COLLEGE OF BUSINESS
Bachelor Degree Programs

- Bachelor of Arts in Business
  - with a major in:
    - Entrepreneurship
- Bachelor of Science in Accounting
- Bachelor of Science in Business
  - with majors in:
    - Business Analytics
    - Business Economics
    - Finance
    - Human Resources Management
    - Management Information Systems
    - Marketing
- Bachelor of Science in Computer Information Systems
- Bachelor of Science, Hospitality and Tourism Management
  - with an option in:
    - Fitness Management

Master Degree Programs

- Master of Business Administration
  - Accounting Concentration
  - MIS Concentration
- Master of Business Administration for Executives
- Master of Accountancy

Accreditations

See 2015-2016 Addendum for Updates

- Programs in the College of Business are accredited by the International Assembly for Collegiate Business Education (IACBE).
- Programs in the White Lodging School of Hospitality and Tourism Management are accredited by the Accreditation Commission for Programs in Hospitality Administration (ACPHA).
- Purdue University Calumet is accredited by the North Central Association (NCA).

Career Opportunities

Graduates of Purdue Calumet's College of Business may work as a financial analyst, retail manager, financial accountant, project manager, small business owner, production manager, consultant, purchasing manager, human resources director, bank officer, labor relations representative, public relations officer, operations manager, managerial accountant, marketing researcher, inventory control director, recruiter, marketing director, benefits administrator, information technology liaison, labor organizer, training and development director, securities analyst, health and safety manager, sales manager, business analyst, information technology manager, independent auditor, transportation director and more.
College of Business

J. Mutchler, Dean

L. Feldman, Associate Dean

Department of Accounting: E. Furticella, Department Head.
Faculty: C. Anderson (Emeritus); P. Empey (Emeritus); E. Engle (Emeritus); G. Hoover King; A. Lindskog (Emerita); M. Mascha; S. Mo; K. Pogach; D. Rinke; E. Waples (Emerita).

Department of Information Systems, Finance, and Business Analytics: K. Chen, Department Head.
Faculty: R. Abuizam; K. Chu; R. Foreman (Emeritus); J. Furdek; L. Green; M. Mick; P. Miranda; P. Obi; S. Sil; D. Tsoukalas; C. Ye; L. Zhao

Department of Marketing, Human Resources, and Management: M. Flannery, Interim Department Head.
Faculty: A. Angriawan; C. Barczyk; S. Conners; K. Firlej; M. Hanson; J. Husain; J. Lucas; C. Mich; A. Mitra; D. Nikolovski; C. Rarick; R. Smith; G. Silver (Emeritus); H. Zhang

White Lodging School of Hospitality and Tourism Management: M. Flannery, Head.
Faculty: G. Farley; R. Fields; J. Hack; J. Pluckenbaum (Emerita); D. Vorwald; M. West (Emerita)

College of Business Staff
K. Nikolovski; C. Parker; J. Pierce; J. Rhyne; P. Stompor

College of Business Advisors
E. Brickman; C. Browder; D. Thinnes

College of Business Special Assignment
G. Falk

Vision
We will have a culture of success that empowers students, faculty and all members of the College of Business family. With our goal of 100% retention by 2020, we will be the most highly-regarded College in the University and will stand out as one of the most highly ranked public Colleges of Business in the Chicagoland region.

Mission
Through our culture of success, we positively influence the lives of our students with experiential learning activities, instilling in them critical thinking skills, an understanding of business functions and an ethical, inclusive and global mindset. We also positively influence the lives of our colleagues with professional development experiences and the ability to provide service and produce relevant scholarly work that impacts the classroom, the surrounding community, the business world and disciplinary professions.

Values
We are committed to continued academic excellence grounded in our values:
- Engagement
- Innovation
- Impact
- Inclusivity
- Collegiality
- Integrity
- Professionalism
- Transparency
- Accountability

Programs
The programs in Business, which are accredited by the International Assembly for Collegiate Business Education (IACBE), prepare students to advance their careers in business by providing a background in three general areas:
- liberal arts, to provide students with breadth of vision and perspective for lifelong learning;
- business foundation courses to provide the skills, perspectives of organizations and the environments in which they function;
- a specialty area in business to enhance the student’s career goals.
**Academic Programs**

**Bachelor of Arts in Business**
- A flexible, generalist program with a major in entrepreneurship.

**Bachelor of Science in Accounting**
- This specialized degree is designed for students pursuing accounting careers and considering professional certifications.

**Bachelor of Science in Business**

**Bachelor of Science in Computer Information Systems**
- A new program of study in the area of Information Systems

**Bachelor of Science, Hospitality and Tourism Management**
- with an option in Fitness Management

**Post-Baccalaureate Certificates**

**Master of Business Administration**
- A general graduate degree for students with bachelor degrees seeking to professionalize their management skills.

**Master of Accountancy**
- This special masters is designed for accounting students considering professional certifications.

**Graduate Certificate in Forensic Accounting**
- A specialized program focusing on types of fraud and how to detect them.

**Minors**
- Minor in Accounting
- Minor in Business
- Minor in Entrepreneurship
- Minor in Foods and Nutrition
- Minor in Finance
- Minor in Hospitality Management
- Minor in Human Resource Management
- Minor in Information Systems
- Minor in International Business
- Minor in Marketing
- Minor in Non-profit Management
- Minor in Recreational Sports Management

**Experiential Learning Courses**
The following classes have been awarded Experiential Learning designation by the Faculty Senate and may be used to fulfill a student’s experiential learning requirements.

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<thead>
<tr>
<th>Course Code</th>
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<td>ACC 40301</td>
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<td>ENTR 41000</td>
<td>HTM 38500</td>
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<td>ACC 49500</td>
<td>CIS 40000</td>
<td>ENTR 42000</td>
<td>HTM 49200</td>
<td>OBHR 43600</td>
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<td>CIS 42600</td>
<td>ENTR 49500</td>
<td>ISM 41700</td>
<td>OBHR 44400</td>
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<td>BIZA 49000</td>
<td>CIS 49500</td>
<td>ENTR 49900</td>
<td>ISM 48600</td>
<td>OBHR 49500</td>
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<td>BUSM 39100</td>
<td>CIS 49900</td>
<td>FIN 49500</td>
<td>ISM 48800</td>
<td>OBHR 49900</td>
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<td>BUSM 45000</td>
<td>ENTR 40000</td>
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<td>MKG 42000</td>
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<td>BUSM 49500</td>
<td>ENTR 40100</td>
<td>HTM 30100</td>
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<td>MKG 43300</td>
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<td>SERV 10300</td>
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</table>

**Policies for Students in BA Business, BS Accounting, BS Computer Information Systems, and BS Business programs**

**Admissions Standards (effective Fall 2013)**

**NEW FRESHMAN**
- Test Scores (SAT CR+M): 850-900 AND Overall GPA 2.00 for the Hospitality and Tourism Management program
- Test Scores (SAT CR+M): 850-900 AND Overall GPA 2.20 for all other programs

**TRANSFERS (including inter-campus transfers), CODOs, re-classification, re-entries, and re-admits:**

For Hospitality and Tourism Management programs: A minimum of 15 college transferring credits AND a cumulative College GPA of at least 2.00 for the last 15 credit hours attempted.

For all other programs: A minimum of 15 college transferring credits AND a cumulative College GPA of at least 2.20. Transfer students with fewer than 15 credit hours, who have the minimum GPA, must meet all direct-acceptance freshman admission requirements.

Articulation Students: Students entering through any of the College of Business articulation agreements must be admitted using the criteria outlined in the articulation agreement.
No enrollment in COB classes after the first week of Classes (effective Spring 2010)
The College of Business does not allow students to enroll into a COB class after the first week of classes. Truly extenuating circumstances will be examined on a case by case basis by the appropriate department head.

Extensions may only be allowed by the appropriate department head (effective Spring 2010)
Students must seek the permission of the appropriate department head at all times (or the student’s advisor may talk to the department head on the student’s behalf). Instructors may not accept or refuse class extensions; they may only make recommendations to their head.

Case of returning students facing a changed COB curriculum
Returning students who interrupted their studies at PUC for a term or more may continue the curriculum described in the Course Catalog on the date of their joining COB. They may also opt into the new curriculum which offers some real advantages: fewer required credit hours for the degree and exposure to global business.

Re-admitted students must follow the new curriculum in effect at the time of their re-entry. Truly extenuating circumstances will be examined on a case by case basis by the appropriate department head.

Minimum required grades for all courses (effective Fall 2013)
Students are required to earn a “C” or better in all courses on their plan of study. Courses in which grades below “C-” are earned must be retaken in order to meet this requirement.

Policy on Dual Degrees/Dual Majors (effective 07.23.07)
A student enrolled at COB may pursue two majors concurrently by working to satisfy all degree requirements for the two majors. The student may not graduate with one major and expect to come back later to finish the other major. The student must complete all requirements for the two majors before graduation in order to graduate with a dual major.

A student who has graduated with one major may not come back and take the junior/senior level courses in another major, counting some of the previous elective coursework towards this second major, and expect to graduate again with a second major.

If a student who has graduated with a Bachelor’s degree from the College of Business wishes to come back to Purdue Calumet for further studies in a different discipline, s/he should be encouraged to pursue a graduate degree or a certificate.

Acceptance of Transfer Credit for Major Courses (effective 05.15.06)
Transfer credit is accepted for no more than two courses within the undergraduate majors without permission of the appropriate department head.

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### Bachelor of Arts in Business, Major in Entrepreneurship
(120 CREDIT HOURS)

<table>
<thead>
<tr>
<th>1. General Education Requirements (28 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum “C-” required in each of the following:</td>
</tr>
<tr>
<td>BUSM 10000 Management Lectures</td>
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<tr>
<td>COM 11400 Fundamentals of Speech</td>
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<tr>
<td>ENGL 10400 English Composition I</td>
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<tr>
<td>ENGL 10500 English Composition II</td>
</tr>
<tr>
<td>ISM 10200 Computer Utilization for Management</td>
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<tr>
<td>MA 15300 Algebra and Trigonometry I</td>
</tr>
<tr>
<td>Natural Science One lab science from SCI or any other Gen Ed 3 approved course</td>
</tr>
<tr>
<td>Social Science SOC 10000 (Introduction to Sociology)</td>
</tr>
<tr>
<td>Arts Requirement A&amp;D 25500 (Art appreciation) or MUS 25000 (Music Appreciation) or THTR 10100 (Theater Appreciation)</td>
</tr>
<tr>
<td>History Requirement HIST 10400 (Introduction to Modern World) or HIST 11000 (The Pre-Modern World) or HIST 15100 (American History to 1877) or HIST 15200 (American History Since 1877)</td>
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</tbody>
</table>

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<thead>
<tr>
<th>2. Humanities (12 credits)</th>
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<tbody>
<tr>
<td>Minimum “C-” required in each of the following:</td>
</tr>
<tr>
<td>ENGL 42000 Business Writing</td>
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<tr>
<td>PHIL 12000 Critical Thinking</td>
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<tr>
<td>PHIL 32400 Ethics for Professions</td>
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<tr>
<td>POL 10200 American Government in Practice</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Business Core (44 credits)</th>
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</thead>
<tbody>
<tr>
<td>Minimum “C-” required in each of the following:</td>
</tr>
<tr>
<td>ACC 20000 Introductory Accounting</td>
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<tr>
<td>ACC 20000 Management Accounting I</td>
</tr>
<tr>
<td>BUSM 10100 Introduction to Business</td>
</tr>
<tr>
<td>BUSM 22500 Fundamental Managerial Statistics</td>
</tr>
<tr>
<td>BUSM 30100 Management Career Lectures</td>
</tr>
<tr>
<td>BUSM 35400 Legal Foundations of Business</td>
</tr>
<tr>
<td>BUSM 36000 Production/Operations Management</td>
</tr>
<tr>
<td>BUSM 38000 International Business</td>
</tr>
<tr>
<td>ECON 25100 Microeconomics</td>
</tr>
<tr>
<td>FIN 31000 Financial Management</td>
</tr>
<tr>
<td>MKG 32400 Marketing Management</td>
</tr>
<tr>
<td>OBHR 22100 Principles of Management</td>
</tr>
<tr>
<td>OBHR 33000 Introduction to Organizational Behavior</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Entrepreneurship Major Courses (ten courses) (30 credits)</th>
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<tbody>
<tr>
<td>Minimum “C-” required in each of the following:</td>
</tr>
<tr>
<td>Required:</td>
</tr>
<tr>
<td>ENTR 10000 Introduction to Entrepreneurship</td>
</tr>
<tr>
<td>ENTR 25000 Opportunity Identification</td>
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<tr>
<td>ENTR 30000 Growing the Firm</td>
</tr>
<tr>
<td>ENTR 31000 Launching a New Venture</td>
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<tr>
<td>ENTR 30300 Raising Money</td>
</tr>
<tr>
<td>ENTR 40000 Small Business Consulting – EXL</td>
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<tr>
<td>ENTR 40100 Social Entrepreneurship – EXL</td>
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<tr>
<td>ENTR 41000 Advanced Small Business Consulting</td>
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<tr>
<td>ENTR 42000 Business Plan Development</td>
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<tr>
<td>ENTR 45000 Corporate Entrepreneurship</td>
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</tbody>
</table>
### Bachelor of Science in Accounting

(120 CREDIT HOURS)

<table>
<thead>
<tr>
<th>1. General Education Requirements (37 credits)</th>
<th>2. Humanities (6 credits)</th>
<th>3. Business Core (47 credits)</th>
<th>4. Accounting Major Courses (seven courses) (21 credits)</th>
<th>5. Business Elective Courses (9 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum &quot;C -&quot; required in each of the following: BUSM 10000  Management Lectures</td>
<td>Minimum &quot;C -&quot; required in each of the following: ENGL 42000  Business Writing</td>
<td>Minimum &quot;C -&quot; required in each of the following: ACC 20000  Introductory Accounting</td>
<td>Minimum &quot;C -&quot; required in each of the following: ACC 30900  Accounting Information Systems</td>
<td>Minimum &quot;C -&quot; required in each of the following: Three (3) business electives from upper division courses in business (BUSM), economics (ECON), finance (FIN), entrepreneurship (ENTR), marketing (MKG), management information systems (ISM) or Organizational Behavior (OBHR).</td>
</tr>
<tr>
<td>COM 11400  Fundamentals of Speech</td>
<td>PHIL 32400  Ethics for Professions</td>
<td>BUSM 10100  Introduction to Business</td>
<td>ACC 35000  Intermediate Accounting I</td>
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<tr>
<td>ECON 25200  Macroeconomics</td>
<td>BUSM 22500  Fundamental Managerial Statistics</td>
<td>BUSM 30100  Management Career Lectures</td>
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<tr>
<td>ENGL 10400  English Composition I</td>
<td>BUSM 35400  Legal Foundations of Business</td>
<td>BUSM 36000  Production/Operations/Management</td>
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<tr>
<td>ENGL 10500  English Composition II</td>
<td>BUSM 38000  International Business</td>
<td>BUSM 45000  Strategic Management: Capstone – EXL</td>
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<tr>
<td>ISM 10200  Computer Utilization for Management</td>
<td>BUSM 45000  Strategic Management: Capstone – EXL</td>
<td>ECON 25100  Microeconomics</td>
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<td>Natural Science: One lab science from SCI or any other General Education approved course</td>
<td>Social Science: SOC 10000 (Introduction to Sociology) or PSY 12000 (Elementary Psychology)</td>
<td>FIN 31000  Financial Management</td>
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<tr>
<td>Social Science: SOC 10000 (Introduction to Sociology) or PSY 12000 (Elementary Psychology)</td>
<td>Arts Requirement: A&amp;D 25500 (Art appreciation) or MUS 25000 (Music Appreciation) or THTR 20100 (Theater Appreciation)</td>
<td>ISM 21100  Principles of Information Systems</td>
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<td>History Requirement: HIST 10400 (Introduction to Modern World) or HIST 11000 (The Pre-Modern World) or HIST 15100 (American History to 1877) or HIST 15200 (American History Since 1877)</td>
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<td>Three (3) additional approved General Education courses</td>
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<td>Minimum &quot;C -&quot; required in each of the following: ACC 20000  Introductory Accounting</td>
<td>Minimum &quot;C -&quot; required in each of the following: ENGL 42000  Business Writing</td>
<td>Minimum &quot;C -&quot; required in each of the following: ACC 20000  Introductory Accounting</td>
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<tr>
<td>ACC 20100  Managerial Accounting II</td>
<td>PHIL 32400  Ethics for Professions</td>
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<tr>
<td>BUSM 10100  Introduction to Business</td>
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<td>BUSM 22500  Fundamental Managerial Statistics</td>
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<td>BUSM 35400  Legal Foundations of Business</td>
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<td>ECON 25100  Microeconomics</td>
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<tr>
<td>FIN 31000  Financial Management</td>
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<td>MA 15300  Algebra and Trigonometry I</td>
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<td>MA 15910  Introduction to Calculus</td>
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<td>OBHR 33000  Introduction to Organizational Behavior</td>
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#### 4. Accounting Major Courses (seven courses) (21 credits)

