

Drexel University

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The Richard C. Goodwin College of Professional Studies

The mission of the Goodwin College of Professional Studies is to provide contemporary students with the academic foundation and practical education that meets their career aspirations and facilitates their professional and personal advancement.

While still serving a large adult, part-time student population, the College has grown into a distinct entity that creates and delivers programs that are professional and applied in nature for both full-time traditional and nontraditional students. Today, the College offers full-time and part-time programs, credit and non-credit courses, classes during the day, evening, Saturdays, and online—as well as programs designed to suit the needs of the corporate sector.

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.

All Goodwin programs are unique, aligning with market and industry needs, and blending theory with practice through laboratory experiments, field trips, and solid alliances with key businesses and industries. Instruction at Goodwin is supported by a team of educators with noteworthy educational credentials and expertise, and varied industrial background.

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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
- Computing and Security Technology
- Culinary Arts
- Culinary Science
- 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.

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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. However, many of these degree programs may require courses during the day. Detailed program descriptions and curriculum requirements may be found by visiting the College's Part-Time Undergraduate Studies web page.

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 and Security Technology
- Construction Management
- Hospitality Management

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

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The Richard C. Goodwin College of Professional Studies

Facilities

The Richard C. Goodwin College of Professional Studies is housed in One Drexel Plaza, 3001 Market Street, across from the 30th Street Train Station in Philadelphia. This facility, designed to provide convenient and effective access for students, includes one-stop student services including admissions, registration, financial aid, and academic advising. The college provides its students with access to seven state-of-the-art computer labs, equipped with advanced and updated software, desktop publishing and scanner capabilities. Additional resources include a state-of-the-art teleconferencing/smart room, and PLC, electronics, and machine tools educational laboratories to support the applied engineering technology program.

The facilities of the department of Hospitality Management occupy 14,000-square-feet in the Academic Building at the center of Campus. The site includes two commercial kitchens, The Academic Bistro (Drexel's student restaurant), and the Center for the Study of Wine and Food that presently holds over 1,200 cookbooks, academic journals and the department wine cellar. The Department also has an administrative center in Drexel's newest building, the Ross North Side Commons.

Architecture - Part-time Evening Program

Part-time Evening Curriculum

The program, offered entirely in the evening, leads to a Bachelor of Architecture degree. The program is structured into three areas of study: the studio/thesis sequence; required and elective architectural coursework; and required university coursework.

Calendar

The course of study usually takes seven years to complete, but students with transfer credits in studio design can accelerate their program. Students are expected to supplement their academic work through full-time employment in architectural offices. The studio courses and most required professional courses are offered in sequences during the fall, winter and spring quarters. Elective courses and required university courses are available during the summer quarter.

Transfer Credits

It is possible to transfer into the architecture program at Drexel. Transfer credit for comparable courses completed at accredited institutions will be awarded if grades of C or higher have been earned. Placement and credit in studio design courses will depend on a portfolio review of the students' academic design projects. In general advanced placement in design is awarded when students have successfully completed comparable studios in B.Arch. programs or in recognized pre-architecture transfer programs.

Advisement and Departmental Regulations

Please refer to the department's General Counseling Guidelines to the Curriculum for a complete description of all departmental regulations and procedures, and for advice in selecting, sequencing, and scheduling coursework. These guidelines are available at the Office of the Department of Architecture at 3201 Arch Street.

Accreditation

The Bachelor of Architecture degree program at Drexel is accredited by the National Architectural Accrediting Board (NAAB).

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

Architecture vs Architectural Engineering

Because Drexel university offers two programs with "architecture" in their titles, it is

useful to point out the significant differences between them:

Architects design buildings to meet people's spatial, organizational, and aesthetic needs; they also coordinate the building design process. After earning a Bachelor of Architecture Degree, graduates become registered architects by completing the required work experience and state licensing examinations.

Architectural Engineers specialize in the design of engineering systems within buildings. Architectural Engineers earn Bachelor of Science Degrees and become professional engineers with the required experience and state examinations. Students whose interests are focused on the technological and engineering aspects of buildings should review Drexel's major in Architectural Engineering offered by the College of Engineering.

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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 at 215-895-2409 for further information.

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Architecture: Part-Time Evening Program

Bachelor of Architecture Degree: 221.0 credits.

Degree requirements (incoming students, 2008/2009)

General education requirements

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 electives*	9.0
	Social science electives	9.0
	Free electives	24.0

*One humanities elective should be a PHIL course addressing Ethics for Architects.

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 program's minimum studio advancement requirements. See the program's Advising Guidelines 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
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
Students select a minimum of one of the following courses		
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

Students select additional history and theory electives to fulfill the requirement of 12.0 credits total.

History and theory electives		12.0 Credits
ARCH 341	Theories of Architecture I	3.0
ARCH 342	Theories of Architecture 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 421 WI	Environmental Psychology and Design Theory	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 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 461	Construction Management I	3.0
CMGT 463	Value Engineering II	3.0
CMGT 363	Estimating I	3.0

* History and theory electives taken beyond the 12 credits required 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.

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Architecture

Bachelor of Architecture Degree: 221.0 credits

Part-time Evening Program

Recommended Plan of Study:

This curriculum format is adjustable to each student's academic situation. Transfer credit evaluation, prior architectural experience, and other considerations may restructure the student's yearly program schedule.

First year

Fall Quarter		Credits
ARCH 111	Studio 1-1	3.0
ARCH 155	Basic Architectural Drawing	3.0
ENGL 101	Expository Writing and Reading	3.0
Winter Quarter		
ARCH 112	Studio 1-2	3.0
ARCH 156	Graphic Communication I	3.0
ENGL 102	Persuasive Writing and Reading	3.0
Spring Quarter		
ARCH 113	Studio 1-3	3.0
ARCH 161	Architectural Construction	3.0
ENGL 103	Techniques of Analysis Evaluation	3.0
Summer Quarter		
ARCH 150	Introduction to CADD I	4.0
	Humanities elective	3.0
	Total credits	34.0

Second year

Fall Quarter		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 Quarter		
ARCH 122	Studio 2-2	3.0
ARCH 142 WI	Architecture and Society II	3.0
MATH 183	Mathematical Analysis II	3.0
Spring Quarter		
ARCH 123	Studio 2-3	3.0
ARCH 143 WI	Architecture and Society III	3.0
MATH 182	Mathematical Analysis III	3.0
Summer Quarter		
ARCH 153	Introduction to CADD II	4.0
	Social science elective	3.0

Total credits	34.0
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Third year

Fall Quarter		Credits
ARCH 231	Studio 3-1*	3.0
PHYS 182	Applied Physics I	3.0
	Social science elective	3.0
Winter Quarter		
ARCH 232	Studio 3-2	3.0
PHYS 183	Applied Physics II	3.0
	Humanities elective	3.0
Spring Quarter		
ARCH 233	Studio 3-3	3.0
PHYS 184	Applied Physics III	3.0
	Humanities elective	3.0
*Prior to taking this course student must meet program's minimum studio advancement requirements. See the program's Advising Guidelines for more details.		
Summer Quarter		
	History/Theory elective	3.0
	Social science elective	3.0
	Free elective	3.0
	Total credits	27.0

Fourth year

Fall Quarter		Credits
ARCH 241	Studio 4-1	4.0
CIVE 261	Materials and Structural Behavior I	3.0
Winter Quarter		
ARCH 242	Studio 4-2	4.0
CIVE 262	Materials and Structural Behavior II	3.0
Spring Quarter		
ARCH 243	Studio 4-3	4.0
CIVE 263	Materials and Structural Behavior III	3.0
Summer Quarter		
	History/Theory elective	3.0
	Professional elective	3.0
	Total credits	27.0

Fifth year

Fall Quarter		Credits
ARCH 351	Studio 5-1	4.0
ARCH 261	Environmental Systems I	3.0
Winter Quarter		
ARCH 352	Studio 5-2	4.0
ARCH 262	Environmental Systems II	3.0
Spring Quarter		
ARCH 353	Studio 5-3	4.0
ARCH 263	Environmental Systems III	3.0
Summer Quarter		
	History/Theory elective	3.0
	Professional elective	3.0
	Free electives	6.0

Total credits	33.0
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Sixth year

Fall Quarter		Credits
ARCH 361	Studio 6-1*	4.0
	Free elective	3.0
Winter Quarter		
ARCH 362	Studio 6-2	4.0
	Social science elective	3.0
Spring Quarter		
ARCH 363	Studio 6-3	4.0
PHIL	Ethics for Architects	3.0
Summer Quarter		
	Professional elective	3.0
	Free elective	3.0
	Total credits	27.0

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

Seventh year (Thesis)

Fall Quarter		Credits
ARCH 496	Thesis I	8.0
	History/Theory elective	3.0
Winter Quarter		
ARCH 497	Thesis II	8.0
	Free elective	3.0
Spring Quarter		
ARCH 498	Thesis III	8.0
	Total credits	33.0

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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, industrial, 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.

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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

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Applied Engineering Technology Electrical Engineering Technology Concentration

Bachelor of Science Degree: 187.5 credits

Degree requirements (incoming students, 2008/2009)

Humanities and social sciences requirements		34.0 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 201	Microeconomics	4.0
HIST 285	Technology in Historical Perspective	3.0
PHIL 315	Engineering Ethics	3.0
	Liberal studies electives	9.0

Basic Science requirements		13.5 Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 103	General Physics I	4.0
PHYS 104	General Physics II	4.0

Mathematics requirements		15.0 Credits
MATH 110	Precalculus	3.0
MATH 121	Calculus and Analytic Geometry I	4.0
MATH 122	Calculus and Analytic Geometry II	4.0
STAT 201	Statistics I	4.0

Applied Engineering Technical Core		62.0 Credits
EET 201	Circuit Analysis I	4.0
EET 202	Circuit Analysis II	4.0
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	4.0
EET 205	Digital Electronics with Laboratory	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	Programmable Logic Controllers	4.0
EET 401	Applied Micro-controllers	3.0
MET 100	Graphical Communication	3.0
MET 101	Manufacturing Materials	4.0
MET 204	Applied Quality Control	3.0
MET 205	Robotics and Mechatronics	3.0

MET 209	Fluid Power	3.0
MET 213	Applied Mechanics	4.0
MHT 205	Thermodynamics I	3.0
MHT 226	Measurement Lab	3.0
INDE 240	Technology Economics	3.0
INDE 370	Industrial Project Management	3.0

Electrical Engineering Technology Concentration requirements 26.0 Credits

EET 206	Analog Electronics I	4.0
EET 313	Signals and Systems I	4.0
EET 317	Analog Electronics II	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

EET Technical electives 6.0 Credits

Students select 6.0 additional credits from any EET, MET, MHT or INDE courses not already required.

