Systems**	3.0
HRM 335	**Beverage Management**	3.0
MKTG 301 WI	**Introduction to Marketing Management**	5.0
	Term credits	*14.0*
Term 12		**Credits**
CULA 420	**Senior Design Project**	3.0
HRM 455	**Hospitality Human Resources Management**	3.0
	Culinary arts elective	3.0
	Social Science electives	6.0
	Term credits	*15.0*
	Total credits (minimum)	**187.0**

General Studies

The General Studies program is designed for students who wish to gain a breadth of knowledge in the humanities, social sciences, and natural sciences. In addition, general studies students focus on a particular area of interest by following one of the concentrations that exist in the program:

Individualized Studies
This is a concentration designed for individuals with a diverse college background and varied educational interests that cannot be captured in a single degree program. In consultation with their academic advisor, students select a specialization within the concentration according to their interests. Students have the opportunity to experiment in a variety of academic subjects through a generous amount of free electives. An attractive feature is that students can complete certificate programs en route to their B.S. degree.

Liberal Studies
A concentration in Liberal Studies provides a broad-based liberal arts education that increases one's appreciation of the world at large and lays the necessary groundwork for graduate study. All liberal studies students take courses in communication, art or architecture history, literature, philosophy, history, political science, psychology, anthropology/sociology, and liberal studies electives. The final 36 credits in the course of study comprise the student's concentration requirements. Students choose to concentrate in either humanities or social sciences. The humanities concentration usually appeals to students interested in focusing on the fine arts, foreign language, literature, or writing. The social science concentration is excellent preparation for graduate school (including law school), research, and careers in which one would deal extensively with people.

Physical Sciences
A concentration in Physical Sciences can lead to graduate school, careers in research and, with the selection of natural science courses, medical , dental, pharmacy, and veterinary school. Students take courses in the following areas: calculus, biology, chemistry, and physics.

For more information on this major, visit Goodwin College's General Studies web page.

General Studies

Bachelor of Science Degree: 180.0 credits

Recommended Plan of Study

General Studies is an individualized plan of study currently advised by Gerry Marekova. Students enroll in the program with a variety of different academic backgrounds, and may apply their credit hours from other institutions toward this multi-disciplinary degree. Flexible policies on transfer credits provide students with the ability to build upon prior coursework and earn a baccalaureate degree relevant to their individualized educational needs. Through the General Studies major, students can create an interdisciplinary program to meet their individual educational goals or to prepare for a particular job or career.

Students majoring in General Studies, in consultation with the director of the program, devise a personalized study plan. The plan of study provides a rationale for their concentration and how the elective credits are to be used.

Individualized Studies Concentration

This is a concentration designed for individuals with a diverse college background and varied educational interests that cannot be captured in a single degree program. In consultation with their academic advisor, students select a specialization within the concentration according to their interests. Students have the opportunity to experiment in a variety of academic subjects through a generous amount of free electives. An attractive feature is that students can complete certificate programs en route to their B.S. degree.

For more information, visit Goodwin College's Pre-Professional Programs page.

Individualized Studies

Bachelor of Science Degree in General Studies: 180.0 credits

Required courses

English requirements		**12.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
COM 230	**Techniques of Speaking**	3.0

Mathematics and Computers requirements		**12.0 Credits**
MATH 181	**Mathematical Analysis I**	3.0
MATH 182	**Mathematical Analysis II**	3.0
MATH 183	**Mathematical Analysis III**	3.0
CS 161	**Introduction to Computing**	3.0

Natural Science requirements		**9.0 Credits**
BIO 151	**Applied Biology**	3.0
CHEM 151	**Applied Chemistry**	3.0
PHYS 151	**Applied Physics**	3.0

Specialization Requirements	**45.0 Credits**
Students must complete 45.0 credits within an area of specialization.	

Liberal Studies requirements	**36.0 Credits**
Students must complete 36.0 credits in Liberal Studies, covering a range of subject areas in the humanities and/or social sciences: anthropology, psychology, sociology, political science, history, philosophy, literature, economics, communication, music, and art.	

Free electives	**66.0 Credits**

Liberal Studies Concentration

A concentration in Liberal Studies provides a broad-based liberal arts education that increases one's appreciation of the world at large and lays the necessary groundwork for graduate study. All liberal studies students take courses in communication, art or architecture history, literature, philosophy, history, political science, psychology, anthropology/sociology, and liberal studies electives. The final 36 credits in the course of study comprise the student's concentration requirements. Students choose to concentrate in either humanities or social sciences. The humanities concentration usually appeals to students interested in focusing on the fine arts, foreign language, literature, or writing. The social science concentration is excellent preparation for graduate school (including law school), research, and careers in which one would deal extensively with people.

For more information, visit Goodwin College's Pre-Professional Programs page.