- ACC 30900  Accounting Information Systems
- ACC 35000  Intermediate Accounting I
- ACC 35100  Intermediate Accounting II
- ACC 42020  Financial Statement Analysis
- ACC 40400  Tax Accounting
- ACC 40600  Auditing
- ACC 40700  Cost Accounting

#### 5. Business Elective Courses (9 credits)

Minimum "C -" required in each of the following:

- Three (3) business electives from upper division courses in business (BUSM), economics (ECON), finance (FIN), entrepreneurship (ENTR), marketing (MKG), management information systems (ISM) or Organizational Behavior (OBHR).
ISM 32000 Advanced Spreadsheet
BIZA 40800 Data Mining/Data Wharehouse
ISM 48600 Project Management - EXL
BIZA 42000 Decision Analytics
BIZA 49000 Senior Project

B. Business Economics major
Required:
ECON 35100 Intermediate Microeconomics
ECON 41900 Managerial Economics
ECON 35200 Intermediate Macroeconomics
ECON 38000 Money & Banking
ECON 36000 Econometrics
ECON 46500 Economic Forecasting Techniques

Electives – Select THREE (3) from the following:
ECON 31100 Environmental Economics
ECON 32200 Public Finance
ECON 35300 Business Cycles
ECON 37500 United States Economic History
ECON 41500 Contemporary Economic Problems and Policies
ECON 43400 International Trade
ECON 46100 Industrial Organization
ECON 46700 Economics and the Law
BUSM 49500 Business Internship - EXL

Or other 30000 or 40000 level courses approved by the advisor

C. Finance major
Required:
ACC 35000 Intermediate Accounting I
FIN 34000 Corporate Financial Problems
FIN 41200 Money & Capital Markets
FIN 44300 Fundamentals of Investment

Electives – Select TWO (2) from:
FIN 44000 Management of Financial Institutions
FIN 44200 Personal Finance
FIN 44400 Investment Management
FIN 44700 Derivatives
FIN 44800 Real Estate Principles
FIN 44900 International Financial Management
FIN 49500 Internship in Finance - EXL

Or other 30000 or 40000 level courses approved by the advisor

D. Management Information Systems major
Required:
ISM 30700 Systems Analysis and Design
ISM 30800 Database Mgmt Analysis and Design
ISM 31800 E-Business Strategy
ISM 48600 Project Management - EXL

Electives – Select TWO (2) from:
ISM 32000 E-Business Applications
ISM 32200 Electronic Spreadsheet for Business
ISM 32500 Logistics
ISM 41600 Information Systems Control and Audit
ISM 41700 Business Problem Solving with Advanced Spreadsheets — EXL
ISM 41800 Knowledge Management and Business Intelligence
ISM 48300 Business Data Communications
ISM 48700 Knowledge and Decision Management
ISM 48810 E-Auction in Practice
ISM 48901 Enterprise Resource Planning Implementation
ISM 49500 MIS Internship - EXL

Or other 30000 or 40000 level courses approved by the advisor

5. Business Elective Courses (12 credits)
Minimum "C -" required in each of the following:
Four business electives from upper division courses in business (BUSM), economics (ECON), Entrepreneurship (ENTR), management information systems (ISM), marketing (MKG), or Organizational Behavior (OBHR).

6. Free Electives – required for Business Economics, Finance, and MIS concentrations; not required for Business Analytics concentration (3 credits)
Minimum "C -" required

Bachelor of Science in Business — Human Resource Management major
(120 CREDIT HOURS)

1. General Education Requirements (37 credits)
Minimum "C -" required in each of the following:
BUSB 10000 Management Lectures
COM 11400 Fundamentals of Speech
ECON 25200 Macroeconomics
ENGL 10000 English Composition OR ENGL 10400 English Composition I
ENGL 10500 English Composition II
ISM 10200 Computer Utilization for Management
Natural Science One lab science from SCI OR any other Gen Ed 3 approved course
Social Science SOC 10000 (Introduction to Sociology) OR PSY 12000 (Elementary Psychology)
Arts Requirement A&D 25500 (Art appreciation) OR MUS 25000 (Music Appreciation) OR THTR 20100 (Theater Appreciation)
History Requirement HIST 10400 (Introduction to Modern World) OR HIST 11000 (The Pre-Modern World) OR HIST 15100 (American History to 1877) OR HIST 15200 (American History Since 1877)

Three (3) additional approved General Education courses

2. Humanities (6 credits)
Minimum "C -" required in each of the following:
ENGL 42000 Business Writing
PHIL 32400 Ethics for Professions

3. Business Core (44 credits)
Minimum "C -" required in each of the following:
ACC 20000 Introductory Accounting
ACC 20100 Managerial Accounting II
BUSM 10100 Introduction to Business
BUSM 22500 Fundamental Managerial Statistics
BUSM 30100 Management Career Lectures
BUSM 35400 Legal Foundations of Business
BUSM 36000 Production/Operations Management
BUSM 38000 International Business
BUSM 45000 Strategic Management: Capstone - EXL
ECON 25100 Microeconomics
FIN 31000 Financial Management
ISM 21100 Principles of Information Systems
MA 15300 Algebra and Trigonometry I
MKG 32400 Marketing Management
OBHR 33000 Introduction to Organizational Behavior

4. Human Resource Management major courses (27 credits)
Minimum "C -" required in each of the following:
OBHR 42600 Training and Managerial Development
OBHR 43000 Labor Relations
OBHR 43100 Human Resource Management

5. Business Elective Courses (12 credits)
Minimum "C -" required in each of the following:
Four business electives from upper division courses in business (BUSM), economics (ECON), Entrepreneurship (ENTR), management information systems (ISM), marketing (MKG), or Organizational Behavior (OBHR).

6. Free Electives – required for Business Economics, Finance, and MIS concentrations; not required for Business Analytics concentration (3 credits)
Minimum "C -" required

Bachelor of Science in Business — Human Resource Management major
(120 CREDIT HOURS)

1. General Education Requirements (37 credits)
Minimum "C -" required in each of the following:
BUSB 10000 Management Lectures
COM 11400 Fundamentals of Speech
ECON 25200 Macroeconomics
ENGL 10000 English Composition OR ENGL 10400 English Composition I
ENGL 10500 English Composition II
ISM 10200 Computer Utilization for Management
Natural Science One lab science from SCI OR any other Gen Ed 3 approved course
Social Science SOC 10000 (Introduction to Sociology) OR PSY 12000 (Elementary Psychology)
Arts Requirement A&D 25500 (Art appreciation) OR MUS 25000 (Music Appreciation) OR THTR 20100 (Theater Appreciation)
History Requirement HIST 10400 (Introduction to Modern World) OR HIST 11000 (The Pre-Modern World) OR HIST 15100 (American History to 1877) OR HIST 15200 (American History Since 1877)

Three (3) additional approved General Education courses

2. Humanities (6 credits)
Minimum "C -" required in each of the following:
ENGL 42000 Business Writing
PHIL 32400 Ethics for Professions

3. Business Core (44 credits)
Minimum "C -" required in each of the following:
ACC 20000 Introductory Accounting
ACC 20100 Managerial Accounting II
BUSM 10100 Introduction to Business
BUSM 22500 Fundamental Managerial Statistics
BUSM 30100 Management Career Lectures
BUSM 35400 Legal Foundations of Business
BUSM 36000 Production/Operations Management
BUSM 38000 International Business
BUSM 45000 Strategic Management: Capstone - EXL
ECON 25100 Microeconomics
FIN 31000 Financial Management
ISM 21100 Principles of Information Systems
MA 15300 Algebra and Trigonometry I
MKG 32400 Marketing Management
OBHR 33000 Introduction to Organizational Behavior

4. Human Resource Management major courses (27 credits)
Minimum "C -" required in each of the following:
OBHR 42600 Training and Managerial Development
OBHR 43000 Labor Relations
OBHR 43100 Human Resource Management

5. Business Elective Courses (12 credits)
Minimum "C -" required in each of the following:
Four business electives from upper division courses in business (BUSM), economics (ECON), Entrepreneurship (ENTR), management information systems (ISM), marketing (MKG), or Organizational Behavior (OBHR).

6. Free Electives – required for Business Economics, Finance, and MIS concentrations; not required for Business Analytics concentration (3 credits)
Minimum "C -" required

Bachelor of Science in Business — Human Resource Management major
(120 CREDIT HOURS)

1. General Education Requirements (37 credits)
Minimum "C -" required in each of the following:
BUSB 10000 Management Lectures
COM 11400 Fundamentals of Speech
ECON 25200 Macroeconomics
ENGL 10000 English Composition OR ENGL 10400 English Composition I
ENGL 10500 English Composition II
ISM 10200 Computer Utilization for Management
Natural Science One lab science from SCI OR any other Gen Ed 3 approved course
Social Science SOC 10000 (Introduction to Sociology) OR PSY 12000 (Elementary Psychology)
Arts Requirement A&D 25500 (Art appreciation) OR MUS 25000 (Music Appreciation) OR THTR 20100 (Theater Appreciation)
History Requirement HIST 10400 (Introduction to Modern World) OR HIST 11000 (The Pre-Modern World) OR HIST 15100 (American History to 1877) OR HIST 15200 (American History Since 1877)

Three (3) additional approved General Education courses

2. Humanities (6 credits)
Minimum "C -" required in each of the following:
ENGL 42000 Business Writing
PHIL 32400 Ethics for Professions

3. Business Core (44 credits)
Minimum "C -" required in each of the following:
ACC 20000 Introductory Accounting
ACC 20100 Managerial Accounting II
BUSM 10100 Introduction to Business
BUSM 22500 Fundamental Managerial Statistics
BUSM 30100 Management Career Lectures
BUSM 35400 Legal Foundations of Business
BUSM 36000 Production/Operations Management
BUSM 38000 International Business
BUSM 45000 Strategic Management: Capstone - EXL
ECON 25100 Microeconomics
FIN 31000 Financial Management
ISM 21100 Principles of Information Systems
MA 15300 Algebra and Trigonometry I
MKG 32400 Marketing Management
OBHR 33000 Introduction to Organizational Behavior

4. Human Resource Management major courses (27 credits)
Minimum "C -" required in each of the following:
OBHR 42600 Training and Managerial Development
OBHR 43000 Labor Relations
OBHR 43100 Human Resource Management
OBHR 43000  Staffing Organizations
OBHR 43400  Benefits Administration
OBHR 43500  Compensation Management
OBHR 43600  Collective Bargaining
OBHR 44400  Leadership
OBHR 44800  HRIS Systems

5. Free Electives (6 credits)
Minimum "C" required

Bachelor of Science in Business – Marketing major
(120 CREDIT HOURS)  See 2015-2016 Addendum for Updates

1. General Education Requirements (34 credits)
Minimum "C" required in each of the following:
BUSM 10000  Management Lectures
COM 11400  Fundamentals of Speech
ECON 25200  Macroeconomics
ENGL 10000  English Composition OR ENGL 10400 English Composition I
ENGL 10500  English Composition II
ISM 10200  Computer Utilization for Management
Natural Science One lab science from SCI OR any other Gen Ed 3 approved course
Social Science SOC 10000 (Introduction to Sociology) OR PSY 12000 (Elementary Psychology)
Arts Requirement A&D 25500 (Art appreciation) OR MUS 25000 (Music Appreciation) OR THTR 20100 (Theater Appreciation)
History Requirement HIST 10400 (Introduction to Modern World) OR HIST 11000 (The Pre-Modern World) OR HIST 15100 (American History to 1877) OR HIST 15200 (American History Since 1877)

Two (2) additional approved General Education courses

2. Humanities (6 credits)
Minimum "C" required in each of the following:
ENGL 42000  Business Writing
PHIL 32400  Ethics for Professions

3. Business Core (44 credits)
Minimum "C" required in each of the following:
ACC 20000  Introductory Accounting
ACC 20100  Managerial Accounting II
BUSM 10100  Introduction to Business
BUSM 22500  Fundamental Managerial Statistics
BUSM 30100  Management Career Lectures
BUSM 35400  Legal Foundations of Business
BUSM 36000  Production/Operations Management
BUSM 38000  International Business
BUSM 45000  Strategic Management: Capstone – EXL
ECON 25100  Microeconomics
FIN 31000  Financial Management
ISM 21100  Principles of Information Systems
MA 15300  Algebra and Trigonometry I
MKG 32400  Marketing Management
OBHR 33000  Introduction to Organizational Behavior

4. Marketing major courses (36 credits)
Minimum "C" required in each of the following:
MKG 42000  Digital Marketing Campaigns
MKG 42100  Integrated Marketing Communication
MKG 42200  International Marketing
MKG 42400  Consumer Behavior
MKG 42500  Marketing Research
MKG 42600  Marketing Channels
MKG 42800  Advertising Management
MKG 42900  Advertising Campaigns II
MKG 43000  Advertising Campaigns I
MKG 43300  Personal Selling
MKG 43400  Digital Marketing Strategy
MKG 48000  Marketing Strategy

Bachelor of Science in Computer Information Systems
(120 CREDIT HOURS)

1. General Education Requirements (31 credits)
Minimum "C" required in each of the following:
BUSM 10000  Management Lectures
COM 11400  Fundamentals of Speech
COM or ENGL elective – must be an approved Gen Ed course
ENGL 10000  English Composition OR ENGL 10400 English Composition I
ENGL 10500  English Composition II
ISM 10200  Computer Utilization for Management
Natural Science One lab science from SCI OR any other Gen Ed 3 approved course
Approved Gen Ed Social Science elective

2. Mathematics/Science (6 credits)
Minimum "C" required in each of the following:
MA 15910  Introduction to Calculus
STAT 30100  Elementary Statistical Methods

3. Humanities and Social Science (6 credits)
Minimum "C" required in each of the following:
PHIL 12000  Critical Thinking
Humanities elective Must be an approved Gen Ed course

4. Business Core (21 credits)
Minimum "C" required in each of the following:
ACC 20000  Introductory Accounting
BUSM 10100  Introduction to Business
BUSM 35400  Legal Foundations of Business
ISM 21100  Principles of Information Systems
ISM 31800  E-Business Applications
OBHR 33000  Introduction to Organizational Behavior
Business Selective One course in Accounting, Operations Management, Finance, or Marketing

5. CIS Major Courses (14 courses) (56 credits)
Minimum "C" required in each of the following required courses:
Required:
CIS 11100  Intro to H-C Interaction
CIS 14000  Introduction to Networks
CIS 16600  Introduction to Programming
CIS 21000  Personal Computer Technology
CIS 23000  Data Communications
CIS 24100  Web Development
CIS 25200  Systems Analysis and Design
CIS 25300  Applied Database Techniques
CIS 26300  Java Programming
CIS 34100  Web Development II

See 2015-2016 Addendum for Updates
CIS 35300 Advanced Database Methods
CIS 41300 IS Auditing & Assurance
CIS 42600 Applied Software Development Project
CIS 46300 Introduction to Mobile Programming
ISM 32000 Advanced Spreadsheet Applications for Business
ISM 48600 Project Management
ISM 32500 Logistics
ISM 48700 Knowledge and Decision Management

Elective — Student will complete an internship, senior project, or undergraduate research. Must be approved by the department head.