Capstone course requirements 9.0 Credits

MET 421	Project Design I	3.0
MET 422	Project Design II	3.0
MET 423	Project Design III	3.0

Miscellaneous 8.0 Credits

CS 161	Introduction to Computing	3.0
EET 102	The Drexel Experience	2.0
UNIV 101	The Drexel Experience	2.0

Free electives 13.0 Credits

Recommended Plan Of Study

BS Applied Engineering Technology

5 YR UG Co-op Concentration /Electrical Engineering Tech.

Term 1		Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	General Chemistry I Laboratory	1.5
EET 102	Introduction to Applied Engineering Technology	3.0
ENGL 101	Expository Writing and Reading	3.0
MATH 110	Precalculus	3.0
PHYS 103	General Physics I	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	19.5
Term 2		Credits
ENGL 102	Persuasive Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 100	Graphical Communication	3.0
PHYS 104	General Physics II	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	15.0
Term 3		Credits
CS 161	Introduction to Computing	3.0
EET 201	Circuit Analysis I	4.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 122	Calculus II	4.0
MET 101	Manufacturing Materials	4.0
	Term Credits	18.0
Term 4		Credits
COM 111	Introduction to Corporate Communication	3.0
EET 202	Circuit Analysis II	4.0
EET 205	Digital Electronics with Laboratory	4.0
MHT 226	Measurement Lab	3.0
STAT 201	Business Statistics I	4.0
	Term Credits	18.0
Term 5		Credits
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	3.0
HIST 285	Technology in Historical Perspective	3.0
MET 205	Robotics and Mechatronics	4.0
MHT 205	Thermodynamics I	3.0
	Term Credits	17.0
Term 6		Credits
COM 230	Techniques of Speaking	3.0
ECON 201	Economics I	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	Programmable Logic Controllers	4.0
MET 213	Applied Mechanics	4.0
	Term Credits	19.0
Term 7		Credits
EET 401	Applied Micro-controllers	3.0
INDE 240	Technology Economics	3.0
MET 104	Fluid Power	4.0
MET 204	Applied Quality Control	4.0

PHIL 315	Engineering Ethics	3.0
	<i>Term Credits</i>	<i>17.0</i>
Term 8		Credits
EET 206	Analog Electronics I	4.0
EET 322	Energy Conversion	4.0
EET 325	Microprocessors	3.0
	Free elective	3.0
	<i>Term Credits</i>	<i>14.0</i>
Term 9		Credits
EET 313	Signals and Systems I	4.0
EET 317	Analog Electronics II	4.0
EET 323	Electrical Systems Design	3.0
INDE 370	Industrial Project Management	3.0
	<i>Term Credits</i>	<i>14.0</i>
Term 10		Credits
EET 324	Power Electronics	4.0
MET 421	Senior Design Project I	3.0
	Free elective	3.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>13.0</i>
Term 11		Credits
MET 422	Senior Design Project II	3.0
	EET technical elective (See degree requirements for options)	3.0
	Free elective	3.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>12.0</i>
Term 12		Credits
MET 423	Senior Design Project III	3.0
	EET technical elective (See degree requirements for options)	3.0
	Free elective	2.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>11.0</i>
	Total Credits (minimum)	187.5

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Applied Engineering Technology Mechanical Engineering Technology Concentration

Bachelor of Science Degree: 187.5 credits

Degree requirements (incoming students, 2008/2009)

Humanities and social sciences requirements		34.0 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 201	Microeconomics	4.0
HIST 285	Technology in Historical Perspective	3.0
PHIL 315	Engineering Ethics	3.0
	Liberal studies electives	9.0

Basic Science requirements		13.5 Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 103	General Physics I	4.0
PHYS 104	General Physics II	4.0

Mathematics requirements		15.0 Credits
MATH 110	Precalculus	3.0
MATH 121	Calculus and Analytic Geometry I	4.0
MATH 122	Calculus and Analytic Geometry II	4.0
STAT 201	Statistics I	4.0

Applied Engineering Technical Core		62.0 Credits
EET 201	Circuit Analysis I	4.0
EET 202	Circuit Analysis II	4.0
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	4.0
EET 205	Digital Electronics with Laboratory	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	Programmable Logic Controllers	4.0
EET 401	Applied Micro-controllers	3.0
MET 100	Graphical Communication	3.0
MET 101	Manufacturing Materials	4.0
MET 204	Applied Quality Control	3.0
MET 205	Robotics and Mechatronics	3.0
MET 204	Fluid Power	3.0

MET 213	Applied Mechanics	4.0
MHT 205	Thermodynamics I	3.0
MHT 226	Measurement Lab	3.0
INDE 240	Technology Economics	3.0
INDE 370	Industrial Project Management	3.0

Mechanical Engineering Technology Concentration requirements 26.0 Credits

MET 316	Computer Numerical Control	3.0
MET 407	Manufacturing Processes	3.0
MET 408	Manufacturing Information Management	3.0
MHT 301	Fluid Mechanics I	3.0
MHT 314	Thermo and Heat Transfer Laboratory	3.0
MHT 401	Mechanical Design I	4.0

MHT Technical electives 6.0 Credits

Students select 6.0 additional credits from any EET, MET, MHT or INDE courses not already required.

Capstone course requirements 9.0 Credits

MET 421	Project Design I	3.0
MET 422	Project Design II	3.0
MET 423	Project Design III	3.0

Miscellaneous 8.0 Credits

CS 161	Introduction to Computing	3.0
EET 102	Introduction to AET	3.0
UNIV 101	The Drexel Experience	2.0

Free electives 14.0 Credits

Recommended Plan Of Study

BS Applied Engineering Technology

5 YR UG Co-op Concentration /Mechanical Engineering Tech.

Term 1		Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	General Chemistry I Laboratory	1.5
EET 102	Introduction to Applied Engineering Technology	3.0
ENGL 101	Expository Writing and Reading	3.0
MATH 110	Precalculus	3.0
PHYS 103	General Physics I	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	19.5
Term 2		Credits
ENGL 102	Persuasive Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 100	Graphical Communication	3.0
PHYS 104	General Physics II	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	15.0
Term 3		Credits
CS 161	Introduction to Computing	3.0
EET 201	Circuit Analysis I	4.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 122	Calculus II	4.0
MET 101	Manufacturing Materials	4.0
	Term Credits	18.0
Term 4		Credits
COM 111	Principles of Communication	3.0
EET 202	Circuit Analysis II	4.0
EET 205	Digital Electronics with Laboratory	4.0
MHT 226	Measurement Lab	3.0
STAT 201	Business Statistics I	4.0
	Term Credits	18.0
Term 5		Credits
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	3.0
HIST 285	Technology in Historical Perspective	3.0
MET 205	Robotics and Mechatronics	3.0
MHT 205	Thermodynamics I	3.0
	Term Credits	16.0
Term 6		Credits
COM 230	Techniques of Speaking	3.0
ECON 201	Economics I	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	Programmable Logic Controllers	4.0
MET 213	Applied Mechanics	4.0
	Term Credits	19.0
Term 7		Credits
EET 401	Applied Micro-controllers	3.0
INDE 240	Technology Economics	3.0
MET 204	Applied Quality Control	3.0
MET 209	Fluid Power	3.0

PHIL 315	Engineering Ethics	3.0
	<i>Term Credits</i>	15.0
Term 8		Credits
MET 316	Computer Numerical Control	3.0
MET 408	MFG Information Management	3.0
MHT 206	Thermodynamics II	3.0
MHT 222	Applied Dynamics I	3.0
MHT 301	Fluid Mechanics I	3.0
	<i>Term Credits</i>	15.0
Term 9		Credits
INDE 370	Industrial Project Management	3.0
MET 407	Manufacturing Processes	3.0
MHT 314	Thermo and Heat Transfer Lab	3.0
MHT 401	Mechanical Design I	4.0
	<i>Term Credits</i>	13.0
Term 10		Credits
MET 421	Senior Design Project I	3.0
	Free electives	7.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	13.0
Term 11		Credits
MET 422	Senior Design Project II	3.0
	Free elective	4.0
	Liberal studies elective	3.0
	MHT technical elective (See degree requirements for options)	3.0
	<i>Term Credits</i>	13.0
Term 12		Credits
MET 423	Senior Design Project III	3.0
	Free elective	4.0
	Liberal studies elective	3.0
	MHT technical elective (See degree requirements for options)	3.0
	<i>Term Credits</i>	13.0
	Total Credits (minimum)	187.5

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Applied Engineering Technology Industrial Engineering Technology Concentration

Bachelor of Science Degree: 187.5 credits

Degree requirements (incoming students, 2008/2009)

Humanities and social sciences requirements		34.0 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 201	Principles of Microeconomics	4.0
HIST 285	Technology in Historical Perspective	3.0
PHIL 315	Engineering Ethics	3.0
	Liberal studies electives	9.0

Basic Science requirements		13.5 Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 103	General Physics I	4.0
PHYS 104	General Physics II	4.0

Mathematics requirements		15.0 Credits
MATH 110	Precalculus	3.0
MATH 121	Calculus and Analytic Geometry I	4.0
MATH 122	Calculus and Analytic Geometry II	4.0
STAT 201	Statistics I	4.0

Applied Engineering Technical Core		62.0 Credits
EET 201	Circuit Analysis I	4.0
EET 202	Circuit Analysis II	4.0
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	4.0
EET 205	Digital Electronics with Laboratory	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	Programmable Logic Controllers	4.0
EET 401	Applied Micro-controllers	3.0
MET 100	Graphical Communication	3.0
MET 101	Manufacturing Materials	4.0
MET 204	Applied Quality Control	3.0

MET 205	Robotics and Mechatronics	3.0
MET 204	Fluid Power	3.0
MET 213	Applied Mechanics	4.0
MHT 205	Thermodynamics I	3.0
MHT 226	Measurement Lab	3.0
INDE 240	Technology Economics	3.0
INDE 370	Industrial Project Management	3.0

Industrial Engineering Technology Concentration requirements **31.0 Credits**

ACCT 115	Financial Accounting Foundations	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0
INDE 300	Quality Management	3.0
INDE 350	Industrial Engineering Simulation	3.0
INDE 363	Operations Research for Engineering II	3.0
INDE 365	Systems Analysis Methods I	3.0
INDE 366	Systems Analysis Methods II	3.0
INDE 375	Quality Improvement by Experimental Design	3.0

IET Technical electives **6.0 Credits**

Students select 6.0 additional credits from any EET, MET, MHT, INDE, OPM, or MKT courses not already required.

Capstone course requirements **9.0 Credits**

MET 421	Project Design I	3.0
MET 422	Project Design II	3.0
MET 423	Project Design III	3.0

Miscellaneous **8.0 Credits**

CS 161	Introduction to Computing	3.0
EET 102	The Drexel Experience	2.0
UNIV 101	The Drexel Experience	2.0

Free electives **7.0 Credits**

Recommended Plan Of Study

BS Applied Engineering Technology

5 YR UG Co-op Concentration /Industrial Engineering Tech

Term 1		Credits
CHEM 111	General Chemistry I	4.0
CHEM 113	General Chemistry I Laboratory	1.5
EET 102	Introduction to Applied Engineering Technology	3.0
ENGL 101	Expository Writing and Reading	3.0
MATH 110	Precalculus	3.0
PHYS 152	Introductory Physics I	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	19.5
Term 2		Credits
ENGL 102	Persuasive Writing and Reading	3.0
MATH 121	Calculus I	4.0
MET 100	Graphical Communication	4.0
PHYS 154	Introductory Physics III	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	16.0
Term 3		Credits
CS 161	Introduction to Computing	3.0
EET 201	Circuit Analysis I	4.0
ENGL 103	Analytical Writing and Reading	3.0
MATH 122	Calculus II	4.0
MET 101	Manufacturing Materials	4.0
	Term Credits	18.0
Term 4		Credits
COM 111	Principles of Communication	3.0
EET 202	Circuit Analysis II	4.0
EET 205	Digital Electronics with Laboratory	4.0
MHT 226	Measurement Lab	3.0
STAT 201	Introduction to Business Statistics	4.0
	Term Credits	18.0
Term 5		Credits
EET 203	Non-Destructive Evaluation of Materials	4.0
EET 204	Introduction to Nanotechnology	3.0
HIST 285	Technology in Historical Perspective	3.0
MET 205	Robotics and Mechatronics	3.0
MHT 205	Thermodynamics I	3.0
	Term Credits	16.0
Term 6		Credits
COM 230	Techniques of Speaking	3.0
ECON 201	Principles of Microeconomics	4.0
EET 311	Modeling of Engineering Systems	4.0
EET 319	PLC Fundamentals	4.0
MET 213	Applied Mechanics	4.0
	Term Credits	19.0
Term 7		Credits
EET 401	Applied Micro-controllers	3.0
INDE 240	Technology Economics	3.0
MET 204	Applied Quality Control	3.0
MET 209	Fluid Power	3.0

PHIL 315	Engineering Ethics	3.0
	<i>Term Credits</i>	<i>15.0</i>
Term 8		Credits
ACCT 115	Financial Accounting Foundations	4.0
ECON 202	Principles of Macroeconomics	4.0
INDE 300	Quality Management	3.0
INDE 350	Industrial Engineering Simulation	3.0
	<i>Term Credits</i>	<i>14.0</i>
Term 9		Credits
FIN 301	Introduction to Finance	4.0
INDE 363	Operations Research for Engineering II	3.0
INDE 365	Systems Analysis Methods I	3.0
INDE 370	Industrial Project Management	3.0
	<i>Term Credits</i>	<i>13.0</i>
Term 10		Credits
INDE 366	Systems Analysis Methods II	3.0
MET 421	Senior Design Project I	3.0
	Free elective	3.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>12.0</i>
Term 11		Credits
INDE 375	Quality Improvement by Experimental Design	4.0
MET 422	Senior Design Project II	3.0
	See advisor for list of appropriate technical electives (MET, EET, INDE)	4.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>14.0</i>
Term 12		Credits
MET 423	Senior Design Project III	3.0
	Free elective	4.0
	See advisor for list of appropriate technical electives (MET, EET, INDE)	3.0
	Liberal studies elective	3.0
	<i>Term Credits</i>	<i>13.0</i>
	Total Credits (minimum)	187.5

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Construction Management

About the program

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 Drexel's Construction Management program receive broad academic, technical, business, and construction management courses that are designed to produce well-rounded construction professionals.