Liberal Studies

Bachelor of Science Degree in General Studies: 180.0 credits

Required courses		
English requirements		**9.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
Mathematics and Computers requirements		**12.0 Credits**
MATH 181	**Mathematical Analysis I**	3.0
MATH 182	**Mathematical Analysis II**	3.0
CS 161	**Introduction to Computing**	3.0
	Statistics elective	3.0
Natural Science requirements		**9.0 Credits**
BIO 151	**Applied Biology**	3.0
CHEM 151	**Applied Chemistry**	3.0
PHYS 151	**Applied Physics**	3.0
Communication requirements		**9.0 Credits**
COM 210	**Theory and Models of Communication**	3.0
COM 230	**Techniques of Speaking**	3.0
	Communication elective	3.0
Women's or African-American Studies requirements		**3.0 Credits**
Music requirements		**3.0 Credits**
MUSC 130	**Introduction to Music**	3.0
Art History/Architecture requirements		**9.0 Credits**
ARTH 101	**History of Art I: Ancient to Medieval**	3.0
ARTH 102	**History of Art II: Renaissance to Modern**	3.0
ARTH 103	**History of Art III: Early Modern to Postmodernism**	3.0
or		
ARCH 141	**Architecture and Society I**	3.0
ARCH 142 WI	**Architecture and Society II**	3.0
ARCH 143 WI	**Architecture and Society III**	3.0

Liberal Studies requirements **69.0 Credits**

Students must complete 69.0 credits in Liberal Studies covering a range of subjects in the humanities and/or social sciences.

History	9.0
Literature	9.0
Philosophy	9.0
Political Science	9.0
Psychology	9.0
Anthropology or Sociology	9.0
Liberal Studies electives*	15.0

*(Subjects listed above, plus economics, women's and African-American studies, and music/art history.)

Concentration Requirements **36.0 Credits**

Students must complete 36.0 credits within an area of concentration focusing on the humanities and/or social sciences. Courses must be upper level with at least 18.0 credits selected from one discipline. Social Science students are required to take SOC 250 and SOC 350: Research Methods I & II as part of their concentration.

Humanities/Social Science courses include anthropology, psychology, sociology, political science, history, philosophy, and literature.

Free electives **21.0 Credits**

Physical Sciences Concentration

A concentration in Physical Sciences can lead to graduate school, careers in research and, with the selection of natural science courses, medical , dental, pharmacy, and veterinary school. Students take courses in the following areas: calculus, biology, chemistry, and physics.

For more information, visit Goodwin College's Pre-Professional Programs page.

Physical Sciences

Bachelor of Science Degree in General Studies: 180.0 credits

Required courses

English requirements		**9.0 Credits**
ENGL 101	**Expository Writing and Reading**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0

Mathematics and Computer Science requirements		**19.0 Credits**
CS 171	**Computer Programming I**	3.0
MATH 121	**Calculus I**	4.0
MATH 122	**Calculus II**	4.0
MATH 123	**Calculus III**	4.0
MATH 200	**Calculus IV**	4.0

Communication requirements		**6.0 Credits**
COM 230	**Techniques of Speaking**	3.0
COM 310	**Technical Communication**	3.0

Philosophy requirements		**6.0 Credits**
PHIL 351	**Philosophy of Technology**	3.0
or		
PHIL 361	**Philosophy of Science**	
PHIL 251	**Ethics**	3.0
or		
BMES 338	**Biomedical Ethics and Law**	

Physical Science requirements		**37.5 Credits**
Biology		
BIO 161	**General Biology I**	3.0
BIO 162	**General Biology II**	3.0
BIO 163	**General Biology III**	3.0
Chemistry		
CHEM 161	**General Chemistry I**	3.0
CHEM 162	**General Chemistry II**	3.0
CHEM 163	**General Chemistry II**	3.0
CHEM 164	**General Chemistry Lab I**	2.0

CHEM 165	**General Chemistry Lab II**	2.5
Physics		
PHYS 185	**Physics I**	3.0
PHYS 186	**Physics I-A**	2.0
PHYS 187	**Physics II**	3.0
PHYS 188	**Physics II-A**	2.0
PHYS 281	**Physics III**	3.0
PHYS 282	**Physics III-A**	2.0

Physical Science electives	**27.0 Credits**
Students must complete 27.0 credits of natural science electives. Courses must be upper level in biology, chemistry, and/or physics.	

Liberal Studies electives	**27.0 Credits**
Students must complete 27.0 credits covering a range of subjects in the humanities and/or social sciences: anthropology. economics, fine arts, history, literature, philosophy, political science, psychology, sociology, etc.	

Free electives	**48.5 Credits**

Hospitality Management

Drexel University's Bachelor's of Science program in Hospitality Management (HM) recognizes the critical importance of an interdisciplinary education with a global perspective for tomorrow's leaders and managers. Building on four major strengths— innovative management, customer service, technology, and international operations— the program prepares individuals to assume leadership of projects, programs, and staff in Hospitality organizations.

Committed to building student knowledge across functional areas and contributing disciplines, the program allows for increased specialization with concentrations in one of four areas: Food & Beverage Management, Gaming and Resort Management, Travel and Tourism, and Lodging Administration.

According to The Gourman Report, which provides rankings of undergraduate programs in American and international universities, Drexel University's Hospitality Management program was ranked in the top tenth percentile of national programs.

For more information, visit the Culinary Arts and Hospitality Management Programs web site.