Post Baccalaureate Certificate, Information Systems
(18 CREDIT HOURS)

Admission Requirements: Students wishing to complete this certificate must apply for admission to the certificate program and provide a transcript from an accredited institution of higher education to verify receipt of a bachelor’s degree.

All courses must be passed with a C (2.0) or better for the certificate to be awarded.

Required Courses
ISM 21100 Management Information Systems
ISM 31800 E-Business Strategy

Four more courses to be chosen from the following list:
CIS 11100 Computer Human Interaction
ISM 42400 Object-Oriented Analysis and Design
ISM 31800 E-Business Strategy
ISM 32000 E-Business Applications
CIS 20000 Information Systems Policies
CIS 40000 Information Systems Strategic Planning
CIS 1800 Introduction to Project Management
CIS 25200/ MGMT 30700 Systems Analysis and Design
ISM 30800 Database Analysis and Design
CIS 41300 Information Systems Auditing & Assurance
ISM 41400 Information Systems Control and Audit
ISM 48600 Project Management

Minor in Accounting
(15 CREDITS)

Minimum “C-” required in each of the following:
ACC 20000 Managerial Accounting
ACC 20100 Introductory Accounting
ECON 25100 Microeconomics
BUSM 22500 Fundamental Business Statistics
FIN 31000 Financial Management
OBHR 33000 Introduction to Organizational Behavior

Minor in Business
(24 CREDITS)

This minor is intended for students who are not in the College of Business. College of Business students may NOT pursue this minor. Minimum “C-” required in each of the following:
ACC 20000 Managerial Accounting
ACC 20100 Introductory Accounting
ECON 25100 Microeconomics
BUSM 22500 Fundamental Business Statistics
FIN 31000 Financial Management
OBHR 33000 Introduction to Organizational Behavior

Minor in Entrepreneurship
(15 CREDITS)

Minimum “C-” required in each of the following:
ENTR 10000 Introduction to Entrepreneurship

Four more courses (4) from list below, preferably from ENTR courses:

CIS 35300 Advanced Database Methods
CIS 41300 IS Auditing & Assurance
CIS 42600 Applied Software Development Project
CIS 46300 Introduction to Mobile Programming
ISM 32000 Advanced Spreadsheet Applications for Business
ISM 48600 Project Management
ISM 32500 Logistics
ISM 48700 Knowledge and Decision Management

Elective — Student will complete an internship, senior project, or undergraduate research. Must be approved by the department head.

Post Baccalaureate Certificate, Information Systems - Software Development
(18 CREDITS)

Admission Requirements: Students wishing to complete this certificate must apply for admission to the certificate program and provide a transcript from an accredited institution of higher education to verify receipt of a bachelor’s degree.

All courses must be passed with a C (2.0) or better for the certificate to be awarded.

Excellent programming elective
CIS programming elective

Minor in Business Analytics
NEW for 2015-2016. See Addendum

Minors in Entrepreneurship
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 3000</td>
<td>Growing the Firm</td>
</tr>
<tr>
<td>ENTR 3010</td>
<td>Introduction to Technical Entrepreneurship</td>
</tr>
<tr>
<td>ENTR 3020</td>
<td>Innovation &amp; New Product Development</td>
</tr>
<tr>
<td>ENTR 3030</td>
<td>Entrepreneurial Finance</td>
</tr>
<tr>
<td>ENTR 4000</td>
<td>Small Business Consulting</td>
</tr>
<tr>
<td>ENTR 4010</td>
<td>Social Entrepreneurship</td>
</tr>
<tr>
<td>ENTR 4200</td>
<td>Business Plan Development</td>
</tr>
<tr>
<td>ISM 3180</td>
<td>E-Business Strategy</td>
</tr>
<tr>
<td>ISM 4860</td>
<td>Project Management</td>
</tr>
<tr>
<td>ISM 4870</td>
<td>Knowledge &amp; Decision Management</td>
</tr>
<tr>
<td>OBHR 4230</td>
<td>Negotiations</td>
</tr>
<tr>
<td>OLS 3500</td>
<td>Applied Creativity for Business and Industry</td>
</tr>
<tr>
<td>OLS 3510</td>
<td>Innovation and Entrepreneurship</td>
</tr>
<tr>
<td>BUSM 39100</td>
<td>Business Internship</td>
</tr>
<tr>
<td>BUSM 38000</td>
<td>International Business</td>
</tr>
<tr>
<td>or other 3000 or 4000 level course approved by the advisor</td>
<td></td>
</tr>
</tbody>
</table>

**Minor in Finance**

*(15 CREDITS)*

Minimum "C-" required in each of the following:

- FIN 34000 Corporate Financial Problems
- FIN 41200 Financial Markets & institutions
- FIN 44300 Fundamentals of Investments

Select two courses from the following:

- ACC 35000 Intermediate Accounting I
- FIN 40200 Financial Statements Analysis
- FIN 44000 Management of Financial Institutions
- FIN 44200 Personal Finance
- FIN 44400 Investment Management
- FIN 44700 Derivatives
- FIN 44900 International Financial Management

**Minor in Human Resource Management**

*(15 CREDITS)*

Minimum "C-" required in each of the following:

- BUSM 10100 Intro. to Business
- BUSM 33000 Human Resource Management
- BUSM 33100 Staffing

Select TWO (2) from:

- BUSM 33300 Total Quality Management
- OBHR 42300 Negotiations
- OBHR 42600 Training and Managerial Development
- OBHR 42700 Occupational Safety and Health
- OBHR 43000 Labor Relations
- OBHR 43400 Benefits Administration
- OBHR 43500 Compensation Management
- OBHR 43600 Collective Bargaining and Negotiations
- OBHR 43700 Managing Career Development
- OBHR 43800 Gender and Diversity in Management
- OBHR 43900 Employment Law

Or others as approved by the advisor.

**Minor in Information Systems**

*(18 CREDITS)*

Minimum "C-" required in each of the following:

- CIS 20400 or ISM 10200 required as the first course.

An additional 5 courses selected from the ISM and CIS course offerings.

---

**Minor in International Business**

*(15 CREDITS)*

Minimum "C-" required in each of the following:

- BUSM 38000 International Business

Three from:

- MKG 42200 International Marketing
- FIN 44900 International Financial Management
- BUSM 48900 International Management
- ECON 43400 International Trade

And one additional course approved by the College of Business which may include one of the above.

**Minor in Marketing**

*(15 CREDITS)*

Minimum "C-" required in each of the following:

- MKG 22400 Principles of Marketing
- MKG 32400 Marketing Management
- MKG 42100 Promotions Management
- MKG 42400 Consumer Behavior

Select TWO (2) from:

- MKG 42200 International Marketing
- MKG 42500 Marketing Research
- MKG 42600 Retailing
- MKG 42700 Sales Management
- MKG 42800 Advertising Management
- MKG 42900 Advertising Campaigns
- MKG 43300 Personal Selling
- MKGT 43400 E-Marketing
- MKG 43500 Services Marketing
- OBHR 42300 Negotiations
- ENTR 30000 Small Business Management

Or others as approved by the advisor.

**Minor in Non-Profit Management**

*(15 CREDITS)*

Minimum "C-" required in each of the following:

- CIS 22200 Information Systems for Non-Profits
- ENTR 30300 Entrepreneurial Finance
- BUSM 33000 Non-Profit Organizational Structure
- BUSM 40010 Non-Profit Management
- BUSM 41400 Non-Profit Grant Writing and Fund Raising

Or others as approved by the advisor.

**Master of Business Administration**

*(48 CREDITS)*

**Admission Requirements**

1. Proof of baccalaureate degree
2. Results from the Graduate Management Admission Test if undergraduate GPA is less than 3.20 on a 4.0 scale. Applicants may request a waiver of the GMAT requirement under special circumstances.
3. Capacity for management responsibility
4. Recommended: College Algebra

**Program Description**

The program effectively requires that all graduate students complete a minimum of 48 graduate credit hours.

1. The MBA program consists of a lock step curriculum of 48 credit hours of Graduate courses. Students may complete the requirements of the degree typically in two years.
2. Two cohort groups will be admitted each year. Students may start the program in either August (Fall) or January (Spring) and finish in 1.5 to 2 years.
3. Courses are offered in 8 week modules.

All courses offered in the evening.

**Degree Requirements - General MBA Program**

The following courses (3 credit hours each) will be required to complete the General MBA degree. If a student has an undergraduate degree in Business, the student may be exempted from no more than 6 credit hours. The courses to be exempted will be determined by the student's MBA advisory committee.

**Part I. Core Courses for all MBA programs (27 credit hours):**

1. MGMT 60000 Accounting for Managers (Financial Accounting)
2. MGMT 61100 Financial Management
3. MGMT 62000 Marketing Management
4. MGMT 63000 Legal & Social Foundations of Business
5. MGMT 65000 Strategic Management
6. MGMT 66000 Operations Management
7. MGMT 67000 Business Analytics
8. MGMT 68000 Introduction to Information Technology
9. OBHR 68100 Leadership/Behavior in Organizations

**Part 2. Electives for General MBA degree (12 credit hours)**

Any four (4) courses (12 credit hours) from the following:

1. MGMT 60100 Managerial Accounting
2. MGMT 67100 Quantitative Methods II
3. ECON 59000 Managerial Economics
4. MGMT 69000 International Business
5. MGMT 69000 Enterprise Risk Management
6. MGMT 69001 Decision Analytics
7. MGMT 69002 Supply Chain Management
8. Other 69000 courses

**Concentrations offered in the MBA program:**

**MBA/ Information Systems ----- Core (27 credit hours) plus 5 concentration courses (15 credit hours) chosen from the list below:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 54400</td>
<td>Database Management Systems</td>
</tr>
<tr>
<td>MGMT 54600</td>
<td>Decision Support and Expert Systems</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Advanced E-Business Applications</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Advanced Project Management</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Supply Chain Management</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Advanced Excel Applications</td>
</tr>
</tbody>
</table>

**MBA/Accounting ----- Core (27 credit hours) plus 5 concentration courses (15 credit hours) chosen from the list below:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>MGMT 50100</td>
<td>Advanced Taxation</td>
</tr>
<tr>
<td>MGMT 50300</td>
<td>Advanced Accounting</td>
</tr>
<tr>
<td>MGMT 50500</td>
<td>Advanced Managerial Accounting</td>
</tr>
<tr>
<td>MGMT 50600</td>
<td>Auditing</td>
</tr>
<tr>
<td>MGMT 50900</td>
<td>International Accounting</td>
</tr>
<tr>
<td>MGMT 51500</td>
<td>Fraud Investigation &amp; Forensic Accounting</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Governmental &amp; Non-For-Profit Accounting</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Accounting Communications</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Corporate Governance &amp; Ethics</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Advanced Financial Reporting</td>
</tr>
</tbody>
</table>

**Transfer of Credit**

Undergraduate credits may not be used to satisfy master's degree requirements. Transfer credits, in general, are not accepted. In exceptional cases, however, graduate credits not exceeding six hours may be transferred into the program.

Exceptional cases are individually considered by the Graduate Committee. Transfer credits are allowed only after one semester of satisfactory work in residence at Purdue University Calumet. The minimum grade for transfer credits is a B.

**Master of Accountancy**

**(30 CREDITS)**

**Admission Requirements**

1. Admission requires an undergraduate degree with a major or concentration in accounting, a graduate index of 3.0/4.0 and satisfactory performance on the GMAT examination if undergraduate GPA is less than 3.20 on a 4.0 scale. Applicants may request a waiver of the GMAT requirement under special circumstances.

2. Applications from students whose undergraduate degree major is not accounting may be considered provided that they have completed a sufficient number and variety of accounting courses to satisfy the prerequisites for the master's level courses required by the program.

**Program Description**

A minimum of 30 semester credit hours of graduate level course work is required to complete this program. The degree requirements are outlined here.

**Required Courses (30 credit hours)**

<table>
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<td>MGMT 50100</td>
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<td>MGMT 50500</td>
<td>Advanced Managerial Accounting</td>
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<tr>
<td>MGMT 50900</td>
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</tr>
<tr>
<td>MGMT 51500</td>
<td>Fraud Investigation</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Governmental &amp; Non-For-Profit Accounting</td>
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<td>Advanced Financial Reporting</td>
</tr>
<tr>
<td>MGMT 59000</td>
<td>Corporate Governance &amp; Ethics</td>
</tr>
</tbody>
</table>

**Graduate Certificate in Forensic Accounting**

The Certificate in Forensic Accounting is designed to prepare candidates to understand how and why occupational fraud is occurring, how it can be detected or prevented, and how allegations of fraud should be professionally investigated and resolved.

**Admission Requirements**

1. A bachelor's degree from an accredited college or university.
2. Completion of an introductory accounting course.

**Credit Hour Requirements:**

The certificate requires students to complete 12 credit hours consisting of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 51500</td>
<td>Introduction to Fraud Investigation</td>
</tr>
<tr>
<td>MGMT 51700</td>
<td>Fraud Data Analysis</td>
</tr>
<tr>
<td>MGMT 51800</td>
<td>Criminology and Legal Issues</td>
</tr>
<tr>
<td>MGMT 51900</td>
<td>Advanced Fraud Investigation</td>
</tr>
</tbody>
</table>
White Lodging School of Hospitality and Tourism Management

M. Flannery, Head.  Faculty:  G. Farley;  R. Fields;  J. Hack;  J. Pluckebaum (Emerita);  D. Vorwald;  M. West (Emerita)

Academic Advisor:  C. Browder
Office Manager:  J. Rhyne
Operations/Lab Manager:  P. Stompor

The department of Hospitality and Tourism Management is designed to offer students a broad-based curriculum, combining a strong liberal arts education with a management focus. It is an interdisciplinary degree that ensures a solid business foundation and a genuine grasp of all aspects of the hospitality industry including food & beverage management, gaming, recreation, private club administration, travel and tourism activities, event and conference planning, convention and visitors bureaus, and more. This foundation of knowledge is coupled with practical learning about how to organize, supervise and manage employees, which will serve you very well in an industry that requires experiential and practical learning integrated with classroom theories.

The hospitality industry is the fastest growing business sector in the world, and globalization has brought about an explosion in career opportunities. The Hospitality and Tourism Management department offers bachelor degree programs; certificate programs are also available. The department offers courses in a variety of academic and experiential learning contexts. Industry practicum experience is required in both the general hospitality and tourism management and fitness management programs. This means prospects abound for internships and experiential learning opportunities.

The centerpiece of experiential learning for Hospitality and Tourism Management is the White Lodging Hospitality and Tourism Management (HTM) Center which features state-of-the-art kitchen spaces, wine & beverage laboratory and a management simulation computer lab. In the HTM laboratories, students are introduced to state-of-the-art computer software used in the hospitality industry and operational foods/restaurant facilities. These laboratories also allow students to engage in simulated experiments and analysis of data from classroom experimental projects.