About the concentration

Drexel's undergraduate concentration in real estate seeks to produce professionals who have knowledge and perspective on the issues in the real estate development process, as well as the industry as a whole. Students will explore the knowledge and skill sets required to create and maintain built environments for living, working and entertainment purposes.

Program Delivery Options

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.

For additional information, please visit the Construction Management web page.

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Construction Management

Bachelor of Science Degree: 184.5 credits

Degree requirements (incoming students, 2008/2009)

English/Communication		21.0 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
COM 270	Business Communication	3.0
COM 310	Technical Communication	3.0
COM 330	Professional Presentations	3.0

Mathematics		7.0 Credits
MATH 110	Pre-Calculus	3.0
MATH 121	Calculus I	4.0

Science		15.5 Credits
ENVS 260	Environmental Science and Society I	3.0
ENVS 272	Physical Geology	4.0
CHEM 111	General Chemistry I	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 182	Applied Physics I	3.0

Business		32.0 Credits
ACCT 115	Financial Accounting	4.0
BLAW 201	Business Law I	4.0
ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0
HRMT 323	Principles of Human Resource Administration	4.0
ORGB 300 WI	Organizational Behavior	4.0
STAT 201	Statistics I	4.0

/Humanities and Social Science		12.0 Credits
PHIL 301	Business Ethics	
3 Humanities and social science electives		9.0

Professional Core - Construction Science		31.0 Credits
CIVE 251	Engineering Surveying	3.0
CMGT 161	Building Materials and Construction Management	3.0

I		
CMGT 162	Building Materials and Construction Management II	3.0
CMGT 163	Building Materials and Construction Management III	3.0
CMGT 263	Understanding Construction Drawings	3.0
CMGT 266	Building Systems I	3.0
CMGT 267	Building Systems II	3.0
CMGT 365	Soil Mechanics in Construction	4.0
CMGT 371	Structural Aspects in Construction I	3.0
CMGT 372	Structural Aspects in Construction II	3.0

Professional Core - Construction		37.0 Credits
CIVE 240	Engineering Economics	3.0
CMGT 101	Introduction to Construction Management	3.0
CMGT 261	Construction Safety	3.0
CMGT 262	Building Codes	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 461	Construction Management I	3.0
CMGT 463	Value Engineering I	3.0
CMGT 467	Techniques of Project Control	4.0

Construction electives		12.0 Credits
Students select at least four (4) courses from the following:		
CMGT 265	Information Technology in Construction	3.0
CMGT 451	Heavy Construction Principles and Practices	3.0
CMGT 465	Marketing of Construction Services	3.0
CMGT 468	Real Estate Development	3.0
CMGT 469	Construction Seminar	3.0
	Other approved CMGT elective*	3.0

*Students may choose another construction elective but the permission of the Program is required.

University requirements		2.0 Credits
UNIV 101	The Drexel Experience	2.0

Free electives		12.0 Credits
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Construction Management: Real Estate Concentration

Bachelor of Science Degree: 184.5 credits

Degree requirements (incoming students, 2008/2009)

The concentration in real estate provides students with training in issues such as project finance, real estate as investment, design and construction, operations, development law, environmental remediation, public policy, market analysis, and architecture. For this specialization, students take the same Construction Management (CMGT) core requirements, replacing some electives with the concentration-specific courses.

English/Communication		21.0 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
COM 270	Business Communication	3.0
COM 310	Technical Communication	3.0
COM 330	Professional Presentations	3.0
Mathematics		7.0 Credits
MATH 110	Pre-Calculus	3.0
MATH 121	Calculus I	4.0
Science		15.5 Credits
ENVS 260	Environmental Science and Society I	3.0
ENVS 272	Physical Geology	4.0
CHEM 111	General Chemistry I	4.0
CHEM 113	Chemistry Laboratory I	1.5
PHYS 182	Applied Physics I	3.0
Business		32.0 Credits
ACCT 115	Financial Accounting	4.0
BLAW 201	Business Law I	4.0
ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0
HRMT 323	Principles of Human Resource Administration	4.0
ORGB 300 WI	Organizational Behavior	4.0
STAT 201	Statistics I	4.0
/Humanities and Social Science		12.0 Credits
PHIL 301	Business Ethics	3.0

3 Humanities and social science electives		9.0
Professional Core - Construction Science		31.0 Credits
CIVE 251	Engineering Surveying	3.0
CMGT 161	Building Materials and Construction Management I	3.0
CMGT 162	Building Materials and Construction Management II	3.0
CMGT 163	Building Materials and Construction Management III	3.0
CMGT 263	Understanding Construction Drawings	3.0
CMGT 266	Building Systems I	3.0
CMGT 267	Building Systems II	3.0
CMGT 365	Soil Mechanics in Construction	4.0
CMGT 371	Structural Aspects in Construction I	3.0
CMGT 372	Structural Aspects in Construction II	3.0
Professional Core - Construction		37.0 Credits
CIVE 240	Engineering Economics	3.0
CMGT 101	Introduction to Construction Management	3.0
CMGT 261	Construction Safety	3.0
CMGT 262	Building Codes	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 461	Construction Management I	3.0
CMGT 463	Value Engineering I	3.0
CMGT 467	Techniques of Project Control	4.0
Concentration in Real Estate		18.0 Credits
ARCH 432	The Development Process	3.0
CMGT 468	Real Estate Development	3.0
REAL 310	Introduction to Real Estate	3.0
REAL 320	Real Estate Law Principles and Practice	3.0
REAL 330	Facilities and Property Management	3.0
ARCH 432	The Development Process	3.0
REAL 310	Introduction to Real Estate	3.0
REAL 320	Real Estate Law Principles and Practice	3.0
REAL 330	Facilities and Property Management	3.0
REAL 470	Real Estate Investment and Market Feasibility Analysis	3.0
University requirements		2.0 Credits
UNIV 101	The Drexel Experience	2.0
Free electives		6.0 Credits

BS Construction Management
5 YR UG Co-op Concentration

Recommended Plan Of Study

	Credits
Term 1	
CMGT 101 Introduction to Construction Management	3.0
CMGT 161 Building Materials & Construction Methods I	3.0
ENGL 101 Expository Writing and Reading	3.0
ENVS 272 Physical Geology	4.0
UNIV 101 The Drexel Experience	1.0
<i>Term Credits</i>	14.0
Term 2	
ACCT 115 Financial Accounting Foundations	4.0
CHEM 111 General Chemistry I	4.0
CHEM 113 General Chemistry I Laboratory	1.5
CMGT 162 Building Materials & Construction Methods II	3.0
ENGL 102 Persuasive Writing and Reading	3.0
UNIV 101 The Drexel Experience	1.0
<i>Term Credits</i>	16.5
Term 3	
CMGT 163 Building Materials & Construction Methods III	3.0
CMGT 263 Understanding Construction Drawings	3.0
ECON 201 Principles of Microeconomics	4.0
ENGL 103 Analytical Writing and Reading	3.0
PHYS 182 Applied Physics I	3.0
<i>Term Credits</i>	16.0
Term 4	
CMGT 264 Construction Management of Field Operations	3.0
COM 230 Techniques of Speaking	3.0
ECON 202 Principles of Macroeconomics	4.0
MATH 110 Precalculus	3.0
Free elective	3.0
<i>Term Credits</i>	16.0
Term 5	
CMGT 261 Construction Safety	3.0
CMGT 262 Building Codes	3.0
COM 270 Business Communication	3.0
MATH 121 Calculus I	4.0
Free elective	3.0
<i>Term Credits</i>	16.0
Term 6	
CMGT 266 Building Systems I	3.0
CMGT 371 Structural Aspects in Construction I	3.0
COM 310 Technical Communication	3.0
ORGB 300 Organizational Behavior	4.0
PHIL 301 Business Ethics	3.0
<i>Term Credits</i>	16.0
Term 7	
BLAW 201 Business Law I	4.0
CIVE 240 Engineering Economic Analysis	3.0
CMGT 267 Building Systems II	3.0
CMGT 372 Structural Aspects in Construction II	3.0
COM 330 Professional Presentations	3.0

	Term Credits	16.0
Term 8		Credits
CMGT 361	Contracts And Specifications I	3.0
CMGT 363	Estimating I	3.0
ENVS 260	Environmental Science and Society I	3.0
STAT 201	Introduction to Business Statistics	4.0
	Free elective	3.0
	Term Credits	16.0
Term 9		Credits
CMGT 362	Contracts & Specs II	3.0
CMGT 364	Estimating II	3.0
FIN 301	Introduction to Finance	4.0
HRMT 323	Principles of Human Resource Administration	4.0
	Term Credits	14.0
Term 10		Credits
CIVE 251	Engineering Surveying	3.0
CMGT 365	Soil Mechanics in Construction	4.0
CMGT 463	Value Engineering I	3.0
	Construction Management elective (See degree requirements for list)	3.0
	Humanities/Social Science elective	3.0
	Term Credits	16.0
Term 11		Credits
CMGT 461	Construction Management I	3.0
CMGT 467	Techniques of Project Control	4.0
	Construction Management elective (See degree requirements for list)	3.0
	Humanities/Social Science elective	3.0
	Term Credits	13.0
Term 12		Credits
CMGT 499	CM Independent Study - Project	3.0
	Two Construction Management electives (See degree requirements for list)	6.0
	Humanities/Social Science elective	3.0
	Term Credits	12.0
	Total Credits (minimum)	181.5

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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.

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Minor in Real Estate

Designed for students in various disciplines (such as, architecture, business, civil engineering, architectural engineering, fashion merchandising and interior design) the minor in real estate provides the necessary knowledge, skills, and perspective to be successful in the real estate development process.

Students will explore the knowledge and skill sets required to create and maintain built environments for living, working and entertainment purposes.

The minor requires eight courses, for a total of 24 credits.