Hospitality Management

Bachelor of Science Degree: 180.0-181.0 credits

General education requirements		Credits
COM 230	Techniques of Speaking	3.0
COM 280	Public Relations	3.0
ENGL 101	Expository Writing and Reading	3.0
ENGL 102	Persuasive Writing and Reading	3.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 101	Introduction to Analysis I	4.0
MATH 102	Introduction to Analysis II	4.0
NFS 101	Introduction to Nutrition and Foods	3.0
UNIV 101	The Drexel Experience	2.0
	Foreign language courses or arts and humanities electives	12.0
	Social science electives	6.0
	Free electives	12.0

Business minor courses		Credits
ACCT 115	Financial Accounting I	5.0
ECON 201	Economics I	4.0
ECON 202	Economics II	4.0
FIN 301	Introduction to Finance	5.0
MKTG 301 WI	Introduction to Marketing Management	5.0
ORGB 300	Organizational Behavior	4.0
POM 300 WI	Production and Operations	4.0
STAT 201	Quantitative Methods	4.0

Departmental requirements		Credits
HRM 110	Introduction to the Hospitality Industry	3.0
HRM 115	Culinary Science	3.0
HRM 120	Principles of Food-Service Management	3.0
HRM 130	Tourism I	3.0
HRM 135	Tourism II	3.0
HRM 150	Customer Service	3.0
HRM 200	Productivity Software for the Hospitality Industry	3.0
HRM 210	Safety and Sanitation	3.0
HRM 215	Commercial Food Production	3.0

HRM 230	**Design Application Seminar**	3.0
HRM 310	**Hospitality Accounting Systems**	3.0
HRM 320	**Hospitality Management Information Systems**	3.0
HRM 325	**Rooms Division I**	3.0
HRM 330	**Hospitality Marketing**	3.0
HRM 335	**Beverage Management**	3.0
HRM 410	**Laws of Hospitality Industry**	3.0
HRM 455	**Hospitality Human Resources**	3.0
	Concentration courses	21.0-22.0
	Departmental electives	15.0

Concentrations

Food and Beverage Management (F&B)

Courses		Credits
HRM 220	**Purchasing for the Hospitality Industry**	3.0
HRM 250	**Contract Food-Service Management**	3.0
HRM 315	**Continental, Ethnic, and Regional Cuisine**	3.0
HRM 340	**Catering Management**	3.0
HRM 350	**Cost Controls in Hospitality**	3.0
HRM 415	**Fine Dining**	4.0
HRM 435	**Wine and Spirits**	3.0

Lodging Administration (LA)

Courses		Credits
HRM 345	**Convention and Trade Shows Management**	3.0
HRM 420	**Hotel/Restaurant Architecture:History and Design**	3.0
HRM 350	**Cost Controls in Hospitality**	3.0
HRM 465	**Special Topics: Franchise Management in HMA**	3.0
HRM 465	**Special Topics: Room Division Management**	3.0
HRM 465	**Special Topics: Hotel Sales and Marketing**	3.0
HRM 465	**Special Topics: Resort Development**	3.0

Tourism and Travel (T&T)

Courses		Credits
HRM 150	**Customer Service**	3.0
HRM 345	**Convention and Trade Shows Management**	3.0
HRM 365	**Heritage Tourism**	3.0
HRM 399	**Guest Lecture Series**	3.0
HRM 465	**Special Topics: Airline Operations**	3.0
HRM 465	**Special Topics: Current Research in T&T**	3.0
HRM 465	**Special Topics: TTOO and TTAA Management**	3.0
HRM 465	**Special Topics: Tourism Economics**	3.0

Program Delivery Options

Drexel's program is composed of approximately equal parts of liberal arts, business administration and hospitality management courses. Students receive a minor in business, as well as completion of the first year of foundation courses required for an MBA degree at Drexel University. The degree in HM can be completed in several ways, each offering unique features

Traditional Four-year option, with one co-op experience:
This option includes one six-month period of full-time employment in the junior year.

Four plus One option BS/MBA combined degree, with co-op experience:
This option offers the greatest amount of education in the shortest time period due to its compressed structure.

Full-time Status Evening option without co-op experience:
To be eligible, students should have a minimum of two years full-time work experience related to students' majors, and a minimum of one year of college level work. Full-time students are eligible for full-time financial aid packages.

Part-time General Studies option without co-op experience:
Take classes anytime day, night, and in several instances on-line at your own pace. On average the evening part-time degree takes six years to complete.

London option:
Hospitality Management students are invited to spend a term in their sophomore, junior or senior year in the Study Abroad Program, Drexel in London, while earning up to 18 credits. The program's emphasis is on the global implications of and opportunities within the hospitality industry.

Drexel University and Burlington County College (BCC) option:
Drexel University and Burlington County College (BCC) have joined together to create a unique educational opportunity: Drexel at BCC. This partnership enables BCC students to earn a bachelor's degree from Drexel University while remaining on BCC's Mount Laurel campus. For more information about the B.S. in Hospitality , visit the Drexel at BCC web site.