**Programs**

- Bachelor of Science, Hospitality and Tourism Management
- Bachelor of Science, Hospitality and Tourism Management with an option in:
  - Fitness Management
- Certificate in Hospitality
- Certificate in Nutrition and Health Management
- Minors in Hospitality Management, Foods and Nutrition, Recreational Sports Management

**Bachelor of Science, Hospitality and Tourism Management**

1. **Communication (12 credits)**
   - ENGL 10000/10400 English Composition I
   - ENGL 10500 English Composition II
   - ENGL 42000 Business Writing

2. **Science and Mathematics (12 credits)**
   - STAT 13000 Statistics and Contemp. Life
   - CIS 20400 Introduction to Computer-based Systems
   - MA/SCI Elective course in Math, Science, Computer Science or Logic
   - SCIENCE Elective course in Science with laboratory

3. **Humanities, Social and Behavioral Sciences (18 credits)**
   - ECON 21000 Economics (or higher)
   - PSY 12000 Elementary Psychology
   - SOC 10000 Introduction to Sociology
   - SPAN 10600 Spanish for Business
   - Humanities Elective Any courses in A&D, ENGL Lit., FLL, HIST, MUS, PHIL, OR THTR
   - Soc. Science Elective ANYTH, ECON, POL, PSY, OR SOC course

4. **Hospitality and Tourism Management**
   - Requirements (72 credits): A grade of “C” or better is required in all F&B, FM and HTM courses
   - FN 20300 Foods: Their Selection and Preparation
   - FN 30300 Essentials of Nutrition
   - HTM 10000 Intro. Hospitality and Tourism Industry
   - HTM 10100 Hospitality and Tourism Student Seminar
   - HTM 14100 Financial Accounting for the Service Industries
   - ACC 20000 Introductory Accounting
   - HTM 18100 Lodging Management
   - HTM 19100 Sanitation and Health in Foodservice, Lodging and Tourism
   - HTM 21200 Organization & Management in Hospitality and Tourism Industry
   - HTM 23100 Hospitality and Tourism Marketing
   - HTM 24100 Managerial Accounting and Financial Management
   - HTM 29100 Quantity Food Production and Service
   - HTM 30100 Hospitality and Tourism Industry Practicum
   - HTM 31100 Procurement Management for Foodservice
   - HTM 31200 Human Resources Management for the Service Industries
   - HTM 32200 Hospitality Facilities Management
   - HTM 34100 Cost Controls in Foodservice and Lodging
   - HTM 37100 Introduction to Tourism
   - HTM 41100 Hospitality and Tourism Law
   - HTM 49101 Sales & Service for Beverage Operations (Must be 21 years old)
   - HTM 49200 Advanced Foodservice Management
   - HTM 49900 Feasibility Studies and Business Development

5. **HTM or FN Electives (12 credit hours)**
6. **Electives or Minors (15 credit hours)**
Bachelor of Science, Hospitality and Tourism Management, Fitness Management Option  
(130 CREDITS)

1. Communication (12 credits)
   - ENGL 10000/10400 English Composition I
   - ENGL 10500 English Composition II
   - ENGL 42000 Business Writing

2. Science and Mathematics (17 credits)
   - STAT 13000 Statistics and Contemp. Life
   - CIS 20400 Introduction Computer-based Systems
   - BIOL 21300 Anatomy and Physiology I
   - BIOL 21400 Anatomy and Physiology II
   - CHM 11900 General Chemistry

3. Humanities, Social and Behavioral Sciences (15 credits)
   - ECON 21000 Economics (or higher)
   - PSY 12000 Elementary Psychology
   - SOC 10000 Introduction to Sociology
   - Humanities Elec.
     A&D, ENGL Lit., FLL, HIST, course in MUS, PHIL, or THTR
   - SOC 43000 Sociology of Aging
   - CDFS 21000 Intro. Human Development

4. Fitness Management Requirements (68 credits)
   A grade of “C” or better is required in all FN, FM and HTM Courses.
   - FN 10500 Current Issues in Nutrition and Food Safety
   - FN 20300 Foods: Their Selection and Preparation
   - FN 26100 Nutrition for Health, Fitness, and Sports
   - FN 30300 Essentials of Nutrition
   - FN 32200 Community Nutrition & Health Promotion Entrepreneurship
   - FN 36000 Nutrition for Aging
   - HTM 10000 Intro. Hospitality and Tourism Industry
   - HTM 10100 Hospitality and Tourism Student Seminar
   - HTM 14100 Financial Accounting for the Service Industries
   - HTM 18100 Lodging Management
   - HTM 21200 Organization and Management in Hospitality and Tourism Industry
   - HTM 23100 Hospitality and Tourism Marketing
   - HTM 31200 Human Resources Management for the Service Industries
   - FM 10000s Individualized Wellness Strategies — five areas of 1 cr. each
   - FM 21900 Issues and Problems in Health
   - FM 26800 Physiology of Exercise
   - FM 30000 Practicum: Health, Fitness and Nutrition
   - FM 30100 Recreation Leadership
   - FM 30200 Anatomy and Kinesiology
   - FM 30500 Practicum in Fitness Management
   - FM 31300 Beginning Concepts of Personal Training
   - FM 31400 Beginning Concepts of Group Exercise
   - FM 41000 Evaluation, Testing and Assessment of Exercise
   - FM 47400 Physiology of Exercise II

5. Electives (17 credits)

Minors in Foods and Nutrition, Hospitality Management, or Recreational Sports Management  
(15-20 CREDITS EACH)

Minor in Foods and Nutrition  
(15 TO 16 CREDITS)

Required
   - FN 10500 Current Issues in Nutrition and Food Safety
   - FN 26100 Nutrition for Health, Fitness and Sports
   - FN 30300 Essentials of Nutrition
   - FN 36000 Nutrition for the Aging
   - Elective F&N-Electives (total 2-3 credits)

Minor in Hospitality Management  
(20 CREDITS)

Required
   - FN 20300 Foods: Their Selection and Preparation
   - HTM 10000 Intro. to Hospitality and Tourism Industry
   - HTM 14100 Financial Accounting for Service Industries
   - HTM 18100 Lodging Management
   - HTM 21200 Organization and Management in Hospitality and Tourism Industry
   - HTM 23100 Hospitality and Tourism Marketing
   - HTM 31200 Human Resources Management for the Service Industries

Minor in Recreational Sports Management  
(15 CREDITS)

Required
   - FN 10500 Current Issues in Nutrition and Food Safety
   - FN 26100 Nutrition for Health, Fitness and Sports
   - FM 10000s Individualized Wellness Strategies — 2 areas of 1 cr. each
   - FM 21900 Issues and Problems in Health
   - FM 30100 Recreation Leadership
   - FM 31500 Private Club Management and Operations

Certificates

Certificates are designed for non-traditional students employed full-time in responsible positions in the hospitality or fitness industry.

Certificate in Hospitality  
(18-19 CREDITS)

Required Courses
   - HTM 14100 Financial Accounting for the Service Industries
   - HTM 21200 Organization & Management in Hospitality and Tourism Industry
   - HTM 23100 Hospitality and Tourism Marketing
   - HTM 30100 Hospitality and Tourism Industry Practicum
   - HTM 31200 Human Resources Management Service Industry
Elective Courses
Completion of two courses in ONE of these six areas:

Restaurant Management:
  FN 20300, HTM 31400, HTM 32200, OR HTM 49100

Hotel Management:
  HTM 18100, HTM 32200, HTM 33100, OR HTM 49100

Institutional Management:
  FN 20300, HTM 19100, HTM 32200, OR HTM 36100

Tourism Management:
  HTM 33100, HTM 37100, HTM 37200, OR SPAN 10600

Casino Management:
  HTM 18100, HTM 31600, HTM 34100, OR HTM 49100

Private Club Management:
  HTM 31500, HTM 32200, HTM 33100 OR HTM 49100

Certificate in Nutrition and Health Management
(18 CREDITS)

Required courses
  FN 10500  Current Issues in Nutrition and Food Safety
  FN 26100  Nutrition for Health, Fitness and Sports
  FM 10000s  Individualized Wellness Strategies — (2 areas of 1 cr. each)
  FM 21900  Issues and Problems in Health
  FM 30100  Recreation Leadership
  HTM 31500  Private Club Management and Operation

Elective (3 credits)
  Any HTM, FN or FM course
COLLEGE OF EDUCATION
College of Education
219/989-2335, 800/HI-PURDUE, ext. 2335, Gyte Annex, Room 138

Department of Teacher Preparation (Undergraduate programs)
219/989-2360, 800/HI-PURDUE, ext. 2360, Gyte Annex, Rooms 138

Department of Graduate Studies in Education
219/989-2326, 800/HI-PURDUE, ext. 2326, Gyte Annex, Room 142

Bachelor Degree Programs
- Elementary/Special Education (Gr. K-6)

Master Degree Programs
- Educational Administration
- Counseling and Development (Mental Health Counseling, School Counseling, and Human Services)
- Instructional Technology
- Special Education

In addition, Purdue Calumet offers licensure programs in educational administration, school counseling and special education (mild and intense intervention).

Career Opportunities
Graduates of Purdue Calumet’s College of Education may work as an elementary school teacher, high school biology teacher, kindergarten teacher, junior high math teacher, reading teacher, middle school social studies teacher, special education teacher, middle school language arts teacher, high school chemistry teacher, mental health counselor, addictions counselor, and more. Master’s graduates may work as a school principal, guidance counselor, mental health counselor, administrator or advance their classroom career.
The Department of Teacher Preparation, in collaboration with other professional educators and agencies, prepares and supports education professionals and related specialists who:

- apply the appropriate knowledge, skills, and attitudes in developing diverse approaches to educational strategies that are constructive, consistent, and reflective of sound practice.
- are prepared to use current information and technology to empower the people they serve; and
- are sensitive and responsive to the unique needs of themselves, of others, and of the diverse society in which they practice; and
- are advocates and models of quality education and lifelong learning.

The Education faculty is committed to providing the human and technological resources necessary to enable students to construct knowledge, develop practices, and foster relationships.

Mission Statement

The mission of Purdue University Calumet’s College of Education, in collaboration with other professional educators and agencies, is to prepare and support education professionals and related specialists who:

- Apply the appropriate knowledge, dispositions, and performances in developing diverse approaches to educational strategies that are constructive, consistent and reflective of sound practice;
- Are prepared to use current research, knowledge, and technology to empower the people they serve;
- Are sensitive and responsive to the unique needs of themselves, of others, and of the diverse society in which they practice;
- Are advocates for and models of quality education and lifelong learning.

The College faculty is committed to providing the human and technological resources necessary to enable students and themselves to develop as educational professionals in constructing knowledge, developing practice, and fostering relationships.

“Constructing knowledge” refers to the process by which individuals make meaning of professional information and develop personal theories about teaching, learning, and human development. Individuals construct knowledge through structured educational activities and life experiences.

“Developing practice” refers both to the process by which education professionals improve how they do their jobs as well as to the process of growing and becoming as reflective practitioners.

INTASC Standards

The Department of Teacher Preparation at PUC has adopted the standards created by the Interstate New Teacher Assessment and Support Consortium (INTASC) to assess our programs and ensure that students leave our program with the knowledge, attitudes, and skills to be successful educators. These Model Core Teaching Standards articulate what effective teaching and learning looks like in a transformed public education system — one that empowers every learner to take ownership of their learning, that emphasizes the learning of content and application of knowledge and skill to real world problems, that values the differences each learner brings to the learning experience, and that leverages rapidly changing learning environments by recognizing the possibilities they bring to maximize learning and engage learners.

A transformed public education system requires a new vision of teaching (INTASC, 2011, p. 3). Additionally, the INTASC standards are adopted and embraced by The Indiana Professional Standards Board. For each of the ten INTASC standards (see below), specific knowledge, dispositions and performances have been defined. Complete documentation of the standards can be found online at www.ccsso.org/Resources/Publications.html. In addition, the INTASC standards have been aligned with the College’s conceptual framework, “Constructing Knowledge, Developing Practice, Fostering Relationships.”

INTASC Standards

1. Learner Development: The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

2. Learning Differences: The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

3. Learning Environments: The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.

4. Content Knowledge: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.

5. Application of Content: The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

6. Assessment: The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher’s and learner’s decision making.

7. Planning for Instruction: The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

8. Instructional Strategies: The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

9. Professional Learning & Ethical Practice: The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

10. Leadership and Collaboration: The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

The Teacher Education programs include a general education component, a major in elementary education or teaching subject areas and electives. The professional education courses begin with exploratory activities in the freshman year and culminate with a full-time supervised teaching experience.

The Department of Teacher Preparation Office and Graduate Studies in Education office serve undergraduates and graduates during and after their attendance at Purdue Calumet, supervising admission of undergraduates to Teacher Education and arranging field experiences, including student teaching. It also facilitates the
process for students. The Literacy Resource Center in Gyte Annex, Room 127, and the Science Laboratory in Gyte, Room 237 all support the school’s programs. The Teacher Education Resource Center in the Purdue Calumet Library contains print and non-print materials used by faculty, graduate and undergraduate students.

**Undergraduate Studies in Education**

The College of Education offers a variety of undergraduate and licensure programs through its Department of Teacher Preparation Office located in the Gyte Annex, Room 138, (219) 989-2360.

The following is a list of undergraduate degrees and licensure programs at the undergraduate level. Please be advised that programs are subject to change. It is the student’s responsibility to work with the appropriate advisor to keep updated on any new requirements or changes.

- Bachelor of Arts, Elementary Education and Special Education (Gr. K-6);
- Licensing programs in the following secondary education areas: in biology, chemistry, English, French, mathematics, physical science, physics, Spanish and social studies teaching with intense areas in economics, government, historical perspectives, psychology, sociology.

*Note: The courses that are taken at Purdue University Calumet are created specifically to meet Indiana teacher education standards. For that reason, they are subject to change should licensing requirements change. To be licensed to teach in another state, you must contact the state Department of Education for their requirements. See their website for information.

**Introductory course work:**

**Gate 1:**

- EDPS 22000 Psychology of Learning;
- EDFA 20000 History and Philosophy of Education;
- EDPS 26000 Introduction to Special Education;

**Gate 2: Screening for Gate 2 Courses**

To be eligible to register for Gate 2 courses, candidates must meet the following requirements:

1. Have completed Introductory Course Work in Gate 1
2. Provide documentation of taking the CASA exam by providing scores. If a candidate has an SAT score of 1100 or ACT score of 24, either can be substituted for the Praxis I exam.
3. Have achieved a portfolio score of 1.5 as well as a dispositional audit portfolio score of 1.5, have earned a cumulative 2.5 GPA, and demonstrated acceptable dispositions

**Admission, Retention and Licensure Standards for all Teacher Education Programs**

**Gate 3: Admission to Teacher Preparation Program**

A candidate seeking teacher licensure through Purdue University Calumet, including student teaching, must be admitted to Methods courses by meeting the following minimum standards:

1. Be enrolled at Purdue University Calumet in good standing.
2. Have completed Introductory Coursework and be registered in Gate 2 courses: and be registered for remaining courses in the following sequence:
   - EDCI 35500 — Teaching and Learning in the K-12 Classroom
   - EDPS 45000 — Teaching Students with Disabilities
   - EDCI 31100 — Media for Children
   - EDCI 36600 — Use of Assessment in the K-12 Classroom
3. Minimum education GPA of 3.0 with no grade lower than a C in Education Courses
4. Minimum cumulative 2.5 GPA with no grade lower than a B in English composition courses.
5. For elementary majors, minimum grade of B and C in two of the required math courses. One of the courses must be MA 13700, and the other may be either MA 13800 or MA 13900. The remaining mathematics class must be completed with a C or better within a year of admission and prior to taking EDCI 31500. Students who earn grades of D, F, or W in MA 13700, must successfully complete MA 02100 before attempting MA 13700 a second time.

*Please note that the grade of C references a 2.0 GPA.*

6. 2.5 cumulative GPA with no Ds or Fs.
7. Licensure scores on all three sections of CASA; Passing Scores (written/electronic):
   - Reading (220/300), Math (220/300), Writing (220/300) or SAT 1100 or ACT 24 prior to registration in GATE 3 courses: EDCI 32100, EDPS 37000, EDCI 32500, EDCI 49000.
8. After completing first education course, have withdrawn from no more than four and repeated no more than two courses.
10. No more than two Education courses with a grade of C.