Required courses		18.0 Credits
ARCH 432	The Development Process	3.0
CMGT 468	Real Estate Development	3.0
REAL 310	Introduction to Real Estate	3.0
REAL 320	Real Estate Law Principles and Practice	3.0
REAL 330	Facilities and Property Management	3.0
REAL 470	Real Estate Investment and Market Feasibility Analysis	3.0

Students select two (2) of the following elective courses to meet the minor requirements :

		6.0 Credits
REAL 471	Advanced Real Estate Investment and Analysis	3.0
REAL 472	Advanced Market Research and Analysis	3.0
REAL 473	Sales and Marketing of Real Estate	3.0
REAL 474	Real Estate Economics in Urban Markets	3.0
REAL 475	Real Estate Finance	3.0
REAL 476	Real Estate Valuation and Analysis	3.0

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Construction Management

Certificate Program

The Construction Management 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.

Courses*

CMGT 161	Building Materials and Construction Management I	3.0
CMGT 162	Building Materials and Construction Management II	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 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

*Course substitutions or other electives may be taken with prior approval from the Construction Management Program Manager.

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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) also will 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
- Business
- Computing Technology
- Customer Operations

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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 or evening. 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 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.

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Communications and Applied Technology

Bachelor of Science Degree: 180.0 credits

Degree requirements (incoming students, 2008/2009)

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		9.0 Credits
MATH 181	Mathematical Analysis I	3.0
MATH 182	Mathematical Analysis II	3.0
MATH 183	Mathematical Analysis III	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*		18.0 Credits
Six social science electives		18.0

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

Free Electives		32.0 Credits
No more than 5 credits of free electives may be in business		

Business requirements		40.0 Credits
ACCT 115	Financial Accounting Foundations	4.0
BLAW 201	Business Law I	4.0
ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0

INTB 200	International Business	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
ORGB 300 WI	Organizational Behavior	4.0
OPM 300 WI	Operations Management	4.0
STAT 201	Statistics I	4.0

Communications and Applied Technology		54.0 Credits
CAT 200	Strategies for Lifelong Learning	3.0
CAT 201	Interpersonal Communication	3.0
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 370 WI	Advanced Business Writing	3.0
COM 335 WI	Electronic Publishing	3.0
COM 340	Desktop Publishing	3.0
CT 230	Web Development I: Introduction	3.0
CT 240	Web Development II: E-Commerce	3.0
CT 385	Web Development II: Database*	3.0
PHIL 323	Organizational Ethics	3.0

*After completion of CT 230, CT 240 and CT 385, students can sit for the Certified Internet Webmaster (CIW) exam. Additional self-study may be necessary.

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Computing and Security Technology

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

Students have an opportunity to pursue two educational paths: a concentration in computing technology or a concentration in computing security. Each concentration consists of 96 credits, divided into 60 credits of core courses and 36 credits of required courses in the specific concentration.

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

Drexel University

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Computing and Security Technology

Bachelor of Science Degree: 185.0 credits

Degree requirements (incoming students, 2008/2009)

Students completing this major must select either a concentration in Computing Technology or a concentration in Computing Security.

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
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*Students must complete 12.0 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 or art.

Free electives		47.0 Credits
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Computing and Security Technology Core Requirements		60.0 Credits
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 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 230	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 400	Network Security I	3.0
CT 395	IT Security I	3.0
CT 420	IT Security II	3.0
CT 491	Senior Project I	3.0
CT 496	Senior Project II	3.0

Computing Technology Concentration requirements 36.0 Credits

CT 100	Microcomputer Hardware	3.0
CT 120	Microcomputer Operating System	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	OO Client Side Programming	3.0
CT 390	OO Server Side Programming	3.0
CT 405	OO Enterprise Programming	3.0
CT 431	Project Management	3.0

Computing Technology electives

CT 438	Database VI	4.0
CT 388	Special Topics in Computing Technology I	4.0
CT 389	Special Topics in Computing Technology II	4.0

Computing Security Concentration requirements 36.0 Credits

CT 300	Security Technology Models and Architecture	3.0
CT 312	Access Control & Intrusion Detection Technology	3.0
CT 315	Security Management Practice	3.0
CT 325	O/S Security Architecture I	3.0
CT 336	IP Security and VPN Technology	3.0
CT 393	IP Security Risk Assessment	3.0
CT 402	Network Security II	3.0
CT 412	IT Security Policies	3.0
CT 415	Disaster Recovery and ContinuityPlanning	3.0
CT 422	Incident Response Best Practices	3.0
CT 432	IT Security System Audits	3.0
CT 472	IT Security Defense Countermeasures	3.0

Computing Security electives

CT 212	Computer Forensics	3.0
CT 213	Forensic Data Recovery Technology	3.0
CT 222	Security and Information Warfare	3.0
CT 225	Data Mining Technology for Security	3.0
CT 295	Public Key Infrastructure Technology	3.0
CT 326	O/S Security Architecture II	3.0
CT 355	Wireless Network Security	3.0

CT 362	Network Auditing	3.0
CT 382	Applied Cryptography	3.0
CT 407	Network Security III	3.0
CT 427	e-Commerce and Web Security Technology	3.0

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Computing and Security Technology

Bachelor of Science Degree: 185.0 credits

Degree requirements (incoming students, 2008/2009)

Students completing this major must select either a concentration in Computing Technology or a concentration in Computing Security.

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
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*Students must complete 12.0 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 or art.

Free electives		47.0 Credits
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Computing and Security Technology Core Requirements		60.0 Credits
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 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 230	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 400	Network Security I	3.0
CT 395	IT Security I	3.0
CT 420	IT Security II	3.0
CT 491	Senior Project I	3.0
CT 496	Senior Project II	3.0

Computing Technology Concentration requirements 36.0 Credits

CT 100	Microcomputer Hardware	3.0
CT 120	Microcomputer Operating System	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	OO Client Side Programming	3.0
CT 390	OO Server Side Programming	3.0
CT 405	OO Enterprise Programming	3.0
CT 431	Project Management	3.0

Computing Technology electives

CT 438	Database VI	4.0
CT 388	Special Topics in Computing Technology I	4.0
CT 389	Special Topics in Computing Technology II	4.0

Computing Security Concentration requirements 36.0 Credits

CT 300	Security Technology Models and Architecture	3.0
CT 312	Access Control & Intrusion Detection Technology	3.0
CT 315	Security Management Practice	3.0
CT 325	O/S Security Architecture I	3.0
CT 336	IP Security and VPN Technology	3.0
CT 393	IP Security Risk Assessment	3.0
CT 402	Network Security II	3.0
CT 412	IT Security Policies	3.0
CT 415	Disaster Recovery and ContinuityPlanning	3.0
CT 422	Incident Response Best Practices	3.0
CT 432	IT Security System Audits	3.0
CT 472	IT Security Defense Countermeasures	3.0

Computing Security electives

CT 212	Computer Forensics	3.0
CT 213	Forensic Data Recovery Technology	3.0
CT 222	Security and Information Warfare	3.0
CT 225	Data Mining Technology for Security	3.0
CT 295	Public Key Infrastructure Technology	3.0
CT 326	O/S Security Architecture II	3.0
CT 355	Wireless Network Security	3.0

CT 362	Network Auditing	3.0
CT 382	Applied Cryptography	3.0
CT 407	Network Security III	3.0
CT 427	e-Commerce and Web Security Technology	3.0

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Post-Baccalaureate Certificate in Computing Security

24.0 credits

The Certificate in Computing Security is designed for computing technology professionals who have a B.S. degree in Computing Technology or considerable experience in the area, and who are seeking a career change or professional advancement with an additional focus on security.

The curriculum provides a deep understanding of the basic security-related issues and technologies as well as the flexibility to choose additional areas of study tailored to the needs of the individual student.

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

Required courses		18.0 Credits
CT 300	Security Technology Models and Architecture	3.0
CT 312	Access Control & Intrusion Detection Technology	3.0
CT 325	O/S Security Architecture I	3.0
CT 336	IP Security and VPN Technology	3.0
CT 402	Network Security II	3.0
CT 472	IT Security Defense Countermeasures	3.0

In addition, students select two of the following electives: 6.0 Credits

Computing Security electives		
CT 212	Computer Forensics	3.0
CT 222	Security and Information Warfare	3.0
CT 295	Public Key Infrastructure Technology	3.0
CT 315	Security Management Practice	3.0
CT 326	O/S Security Architecture II	3.0
CT 355	Wireless Network Security	3.0
CT 362	Network Auditing	3.0
CT 382	Applied Cryptography	3.0
CT 393	IP Security Risk Assessment	3.0
CT 412	IT Security Policies	3.0
CT 415	Disaster Recovery and Continuity Planning	3.0
CT 422	Incident Response Best Practices	3.0
CT 432	IT Security System Audits	3.0

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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. This program comprises approximately equal parts liberal arts, business and administration, hospitality management, and culinary arts. Students also receive a minor in business administration as well as completing the first year of foundation courses required for any accredited MBA degree. The incentive allows students to continue their education by taking advantage of many of the one-year MBA programs currently offered throughout the United States. In addition, the culinary arts program has taken on an exciting new area of specialization: Culinology. The Research Chef's association defines Culinology as a merger between culinary arts and food science. It is now nationally recognized as a valued discipline and an emerging trend within the field of culinary education and the industry at large. Specific jobs for professionals with skills in the culinary arts and Culinology include food research and development professionals, corporate R & D chefs, applied food science specialists and chef educators.

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

Drexel University

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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.

Drexel University

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Culinary Arts

Bachelor of Science Degree: 183.0

Degree requirements (incoming students, 2008/2009)

General education requirements		50.0 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	4.0
NFS 154	Composition and Interaction	3.0
UNIV 101	The Drexel Experience	2.0
	Arts and humanities electives***	9.0
	Social science electives	6.0
	Free electives	6.0

*Students may substitute HRM 360 Hospitality Industry Public Relations.

**Students may substitute MATH 181, 182, and 183 with advisor's permission.

***Students choose three classes from the following subject areas: AS-I, COM, FMVD, HIST, HUM, PHIL, PSCI, WMST. Students can also select any of the language courses to fulfil Arts and Humanities requirements, but if they do so they must select four courses.

Business Minor Requirements 24.0 Credits

Students have the option of satisfying the business minor requirement by completing one of three possible business minors: **General Business Administration, Marketing or Entrepreneurship.**

General Business Administration Minor Option:

ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
ORGB 300 WI	Organizational Behavior	4.0
STAT 201	Statistics I	4.0

Department requirements		47.0 Credits
FDSC 270	Microbial Food Safety and Sanitation	4.0
HRM 110	Introduction to the Hospitality Industry	3.0
HRM 120	Principles of Food-Service Management	3.0
HRM 130	Tourism I	3.0
HRM 150	Customer Service	3.0
HRM 160	Laws of Hospitality Industry	3.0
HRM 200	Productivity Software for the Hospitality Industry	3.0
HRM 215	Commercial Food Production	4.0
HRM 220	Purchasing for the Hospitality Industry	3.0
HRM 225	Equipment Design and Layout	3.0
HRM 320	Hospitality Management Information Systems	3.0
HRM 330	Hospitality Marketing	3.0
HRM 350	Cost Controls in Hospitality	3.0
HRM 335	Beverage Management	3.0
HRM 455	Hospitality Human Resources	3.0

Culinary arts requirements		62.0 Credits
CULA 120	Major Techniques and Traditions I	3.0
CULA 121	Major Techniques and Traditions II	3.0
CULA 125	Foundations of Professional Baking	3.0
CULA 216	A la Carte Cuisine	3.0
CULA 220	Patisserie I	2.0
CULA 225	Patisserie II	2.0
CULA 235	Professional Dining Room Management	2.0
CULA 300	Fundamentals of Vegetarian Cuisine	3.0
CULA 305	Fundamentals of Italian Cuisine	3.0
CULA 310	Fundamentals of French Cuisine	3.0
CULA 315	Fundamentals of American Cuisine	3.0
CULA 316	Butchery Lab	2.0
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 Photography	3.0
CULA 420	Senior Design Project	3.0