Recommended Plan of Study

BS Hospitality Management

Bachelor of Science Degree — 4-yr co-op

Term 1		Credits
ENGL 101	**Expository Writing and Reading**	3.0
HRM 110	**Introduction to the Hospitality Industry**	3.0
HRM 130	**Tourism I**	3.0
HRM 200	**Productivity Software for the Hospitality Industry**	3.0
MATH 101	**Introduction to Math Analysis I**	4.0
UNIV 101	**The Drexel Experience**	1.0
	Term credits	*17.0*
Term 2		**Credits**
ENGL 102	**Persuasive Writing and Reading**	3.0
HRM 150	**Customer Service**	3.0
HRM 210	**Safety and Sanitation**	3.0
MATH 102	**Introduction to Math Analysis II**	4.0
UNIV 101	**The Drexel Experience**	1.0
	Term credits	*14.0*
Term 3		**Credits**
ENGL 103	**Analytical Writing and Reading**	3.0
NFS 101	**Introduction to Nutrition and Foods**	3.0
HRM 115	**Culinary Science**	3.0
HRM 120	**Principles of Food-Service Management**	3.0
HRM 135	**Tourism II**	3.0
HRM 410	**Laws of Hospitality Industry**	3.0
	Term credits	*18.0*
Term 4		**Credits**
ACCT 115	**Financial Accounting Foundations**	5.0
ECON 201	**Economics I**	4.0
HRM 230	**Design Application Seminar**	3.0
HRM 215	**Commercial Food Production**	3.0
or		
	Elective	3.0
	Term credits	*15.0*
Term 5		**Credits**
ECON 202	**Economics II**	4.0
	Hospitality Management concentration course [1]	3.0
HRM 310	**Hospitality Accounting Systems**	3.0
HRM 325	**Hotel Room Division Management**	3.0
	Elective	3.0
	Term credits	*16.0*

1 Students concentrate in either Lodging Administration, Food and Beverage Management, or Travel and Tourism. See the Degree requirements for a list of the concentration courses.

Term 6		Credits
STAT 201	**Statistics I**	4.0
	Hospitality Management department elective	3.0
	Hospitality Management concentration course	3.0
	Arts and Humanities elective	3.0
HRM 215	**Commercial Food Production**	3.0

or

	Elective	3.0
	Term credits	*16.0*
Term 7		**Credits**
	Hospitality Management department elective	3.0
	Hospitality Management concentration course	3.0
	Arts and Humanities elective	3.0
	Social Science elective	3.0
	Term credits	*12.0*
Term 8		**Credits**
COM 230	**Techniques of Speaking**	3.0
FIN 301	**Introduction to Finance**	5.0
	Hospitality Management department elective	3.0
	Hospitality Management concentration course	3.0
	Term credits	*14.0*
Term 9		**Credits**
POM 300 WI	**Operations Management**	4.0
COM 280	**Public Relations**	3.0
	Hospitality Management department elective	3.0
	Elective	3.0
	Arts and Humanities elective	3.0
	Term credits	*16.0*
Term 10		**Credits**
ORGB 300	**Organizational Behavior**	4.0
	Hospitality Management concentration course	3.0
HRM 330	**Hospitality Marketing**	3.0
	Elective	3.0
	Arts and Humanities elective	3.0
	Term credits	*16.0*
Term 11		**Credits**
	Hospitality Management concentration course	3.0
HRM 320	**Hospitality Management Information Systems**	3.0
HRM 335	**Beverage Management**	3.0
MKTG 301 WI	**Introduction to Marketing Management**	5.0
	Term credits	*14.0*
Term 12		**Credits**
	Hospitality Management department elective	3.0
	Hospitality Management concentration course	3.0
HRM 455	**Hospitality Human Resources Management**	3.0
	Social Science elective	3.0
	Term credits	*12.0*
	Total credits (minimum)	**180.0**

Industrial Engineering

The current demand for industrial engineers is high, but the supply of credentialed industrial engineers is limited. The trend toward an automated workplace and demands for greater efficiency in business and industry further enhance employment prospects for industrial engineers. Drexel's Goodwin College of Professional Studies curriculum leads to the bachelor of science degree, and Drexel is the only college in the Delaware Valley offering a degree in industrial engineering.

Coursework

The coursework for the Bachelor of Science in Industrial Engineering provides a solid understanding of materials, design, statistics, operations research, information systems, methods engineering, manufacturing engineering, cost accounting, and production economy. Emphasis is placed on basic engineering and applied science, with the remainder of the program devoted to the humanities and those aspects of management pertinent to organizing and managing systems to produce and distribute services and products.Through the selection of electives, the curriculum offers options for specialization in a number of areas, providing the student with a sound basis for graduate study in management and industrial engineering.

Core courses include chemistry, calculus, physics, computer programming, principles of economics, technical writing, and coursework in various engineering principles. In the final year, students complete three levels of project design in a team setting.

Industrial Engineering

Bachelor of Science Degree: 192.0 credits

Required courses

English composition requirements		12.0 Credits
ENGL 101	Expository Writing and Reading	3.0
ENGL 102	Persuasive Writing and Reading	3.0
ENGL 103	Analytical Writing and Reading	3.0
COM 310	Technical Communication	3.0

Mathematics requirements		27.0 Credits
MATH 184	Calculus and Analytic Geometry I	3.0
MATH 185	Calculus and Analytic Geometry II	3.0
MATH 186	Calculus and Analytic Geometry III	3.0
MATH 187	Calculus and Analytic Geometry IV	3.0
MATH 188	Calculus and Analytic Geometry V	3.0
MATH 189	Calculus and Analytic Geometry VI	3.0
MATH 261	Linear Algebra	3.0
MATH 384	Theory of Probability	3.0
MATH 385	Mathematical Statistics I	3.0