**Retention Standards for the Teacher Education Program**

Admission to methods courses does not insure retention in the program or approval for the professional semester. Each candidate’s progress will be reviewed by the advisor semester by semester. To be retained in the methods courses, the candidate must meet the following requirements:

1. Must be enrolled at Purdue University Calumet in good standing.
2. Maintained a minimum grade index of 3.0 with no grade lower than a C in Education courses.
3. Maintained a 2.5 cumulative GPA with no Ds or Fs.
4. Completed no more than two Education courses with a grade of C.
5. After completing first education course, have withdrawn from no more than four and repeated no more than two courses.
6. Demonstrated acceptable dispositions.

If a candidate is found to be in violation of any retention standard, the candidate will be placed on probation for the Teacher Education Program. The candidate will be notified by the academic advisor of this status and will not be allowed to proceed further in the Teacher Education Program until any deficiency is eliminated.

**Gate 4: Admission to the Professional Semester (Student Teaching)**

Candidates seeking admission to the Professional Semester must meet the following minimum standards:

1. Be enrolled at Purdue University Calumet in good standing.
2. Maintained a minimum education GPA of 3.0 with no grade lower than a C in Education courses.
3. Maintained appropriate GPA in secondary content.
4. Completed no more than two Education courses with a grade of C.
5. After completing first education course, have withdrawn from no more than four and repeated no more than two education courses.
6. Demonstrated acceptable dispositions.

If a candidate is found to be in violation of any retention standard, the candidate will be placed on probation for the Teacher Education Program. The candidate will be notified by the academic advisor of this status and will not be allowed to proceed further in the Teacher Education Program until any deficiency is eliminated.

**Appeal Process for Admission and Retention Standards**

A candidate may choose to appeal a denial to methods courses or the Professional Semester if they have special circumstances that they feel have prevented them from completing all the requirements for admission. All appeals for admission to methods courses and the Professional Semester must be sent to the department’s Faculty Appeals Committee. The Appeals Committee is made up of four faculty/staff from the Department of Teacher Preparation. Each member will serve on the committee for three academic years. The following steps must be taken in order to submit information to the Appeals Committee:

1. Complete a request form for the Appeals Committee. This form may be obtained from the Department of Teacher Preparation Office (Gyte Annex, Room 138).

2. Fill out an appeal form.
3. Provide evidence of any special circumstances.
4. Submit the appeal form and evidence to the Appeals Committee.

5. The Appeals Committee will review the appeal and make a decision.
6. The candidate will be notified of the decision.

For more information, please contact the Department of Teacher Preparation Office.
2. Submit the appeal to the Department of Teacher Preparation Office (Gyte Annex, Room 138) by February 15th for Spring semester appeals and September 15th for Fall semester appeals.
3. The Faculty Appeals Committee will meet as needed to consider appeal requests. The advisor will notify the candidate of the committee's decision or by the date indicated on the denial letter.

Licensure Standards
Gate 5: Licensure
Candidates will be recommended for a standard teaching license in Indiana and in other states where the recommendation is accepted when they have met the following standards:

1. Completed a program of Elementary or Secondary Education.
2. Earned a bachelor degree.
3. Maintained a minimum education GPA of 3.0 and no grade lower than a C in Education courses.
4. Achieved a 2.5 graduation index.
5. Achieved passing scores on the CORE Tests and any other tests as required by the Indiana Professional Standards Board or the Department of Teacher Preparation.

Note: Any education major re-entering the program who was not registered in a course for two or more years must meet the admission, retention, and licensure standards in effect at the time of re-entry. The Advisor, in consultation with the Faculty Appeals Committee, has the authority to make decisions in areas where the adopted standards of admission, retention, and licensure do not adequately address individual situations. The policy reflects the minimum requirements for the Department of Teacher Education.

Purdue University Calumet Title II HEA Report Card

Founded in 1946, Purdue University Calumet is a comprehensive regional university dedicated to serving the professional, cultural, and general educational needs of the citizens of Northwest Indiana. Its academic programs lead to certificates and associate, baccalaureate and master's degrees.

The goal of Purdue Calumet’s College of Education is to work with other university academic units and local schools to produce teachers who are able to teach a diverse student population utilizing a variety of research-based instructional methods that result in high quality student learning. Purdue Calumet’s mission is to produce teachers who excite, encourage and enable their students to be life-long learners.

Student Demographic Characteristics: 69% percent of Purdue Calumet undergraduate students are of traditional age (17-25-years-old), attending soon after completing high school. A significant number of students are the first in their families to pursue a college degree. 68% percent are enrolled as full time students. 85% percent are Indiana residents. 80% of Purdue Calumet teacher education program recent graduates are female. Minority students comprise 19% of 2009-2010 teacher education program completers (baccalaureate graduates) and 36% percent of the total undergraduate student body.

Type of Institution: At Purdue University Calumet, teacher education candidates are required to take and pass state-mandated tests at two points as they prepare for licensure.

1) Admission to Teacher Education. Candidates must have completed 30 semester hours of course work, maintained a minimum grade index of 3.0 in education courses and an overall grade index of 2.5 with no grade below a B in English composition courses, have submitted an acceptable professional portfolio, and passed a basic skills test in reading, writing and mathematics (CASA) at the state mandated level.

Program Completer: At Purdue University Calumet a program completer is a teacher candidate who has completed all requirements of an Indiana state approved teacher preparation program, except the passing of a mandated content test at the state-required level.

Teacher Preparation Programs: Purdue University Calumet offers six baccalaureate programs leading to state teacher licensure in: Elementary Education/Special Needs, Secondary Education in English, Foreign Language, Mathematics, Science, and Social Studies. Graduate level programs are offered in Special Education. In addition, elementary and secondary teacher candidates who hold a baccalaureate degree can pursue licensure at Purdue Calumet through an individually tailored program that meets all state requirements. As a part of the Northwest Indiana Consortium for Teacher Education, Purdue Calumet offers Transition to Teach programs in five secondary areas, including English, Mathematics, Foreign Language, Physical Science, and Life Science.

Accreditation: Purdue University Calumet is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The University’s College of Education programs (undergraduate and graduate) are accredited by the National Council for the Accreditation of Teacher Education, (NCATE). The undergraduate programs were granted continuing accreditation under NCATE 2000 Standards in March, 2002. Graduate programs, formally accredited with the College of Education at Purdue University, are now accredited at Purdue University Calumet.

Unique Program Characteristics: Purdue University Calumet's programs involve candidates in developmental field experience throughout their career at Purdue Calumet. These experiences are designed to build upon one another in small steps, so that skill and confidence in teaching develops, leading to success in student teaching. A portfolio developed by students helps focus their professional growth on the areas needed for success in their first teaching position.

Notable Features and Accomplishments: Purdue University Calumet has educated a large number of elementary, secondary and special education teachers who are practicing in northwest Indiana schools, as well as a significant number of principals and school counselors in those schools. In collaboration with the Purdue University College of Education at West Lafayette, Purdue Calumet also assists in the education of urban school superintendents.
## Table C1: Single-Assessment Institution-Level Pass-rate Data: Regular Teacher Preparation Program

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Assessment Code #</th>
<th># Taking Assessment</th>
<th># Passing Assessment</th>
<th>Institution Pass Rate</th>
<th>Statewide Pass Rate</th>
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<td><strong>Basic Skills</strong></td>
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<td>PPST Reading</td>
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<tr>
<td>Educ. Except. Students: Mild Moder. Disabil.</td>
<td>542</td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Performance Assessments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Table C2: Aggregate and Summary Institution-Level Pass-rate Data: Regular Teacher Preparation Program, 2011-2012

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th># Taking Assessment</th>
<th># Passing Assessment</th>
<th>Institution Pass Rate</th>
<th>Statewide Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate: Basic Skills*</td>
<td>65</td>
<td>60</td>
<td>92%</td>
<td>98%</td>
</tr>
<tr>
<td>Aggregate: Professional Knowledge*</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Aggregate: Academic Content Areas (math, English, biology etc.)*</td>
<td>48</td>
<td>28</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Aggregate: Other Content Areas (elementary education, career/technical education, health education, etc.)*</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Aggregate: Teaching Special Populations (special education, ESL...)*</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Performance Assessments*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary of Individual Assessments**</td>
<td>56</td>
<td>55</td>
<td>98%</td>
<td>98%</td>
</tr>
</tbody>
</table>

* Aggregate pass rate — Numerator: Number who passed all the tests they took in a category (and within their area of specialization). Denominator: Number of completers who took one or more test in a category (and within their area of specialization).

** Summary pass rate — Numerator: Number who passed all the tests they took within their area of specialization. Denominator: Number of completers who took one or more tests used by the state (and within their area of specialization).
Table C1a: Single-Assessment Institution-Level Pass-rate Data: Regular Teacher Preparation Program, 2011-2012

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Assessment Code #</th>
<th># Taking Assessment</th>
<th># Passing Assessment</th>
<th>Institution Pass Rate</th>
<th>Statewide Pass Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPST Reading</td>
<td>710</td>
<td>61</td>
<td>60</td>
<td>98%</td>
<td>100%</td>
</tr>
<tr>
<td>PPST Writing</td>
<td>720</td>
<td>57</td>
<td>57</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>PPST Mathematics</td>
<td>730</td>
<td>58</td>
<td>58</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Academic Content Areas (math, English, biology, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elem Ed Curr Instruc Assessment</td>
<td>011</td>
<td>37</td>
<td>37</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Eng Lang Lit Comp Content Knowledge</td>
<td>041</td>
<td>6</td>
<td>11</td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Mathematics: Content Knowledge</td>
<td>061</td>
<td>5</td>
<td></td>
<td>100%</td>
<td>99%</td>
</tr>
<tr>
<td>Social Studies: Content Knowledge</td>
<td>081</td>
<td>6</td>
<td></td>
<td></td>
<td>98%</td>
</tr>
<tr>
<td>Spanish Content Knowledge</td>
<td>191</td>
<td>1</td>
<td></td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Biology Content Knowledge</td>
<td>235</td>
<td>1</td>
<td></td>
<td></td>
<td>98%</td>
</tr>
<tr>
<td>Chemistry Content Knowledge</td>
<td>245</td>
<td>2</td>
<td></td>
<td></td>
<td>92%</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>300</td>
<td>37</td>
<td>37</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Elem Education Multi Math</td>
<td>5033</td>
<td>3</td>
<td></td>
<td></td>
<td>78%</td>
</tr>
<tr>
<td>Elem Ed Multi Subject Reading Lang Arts</td>
<td>5032</td>
<td>3</td>
<td></td>
<td></td>
<td>94%</td>
</tr>
<tr>
<td>Elem Ed Multi Subject Science</td>
<td>5035</td>
<td>3</td>
<td></td>
<td></td>
<td>82%</td>
</tr>
<tr>
<td>Elem Ed Multi Subject Social Studies</td>
<td>5034</td>
<td>3</td>
<td></td>
<td></td>
<td>89%</td>
</tr>
<tr>
<td>Government Political Science</td>
<td>0930</td>
<td>3</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>World &amp; US History</td>
<td>0941</td>
<td>3</td>
<td></td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td>Geography</td>
<td>0921</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>0950</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Psychology</td>
<td>0390</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>0265</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Arts, Elementary Education/Special Education (Grades K-6) (127 CREDIT MINIMUM)

1. Communication
   - ENGL 10400 English Composition I or ENGL 10000
   - OR
   - ENGL 10800 Advanced Freshman Composition
   - COM 11400 Fundamentals of Speech
   - ENGL 10500 English Composition II
   - Foreign Language 20100 (3 credits)

2. Humanities and Social Studies
   - POL 10100 American Government and Politics
   - HIST 15100 United States History to 1877
   - HIST 15200 United States History Since 1877
   - HIST 10400 Introduction to the Modern World
   - PHIL 10600 Human Experience in Art, Lit., Music, and Philosophy
   - A&D 20300 Art Activities Elementary Teachers
   - MUS 20300 Music for Elementary Teachers

3. Science and Math
   - MA 13700 Mathematics for Elementary Teachers I
   - MA 13800 Mathematics for Elementary Teachers II
   - MA 13900 Mathematics for Elementary Teachers III
   - CIS 20400 Intro to Computer Based Systems
   - SCI 11200 Introduction to Physical Science I
   - SCI 11300 Introduction to Physical Science II
   - SCI 11400 Introduction to Life Science I
   - SCI 31500 Environmental Science for Elementary Education

4. Education Requirements (Sequenced)
   **GATE1: Introductory course work**
   - EDFA 20000 History and Philosophy of Education
   - EDPS 22000 Psychology of Learning
   - EDPS 26000 Introduction to Special Education

   **GATE 2: Advanced Premethods**
   (Minimum scores on Praxis I or PPST required for registration or SAT score of 1100 or ACT score of 24 if seeking to waive Praxis exam)
   - EDCI 35500(ExL) Teaching and Learning in the K-12 Classroom
   - EDCI 31100 Media for Children
   - EDPS 450 Teaching Students with Disabilities
   - EDCI 36600 Use of Assessment in the K-12 Classroom

   **GATE 3: Methods Semester 1**
   - EDCI 32100 Literacy I: Grades K-2
   - EDCI 37000(ExL) Teaching Students with Diverse Learning Needs
   - EDCI 32300 Educational Technology for Teaching and Learning
   - EDCI 30001 Lifelong Health & Wellness for Teachers & Children
   *may be taken at any point during Gate 3

   **Method Semester 2**
   - EDCI 30400 Literacy and Middle Childhood
   - EDCI 31600 Teaching Social Studies in the Elementary School
   - EDPS 49100 Topics in Special Education

   **Methods Semester 3**
   - EDCI 31500 Teaching Mathematics in the Elementary School
   - EDCI 31700 Teaching of Science in the Elementary School Curriculum
   - EDPS 38000 Special Education Law

   **GATE 4: Professional Semester**
   - EDCI 49700(ExL) Supervised Teaching (K-6 classroom)
   - EDCI 49900 Student Teaching In Special Education

Courses designated as ExL meet the university requirement for experiential learning.
Bachelor Degree Programs at PUC offering Teacher Licensure

Departments include life science, chemistry, physical science, physics, English, Spanish, French, German, mathematics, and social studies (economics, government, history, psychology and sociology). All Secondary Teaching Programs are offered jointly with the academic departments. See the appropriate department for further information.

1. Education Requirements (Sequenced)
   - **GATE 1: Introductory coursework**
     - EDFA 20000 History and Philosophy of Education
     - EDPS 26000 Introduction to Special Education
     - EDPS 22000 Psychology of Learning
   - **GATE 2: Advanced Premethods**
     (Licensure scores on CASA required for registration)
     - EDCI 35500 (ExL) Teaching and Learning in the K-12 Classroom
     - EDCI 36600 Use of Assessment in the K-12 Classroom
   - **GATE 3: Methods**
     - EDPS 37000 (ExL) Teaching Students w/Diverse Learning Needs in the K-12 Classroom
     - EDCI 34X00 Strategies of Instruction in the content major (Methods course)
     - EDCI 30900 Teaching Reading in Middle/Secondary Schools
   - **GATE 4: Professional Semester**
     - EDCI 49700 (ExL) Supervised Teaching of Middle School/Jr High/High School Subjects

2. Appropriate general education courses and content area courses and GPA for degree and licensure.
3. Appropriate electives, fulfilling degree requirements.