Culinary Arts (CULA) Electives		11.0 Credits
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Students select a minimum of 11.0 credits from following courses:

CULA 226	Patisserie III	2.0
CULA 240	Fundamentals of Chinese Cuisine	3.0
CULA 306	Advanced Italian Cuisine	3.0
CULA 311	Advanced French Cuisine	3.0
CULA 330	Charcuterie	3.0
CULA 335	Fundamentals of Indian Cuisine	3.0
CULA 425	The Kitchen Garden	3.0
CULA 426	The Kitchen Garden: Summer	3.0
CULA 427	The Kitchen Garden: Fall	3.0

BS Culinary Arts
 4 YR UG Co-op Concentration
 Gen. Business Minor

Recommended Plan Of Study

	Credits
Term 1	
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 Software for Hospitality Industry	3.0
MATH 101 Introduction to Math Analysis I	4.0
UNIV 101 The Drexel Experience	1.0
<i>Term Credits</i>	17.0
Term 2	
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
<i>Term Credits</i>	14.0
Term 3	
ENGL 103 Analytical Writing and Reading	3.0
HRM 120 Principles of Food-Service Management	3.0
HRM 410 Laws of Hospitality Industry	3.0
NFS 101 Introduction to Nutrition and Food	3.0
Arts and Humanities elective	3.0
<i>Term Credits</i>	15.0
Term 4	
CULA 115 Culinary Fundamentals	3.0
ECON 201 Principles of Microeconomics	4.0
HRM 220 Purchasing for the Hospitality Industry	3.0
HRM 230 Design Application Seminar	3.0
<i>Term Credits</i>	13.0
Term 5	
CULA 120 Techniques & Traditions I	3.0
CULA 125 Foundations of Professional Baking	3.0
ECON 202 Principles of Macroeconomics	4.0
HRM 215 Commercial Food Production	3.0
HRM 310 Hospitality Accounting Systems	3.0
<i>Term Credits</i>	16.0
Term 6	
CULA 121 Techniques & Traditions II	3.0
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	2.0
CULA 315 Fundamentals of American Cuisine	3.0
CULA 325 The Garde Manger Laboratory	2.0
<i>Term Credits</i>	16.5
Term 7	
CULA 305 Fundamentals of Italian Cuisine	3.0
STAT 201 Statistics I	4.0
Arts and Humanities elective	3.0

	Culinary Arts (CULA) elective	3.0
	<i>Term Credits</i>	13.0
Term 8		Credits
CULA 225	Patisserie II	2.0
CULA 310	Fundamentals of French Cuisine	3.0
CULA 405	Culture and Gastronomy I	3.0
FIN 301	Introduction to Finance	4.0
	Arts and Humanities elective	3.0
	Culinary Arts (CULA) elective	3.0
	<i>Term Credits</i>	18.0
Term 9		Credits
COM 280	Public Relations	3.0
CULA 300	Fundamentals of Vegetarian Cuisine	3.0
CULA 410	Culture and Gastronomy II	3.0
	Arts and Humanities elective	3.0
	Free elective	3.0
	<i>Term Credits</i>	15.0
Term 10		Credits
CULA 400	Directed Studies with a Master Chef	2.0
CULA 415	Food Styling and Photography	3.0
HRM 330	Hospitality Marketing	3.0
ORGB 300	Organizational Behavior	4.0
	Culinary Arts (CULA) elective	3.0
	<i>Term Credits</i>	15.0
Term 11		Credits
CULA 320	Advanced Culinary Studio	3.0
HRM 335	Beverage Management	3.0
MKTG 301	Introduction to Marketing Management	4.0
HRM 320	Hospitality Management Information Systems	3.0
	<i>Term Credits</i>	13.0
Term 12		Credits
CULA 420	Senior Design Project	3.0
HRM 455	Hospitality Human Resources Management	3.0
	Culinary Arts (CULA) elective	3.0
	Social science electives	6.0
	<i>Term Credits</i>	15.0
	Total Credits (minimum)	180.5

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Drexel University

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Culinary Science

About Culinary Science

Culinary scientists learn to integrate and apply knowledge from the disciplines of chemistry, microbiology, culinary arts, hospitality, and nutrition in order to preserve, process, package, and distribute foods that are safe, nutritious, and delicious. Students majoring in Culinary Science are prepared for careers in the food industry such as a research chef or product developer. In such positions, graduates can combine their creative and aesthetic talents with their technical expertise as food scientists.

The Culinary Science program at Goodwin is committed to providing a professional, comprehensive, and challenging college experience as it prepares students for a variety of rewarding careers in the culinary field and food science and manufacturing industries. In order to provide students with a well-rounded educational experience, the Culinary Science curriculum is composed of approximately equal amounts of coursework in liberal arts, business administration, food science, natural sciences, and culinary arts. As part of the Culinary Science B.S. program, all students receive a minor in business that includes the first-year foundation courses required for an MBA degree at Drexel University.

Drexel's B.S. in Culinary Science curriculum meets the Approved Culinology® Degree Program standards of the Research Chefs Association. The 182-credit curriculum includes one six-month period of cooperative employment in the spring and summer terms of the junior year.

Career possibilities for someone with a degree in culinary science include numerous positions in food companies such as manager of research and development, quality assurance manager, corporate executive chef, research and development chef, senior culinary research technologist, flavor development laboratory manager, and senior formulation chef.

For more information, visit Goodwin College's Culinary Science web page.

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Culinary Science

Bachelor of Science Degree: 182.0 credits

Degree requirements (incoming students, 2008/2009)

Written Analysis and Communication		15.0 Credits
COM 230	Techniques of Speaking	3.0
COM 310	Technical Communication	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

Mathematical Analysis		12.0 Credits
MATH 101	Introduction to Analysis I*	4.0
MATH 102	Introduction to Analysis II*	4.0
MATH 239	Math for the Life Sciences	4.0

*Students may substitute MATH 181, MATH 182, and MATH 183 with permission from an advisor.

Nutrition		12.0 Credits
NFS 200	Nutrition I	4.0
NFS 203	Nutrition II	4.0
NFS 365	Nutritional Laboratory	4.0

Humanities and Social Science		5.0 Credits
ANTH 101	Cultural Diversity	3.0
UNIV 101	The Drexel Experience	2.0

Biological Sciences		9.0 Credits
BIO 121	Physiology and Nutrition	4.5
BIO 122	Cells and Genetics	4.5

Chemistry		17.0 Credits
CHEM 101	General Chemistry I	3.5
CHEM 102	General Chemistry II	4.5
CHEM 103	General Chemistry III	5.0
NFS 400	Nutritional Chemistry	3.0
NFS 404	Nutritional Chemistry Laboratory	1.0

Physics		8.0 Credits
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PHYS 103	General Physics I	4.0
PHYS 104	General Physics II	4.0

Business Administration Minor **28.0 Credits**

ACCT 115	Financial Accounting Foundations	4.0
ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
MKTG 347	New Product Development	4.0
ORGB 300 WI	Organizational Behavior	4.0
STAT 201	Statistics I	4.0

Food Science Requirements **32.0 Credits**

FDSC 154	Foods: Composition, Interaction & Formulations	4.0
FDSC 270	Microbial Food Safety and Sanitation	4.0
FDSC 350	Experimental Foods	3.0
FDSC 450	Food Microbiology	3.0
FDSC 451	Food Microbiology Laboratory	2.0
FDSC 454	Microbiology and Chemistry of Food Safety	3.0
FDSC 456	Food Preservation Process	3.0
FDSC 458	Nutritional Impact of Food Processing	3.0
FDSC 460	Food Chemistry	3.0
FDSC 461	Food Analysis	3.0
FDSC 490	Food Science Seminar	1.0

Hospitality Management/Culinary Arts Requirements **36.0 Credits**

HRM 110	Introduction to the Hospitality Industry	3.0
HRM 120	Principles of Food-Service Management	3.0
HRM 215	Commercial Food Production	3.0
CULA 120	Major Techniques and Traditions I	3.0
CULA 121	Major Techniques and Traditions II	3.0
CULA 399	Independent Study in the Culinary Arts: Practicum II	6.0
CULA 310	Fundamentals of French Cuisine	3.0
CULA 315	Fundamentals of American Cuisine	3.0
CULA 405	Culture and Gastronomy I	3.0
CULA 410	Culture and Gastronomy II	3.0
CULA 420	Senior Design Project	3.0

Hospitality Management/Culinary Arts Electives **9.0 Credits**

BS Culinary Science
4 YR UG Co-op Concentration

Recommended Plan Of Study

Term 1		Credits
CHEM 101	General Chemistry I	3.5
ENGL 101	Expository Writing and Reading	3.0
HRM 110	Introduction to the Hospitality Industry	3.0
MATH 101	Introduction to Analysis I	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	14.5
Term 2		Credits
ANTH 101	Introduction to Cultural Diversity	3.0
CHEM 102	General Chemistry II	4.5
ENGL 102	Persuasive Writing and Reading	3.0
MATH 102	Introduction to Analysis II	4.0
UNIV 101	The Drexel Experience	1.0
	Term Credits	15.5
Term 3		Credits
CHEM 103	General Chemistry III	5.0
ENGL 103	Analytical Writing and Reading	3.0
FDSC 154	Foods: Composition, Interaction and Formulation	4.0
HRM 120	Principles of Food-Service Management	3.0
	Term Credits	15.0
Term 4		Credits
BIO 121	Physiology and Nutrition	4.5
CULA 120	Techniques & Traditions I	3.0
NFS 200	Nutrition I: Principles of Nutrition	4.0
NFS 215	Nutritional Chemistry	3.0
NFS 404	Nutritional Chemistry Laboratory	1.0
	Term Credits	15.5
Term 5		Credits
BIO 122	Cells and Genetics	4.5
CULA 121	Techniques & Traditions II	3.0
FDSC 270	Microbial Food Safety and Sanitation	4.0
HRM 215	Commercial Food Production	3.0
	Term Credits	14.5
Term 6		Credits
ACCT 115	Financial Accounting Foundations	4.0
CULA 315	Fundamentals of American Cuisine	3.0
ECON 201	Economics I	4.0
MATH 239	Mathematics for the Life Sciences	4.0
	Term Credits	15.0
Term 7		Credits
COM 230	Techniques of Speaking	3.0
CULA 291	Culinary Arts Practicum II	6.0
ECON 202	Economics II	4.0
	Culinary Arts (CULA) elective	3.0
	Term Credits	16.0
Term 8		Credits
CULA 310	Fundamentals of French Cuisine	3.0
FDSC 350		

	Experimental Foods: Product Development	3.0
FDSC 456	Food Preservation Processes	3.0
ORGB 300	Organizational Behavior	4.0
PHYS 103	General Physics I	4.0
	<i>Term Credits</i>	17.0
Term 9		Credits
FDSC 454	Microbiology & Chemistry of Food Safety	3.0
FDSC 461	Food Analysis	3.0
NFS 203	Nutrition II: Nutrition in the Lifecycle	4.0
NFS 365	Nutrition Laboratory: Food and Nutrient Analysis	4.0
PHYS 104	General Physics II	4.0
	<i>Term Credits</i>	18.0
Term 10		Credits
CULA 405	Culture and Gastronomy I	3.0
FDSC 450	Food Microbiology	3.0
FDSC 451	Food Microbiology Laboratory	2.0
MKTG 301	Introduction to Marketing Management	4.0
	Culinary Arts (CULA) elective	3.0
	<i>Term Credits</i>	15.0
Term 11		Credits
CULA 410	Culture and Gastronomy II	3.0
FDSC 458	Nutritional Impact of Food Processing Methods	3.0
FDSC 460	Food Chemistry	3.0
MKTG 347	New Product Development	4.0
	<i>Term Credits</i>	13.0
Term 12		Credits
COM 310	Technical Communication	3.0
CULA 420	Senior Design Project	3.0
FDSC 490	Seminar in Food Science	1.0
STAT 201	Business Statistics I	4.0
	Culinary Arts (CULA) elective	3.0
	<i>Term Credits</i>	14.0
	Total Credits (minimum)	183.0

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Minor in Food Science

The minor in food science is designed for students interested in applying the basic sciences to the world's largest industry. The minor should be especially attractive to students in the premedical, chemical, and biological sciences, as it provides a background for excellent employment and post-baccalaureate study opportunities in areas closely allied to their basic disciplines.