Science requirements		24.0 Credits
CHEM 161	General Chemistry I	3.0
CHEM 162	General Chemistry II	3.0
CHEM 163	General Chemistry III	3.0
PHYS 185	Physics I	3.0
PHYS 186	Physics I-A	2.0
PHYS 187	Physics II	3.0
PHYS 188	Physics II-A	2.0
PHYS 281	Physics III	3.0
PHYS 282	Physics III-A	2.0

Liberal studies requirements		18.0 Credits
ECON 211	Principles of Economics I (Micro)	3.0

HIST 285	**Technology in Historical Perspective**	3.0
PHIL 315	**Engineering Ethics**	3.0
	Two course liberal studies sequence	6.0
	Liberal studies elective	3.0

Computer science requirements		**3.0 Credits**
	Computer programming elective	3.0

Engineering sciences requirements		**33.0 Credits**
CIVE 240	**Project Economics and Decisions**	3.0
ECE 211	**Electrical Engineering Principles**	3.0
ECE 212	**Electrical Engineering Principles Laboratory**	1.0
MATE 101	**Fundamentals of Materials**	4.0
MEM 201	**Fundamentals of Computer-Aided Design**	3.0
MEM 202	**Engineering Mechanics: Statics**	3.0
MEM 210?	**Basic Thermodynamics**	4.0
MEM 220	**Basic Fluid Mechanics**	4.0
MEM 230	**Mechanics of Materials I**	4.0
MEM 238	**Engineering Mechanics: Dynamics**	4.0

Industrial Engineering Core requirements		**42.0 Credits**
POM 300 WI	**Operations Management**	4.0
INDE 361	**Quality Control**	3.0
INDE 362	**Operations Research for Engineering I**	3.0
INDE 363	**Operations Research for Engineering II**	3.0
INDE 364	**Special Topics in Industrial Engineering: Fundamentals of Industrial Engineering**	4.0
INDE 364	**Special Topics in Industrial Engineering: Ergonomics**	3.0
INDE 364	**Special Topics in Industrial Engineering: Occupational Safety**	3.0
INDE 364	**Special Topics in Industrial Engineering: Facilities Location / Plant Design**	3.0
INDE 364	**Special Topics in Industrial Engineering: Manufacturing Processes I**	3.0
INDE 364	**Special Topics in Industrial Engineering: Industrial Engineering Simulation**	3.0
INDE 461	**Methods Engineering and Measurement**	3.0
ENGR 491	**Senior Project Design I**	2.0
ENGR 492	**Senior Project Design II**	2.0
ENGR 493	**Senior Project Design III**	4.0

Industrial Engineering track courses	**21.0 Credits**

Free electives	**12.0 Credits**

Industrial Engineering

Bachelor of Science Degree: 192.0 credits

Recommended Plan of Study:

First year

(Fall)		**Credits**
CHEM 161	**General Chemistry I**	3.0
ENGL 101	**Expository Writing and Reading**	3.0
MATH 184	**Calculus and Analytic Geometry I**	3.0
(Winter)		
CHEM 162	**General Chemistry II**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
MATH 185	**Calculus and Analytic Geometry II**	3.0
(Spring)		
CHEM 163	**General Chemistry III**	3.0
ENGL 103	**Techniques of Analysis Evaluation**	3.0
MATH 186	**Calculus and Analytic Geometry III**	3.0
(Summer)		
MATH 187	**Calculus and Analytic Geometry IV**	3.0
PHYS 185	**Physics I**	3.0
PHYS 186	**Physics I-A**	2.0
	Total credits	35.0

Second year

(Fall)		**Credits**
MATE 101	**Fundamentals of Materials**	4.0
MATH 188	**Calculus and Analytic Geometry V**	3.0
MEM 201	**Fundamentals of Computer-Aided Design**	3.0
(Winter)		
MATH 189	**Calculus and Analytic Geometry VI**	3.0
PHYS 187	**Physics II**	3.0
	Free elective	3.0
(Spring)		
CS 171	**Computer Programming**	3.0
PHYS 281	**Physics III**	3.0
PHYS 282	**Physics III-A**	2.0

(Summer)		
MATH 261	**Linear Algebra**	3.0
	Liberal studies elective	3.0
	Total credits	33.0

Third year

(Fall)		**Credits**
ECON 201	**Economics I**	4.0
MATH 384	**Theory of Probability**	3.0
MEM 202	**Engineering Mechanics: Statics**	3.0
(Winter)		
ECON 211	**Economics II**	4.0
MATH 385	**Mathematical Statistics I**	3.0
	Free elective	3.0
(Spring)		
CIVE 240	**Project Economics and Decisions**	3.0
POM 300 WI	**Operations Management**	4.0
(Summer)		
MEM 210?	**Basic Thermodynamics**	4.0
	Liberal studies elective	3.0
	Total credits	34.0

Fourth year

(Fall)		**Credits**
COM 310	**Technical Communication**	3.0
INDE 361	**Quality Control**	3.0
MEM 238	**Engineering Mechanics: Dynamics**	4.0
(Winter)		
INDE 362	**Operations Research for Engineering I**	3.0
MEM 230	**Mechanics of Materials I**	4.0
	Liberal studies elective	3.0
(Spring)		
INDE 363	**Operations Research for Engineering II**	3.0
MEM 220	**Basic Fluid Mechanics**	4.0
(Summer)		
ECE 211	**Electrical Engineering Principles**	3.0
ECE 212	**Electrical Engineering Principles Laboratory**	1.0
	Total credits	34.0