Alternative Licensure Routes (Teacher Licensure Only)

The Department of Teacher Preparation offers three options for students seeking to become teachers who have undergraduate degrees:

**Transition to Teach Program**

Students who are interested in the Transition to Teach program must meet the following requirements:
1. Have a degree in biology, mathematics, chemistry, English, physics, Spanish, or French.
2. Minimum undergraduate cumulative 3.0 GPA
3. Minimum 3.0/4.0 GPA in the subject area in which licensure is desired
4. Minimum undergraduate cumulative GPA of 2.5/4.0 with 5 years of work experience in the education field.
5. Must take and pass the CORE exam with a score of 220 or higher in reading, 220 in writing and 220 in math.
6. Must take and pass the CORE exam in the desired subject area

**Licensure-Only Option**

Students who are interested in becoming a teacher who have an undergraduate degree in majors other than biology, mathematics, chemistry, English, physics, Spanish, or French or do not meet the requirements for Transition to Teach may enroll in the Licensure Only Option. The requirements are:
1. Minimum undergraduate 2.5/4.0 cumulative GPA
2. Must take and pass the CORE exam with a score of 220 or higher in reading, 220 in writing and 220 in math.
3. Minimum required GPA in the desired subject area:
   - foreign Language and English minimum 3.0/4.0 GPA
   - biology, chemistry and physics minimum 2.75/4.0 GPA
   - mathematics minimum 2.5/4.0 GPA
The College of Education offers a variety of Master’s degrees areas of concentration and license programs through its Graduate Studies in Education office located in the Gyte Annex, Room 122 (219) 989-2326. The GSE secretary is responsible for all paperwork regarding admissions to, and retention in, graduate programs. The Head of the Department of Graduate Studies in Education is responsible for supervision of all graduate programs. For admission to, and successful completion of, any of our graduate programs, the student must fulfill the following requirements:

A. Admission to a GSE Program
   Step 1. It is very important that the student contact the advisor of a GSE program in which the student might be interested. Because of federal and state requirements, each of our programs has its own special requirements, procedures, and standards so it is important to speak directly with the advisor who will best know these requirements, procedures, and standards. The advisor will coach the student on the proper steps to take for admission into that specific major.
   Step 2. Based on the advice given by the advisor, the student must follow two steps to apply for admission. First, the student must fill out the online application requesting admission to the program of choice. Advice on completing this application may be sought from the GSE secretary in Gyte Annex, Room 122. Second, the student must check with the GSE secretary for any additional required forms or activities that need to be completed for admission to the desired program. Any such forms or activities must be completed and returned to the GSE secretary before admission may occur. When all forms and requested information are submitted, the GSE secretary will continue the admissions procedure by forwarding the student’s admissions folder to the appropriate advisor.
   Step 3. The advisor of the student’s desired program will review the admissions materials, will notify the student of any additional procedures, and will bring the folder before the GSE Admissions Committee for action and, if the action is positive, will notify the student of any additional procedures, will bring the folder to the Head for processing. The student will receive a letter in a few weeks from the Graduate School in West Lafayette informing the student of admission into the program.
   Step 4. The student will again meet with the advisor and begin taking the required coursework.

B. Completion of a GSE Program
   Step 1. Completion of a GSE program will require successfully completing course work as well as fulfilling specific requirements unique to each program. It is, therefore, necessary for the student to make certain to meet with the program advisor and discover ANY AND ALL additional program requirements for graduation.
   All of our degree and license programs are standards-driven, so the student must prove the attainment of all standards in whatever form the individual program or license requires. A portfolio, for example, will be one form of proving standards attainment, but the details of the portfolio will differ with each program or licensing area. Some license programs may require a state exam as well. Therefore, the student must make certain throughout his or her program to complete all graduation requirements as they are assigned. This must be done before the advisor will present him or her for graduation or for license completion.
   Step 2. In order to graduate, the student must have a written, formalized plan of study (POS). This POS is a contract between the student and the student’s advisor listing the specific courses a student is to complete. It is the student’s responsibility to contact his/her advisor for the completion of a POS. The earliest that a POS may be written is as soon as the student has been admitted into the desired program and as soon as any conditions on such admission have been fulfilled. The latest a POS may be written is the semester before that in which the student expects to graduate.

The following is a list of our Master’s degrees areas of concentration and licensing programs.

**Master of Science in Education (Special Education Concentration)**

(30 credit hours)

In addition to the following coursework, a professional portfolio is required.

**Foundations (3 hours)**
- EDPS 59100 Integrating Students with Special Needs

**Special Education Core (21 hours)**

Select six of the following courses:
- EDPS 56300 Identification, Evaluation, and assessment of Individuals with Exceptionalities
- EDPS 56500 Intervention Strategies and Research
- EDPS 59100 Applied Behavior Analysis for Teachers
- EDPS 66400 Seminar in Special Education: Collaboration
- EDPS 66400-01 Special Education Law
- EDPS 5900 Autism Spectrum Disorders
- EDPS 5600 Internship

**Related (6 hours)**

Select two of the following courses:
- EDCI 51100 Mathematics in the Elementary School
- EDCI 59100 with title Literacy Problems: Evaluation and Remediation
- EDCI 59100 with title Human Issues In Technology

**License in Exceptional Needs: Intense Intervention**

(21 HOURS)

This is a cohort program, which begins each Spring semester, beginning in January. This is not a ‘stand-alone’ license. Candidates must first hold a valid teaching license. In addition, candidates for this program must (1) first be licensed in Mild Interventions K-12 or complete a specific four-course alternative (Integrating Students with Special Needs; Identification, Evaluation, and Assessment of Individuals with Exceptionalities; Applied Behavior Analysis for Teachers; and Seminar in Special Education: Collaboration). Supported by a US Department of Education grant, the program is tuition-free for qualifying candidates. Send a letter of interest and resume (as a single e-mail attachment) to Dr. Rita Brusca-Vega, Project Director (vega@purduecal.edu).

- EDPS 59000 with title Individuals with Severe Disabilities: Historical Perspectives, Etiology, and Characteristics
- EDPS 59000 with title Intervention Strategies and Research for Teaching Individuals with Severe Disabilities I
- EDPS 59000 with title Intervention Strategies and Research for Teaching Individuals with Severe Disabilities II
- EDPS 59000 with title Seminar in Special Education: Diversity, Families and Disability
- EDPS 59000 with title Seminar in Special Education: Serving Students with Autism Spectrum Disorder
- EDPS 59100 Internship I: Intense Intervention
- EDPS 59100 Advanced Technological Applications in Special Education
**Director of Exceptional Needs License Program (Special Education Director’s License)**

(40 Semester Hours)

1. **Special Education/Foundations Block (12 hrs)**
   - EDCI 58500 Multicultural Education
   - EDPS 53000 Advanced Educational Psychology
   - EDPS 53300 Introduction to Educational Research I: Methods
   - EDPS 66400 Sem: Special Education Law
   - EDFA 60800 Business Management in Education

2. **Administration Block (28 hours):**
   (Must be taken in sequence)
   - EDFA 51200 Foundations of Educational Administration
   - EDFA 60900 Legal Aspects of American Education
   - EDFA 61000 Supervision of Instruction and Instructional Personnel
   - EDFA 51600 School and Community Relations
   - EDFA 59100 Legal Aspects II
   - EDIC 59100 School Curriculum
   - EDFA 59100 School Administration
   - EDFA 69500 with title Internship In Special Education
   - EDFA 69500 with title Internship In Administration (4-Hour Course)

   **Note:** This program is intended for those who already have a master's degree and are seeking licensure. It is also intended for those who already have special education licensure, experience and background. The intent is to couple the Exceptional Needs Director’s License with the Building Level Administrator’s License whenever possible. However, a master’s degree can be worked into the program for those who do not yet have one. Also, additional special education course work may be built into the program for those who need it. The first step is to contact Dr. Pam Frampton the administration advisor: frampton@purduecal.edu

**Indiana State License Program, School Counseling**

(51 HOURS)

**Required Courses**
- EDPS 50000 Human Relations in Group Counseling
- EDPS 50100 Intro to School Counseling
- EDPS 50500 Career Theory
- EDPS 50700 Counseling Multicultural and Diverse Populations
- EDPS 53100 Intro. Measurement and Evaluation
- EDPS 59100 with title Research in Counseling
- EDPS 59100 with title Human Growth & Life Span Development
- EDPS 60000 Counseling Theories and Techniques
- EDPS 60100 Counseling Techniques Lab
- EDPS 60900 Program Development/Ethics/Consultation
- EDPS 61000 Counseling Practicum
- EDPS 59100 with title Counseling Children and Adolescents
- EDPS 62000 with title Seminar: Addictions
- EDPS 62000 with title Counseling Seminar (Electives): Diverse Topics (2 electives, 6 credit hrs)
- EDPS 69500 Internship in Education (600 hours; 6 credit hrs)

**Master of Science in Education (Human Services Concentration)**

(non-licensure program) (33 HOURS)

- EDPS 50000 Human Relations in Group Counseling
- EDPS 50300 Intro to Mental Health Counseling
- EDPS 50700 Counseling Multicultural and Diverse Populations
- EDPS 59100 with title Ethics in Mental Health Counseling
- EDPS 59100 with title Research in Counseling
- EDPS 59100 with title Counseling and Psychopathology
- EDPS 62000 Counseling Seminar (Electives): Diverse Topics (4 electives, 12 credit hrs)
- EDPS 69500 Internship in Education (300 hours; 3 credit hours)
- EDPS 695 Internship in Education (300 hours; 3 credit hours)

**Certificate in Addiction Counseling**

(18 CREDITS)

Only candidates accepted into the certification program or any program within the Department of Counseling & Development may enroll in these courses. Enrollment is strictly limited to these programs.

**Note:** Completed course work will be listed on a transcript; however, this is an informal program. Completion of this group of courses does not award a degree or formal certificate. However, this program of study does include all of the necessary coursework, as identified by ICADA, to sit for the state licensure exam to become a licensed addictions counselor. This is an ICADA approved program and are approved by the state HEA.

The following courses must be completed with a grade of B or better. A grade of C...
in any course will be grounds for dismissal from the certification program in addiction counseling. Courses need NOT be taken sequentially. A limited criminal history check must be submitted by each student before his/her first class.

EDPS 59100 with title Theories of Addiction Counseling and Psychopharmacology
EDPS 59100 with title Seminar I: Diversity, HIV/AIDS, and Dual Diagnosis
EDPS 59100 with title Seminar II: Ethics, Criminal Justice, and Social Systems
EDPS 59100 with title Recovery and Relapse
EDPS 59100 with title Techniques of Addiction Counseling: Counseling Skills, Groups and Processes (screening, referrals, and treatment planning)
EDPS 59100 with title Practicum

Certificate in Expressive Arts Therapy
(15 Credit Hours)
This certificate is only open to graduate students in counseling and to counselors and social workers for the purpose of professional development.

Note: Completed course work will be listed on a transcript; however, this is an informal program. Completion of this group of courses does not award a degree or formal certificate.

The courses are all EDPS 59100 courses and include the following:
- Foundations of Expressive Arts Therapy
- Play Therapy
- Visual Arts/Imagery in Counseling
- Expressive Writing, Drama, and Movement
- Sandplay and Symbolism

Master of Science in Education
(Instructional Technology Concentration)
(33 CREDITS)

Entrance gate (6 hours—must be completed before technology courses may be taken)
EDPS 53000 Advanced Educational Psychology
EDCI 57200 Introduction to Learning Systems Design

Technology Courses (15 hours—suggested sequence)
EDCI 55400 Production of Instructional Materials
EDCI 56600 Educational Applications of Hypermedia
EDCI 57500 Foundations of Distance Learning
EDCI 66300 Interactive Video and Multimedia
EDCI 59100 with title Instructional Technology Leadership

Foundation Courses (6 hours—can be completed at any time)
EDPS 53300 Introduction to Educational Research
OR
EDPS 53100 Introduction to Measurement and Evaluation
AND
EDPS 59100 with title Human Issues in Technology

Elective (3 hours)
Any graduate level course approved by your advisor and listed in your plan of study

Capstone Project (3 hours—must be completed at end of program)
EDCI 57300 Instructional Development Practicum

Master of Science in Education
(Instructional Technology Concentration)
(33 CREDITS)

Entrance gate (6 hours)
EDCI 57200 Introduction to Learning Systems Design
EDCI 53100 Learning Theory and Instructional Design (see advisor)

Technology Courses (15 hours—suggested sequence)
EDCI 59100X Foundations of Grant Writing
EDCI 56600 Educational Applications of Hypermedia OR
EDCI 66900 Introduction to E-Learning

EDCI 57700 Strategic Assessment and Evaluation OR
EDPS 53100 Introduction to Measurement and Evaluation (see advisor for appropriate section)

EDCI 57100 Advanced Assistive Technology OR
EDCI 59100 Human Issues in Technology

Foundation Courses (6 hours—can be completed at any time)
EDPS 55400 Production of Instructional Materials
EDCI 66300 Interactive Video
EDCI 59100 with title Instructional Technology Leadership

Choose ONE of the following:
EDCI 55400 Production of Instructional Materials
EDCI 66300 Interactive Video
EDCI 59100 with title Instructional Technology Leadership

Additional Coursework Available for License Renewal through the Instructional Technology program
Purdue University Calumet wants to help teachers, administrators, and other licensed educators reach their goals, learn more, and get the credits they need to renew their licenses through in-class and online coursework. Purdue Calumet allows educators currently holding a valid Indiana Teacher's License (Those holding emergency permits cannot renew using these courses) to acquire needed academic credits in several different ways:
- Develop and teach a 15-hour, project-based workshop or instructional session for other teachers or administrator at your own school district (Pass/No Pass Option);
- Take a one credit-hour, online or person-to-person learning module on a technology topic approved by Graduate Studies faculty;
- Take a three credit-hour, semester long course in Instructional Technology and Design (or other areas) online or in the traditional classroom with qualified, friendly, and helpful Graduate Studies faculty. 3 credit hour classes offered: EDCI 56000 Computers in the Classroom, EDCI 59100 Designing Instruction for the Web (online), EDCI 59100 Instructional Design for Online Education. Please contact Helen Jancich, (Jancich@purduecal.edu) for information regarding license renewal.

EDCI 57500 Foundations of Distance Learning
EDCI 66300 Interactive Video and Multimedia
EDCI 58700 Leadership & Management in Instructional Technology OR
EDCI 59100 Instructional Technology Leadership
EDCI 67200 Advanced Practices in Learning Systems Design

Foundation Courses (6 hours—can be completed at any time)
EDCI 57700 Strategic Assessment and Evaluation OR
EDPS 53100 Introduction to Measurement and Evaluation (see advisor for appropriate section)

EDCI 57100 Advanced Assistive Technology OR
EDCI 59100 Human Issues in Technology

Capstone Project (3 hours—must be completed at end of program)
EDCI 57300 Instructional Development Practicum

Certification in Instructional Technology
The Instructional Technology Program is now offering a new certificate program in Instructional Technology for K-12 teachers, based in the ISTE standards adopted by the State of Indiana. Trainers and other instructional leaders in business, health, and higher education are also welcome to participate in this certificate program as well.

Note: Completed course work will be listed on a transcript; however, this is an informal program. Completion of this group of courses does not award a degree or formal certificate.