The minor consists of 24 credits. Interested students should consult with a nutrition and food science faculty member to schedule courses appropriate for their background and goals.

Required courses		24.0 Credits
NFS 200	Nutrition I	4.0
NFS 203	Nutrition I	4.0
FDSC 270	Microbial Food Safety and Sanitation	4.0
FDSC 454	Microbiology and Chemistry of Food Safety	3.0
FDSC 458	Nutritional Impact of Food Processing	3.0
FDSC 460	Food Chemistry	3.0
FDSC 461	Food Analysis	3.0

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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.

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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.

Drexel University

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Individualized Studies

Bachelor of Science Degree: 180.0 credits

Degree requirements (incoming students, 2008/2009)

English requirements		12.0 Credits
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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 requirements		9.0 Credits
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MATH 181	Mathematical Analysis I	3.0
MATH 182	Mathematical Analysis II	3.0
MATH 183	Mathematical Analysis III	3.0

Computing requirement	3.0 Credits
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Students select one of the following courses:

CS 161	Introduction to Computing	3.0
CS 171	Computer Programming I	3.0
CT 220	Database I	3.0
CT 230	Web Development I	3.0
PRST 211	Computer Applications for Professionals	3.0
PRST 212	Creative Studies in the World Wide Web	3.0

Natural Science electives	9.0 Credits
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Students select 9.0 credits from the following: ANAT, BIO, CHEM, FDSC, NFS, PHEV, PHYS. Courses from other departments may be considered with advisor approval.

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

Liberal Studies requirements	36.0 Credits
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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 and fine arts. (Arts history or appreciation courses, rather than applied courses.)

Free electives	66.0 Credits
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Drexel University

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General Studies

Bachelor of Science Degree: 180.0 credits

Recommended Plan of Study

General Studies is an individualized plan of study currently advised by Ann M. Solan. 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.

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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.

Drexel University

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Liberal Studies

Bachelor of Science Degree: 180.0 credits
Degree requirements (incoming students, 2008/2009)

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		12.0 Credits
MATH 181	Mathematical Analysis I	3.0
MATH 182	Mathematical Analysis II	3.0

Computing requirement		3.0 Credits
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Students select one of the following courses:

CS 161	Introduction to Computing	3.0
CS 171	Computer Programming I	3.0
CT 220	Database I	3.0
CT 230	Web Development I	3.0
PRST 211	Computer Applications for Professionals	3.0
PRST 212	Creative Studies in the World Wide Web	3.0

Natural Science electives		9.0 Credits
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Students select 9.0 credits from the following: ANAT, BIO, CHEM, FDSC, NFS, PHEV, PHYS. Courses from other departments may be considered with advisor approval.

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
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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 WII	Architecture and Society III	3.0
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Liberal Studies requirements	69.0 Credits
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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, foreign languages, fine arts, religion, women's and African-American studies.) Courses from other departments may be considered with advisor approval.

Concentration Requirements	36.0 Credits
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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 CAT 360 Applied Organizational Research.

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

Free electives	21.0 Credits
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Drexel University

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Physical Science 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.

Drexel University

Catalog 2008/2009

Physical Sciences

Bachelor of Science Degree: 180.0 credits

Required courses (incoming students, 2008/2009)

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		9.0 - 12.0 Credits
MATH 181	Mathematical Analysis I	3.0
MATH 182	Mathematical Analysis II	3.0
MATH 183	Mathematical Analysis III	3.0
or		
MATH 121	Calculus I	4.0
MATH 122	Calculus II	4.0
MATH 123	Calculus III	4.0
Computing requirement		3.0 Credits
Students select one of the following courses:		
CS 161	Introduction to Computing	3.0
CS 171	Computer Programming I	3.0
CT 220	Database I	3.0
CT 230	Web Development I	3.0
PRST 211	Computer Applications for Professionals	3.0
PRST 212	Creative Studies in the World Wide Web	3.0
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
PHIL 251	Ethics	3.0
Physical Science requirements		31.5 - 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 182	Applied Physics I	3.0
PHYS 183	Applied Physics II	3.0
PHYS 184	Applied Physics III	3.0
or		
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

*Premed students should note that BIO 161-163 are lecture only, and many medical schools require labs.

Physical Science electives **27.0 Credits**

Students must complete 27.0 credits of natural science electives. Courses must be upper level in biology, chemistry, physics or environmental science..

Liberal Studies electives **27.0 Credits**

Students must complete 27.0 credits covering a range of subjects that may include: anthropology, economics, fine arts, history, literature, music philosophy, political science, psychology, sociology, etc.

Free electives **52.5-61.5Credits**

Drexel University

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Hospitality Management

The Hospitality Management program at Drexel University, Goodwin College recognizes the critical importance of an interdisciplinary education with a global perspective for tomorrow's leaders and managers. 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
- Hotel Management 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.

Drexel University

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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.

Drexel University

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Hospitality Management

Bachelor of Science Degree: 181.0 credits

Degree requirements (incoming students, 2008/2009)

General education requirements		61.0 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	15.0

Business Minor Requirements	24.0 Credits
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Students have the option of satisfying the business minor requirement by completing one of three possible business minors: **General Business Administration, Marketing or Entrepreneurship.**

General Business Administration Minor Option:

ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
FIN 301	Introduction to Finance	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
ORGB 300 WI	Organizational Behavior	4.0
STAT 201	Statistics I	4.0

Hospitality Major requirements		95.0 Credits
CULA 115	Culinary Fundamentals	3.0
FDSC 270	Microbial Food Safety	4.0
HRM 110	Introduction to the Hospitality Industry	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 160	Laws of Hospitality Industry	3.0
HRM 200	Productivity Software for the Hospitality Industry	3.0
HRM 215	Commercial Food Production	4.0
HRM 230	Design Application Seminar	3.0
HRM 310	Hospitality Accounting Systems	3.0
HRM 320	Hospitality Management Information Systems	3.0
HRM 325	Hotels Rooms Division Management	3.0
HRM 330	Hospitality Marketing	3.0
HRM 335	Beverage Management	3.0
HRM 450	Hospitality Leadership Seminar	3.0
HRM 455	Hospitality Human Resources	3.0
	Concentration courses	21.0 - 24.0
	Departmental electives	15.0

Concentrations

Food and Beverage Management (F&B)

Courses		15.0 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 435	Wine and Spirits	3.0

Hotel Management Administration

Courses		15.0 Credits
HRM 326	Hotel Rooms Division Management II	3.0
HRM 345	Convention and Trade Shows Management	3.0
HRM 355	Resort Management	3.0
HRM 425	Hospitality Industry Administration	3.0
HRM 430	Hotel Sales and Marketing	3.0

Travel and Tourism

Courses		15.0 Credits
HRM 345	Convention and Trade Shows Management	3.0
HRM 365	Heritage Tourism	3.0
HRM 385	Guest Lecture Series	3.0
HRM 395	Economics of Tourism	3.0
HRM 405	Current Issues in Travel and Tourism	3.0

Gaming and Resort Management

Courses		21.0 Credits
HRM 355	Resort Management	3.0
HRM 370	Gaming and Casino Management I	3.0
HRM 371	Gaming and Casino Management II	3.0

HRM 375	Security and Loss Prevention	3.0
HRM 470	Gaming Legislation, Policy and Law	3.0
HRM 472	Gaming Information Systems	3.0
HRM 475	Current Issues in Gaming	3.0

BS Hospitality Management
 4 YR UG Co-op Concentration
 Gen. Business Minor

Recommended Plan Of Study

	Credits
Term 1	
ENGL 101 Expository Writing and Reading	3.0
HRM 110 Introduction to the Hospitality	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
<i>Term Credits</i>	17.0
Term 2	
ENGL 102 Persuasive Writing and Reading	3.0
HRM 150 Customer Service	3.0
MATH 102 Introduction to Math Analysis II	4.0
UNIV 101 The Drexel Experience	1.0
Free elective	3.0
<i>Term Credits</i>	14.0
Term 3	
CULA 115 Culinary Fundamentals	3.0
ENGL 103 Analytical Writing and Reading	3.0
HRM 120 Principles of Food-Service Management	3.0
HRM 135 Tourism II	3.0
HRM 160 Laws of the Hospitality Industry	3.0
NFS 101 Introduction to Nutrition and Food	3.0
<i>Term Credits</i>	18.0
Term 4	
ECON 201 Principles of Microeconomics	4.0
FDSC 270 Microbial Food Safety	4.0
HRM 215 Commercial Food Production	4.0
HRM 230 Design Application Seminar	3.0
<i>Term Credits</i>	15.0
Term 5	
ECON 202 Principles of Macroeconomics	4.0
HRM 310 Hospitality Accounting Systems	3.0
HRM 325 Hotel Room Division Management	3.0
Free elective	3.0
HRMT concentration course (See degree requirements for list)	3.0
<i>Term Credits</i>	16.0
Term 6	
STAT 201 Statistics I	4.0
Arts and Humanities elective	3.0
HRMT concentration course (See degree requirements for list)	3.0
Hospitality Management program elective	3.0
<i>Term Credits</i>	13.0
Term 7	
Arts and Humanities elective	3.0
HRMT concentration course (See degree requirements for list)	3.0
Hospitality Management program elective	3.0
Social science elective	3.0
<i>Term Credits</i>	12.0

Term 8		Credits
COM 230	Techniques of Speaking	3.0
FIN 301	Introduction to Finance	5.0
	HRMT concentration course (See degree requirements for list)	3.0
	Hospitality Management program elective	3.0
	Term Credits	14.0
Term 9		Credits
COM 280	Public Relations	3.0
	Arts and Humanities elective	3.0
	Free elective	3.0
	HRMT concentration course (See degree requirements for list)	3.0
	Hospitality Management program elective	3.0
	Term Credits	15.0
Term 10		Credits
HRM 330	Hospitality Marketing	3.0
HRM 450	Hospitality Leadership Seminar	3.0
ORGB 300	Organizational Behavior	4.0
	Arts and Humanities elective	3.0
	HRMT concentration course (See degree requirements for list)	3.0
	Term Credits	16.0
Term 11		Credits
HRM 320	Hospitality Management Information Systems	3.0
HRM 335	Beverage Management	3.0
MKTG 301	Introduction to Marketing Management	4.0
	Free elective	3.0
	HRMT concentration course (See degree requirements for list)	3.0
	Term Credits	16.0
Term 12		Credits
HRM 455	Hospitality Human Resources Management	3.0
	Free elective	3.0
	HRMT concentration course (See degree requirements for list)	3.0
	Hospitality Management program elective	3.0
	Social science elective	3.0
	Term Credits	15.0
	Total Credits (minimum)	181.0

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Industrial Engineering Technology

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.

Coursework

The coursework for the Bachelor of Science in Industrial Engineering Technology 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.

For more information on this major, visit Goodwin College's Industrial Engineering Technology web page.