Fifth year

(Fall)		**Credits**
ACCT 115	**Financial Accounting**	5.0
INDE 461	**Methods Engineering and Measurement**	3.0
(Winter)		
ACCT 116	**Managerial Accounting**	5.0

INDE 462	**Industrial Plant Design**	3.0
(Spring)		
INDE 463	**Production Management**	3.0
	Industrial Engineering elective	3.0
	Liberal studies elective	3.0
(Summer)		
	Industrial engineering elective	3.0
	Free elective	3.0
	Total credits	31.0

Sixth year

(Fall)		**Credits**
ENGR 491	**Senior Project Design I**	2.0
	Industrial engineering elective	3.0
	Free elective	3.0
(Winter)		
FIN 346	**Global Financial Management**	3.0
ENGR 492	**Senior Project Design II**	2.0
	Industrial Engineering elective	3.0
(Spring)		
ENGR 493	**Senior Project Design III**	4.0
MKTG 301 WI	**Introduction to Marketing Management**	5.0
	Total credits	25.0

Sport Management

Through Drexel's Sport Management program, students master the knowledge and skills necessary for success in the fields of Sport Management, athletics/ coaching, sports psychology and other professions supporting sports and recreation.

The program focuses on the integration of applicable areas of learning including biology, nutrition, human performance, psychology, athletics and business management. It uses a multidisciplinary approach (athletics and human performance; sport and the psycho-socio-cultural process; sports as an industry) to understand sports and manage the sports industry. Students will also develop the important supporting skills in technology and communications.The major emphasizes the practical application of skills to the solution of problems in the management of sports, athletics and recreation on the professional, amateur and community level.

Coursework
The B. S. in Sport Management consists of 181 credits. All students enrolled in the program are required to take 47 credits of general education courses plus 43 credits of core courses on the foundations of Sport Management. These courses are supplemented by 30 credits of free electives.The balance of the program is based on technical elective courses drawn from four major concentrations, namely Athletics, Health & Human Performance (15 credits);The
Business of Sport (15 credits); Sport & the Psycho-Socio-Cultural Process (15 credits);Technology for Sport Management (16 credits).

Degree Completion Options
The Bachelor of Science degree in sport management can be completed in either four or five years:

Five-year option, with co-op experience
This option allows for the greatest amount of employment experience, with three distinct six-month periods of employment included with studies. After the start of the sophomore year, students study or work through all terms, including summers.

Four-year option, with internship experience
This option includes just one six-month period of full-time employment. After the start of the sophomore year, students study or work through all terms, including summers.

Sport Management

Bachelor of Science Degree: 181.0 credits

General education requirements		47.0 Credits
BIO 151	Applied Biology I	3.0
CHEM 151	Applied Chemistry	3.0
COM 230	Techniques of Speaking	3.0
COM 270	Writing for Business	3.0
CS 161	Introduction to Computing	3.0
or		
INFO 101	Introduction to Information Technology	3.0
ENGL 101	Expository Writing and Reading	3.0
ENGL 102	Persuasive Writing and Reading	3.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 101	Introduction to Analysis I	4.0
MATH 102	Introduction to Analysis II	4.0
PHYS 151	Applied Physics	3.0
PSCI 100	Introduction to Political Science	4.0
UNIV 101	The Drexel Experience	2.0

Select one of the following three English courses:		
ENGL 200 WI	Classical to Medieval Literature	3.0
ENGL 201	Renaissance to the Enlightenment	3.0
ENGL 202 WI	Romanticism to Modernism	3.0

Select one of the following two English courses:		
ENGL 203 WI	Post-Colonial Literature I: Africa/Asia/Caribbean/Japan/ Middle East	3.0
ENGL 204	Post-Colonial Literature II: Africa/Asia/Caribbean/Japan/ Middle East	3.0

Core courses		49.0 Credits
ACCT 111	Financial Accounting	3.0
BUSN 101	Foundations of Business I	3.0
COM 290	Sports and the Mass Media	3.0
HRMT 323	Principles of Human Resource Administration	3.0
ORGB 300	Organizational Behavior	4.0
PHIL 325	Ethics in Sport Management	3.0

PSY 245	**Sports Psychology**	3.0
SMT 110	**Business of Sports**	3.0
SMT 152	**Leadership in Sport and Society**	3.0
SMT 200	**Facility and Event Management**	3.0
SMT 201	**Sports Marketing, Promotion and Public Relations**	3.0
SMT 230	**Sport and the Law**	3.0
SMT 250	**Technology and Sport**	3.0
SMT 300	**Quantitative Analysis /Statistics in Sports**	3.0
SMT 320	**Economic Aspects of Sport Management**	3.0
SOC 268	**Sociology of Sport**	3.0

Athletics, Health and Human Performance **15.0 Credits**

Select five of the following courses:

ANAT 101	**Anatomy & Physiology I**	5.0
BCS 352	**Life-Span Human Development***	3.0
NFS 101	**Introduction to Nutrition and Foods**	3.0
NFS 310	**Nutrition and Sports**	3.0
PSY 310	**Drugs and Human Behavior**	3.0
SMT 280	**Kinesiology**	3.0
SMT 101	**Principles of Coaching**	3.0
SMT 120	**Life Skills for Coaches**	3.0
SMT 210	**Prevention/Care for Athletic Injuries**	3.0
SMT 340	**International Aspects of Sport Management**	3.0
SMT 390	**Special Topics in Sport Management**	3.0

* Course offered through the College of Nursing and Health Professions

The Business of Sport **15.0 Credits**

BLAW 201	**Business Law I**	4.0
ECON 211	**Principles of Economics I (Micro)**	3.0

In addition to BLAW 201 and ECON 211, students select from following electives to complete a minimum of 15.0 credits in this area:

ACCT 115	**Financial Accounting Foundations**	5.0
ACCT 116	**Managerial Accounting Foundations**	5.0
BLAW 202	**Business Law II**	4.0
ECON 212	**Principles of Economics II (Macro)**	3.0
MKTG 311	**Introduction to Marketing Management**	3.0
SMT 220	**Recreation, Wellness and Society**	3.0
SMT 235	**Sports Administration and Governance**	3.0
SMT 340	**International Aspect of Sport**	3.0
SMT 365	**Operations Management in Sports**	3.0
SMT 475	**Coaching Practicum**	3.0

Sport and the Psycho/Socio-cultural Process **15.0 Credits**

Select five of the following courses:

PHIL 210	**Philosophy of Sport**	3.0
PSY 101	**General Psychology**	3.0
PSY 120	**Developmental Psychology**	3.0
PSY 140	**Approaches to Personality**	3.0
PSY 212	**Physiological Psychology**	3.0
PSY 230	**Psychology of Learning**	3.0
PSY 342	**Counseling Psychology**	3.0
PSY 355	**Health Psychology**	3.0
SMT 330	**Gender Equity and Women in Sport**	3.0
SMT 335	**Minority Issues and Opportunities in Sport**	3.0
SOC 101	**Introduction to Sociology**	3.0
SOC 210	**Race and Ethnic Relations**	3.0
SOC 250	**Research Methods I**	3.0

Technology for Sport Management		**13.0 Credits**
COM 240	**New Technologies in Communication**	3.0
COM 335	**Writing for the World Wide Web**	3.0
MIS 300	**Management of Information Systems**	4.0
	Technology elective**	3.0

**Suggested Technology electives include: COM 300 Computer Assisted Journalism, COM 340 Desktop Publishing, INFO 102 Intro to Information Systems, INFO 105 Information Evaluation, Organization and Use, DIGM 150 Overview of Digital Media, FMVD 110 Shooting and Lighting, MIS 341 Micro-computing Technology for Business. Check with the Sport Management program for additional technical elective options.

Electives		**27.0 Credits**
	Free electives***	27.0

*** Students may pursue a minor or take further studies in the sport management area electives.

Writing-Intensive Course Requirements

In order to graduate, all students beginning with the entering class of 2002/01 (fall, 2002) must pass three writing-intensive courses after their freshman year. Two writing-intensive courses must be in a student's major. The third can be in any discipline. Students are advised to take one writing-intensive class each year, beginning with the sophomore year, and to avoid “clustering” these courses near the end of their matriculation. Transfer students need to meet with an academic advisor to review the number of writing-intensive courses required to graduate.

A "WI" next to a course in this catalog indicates that this course can fulfill a writing-intensive requirement. Departments will designate specific sections of such courses as writing-intensive. Sections of writing-intensive courses are not indicated in this catalog. Students should check the section comments in Banner when registering. Students scheduling their courses in Banner can also conduct a search for courses with the attribute "WI" to bring up a list of all writing-intensive courses available that term. For more information on writing-intensive courses, see the Drexel University Writing Program's Writing-Intensive Course page.

Recommended Plan of Study

BS Sport Management

Bachelor of Science Degree — 5-yr co-op

Term 1		Credits
BUSN 101	**Foundations of Business I**	3.0
ENGL 101	**Expository Writing and Reading**	3.0
SOC 101	**Introduction to Sociology**	3.0
MATH 101	**Introduction to Math Analysis I**	4.0
SMT 110	**Business of Sports**	3.0
UNIV 101	**The Drexel Experience**	1.0
	Term credits	*17.0*
Term 2		**Credits**
BIO 151	**Applied Biology**	3.0
ENGL 102	**Persuasive Writing and Reading**	3.0
MATH 102	**Introduction to Math Analysis II**	4.0
PSY 101	**General Psychology I**	3.0
SMT 200	**Facility and Event Management**	3.0
UNIV 101	**The Drexel Experience**	1.0
	Term credits	*17.0*
Term 3		**Credits**
CHEM 151	**Applied Chemistry**	3.0
ENGL 103	**Analytical Writing and Reading**	3.0
ACCT 111	**Financial Accounting**	3.0
	Athletics, Health and Human Performance elective [1]	3.0
CS 161	**Introduction to Computing**	3.0
or		
INFO 101	**Introduction to Information Technology**	3.0
	Term credits	*15.0*
1	See the Degree requirements page for a list of Athletics, Health and Human Performance electives.	
Term 4		**Credits**
BLAW 201	**Business Law I**	4.0
COM 270 WI	**Business Communication**	3.0
PHYS 151	**Applied Physics**	3.0
COM 290	**Sports and the Mass Media**	3.0
SMT 250	**Technology and Sport**	3.0
	Term credits	*16.0*
Term 5		**Credits**
COM 230	**Techniques of Speaking**	3.0
ECON 211	**Principles of Economics I (Micro)**	3.0
PSY 245 WI	**Sports Psychology**	3.0
SMT 201	**Sport Marketing, Promotion, and Public Relations**	3.0
	Athletics, Health and Human Performance elective	3.0
	Term credits	*15.0*
Term 6		**Credits**
COM 240	**New Technologies in Communication**	3.0
SMT 152	**Leadership in Sport and Society**	3.0
SOC 268	**Sociology of Sport**	3.0
	Elective	3.0