Visit the Web or contact us today to learn more about this certification opportunity!
Indiana State License Program, Educational Administration

(37 CREDITS)

1. Foundations Block (6 hours)
   EDPS 53000 Advanced Educational Psychology
   EDPS 53300 Introduction to Educational Research

2. Administration (28 hours)
   (Must be taken in sequence)
   EDFA 51200 Foundations Educational Administration
   EDFA 60900 Legal Aspects of American Education
   EDFA 61000 Supervision of Instruction and Instructional Personnel
   EDFA 51600 School Community Relations
   EDFA 59100 Legal Aspects II
   EDCI 59100 School Curriculum
   EDPS 66400 Seminar in Special Education (Special Education Law)
   EDFA 59100 School Administration
   EDFA 69500 Internship in Education (is a 4 hour course)

3. Electives (3 hours) Below are some suggestions
   (Must be in Administration, there is at least one each semester)
   EDFA 61300 Collective Bargaining
   EDFA 51300 Educational Facilities Planning
   EDFA 59100 School Safety
   EDFA 59100 Data-Driven School Improvement
   EDFA 60800 Business Management in Education

Revised: 06-07
• COLLEGE OF •

ENGINEERING, MATHEMATICS AND SCIENCE
The College of Engineering, Mathematics and Science (EMS) houses the following departments:

- Biological Sciences; 219/989-2404, Gyte Bldg., Room 298
- Chemistry and Physics; 219/989-2284, Gyte Bldg., Room 251
- Electrical and Computer Engineering; 219/989-3106, Potter Bldg., Room 121
- Mechanical Engineering; 219/989-2472, Powers Bldg., Room 211
- Mathematics, Computer Science and Statistics; 219/989-2273, Classroom Office Bldg., Rooms 343

**Associate Degree Program**

- Biological Sciences
  - Applied Sciences in Emergency Medical Services/Paramedic

**Bachelor’s Degree Programs**

Twelve (12) Bachelor of Science degrees are offered through the departments housed in the College of Engineering, Mathematics and Science. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

**Biological Sciences**

- **BS in Biology**
  - Concentrations in Biology:
    - General Biology
    - Biotechnology
    - Cell Biology/Physiology
    - Ecology
    - Microbiology
- **BS in Medical Technology**

**Chemistry and Physics**

- **BS in Chemistry**
- **BS in Physics**
  - Concentrations in Physics:
    - Computational Physics
    - Engineering Physics
- **BS in Physical Sciences**
  - Minors:
    - Chemistry
    - Physics
    - Astrophysics

**Mathematics, Computer Science, and Statistics**

- **BS in Mathematics**
- **BS in Interdisciplinary Engineering**

**Engineering**

- **BS in Mechanical Engineering**
  - Concentration in:
    - Mechatronics
- **BS in Electrical Engineering**
  - Concentrations in:
    - Mechatronics
    - Power and Energy System
    - Bioinstrumentation
- **Minor:**
  - Electrical and Computer Engineering

**Pre-Medical and Healthcare Gateway**

Preparation for admission to medical or other healthcare professional schools does not require specific majors. The necessary prerequisite courses, which vary for each profession, are available and are accommodated by many of the majors and concentrations within the College of Engineering, Mathematics, and Science. Advising plans allow students to prepare for careers in:

- Medicine
- Dentistry
- Veterinary science and medicine
- Optometry
- Podiatry
- Physician assistant
- Physical therapy
- Pharmacy
- Occupational therapy

**Teacher Preparation**

Teaching middle or high school math or sciences requires specialized courses and training. The College of Engineering, Mathematics, and Science partners with the College of Education to offer programs of course work designed to prepare you for a secondary education teaching license in Physical Sciences, Biology, Chemistry, Physics, or Mathematics. Students complete the BS in their science or math major. Education courses required for licensure are used to fulfill electives outside of the major discipline.
Undergraduate Certificate
- Coatings technology

Graduate Certificate
- Biotechnology
- Engineering project management

Combined Bachelor’s and Master’s Degree Program
- Biology

Master’s Degree Programs
- Biology
- Computer Science
- Engineering
- Mathematics

Transfer Programs
- Biological Sciences
- Agriculture and Preforestry

Career Opportunities
Graduates of Purdue Calumet’s College of Engineering, Mathematics and Science work in a wide variety of businesses, industries, service organizations, government, or educational careers. Many choose to pursue graduate and professional degrees, including masters and doctoral programs, and those associated with the healthcare industry. Our graduates are successful engineers, research scientists, environmental care professionals, actuaries, cryptographers, chemists, physicists, science and mathematics teachers, and more.
Department of Biological Sciences

W.-T. Evert Ting, Interim Head. Faculty: Y. D. Choi; J. C. Creighton; N. Evans; B. Mania-Farnell; R. Rohm; R. Sarac; F.-S. Wang; M. I. Zimmer
Emeritus Faculty: A. M. Chelich; T. J. Dougherty; R. L. Peloquin; J. R. Shoup; C. C. Tseng; J. F. Wermuth; R. J. Werth; K. S. Wilson
Lab Coordinator: L. Levin

Biology is a fascinating field that holds important keys to the future of our society. New biological research in areas such as gene therapy, stem cells, energy production from biomass, and environmental remediation is changing the way we live our lives.

The Department of Biological Sciences at Purdue University Calumet offers a comprehensive education that provides students with both a solid background in the biological sciences and the flexibility to meet individual needs. At the undergraduate level, we offer Bachelor of Science (BS) degrees in Biology, and in Medical Technology and an Associate of Applied Science Degree in Emergency Medical Services/Paramedic. For our BS in Biology, students may choose one of five areas of concentration (General Biology, Biotechnology, Cell Biology/Physiology, Ecology, and Microbiology) or eight four-year pre-professional programs (Biological Sciences Teaching, Premedicine, Prephysical Assistant, Predentistry, Preoptometry, Prephysical Therapy, Preoccupational Therapy, and Preveterinary Science and Medicine.). In addition, we offer a two-year pre-pharmacy program and a two-year transfer program in cooperation with the School of Agriculture at Purdue University West Lafayette. At the graduate level, we offer a Master of Science (MS) degree in Biology for which students can choose either thesis or non-thesis options. Our graduate degrees can be used to further professional development, to prepare for additional graduate studies in the life sciences, or as a bridge to professional studies in health sciences.

Our department emphasizes an integrated approach to teaching modern biology, in that faculty research is integrated directly into student coursework. We have an active and creative faculty who bring new insights and innovative concepts to the classroom through their research. Areas of strength in the department include molecular biology with emphasis in genetic engineering and biotechnology, cell biology, microbiology, physiology, and ecology. Students utilize cutting-edge laboratory facilities and equipment to acquire hands-on experience with modern investigational and laboratory techniques in biological sciences. Supervised research opportunities are available for both undergraduate and graduate students. Graduate teaching and research assistantships are available to support students pursuing an MS degree.

Degrees and Programs

Two (2) Bachelor of Science degrees are offered through the department. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

Undergraduate

■ Associate of Applied Science Degree, Emergency Medical Service/Paramedic
■ Bachelor of Science Degree, Biology

Optional areas of concentration:
— General Biology
— Biotechnology
— Cell Biology/Physiology
— Ecology
— Microbiology
■ Bachelor of Science Degree, Medical Technology
■ Pre-Pharmacy Program
■ Transfer Program in Agriculture and Forestry
■ Minor in Biology
■ Minor in Biotechnology
■ Minor in Environmental Sciences
■ Premedical and healthcare professional preparation

The necessary prerequisite courses required for admission to medical and healthcare professional schools are accommodated by undergraduate degrees within Biological Sciences. Specific recommendations are made based on the discipline (medicine, dentistry, veterinary, optometry, podiatry, physician assistant, physical therapy, pharmacy, and occupational therapy). For more details, students are encouraged to visit our website at webs.purduecal.edu/ems/pre-health-recruiting/ or contact a preprofessional advisor.

Graduate

■ Master of Sciences, Biology
■ Graduate Biotechnology Certificate
Associate of Applied Science, Emergency Medical Services/Paramedic (60 CREDITS)

This associate degree program prepares students for careers in paramedicine. The program has two components and requires at least 3 years for completion. The academic phase of the program occurs on the Purdue University Calumet campus and includes course work in the basic sciences and general studies. The clinical professional phase of the program is offered at an affiliated hospital (St. Anthony Medical Center, Crown Point, St. Mary’s Medical Center, Hobart or Methodist Hospitals, Inc., Gary, Indiana) approved to offer the paramedic curriculum. 

Note: Emergency Medical Technician (EMT) training and certification must be completed prior to applying for the clinical phase.

Preclinical Phase (32 CREDITS AT PURDUE UNIVERSITY CALUMET)

First Semester (16 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 21300</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>CHM 11900</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>ENGL 10400</td>
<td>English Composition I</td>
</tr>
<tr>
<td>MA 14700*</td>
<td>Algebra and Trigonometry for Technology I</td>
</tr>
<tr>
<td>PSY 12000</td>
<td>Elementary Psychology</td>
</tr>
</tbody>
</table>

*Note: Students with strong backgrounds in Math and/or Chemistry may substitute a higher level course for MA 14700 and/or CHM 11900.

Second Semester (16 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 21400</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>ENGL 10500</td>
<td>English Composition II</td>
</tr>
<tr>
<td>COM 11400</td>
<td>Fundamentals of Speech Communication</td>
</tr>
<tr>
<td>PSY Electives*</td>
<td>(3 credits)</td>
</tr>
<tr>
<td>Elective</td>
<td>(3 credits)</td>
</tr>
</tbody>
</table>

*The following courses are recommended: PSY 35500, PSY 36100, PSY 42800, PSY 43300, PSY 53200, PSY 55300.

Clinical Phase (28 CREDITS)

Successful completion of an 10- to 18-month clinical portion includes lectures, conferences, a technical preceptorship, and field experience at an affiliated hospital of emergency medical services/paramedics. 

Note: Students must register for “Candidate Only” status at Purdue Calumet at the beginning of the semester in which they expect to complete their degree.

Bachelor of Science – Biology (120 CREDITS)

The Department of Biological Sciences at Purdue University Calumet offers five different study plans that lead to the Bachelor of Science Degree in Biology. Students can choose General Biology, which allows students to select a wide variety of biology elective courses that match the individual’s interests and education goals, or select one of the four areas of concentration (Biotechnology, Cell Biology/Physiology, Ecology, and Microbiology) to study the field in depth. Students in professional programs may follow any of the five study plans and incorporate required courses for meeting admission requirements for professional schools or obtaining teaching licensure.

General Requirements for BS in Biology Degree:

English and Communication (9 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 10400*</td>
<td>English Composition I (Gen Ed)</td>
</tr>
<tr>
<td>ENGL 10500*</td>
<td>English Composition II (Gen Ed) (ExL)</td>
</tr>
<tr>
<td>COM 11400</td>
<td>Fundamentals of Speech Communication (Gen Ed)</td>
</tr>
</tbody>
</table>

*Students placed in ENGL 10000 English Composition may use ENGL 10000 (3 credits) with a B or better grade to replace ENGL 10400.

*Students placed in ENGL 10000 Accelerated First-Year Composition (3 credits) may use ENGL 10800 and an intensive writing elective (3 credits) to replace the ENGL 10400 & 10500 sequence.

Humanities & Social Science (15 credits)

- One Humanities course that meets the General Education requirement (3 credits)
- One Social Sciences course that meets the General Education requirement (3 credits)
- The remaining 9 credits can be from Foreign Languages (0-6 credits) or any Humanities or Social Science courses (consult advisor for course selection).

Mathematics, Statistics & Computer Science (12 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 16031</td>
<td>Calculus I for Life Science</td>
</tr>
<tr>
<td>MA 16032</td>
<td>Calculus II for Life Science</td>
</tr>
<tr>
<td>STAT 33001</td>
<td>Biostatistics*</td>
</tr>
<tr>
<td>CIS 20400</td>
<td>Introduction to Computer-Based System (Gen Ed)</td>
</tr>
</tbody>
</table>

*May be replaced by STAT 30100 Elementary Statistical Methods

Chemistry (19 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 11500</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>CHM 11600</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHM 25500/25501</td>
<td>Organic Chemistry I &amp; Laboratory</td>
</tr>
<tr>
<td>CHM 25600/25601</td>
<td>Organic Chemistry II &amp; Laboratory</td>
</tr>
<tr>
<td>CHM 33300*</td>
<td>Principles of Biochemistry*</td>
</tr>
</tbody>
</table>

*Students who choose the Ecology concentration may use CHM 32400 Environmental Chemistry in place of CHM 33300

Biology (Min. 38 credits)

Minimum 2.0 GPA for all biology core and concentration required courses. Minimum 2.0 GPA for all biology courses required for the degree.

1. Biology Core Courses (18 Credits) (Required by all biology concentrations)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 10100*</td>
<td>Introductory Biology I (Gen Ed)</td>
</tr>
<tr>
<td>BIOL 10200*</td>
<td>Introductory Biology II (Gen Ed)</td>
</tr>
<tr>
<td>BIOL 10700</td>
<td>Freshman Experience in Biological Sciences (Gen Ed)</td>
</tr>
<tr>
<td>BIOL 24300</td>
<td>Introductory Cell Biology</td>
</tr>
<tr>
<td>BIOL 24400</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 42600</td>
<td>Senior Capstone</td>
</tr>
</tbody>
</table>

*BIOL 10100/10200 require a C or better grade to qualify for graduation.

2. Concentration Required Courses (7-8 Credits)

A. General Biology Concentration (choose 2; 8 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>BIOL 33300</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIOL 35700*</td>
<td>Animal Physiology</td>
</tr>
</tbody>
</table>

B. Biotechnology Concentration (7 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>BIOL 50800</td>
<td>Recombinant DNA Techniques</td>
</tr>
</tbody>
</table>

C. Cell Biology/Physiology Concentration (8 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 35700*</td>
<td>Animal Physiology</td>
</tr>
</tbody>
</table>

And choose one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>BIOL 35700*</td>
<td>Animal Physiology</td>
</tr>
</tbody>
</table>

D. Ecology Concentration (8 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 33300</td>
<td>Ecology</td>
</tr>
</tbody>
</table>

And choose one from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>BIOL 35700*</td>
<td>Animal Physiology</td>
</tr>
</tbody>
</table>
Microbiology Concentration (8 credits)
BIOL 31600  Basic Microbiology
And choose one from the following:
BIOL 33300  Ecology
BIOL 35700*  Animal Physiology
*BIOL 35700 Animal Physiology may be replaced by BIOL 21400 Human Anatomy & Physiology II. (BIOL 21300 Human Anatomy & Physiology I, a prerequisite of BIOL 21400, is counted as a free elective course.)

3. Biology Elective Courses (Min. 12-14 credits)
Maximum 3 credits of independent studies, research, internship, or practicum may be used to fulfill the biology elective requirement.
A. General Biology Concentration (Min. 12 credits)
Additional 12 credits of biology elective courses at the 30000 level or above, excluding BIOL 33000 and BIOL 33900.

B. Biotechnology Concentration (Min. 14 credits)
BIOL 35700  Animal Physiology
BIOL 41800  Drugs and Diseases
BIOL 48800  Biological Sciences Internship (E X L)
BIOL 48900  Independent Student Research (E X L)
BIOL 50700  Molecular Biology
BIOL 52500  Principles of Neurobiology
BIOL 53300/53400  Medical Microbiology and Laboratory
BIOL 56100  Immunology
BIOL 56600  Developmental Biology
BIOL 49500 or 59500*  Special Assignments (related to Biotechnology)
*Repeatable for credits. Topics may include but not limited to Advanced Cell Biology, Advanced Immunology, Bioinformatics, Cell and Tissue Culture, Environmental Microbiology, Epigenetics, Ethical Frontiers, Food Microbiology, Virology, and Research related to Biotechnology.

C. Cell Biology/Physiology Concentration (Min. 12 credits)
BIOL 30700  Plant Physiology
BIOL 34200  Biological Sciences Practicum (E X L)
BIOL 41800  Drugs and Diseases
BIOL 48800  Biological Sciences Internship (E X L)
BIOL 48900  Independent Student Research (E X L)
BIOL 50700  Molecular Biology
BIOL 52500  Principles of Neurobiology
BIOL 56100  Immunology
BIOL 56600  Developmental Biology
BIOL 49500 or 59500*  Special Assignments (related to Cell Biology or Physiology)
*Repeatable for credits. Topics may include but not limited to Advanced Cell Biology, Advanced Immunology, Bioinformatics, Cell and Tissue Culture, and Research related to Cell Biology or Physiology.

D. Ecology Concentration (Min. 12 credits)
Choose min. 9 credits from the following list of Ecology elective courses. The remaining 3 credits can be any 30000 level of biology courses except BIOL 33000 or BIOL 33900.
BIOL 30700  Plant Physiology
BIOL 34200  Biological Science Practicum (E X L)
BIOL 40500  Conservation Biology
BIOL 41200  Climate Change and the Environment
BIOL 41300  Aquatic Ecology
BIOL 41400  Invasive Species Ecology
BIOL 48800  Biological Sciences Internship (E X L)
BIOL 48900  Independent Student Research (E X L)
BIOL 58000  Evolution
BIOL 58700  Biogeography
BIOL 58800  Plant Ecology
BIOL 59100  Field Ecology
BIOL 49500 or 59500*  Special Assignments (related to Ecology)
*Repeatable for credits. Topics may include but not limited to Animal Behavior, Environmental Microbiology, Wetland Ecology, Ornithology, and Research related to Ecology.