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Industrial Engineering Technology

Bachelor of Science Degree: 186.0 credits

Degree requirements (incoming students, 2008/2009)

English composition requirements		15.0 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
COM 230	Principles of Communication	3.0

Mathematics requirements		21.0 Credits
MATH 121	Calculus I	4.0
MATH 122	Calculus II	4.0
MATH 123	Calculus III	4.0
MATH 261	Linear Algebra	3.0
STAT 261	Statistics I	3.0
STAT 262	Statistics II	3.0

Science requirements		20.0 Credits
CHEM 161	General Chemistry I	3.0
CHEM 164	Chemistry Laboratory	2.0
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

Business requirements		12.0 Credits
ACCT 115	Financial Accounting Foundations	4.0
FIN 301	Introduction to Finance	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0

Humanities and Social Science requirements		17.0 Credits
ECON 201	Principles of Microeconomics	4.0
ECON 202	Principles of Macroeconomics	4.0
HIST 285	Technology in Historical Perspective	3.0
PHIL 315	Engineering Ethics	3.0
	Two Humanities and Social Sciences electives*	6.0

* HIST 285 Technology in Historical Perspective is a recommended Humanities and Social Sciences elective.

Engineering sciences requirements		17.0 Credits
CIVE 240	Engineering Economics	3.0
CT 100	Microcomputer Hardware	3.0
CT 290	Client Side Programmig	3.0
MET 100	Graphical Communication	3.0
MET 101	Manufacturing Materials	4.0

Industrial Engineering Core requirements		49.0 Credits
INDE 300	Quality Management	3.0
INDE 350	Industrial Engineering Simulation	3.0
INDE 351	Intelligent Manufacturing Systems	3.0
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 365	Systems Analysis Methods I	3.0
INDE 366	Systems Analysis Methods II	3.0
INDE 367	Data Processing	3.0
INDE 370	Industrial Project Management	3.0
INDE 470	Engineering Quality Methods	3.0
INDE 490	Senior Project Design	4.0
OPM 300 WI	Operations Management	4.0
OPM 341	Supply Chain Management	4.0
OPM 325	Advanced Planning and Control of Operations	4.0

Professional (Technical) electives		21.0 Credits
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Free electives		14.0 Credits
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Recommended Plan Of Study

BS Industrial Engineering Technology

Term 1		Credits
CHEM 161	General Chemistry I	3.0
CHEM 164	General Chemistry Laboratory I	2.0
ENGL 101	Expository Writing and Reading	3.0
MATH 121	Calculus I	4.0
	<i>Term Credits</i>	12.0
Term 2		Credits
CT 100	Microcomputer Hardware	3.0
ENGL 102	Persuasive Writing and Reading	3.0
MATH 122	Calculus II	4.0
PHYS 185	Physics I	3.0
PHYS 186	Physics I-A	2.0
	<i>Term Credits</i>	15.0
Term 3		Credits
ENGL 103	Analytical Writing and Reading	3.0
MATH 123	Calculus III	4.0
MET 101	Manufacturing Materials	4.0
PHYS 187	Physics II	3.0
PHYS 188	Physics II-A	2.0
	<i>Term Credits</i>	16.0
Term 4		Credits
COM 111	Principles of Communication	3.0
MATH 261	Linear Algebra	3.0
MET 100	Graphical Communication	3.0
PHYS 281	Physics III	3.0
PHYS 282	Physics III-A	2.0
	<i>Term Credits</i>	14.0
Term 5		Credits
ACCT 115	Financial Accounting Foundations	4.0
HIST 285	Technology in Historical Perspective	3.0
INDE 362	Operations Research for Engineering I	3.0
STAT 261	Statistics I	3.0
	Humanities/Social Science elective	3.0
	<i>Term Credits</i>	16.0
Term 6		Credits
FIN 301	Introduction to Finance	4.0
INDE 363	Operations Research for Engineering II	3.0
INDE 365	Systems Analysis Methods I	3.0
STAT 262	Statistics II	3.0
	Free electives	6.0
	<i>Term Credits</i>	19.0
Term 7		Credits
CT 290	Client Side Programming	3.0
INDE 361	Quality Control	3.0
OPM 300	Operations Management	4.0
	Free elective	3.0
	<i>Term Credits</i>	13.0
Term 8		Credits

ECON 201	Principles of Microeconomics	4.0
INDE 350	Industrial Engineering Simulation	3.0
INDE 366	Systems Analysis Methods II	3.0
INDE 370	Industrial Project Management	3.0
OPM 325	Control Production & Operations	4.0
	Technical elective	3.0
	<i>Term Credits</i>	20.0
Term 9		Credits
COM 230	Techniques of Speaking	3.0
ECON 202	Principles of Macroeconomics	4.0
INDE 351	Intelligent Manufacturing Systems	4.0
PHIL 315	Engineering Ethics	3.0
	Technical elective	3.0
	<i>Term Credits</i>	17.0
Term 10		Credits
CIVE 240	Engineering Economic Analysis	3.0
INDE 300	Quality Management	3.0
MKTG 301	Introduction to Marketing Management	4.0
	Technical electives	6.0
	<i>Term Credits</i>	16.0
Term 11		Credits
INDE 367	Data Processing	3.0
INDE 470	Engineering Quality Methods	3.0
POM 341	Advanced Operations Planning & Control	3.0
	Free elective	3.0
	Technical elective	3.0
	<i>Term Credits</i>	15.0
Term 12		Credits
INDE 490	Senior Project Design	4.0
	Free elective	3.0
	Technical electives	6.0
	<i>Term Credits</i>	13.0
	Total Credits (minimum)	186.0

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Drexel University

Catalog 2008/2009

Professional Studies

About the Major

The B.S. in Professional Studies is designed for aspiring professionals in any industry. Students are encouraged to take the technical knowledge they already possess in their fields, and learn to utilize it as creative and innovative leaders and communicators.

The core coursework emphasizes computing, researching, planning, problem-solving, decision-making, and leading people. In addition to courses in social sciences, business and communications, students become acquainted with creativity theory and practice, learning to apply creativity principles to enhance their individual, team, and organization.

Career Opportunities

The program helps students from a variety of industries improve their professional skills and strengthen their position in the job market. Industries with employees that may benefit from the Professional Studies include, but are not limited to:

- Telecommunications
- Aerospace
- Pharmaceutical
- Retail

Opportunities for Professional Studies graduates include:

- Career advancement within students' current organizations and industries
- Preparation to pursue a master's degree in a variety of areas

Transfer Credits

To maximize prior coursework and previous learning, students are provided with a personal evaluation of credits they have earned at other institutions as well as other certifications they may have received. Credit for prior learning can be earned through:

- Transfer agreements with other colleges and universities
- The College Level Examination Program (CLEP)
- Portfolio assessments

Program Delivery Options

The Professional Studies degree-completion program offers several flexible delivery options. This major is delivered in a variety of formats so that part-time students can complete their degree in the delivery format that best fits their lifestyle.

- *Saturday Scholars option:* Students who already possess an associate's degree or equivalent credits may complete their degree entirely on Saturdays through the Goodwin College's Saturday Scholars program,

providing virtually no interruption to their weekday routine.

- *Evening option:* Students can complete their degree by participating in the Goodwin College's venerable evening program. Courses meet one night per week for three or four hours.
- *Hybrid option:* Students who desire maximum flexibility may schedule a blend of Saturday, evening, and online classes.

For more information about this major, visit Goodwin College's Professional Studies web page.

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Professional Studies

Bachelor of Science Degree: 180.0 credits

Required courses (incoming students, 2008/2009)

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

Communication requirements		9.0 Credits
COM 111	Principles of Communication	3.0
COM 230	Techniques of Speaking	3.0
COM 270 WI	Business Communication	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

Science requirements 9.0 Credits

Science Sequence Options (Choose one sequence)

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

or

PHYS 182	Applied Physics I	3.0
PHYS 183	Applied Physics II	3.0

Science elective

Students select one science elective		3.0
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Adult Transition Seminar 3.0 Credits

CAT 200	Strategies for Lifelong Learning	3.0
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Social and Behavioral Science requirements 18.0 Credits

ANTH 101	Cultural Diversity: Introduction to Cultural Anthropology	3.0
PHIL 105	Critical Reasoning	3.0

PSY 101	General Psychology I	3.0
SOC 101	Introduction to Sociology	3.0

Students select one of the following:

SOC 110	Sociology of the Future	3.0
SOC 210	Race and Ethnic Relations	3.0
SOC 230	Women and Men in Changing Society	3.0

Students select one of the following:

COM 345	Intercultural Communication	3.0
CAT 201	Interpersonal Communication	3.0
UGSD 150	Introduction to World Religions	3.0

Creativity Studies **9.0 Credits**

CRTV 301	Foundations in Creativity	3.0
CRTV 302	Tools and Techniques in Creativity	3.0
CRTV 303	Creativity in the Workplace	3.0

Professional Studies Core **60.0 Credits**

BLAW 201	Business Law I	4.0
BUSN 301	Accounting and Finance for Non-Financial Professionals	4.0
CAT 301	Project Management	3.0
CAT 302	Customer Service Theory and Practice	3.0
CAT 360	Applied Organizational Research	3.0
HRMT 323	Principles of Human Resource Administration	4.0
MGMT 260	Introduction to Entrepreneurship	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
ORGB 300 WI	Organizational Behavior	4.0
PHIL 323	Organizational Ethics	3.0
PRST 211	Computer Applications for Professionals	3.0
PRST 212	Creative Studies in the WWW	3.0
PRST 330	Career and Professional Development	3.0
PRST 440	Policy Analysis	3.0
PRST 450	Creative Leadership for Professionals	3.0
PRST 491 WI	Professional Portfolio I	3.0
PRST 492 WI	Professional Portfolio II	3.0

Students select one of the following two courses:

EDUC 436	Sociology of the Future	3.0
SOC 340	Globalization	3.0

Free Electives* **54.0 Credits**

*Depending on transfer credits and professional goals, students may use free electives to pursue a minor such as Business or to pursue a certificate program. Students should see their academic advisor for details.

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.

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Professional Studies

Bachelor of Science Degree: 180.0 credits

Required courses (incoming students, 2008/2009)

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

Communication requirements		9.0 Credits
COM 111	Principles of Communication	3.0
COM 230	Techniques of Speaking	3.0
COM 270 WI	Business Communication	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

Science requirements 9.0 Credits

Science Sequence Options (Choose one sequence)

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

or

PHYS 182	Applied Physics I	3.0
PHYS 183	Applied Physics II	3.0

Science elective

Students select one science elective		3.0
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Adult Transition Seminar 3.0 Credits

CAT 200	Strategies for Lifelong Learning	3.0
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Social and Behavioral Science requirements 18.0 Credits

ANTH 101	Cultural Diversity: Introduction to Cultural Anthropology	3.0
PHIL 105	Critical Reasoning	3.0

PSY 101	General Psychology I	3.0
SOC 101	Introduction to Sociology	3.0

Students select one of the following:

SOC 110	Sociology of the Future	3.0
SOC 210	Race and Ethnic Relations	3.0
SOC 230	Women and Men in Changing Society	3.0

Students select one of the following:

COM 345	Intercultural Communication	3.0
CAT 201	Interpersonal Communication	3.0
UGSD 150	Introduction to World Religions	3.0

Creativity Studies 9.0 Credits

CRTV 301	Foundations in Creativity	3.0
CRTV 302	Tools and Techniques in Creativity	3.0
CRTV 303	Creativity in the Workplace	3.0

Professional Studies Core 60.0 Credits

BLAW 201	Business Law I	4.0
BUSN 301	Accounting and Finance for Non-Financial Professionals	4.0
CAT 301	Project Management	3.0
CAT 302	Customer Service Theory and Practice	3.0
CAT 360	Applied Organizational Research	3.0
HRMT 323	Principles of Human Resource Administration	4.0
MGMT 260	Introduction to Entrepreneurship	4.0
MKTG 301 WI	Introduction to Marketing Management	4.0
ORGB 300 WI	Organizational Behavior	4.0
PHIL 323	Organizational Ethics	3.0
PRST 211	Computer Applications for Professionals	3.0
PRST 212	Creative Studies in the WWW	3.0
PRST 330	Career and Professional Development	3.0
PRST 440	Policy Analysis	3.0
PRST 450	Creative Leadership for Professionals	3.0
PRST 491 WI	Professional Portfolio I	3.0
PRST 492 WI	Professional Portfolio II	3.0

Students select one of the following two courses:

EDUC 436	Sociology of the Future	3.0
SOC 340	Globalization	3.0

Free Electives* 54.0 Credits

*Depending on transfer credits and professional goals, students may use free electives to pursue a minor such as Business or to pursue a certificate program. Students should see their academic advisor for details.