	Business of Sport elective [1]	3.0
	Term credits	*15.0*

1 See the Degree requirements page for a list of Business of Sport electives.

Term 7		**Credits**
ORGB 300	**Organizational Behavior**	4.0
PSCI 100	**Introduction to Political Science**	4.0
	Elective	3.0
	Athletics, Health and Human Performance elective	3.0
	Sport and the Psycho/Socio-cultural Process elective [1]	3.0
	Term credits	*17.0*

1 See the Degree requirements page for a list of Sport and the Psycho/Socio-cultural Process electives.

Term 8		**Credits**
HRMT 323	**Principles of Human Resource Administration**	3.0
	Elective	3.0
	Business of Sport elective	3.0
	Sport and the Psycho/Socio-cultural Process elective	3.0
ENGL 204	**Post-Colonial Literature II**	3.0
or		
ENGL 203 WI	**Post-Colonial Literature I**	3.0
	Term credits	*15.0*

Term 9		**Credits**
MIS 300	**Management Information Systems**	4.0
	Two electives	6.0
	Business of Sport elective	3.0
ENGL 200	**Classical to Medieval Literature**	3.0
or		
ENGL 201	**Renaissance to the Enlightenment**	3.0
or		
ENGL 202 WI	**Romanticism to Modernism**	3.0
	Term credits	*16.0*

Term 10		**Credits**
PHIL 325	**Ethics in Sports Management**	3.0
SMT 300	**Quantitative Analysis/Statistics in Sport**	3.0
	Elective	3.0
	Business of Sport elective	3.0
	Technology elective [1]	3.0
	Term credits	*15.0*

1 Suggested Technology electives include COM 300 Computer Assisted Journalism, COM 340 Desktop Publishing, ISYS 102 Intro to Information Systems II, ISYS 105 Information Evaluation, Organization and Use, DIGM 150 Overview of Digital Media, FMVD 105 Fundamentals of Video Production, MIS 341 Micro-computing Technology for Business. Check with the Sports Management program for additional technical elective options.

Term 11		**Credits**
COM 335	**Writing for the World Wide Web**	3.0
SMT 230	**Sport and the Law**	3.0
	Elective	3.0
	Athletics, Health and Human Performance elective	3.0
	Term credits	*12.0*

Term 12		**Credits**
SMT 320	**Economic Aspects of Sports Management**	3.0
	Two electives	6.0
	Sport and the Psycho/Socio-cultural Process elective	3.0
	Term credits	*12.0*

	Total credits (minimum)	**182.0**

Minor in Construction Management

Students in Civil Engineering, Architectural Engineering and Architecture may select to pursue Construction Management as a minor area of study. Because construction is inherently related to design in these disciplines, the Construction Management minor can be a natural extension of each field of study.

The requirements for the minor include:

- completion of a minimum of 24 credits
- courses used to fulfill general education requirements may not be counted toward an academic minor
- up to nine credits earned within the student's major may be counted toward the minor with minor department approval.
- prerequisite courses may be counted toward the minor if recommended by the minor department.

Required courses		Credits
CMGT 161	**Building Materials and Construction Management I**	3.0
CMGT 162	**Building Materials and Construction Management II**	3.0
CMGT 361	**Contracts & Specifications I**	3.0
CMGT 362	**Contracts & Specifications II**	3.0
CMGT 363	**Estimating I**	3.0
CMGT 467	**Techniques of Project Control**	3.0

Two of the following elective courses may be chosen to meet the minor requirements* :

CMGT 261	**Construction Safety**	3.0
CMGT 263	**Understanding Construction Drawing**	3.0
CMGT 364	**Estimating II**	3.0
CMGT 461	**Construction Management I**	3.0
CMGT 462	**Construction Management II**	3.0
CMGT 463	**Value Engineering I**	3.0
CMGT 465	**Marketing Construction Services**	3.0

* Choice of electives must be approved by the department based on the student's major field and prior experience.

Certain courses within the student's major may also be used to meet the minor requirements. These include:

ARCH 261	**Environmental Systems I**	3.0
ARCH 262	**Environmental Systems II**	3.0
CIVE 240	**Engineering Economics**	3.0
ARCH 161	**Architectural Construction***	3.0

* ARCH 161 can be substituted for CMGT 161 for Architects. An elective may be substituted for CMGT 162.