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.

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Professional Studies

Bachelor of Science Degree: 180.0 credits

Part-time/Evening Program

Recommended Plan of Study:

First year

(Fall)		Credits
CAT 200	Strategies for Lifelong Learning	3.0
ENGL 101	Expository Writing and Reading	3.0
MATH 181	Mathematical Analysis I	3.0
Total credits		9.0

(Winter)		
COM 111	Principles of Communication	3.0
ENGL 102	Persuasive Writing and Reading	3.0
MATH 182	Mathematical Analysis II	3.0
Total credits		9.0

(Spring)		
ENGL 103	Techniques of Analysis Evaluation	3.0
MATH 183	Mathematical Analysis III	3.0
SOC 101	Introduction to Sociology	3.0
Total credits		9.0

(Summer)		
ANTH 101	Cultural Diversity: Introduction to Cultural Anthropology	3.0
COM 270	Business Communication	3.0
Total credits		6.0

Second year

(Fall)		
CRTV 301	Foundations in Creativity	3.0
	Science sequence I *	3.0
	Free elective	3.0
Total credits		9.0

*BIO 161 or CHEM 161 or PHYS 182.

(Winter)		
CRTV 302	Tools and Techniques in Creativity	3.0
PHIL 105	Critical Reasoning	3.0
	Science sequence II*	3.0

Total credits	9.0
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*BIO 162 or CHEM 162 or PHYS 183.

(Spring)

COM 230	Techniques of Speaking	3.0
CRTV 303	Creativity in the Workplace	3.0
	Science elective	3.0
	Total credits	9.0

(Summer)

MKTG 301 WI	Introduction to Marketing Management	4.0
	Free elective	3.0
	Total credits	7.0

Third year

(Fall)

BUSN 301	Accounting and Finance for Non-Financial Professionals	4.0
PRST 211	Computer Applications for Professionals	3.0
	Free elective	3.0
	Total credits	10.0

(Winter)

ORGB 300 WI	Organizational Behavior	4.0
PRST 212	Creative Studies in the WWW	3.0
PSY 101	General Psychology I	3.0
	Total credits	10.0

(Spring)

BLAW 201	Business Law I	4.0
HRMT 323	Principles of Human Resource Administration	4.0
	Total credits	8.0

(Summer)

CAT 302	Customer Service Theory and Practice	3.0
	Free elective	3.0
	Total credits	6.0

Fourth year

(Fall)

MGMT 260	Introduction to Entrepreneurship	4.0
COM 345	Intercultural Communication	3.0
	Free elective	3.0
	Total credits	10.0

(Winter)

SOC 210	Race and Ethnic Relations	3.0
or		
SOC 230	Women and Men in Changing Society	3.0
	Free elective	3.0
	Total credits	6.0

(Spring)

CAT 301	Project Management	3.0
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	Free elective	3.0
	Total credits	6.0

(Summer)

	Free electives	6.0
	Total credits	6.0

Fifth year

(Fall)

SOC 340	Globalization	3.0
	Free electives	6.0
	Total credits	9.0

(Winter)

PHIL 323	Organizational Ethics	3.0
PRST 330	Career and Professional Development	3.0
	Free elective	3.0
	Total credits	9.0

(Spring)

PRST 440	Policy Analysis	3.0
	Free electives	6.0
	Total credits	9.0

(Summer)

	Free electives	6.0
	Total credits	6.0

Sixth year

(Fall)

CAT 360	Applied Organizational Research	3.0
PRST 450	Creative Leadership for Professionals	3.0
	Total credits	6.0

(Winter)

PRST 491 WI	Professional Portfolio I	3.0
	Free elective	3.0
	Total credits	6.0

(Spring)

PRST 492 WI	Professional Portfolio II	3.0
	Free elective	3.0
	Total credits	6.0

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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 athletics management, business, business administration, communication and technology. 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. 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 49 credits of core courses on the foundations of Sport Management. These courses are supplemented by 27 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 (13 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.

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Sport Management

Bachelor of Science Degree: 181.0 credits

Required courses (incoming students, 2008/2009)

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		52.0 Credits
BUSN 101	Foundations of Business I	4.0
ACCT 115	Financial Accounting Foundations	4.0
COM 290	Sports and the Mass Media	3.0
ORGB 300 WI	Organizational Behavior	4.0
HRMT 323	Principles of Human Resource Administration	4.0
SMT 110	Business of Sport	3.0
SMT 152	Leadership in Sport and Society	3.0
SMT 200	Introduction to 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 for Sports	3.0
SMT 320	Economic Aspects of Sport Management	3.0
PHIL 325	Ethics in Sport Management	3.0
PSY 245	Sports Psychology	3.0
SOC 268	Sociology of Sport	3.0

Athletics, Health and Human Performance 15.0 Credits

Select 15.0 credits from 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 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 201	Principles of Microeconomics	4.0

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

ACCT 116	Managerial Accounting Foundations	4.0
BLAW 202	Business Law II	4.0
ECON 202	Principles of Macroeconomics	4.0
MKTG 301	Introduction to Marketing Management	4.0
SMT 220	Recreation, Wellness and Society	3.0
SMT 235	Sports Administration and Governance	3.0
SMT 340	International Aspects of Sport Management	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 I	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
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Technology for Sport Management		13.0 Credits
COM 240	New Technologies in Communication	3.0
COM 335	Electronic Publishing	3.0
MIS 300	Management of Information Systems	4.0
Technology elective**		3.0

**Suggested Technology electives include: COM 300 On-line 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		26.0 Credits
Free electives***		26.0

*** 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.

BS Sport Management
5 YR UG Co-op Concentration

Recommended Plan Of Study

	Credits
Term 1	
BUSN 101 Foundations of Business I	4.0
ENGL 101 Expository Writing and Reading	3.0
MATH 101 Introduction to Math Analysis I	4.0
SMT 110 Business of Sports	3.0
SOC 101 Introduction to Sociology	3.0
UNIV 101 The Drexel Experience	1.0
<i>Term Credits</i>	18.0
Term 2	
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
<i>Term Credits</i>	17.0
Term 3	
ACCT 115 Financial Accounting Foundations	4.0
CHEM 151 Applied Chemistry	3.0
ENGL 103 Analytical Writing and Reading	3.0
INFO 101 Introduction to Information Technology	3.0
or	
CS 161 Introduction to Computing	3.0
Athletics/Health/Performance course (See degree requirement)	3.0
<i>Term Credits</i>	16.0
Term 4	
BLAW 201 Business Law I	4.0
COM 270 Business Communication	3.0
COM 290 Sports and the Mass Media	3.0
PHYS 151 Applied Physics	3.0
SMT 250 Technology and Sport	3.0
<i>Term Credits</i>	16.0
Term 5	
COM 230 Techniques of Speaking	3.0
ECON 201 Principles of Microeconomics	4.0
PSY 245 Sports Psychology	3.0
SMT 201 Sports Marketing, Promotion, and Public Relations	3.0
Athletics/Health/Performance course (See degree requirement)	3.0
<i>Term Credits</i>	16.0
Term 6	
COM 240 New Technologies in Communication	3.0
SMT 152 Leadership in Sport and Society	3.0
SOC 268 Sociology of Sport	3.0
Business of Sport course (See degree requirements for list)	3.0
Free elective	3.0
<i>Term Credits</i>	15.0
Term 7	
	Credits

ORGB 300	Organizational Behavior	4.0
PSCI 100	Introduction to Political Science	4.0
	Athletics/Health/Performance course (See degree requirement)	3.0
	Sport & Pscyho/Sociocultural course (See degree requirments)	3.0
	<i>Term Credits</i>	<i>14.0</i>
Term 8		Credits
HRMT 323	Principles of Human Resource Administration	4.0
ENGL 204	Post-Colonial Literature II	3.0
or		
ENGL 203	Post-Colonial Literature I	3.0
	Business of Sport course (See degree requirements for list)	3.0
	Free elective	3.0
	Sport & Pscyho/Sociocultural course (See degree requirments)	3.0
	<i>Term Credits</i>	<i>16.0</i>
Term 9		Credits
MIS 300	Management Information Systems	4.0
ENGL 200	Classical to Medieval Literature	3.0
or		
ENGL 202	Romanticism to Modernism	3.0
or		
ENGL 201	Renaissance to the Enlightenment	3.0
	Business of Sport course (See degree requirements for list)	3.0
	Free elective	4.0
	<i>Term Credits</i>	<i>14.0</i>
Term 10		Credits
PHIL 325	Ethics in Sports Management	3.0
SMT 300	Quantitative Analysis and Statistics in Sport	3.0
	Business of Sport course (See degree requirements for list)	3.0
	Free elective	3.0
	Technology elective (See degree requirements)	3.0
	<i>Term Credits</i>	<i>15.0</i>
Term 11		Credits
COM 335	Writing for the World Wide Web	3.0
SMT 230	Sport and the Law	3.0
	Athletics/Health/Performance course (See degree requirement)	3.0
	Free elective	3.0
	<i>Term Credits</i>	<i>12.0</i>
Term 12		Credits
SMT 320	Economic Aspects of Sports Management	3.0
	Free electives	6.0
	Sport & Pscyho/Sociocultural course (See degree requirments)	3.0
	<i>Term Credits</i>	<i>12.0</i>
	Total Credits (minimum)	181.0

Drexel University

Catalog 2008/2009

Sport Management

Drexel Co-op

Drexel University has long been known for its co-operative education programs, through which students combine periods of full-time, career-related employment with their studies. Co-op employment is required for sport management students and is central to their experience.

Within the sport management program, co-operative education gives students experience in a range of sports activities and settings, from coaching to the business of sports to health-enhancing activities. Students may be placed with local athletic teams, or with organizations aligned with sports (e.g., a sports agency). Co-op experiences are available with many of the region's sports, recreation, and health organizations, including professional sports teams, high school and college athletic departments, sports media networks, school districts, community-based health organizations, youth fitness organizations, fitness centers, sports complexes, hospital and health care organizations, and others.

Career Opportunities

The multidisciplinary nature of the sport management program allows its graduates to be ready for a wide range of sport-related professions, including athletic management, sports and recreational activities at all levels (professional, semi-professional, collegiate, scholastic, and youth) within a range of organizations (public, private, community, recreation, scholastic, professional, and amateur), and for varying purposes (competitive, fitness, wellness, and rehabilitation).

Sports management graduates are uniquely qualified for leadership, support, or coaching positions in professional and amateur sports organizations, in recreation and community centers, in high schools and colleges, and in other sports venues, as well as in the health and wellness industry. The program also prepares students for graduate study in a variety of fields including sport management, sports psychology, counseling psychology, physical therapy, education, business administration as it relates to sport, and other fields.

Visit the Drexel Steinbright Career Development Center page for more information on career opportunities.