E. Microbiology Concentration (Min. 12 credits)
Choose minimum 6 credits from Group A and the rest can be from Group A or B
Group A
BIOL 53300/53400  Medical Microbiology & Laboratory
BIOL 56100  Immunology
BIOL 49500 or 59500*  Special Assignments (related to Microbiology)
*Repeatable for credits. Choose among the following topics: Environmental Microbiology, Food Microbiology, and Virology.

Group B
BIOL 48800  Biological Sciences Internship (E X L)
BIOL 48900  Independent Student Research (E X L)
BIOL 50700  Molecular Biology
BIOL 50800  Recombinant DNA
BIOL 49500 or 59500*  Special Assignment (Microbiology or supporting areas)
*Repeatable for credits. Choose among the following topics: Advanced Immunology, Bioinformatics, Cell and Tissue Culture, Experimental Design, and Microbiology Research

Free Electives (18-19 credits)

Life Sciences Teaching
Students who are seeking to obtain licensure for teaching life sciences in middle/junior high/senior high school settings while pursuing a BS in Biology degree should take 36 credits of education courses in sequence to fulfill education requirements. (See Secondary Teaching in Science and Math Programs on page 93.) Some of these courses may be used to fulfill the Humanities and Social Sciences, Experiential Learning, and free elective requirements for the BS in Biology degree. However, more than 120 credits of coursework may be needed to complete both the BS degree in Biology and the teaching licensure requirements. Please consult your advisor.

Predentistry
Students are eligible to apply for admission to dental school after completion at least 90 semester hours with the appropriate course requirements. Nevertheless, the vast majority of students who are accepted to dental school do have a Bachelor’s degree. We endeavor to update and align our Predentistry program to match the Indiana University School of Dentistry prerequisite course requirements. Admission requirements may vary from school to school. It is up to students to make sure that their program satisfies the admission requirements for any dental school to which they may apply. Currently, applications to IUPUI Dental School must be sent by Jan. 1st of the year the applicant plans to attend http://www.iusd.iupui.edu. Deadline dates change from year to year. For more information on dental schools and the application process, go to: http://www.ada.org. To apply, students must take the Dental Admission Test (DAT). Successful performance on the DAT requires completion of at least one year of college education, which should include courses in biology, and general and organic chemistry. Physics and advanced level biology are not required prior to taking the DAT. Most applicants complete two or more years of college prior to taking the examination.
To earn a BS degree in Biology and prepare for application to the Indiana University School of Dentistry, students may choose any biology study plan and incorporate the following highly recommended courses in their study plan to meet the admission requirements:
BIOL 21300  Human Anatomy and Physiology I
BIOL 21400  Human Anatomy and Physiology II
BIOL 31600  Basic Microbiology
BIOL 56100  Immunology
PSY 12000  Elementary Psychology

Premedicine
Students are eligible to apply for admission to medical school after completing at least 90 semester hours with the appropriate course requirements. However, the vast majority of students who are accepted to medical school do have a Bachelor’s degree. We endeavor to update and align our Premedicine program to match the prerequisite course requirements of the Indiana University School of Medicine. Admission requirements may vary from school to school. It is up to students to make sure that their
study plan satisfies the admission requirements for any medical school to which they apply. Deadline dates change from year to year. For more information on medical schools and the application process, go to http://www.aamc.org or for colleges of osteopathy, go to http://www.aacom.org. In order to apply to medical school students must take the Medical College Admission Test (MCAT). This test is given on specified dates during the year. Applicants must register online at http://www.aamc.org/MCAT.

To earn a BS degree in Biology and prepare for application to the Indiana University School of Medicine, students may choose any biology study plan and incorporate the following courses into their study plan to meet the admission requirements:

- **PSY 12000** Elementary Psychology
- **SOC 10000** Introduction to Sociology

### Recommended Biology Courses for Students in Premedicine Program

- **BIOL 21300** Human Anatomy and Physiology I
- **BIOL 21400** Human Anatomy and Physiology II
- **BIOL 35700** Animal Physiology
- **BIOL 34200** Biological Sciences Practicum (E X L)
- **BIOL 41800** Drugs and Diseases
- **BIOL 48800** Biological Sciences Internship (E X L)
- **BIOL 48900** Biological Sciences Research (E X L)
- **BIOL 50700** Molecular Biology
- **BIOL 50800** Recombinant DNA Techniques
- **BIOL 52500** Principles of Neurobiology
- **BIOL 53300/53400** Medical Microbiology & Laboratory
- **BIOL 56100** Immunology
- **BIOL 56600** Developmental Biology
- **BIOL 49500 or 59500** Special Assignments

*Repeatable for credits. Topics may include, but are not limited to: Advanced Immunology, Bioinformatics, Epigenetics, Ethic Frontiers, Medical Genetics, Food Microbiology, Environmental Microbiology, Virology, and Research.

### Preoccupational Therapy

Admission into a Master of Occupational Therapy (MS OT) program requires a completed baccalaureate degree and completion of prerequisite courses. Most schools require the GRE. We endeavor to update and align our pre-OT program with the Indiana University School of Health and Rehabilitation Sciences to stay updated on this school’s admission requirements. Admission requirements may vary from school to school. It is up to students to make sure their study plan satisfies the admission requirements for any Occupational Therapy school to which they may apply. For more information on occupational therapy schools and profession, go to http://www.aota.org/.

To earn a BS degree in Biology and prepare for application to the MS OT program at Indiana University, students may choose any biology study plan and incorporate the following courses into their study plan to meet the admission requirements:

- **BIOL 21300** Human Anatomy and Physiology I
- **BIOL 21400** Human Anatomy and Physiology II
- **PSY 12000** Elementary Psychology
- **PSY 35000** Abnormal Psychology
- **CDFS 21000** Introduction to Human Development
- **SOC 10000** Introduction to Sociology
- **BIOL 29500** Medical Terminology

Additional Admission Requirements: [http://www.shrs.iupui.edu/occupational_therapy](http://www.shrs.iupui.edu/occupational_therapy)

1) All prerequisite coursework (Statistics English /Communication (6 credits), and above courses) must be completed with a minimum cumulative grade point average (GPA) of 3.2 on a 4.0 scale with no lower than a “C” in any one prerequisite.

2) Admission to Master of Occupational Therapy program at the Indiana University School of Health and Rehabilitation Sciences also requires a minimum of 12 hours of observation and/or volunteer work among at least three different Occupational Therapy practice settings (such as acute care hospital; outpatient clinic, community mental health center, school system, and so forth) with either an Occupational Therapist or an Occupational Therapy assistant.

### Preoptometry

Students are eligible to apply for admission to optometry school after completion at least 90 semester hours with the appropriate course requirements. Of the 90 credit hours, at least 20 must be at the 30000-40000 level. If one chooses to apply after 90 credit hours, there are additional academic requirements that must be met. The vast majority of students who are accepted to optometry school do have a Bachelor’s degree. We endeavor to update and align our preoptometry program to match the pre-requisite course requirements for the optometry program at the Indiana University School of Optometry. Admission requirements may vary from school to school. It is up to students to make sure that their study plan satisfies the admission requirements for any optometry school to which they apply. Shadowing an optometrist is recommended. In addition, students must take the Optometry College Admission Test (OAT). For more information on prerequisites go to: [www.opt.indiana.edu/](http://www.opt.indiana.edu/)

To earn a BS degree in Biology and prepare for application to the Indiana University School of Optometry, the student may choose any biology study plan and incorporate the following courses in their study plan to meet the admission requirements:

- **BIOL 21300** Human Anatomy and Physiology I
- **BIOL 21400** Human Anatomy and Physiology II
- **BIOL 33300** Principles of Biochemistry
- **BIOL 29500** Medical Terminology
- **BIOL 48900** Biological Sciences Research (ExL)
- **PHIL 11100** Ethics
- **Histology**

(*These courses may not be available at Purdue Calumet.*)

### Prephysician Assistant

Purdue University Calumet endeavor to update and align our Prephysician Assistant program to match the admission requirements for the Master of Physician Assistant Studies at the Indiana University School of Health and Rehabilitation Sciences. The most common route for pre-PA students is to earn an undergraduate degree while completing the prerequisite courses for the graduate-level PA programs to which they plan to apply. There are multiple requirements for admittance to the IU PA program. Applications to the school begin April 16th and close on October 1st. The Physician Assistant program participates in CASPA; applicants must complete both a CASPA application and the IUPUI graduate application by the October 1st deadline. In addition, applicants should have a minimum of 300 hours of documented patient care experience. GRE or MCAT scores are also required. The above description is a guideline only for the IU Physician Assistant Program; students should make sure that their program satisfies the admission requirements for any school to which they apply. For more information about the application process and requirements visit: [http://shrs.iupui.edu/health_sciences/degrees/mpas/applicationProcess.html](http://shrs.iupui.edu/health_sciences/degrees/mpas/applicationProcess.html)

For CAPSA: [https://portal.caspaonline.org/](https://portal.caspaonline.org/)

For more information regarding other PA schools visit: [http://www.azaonline.org/?th=ed/ContentDir/pad/255](http://www.azaonline.org/?th=ed/ContentDir/pad/255)

To earn a BS degree in Biology and prepare for application to the Indiana University School of Health and Rehabilitation Sciences, students may choose any biology study plan and incorporate the following courses to meet the admission requirements:

- **BIOL 21300** Anatomy and Physiology I
- **BIOL 21400** Anatomy and Physiology II
BIOL 29500 Medical Terminology
BIOL 31600 Basic Microbiology
PSY 12000 Elementary Psychology
Nutrition or Health Promotion or Wellness

Recommended Biology Elective Courses:
See recommended biology electives for premedicine program (page 71)

Prephysical Therapy
Admission into a Doctorate of Physical Therapy (DPT) program requires a completed baccalaureate degree and completion of pre-requisite courses. Some schools require GRE test. We endeavor to update and align our prephysical therapy program to meet the pre-requisite course requirements for the Indiana University Doctor of Physical Therapy Program (DPT). (http://shr.s.iu.edu/physical_therapy/) Admission requirements may vary from school to school. It is up to the individual students to make sure that their study plans satisfy the admission requirements for any Physical Therapy (PT) school to which they apply. Physical Therapy is a very competitive program (http://www.apta.org/).

To earn a BS degree in Biology and prepare for application to the Doctor of Physical Therapy Program (DPT) at the Indiana University School of Health and Rehabilitation Sciences, students may choose any biology study plan and incorporate the following courses in the study plan to meet the admission requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 21300</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIOL 21400</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>BIOL 29500</td>
<td>Medical Terminology</td>
</tr>
<tr>
<td>STAT 30100</td>
<td>Elementary Statistical Methods I</td>
</tr>
<tr>
<td>PSY 12000</td>
<td>Elementary Psychology</td>
</tr>
<tr>
<td>CDFS 21000</td>
<td>Introduction to Human Development</td>
</tr>
</tbody>
</table>

Additional Admission Requirements: (from www.shr.s.iu.edu/physical_therapy)
1) Cumulative GPA of 3.2; Math/Science GPA of 3.2 (includes grades earned in chemistry, physics, human anatomy, human physiology, and statistics)
2) GRE
3) Completion of 40 clinical observation hours or work experience in both inpatient and outpatient settings recorded on Clinical Observation Experience Form. A minimum of 20 hours is required in each setting.

Preveterinary Science and Medicine
To become a veterinarian, the individual must graduate from a four-year program at an accredited college of veterinary medicine with a Doctor of Veterinary Medicine (D.V.M. or V.M.D) degree and obtain a license to practice. Twenty-eight schools in 26 states meet accreditation standards set by the Council on Education of the American Veterinary Medical Association (http://www.avma.org/education/cwa/colleges_accredited/colleges_accredited.asp). Purdue University Calumet communicates with the Purdue University College of Veterinary Medicine (http://www.vet.purdue.edu/) to stay updated on this school's admission requirements. Students are eligible to apply for admission to the Purdue University College of Veterinary Medicine after completion of required courses totaling a minimum of 75 credit hours with a C or better in each course; however, most schools prefer completion of a bachelor’s degree. Admission requirements may vary from school to school. It is up to students to make sure that their study plans satisfy the admission requirements for any vet school to which they apply. For more information on veterinary school prerequisites visit: http://www.avma.org/data/files/vnicas/prereqchrt14.pdf

To earn a BS degree in Biology and prepare for application to the Doctor of Veterinary Medicine degree program offered by the Purdue University College of Veterinary Medicine, students may choose any biology study plan and incorporate the following courses in the study plan.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 33300</td>
<td>Principles of Biochemistry</td>
</tr>
<tr>
<td>ANSC 22100</td>
<td>Principles of Animal Nutrition</td>
</tr>
<tr>
<td>BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>or BIOL 22100</td>
<td>Introduction to Microbiology</td>
</tr>
</tbody>
</table>

Bachelor of Science - Medical Technology
(120 CREDITS)
Minimum 2.0 GPA for all biology courses required for the degree.

English and Communication (9 credits)
- ENGL 10400* English Composition I (Gen Ed)
- ENGL 10500* English Composition II (Gen Ed)
- COM 11400 Fundamentals of Speech Communication (Gen Ed)
  *Students placed in ENGL 10000 English Composition may use ENGL 10000 (3 credits) with a B or better grade to replace ENGL 10400.

Humanities & Social Sciences (9 credits)
- Gen Ed approved Humanities (3 credits)
- Gen Ed approved Social Sciences (3 credits)
- Any Humanities or Social Sciences courses (3 credits)

Mathematics, Statistics, & Computer Sciences (12 credits)
- MA 22300 Introductory Analysis I (Calculus I) (Gen Ed)
- MA 22400 Introductory Analysis II (Calculus II) (Gen Ed)
- STAT 33001* Biostatistics
- CIS 20400 Introduction to Computer-Based Systems (Gen Ed)
  *May be replaced by STAT 30100 Elementary Statistical Methods

Chemistry & Physics (27 credits)
- CHM 11500 General Chemistry I
- CHM 11600 General Chemistry II
- CHM 25500/25501 Organic Chemistry I & Laboratory
- CHM 25600/25601 Organic Chemistry II & Laboratory
- CHM 33300 Principles of Biochemistry*
- PHYS 22000 General Physics I
- PHYS 22100 General Physics II

Biology Required Courses (25 credits)
- BIOL 10100* Introductory Biology I (Gen Ed)
- BIOL 10200* Introductory Biology II (Gen Ed)
- BIOL 10700 Freshman Experience in Biological Sciences (Gen Ed)
- BIOL 24300 Introductory Cell Biology
- BIOL 24400 Genetics
your grade and GPA. Required Courses for fall 2015 admissions: at least 3.00 to be competitive. It is not to your advantage to repeat courses to improve Pharmacy (Pharm.D.) program in West Lafayette, IN. Generally, a student needs a GPA of and the profession, visit www.PharmCAS.org. Courses listed below are required for those for any pharmacy school to which they apply. For more information on pharmacy schools individual students to make sure that their study plans satisfy the admission requirements admissions.php. Admission requirements may vary from school to school. It is up to

**Clinical Program** (32 credits)

Successful completion of 12-month clinical program at an affiliated hospital (St. Margaret Mercy Healthcare Centers, North Campus, Hammond, IN; OSF Saint Francis Medical Center, Peoria, IL; or Hines VA Hospital, Hines, IL).

*Note:*
1. Completion of pre-requisite courses at Purdue University Calumet does not guarantee admission to an affiliated hospital program.
2. For acceptance into a clinical program, overall 2.5 GPA and a minimum of 2.5 GPA in all science courses are required. Please consult your advisor for application procedure.
3. To meet the experiential learning requirement, register for BIOL 4200 Biology Practicum in both semesters of clinical training.
4. Students must register for “Candidate Only” at Purdue Calumet at the beginning of the semester in which they expect to complete the B.S.

**Prepharmacy**
(65 CREDITS)

Students are eligible to apply to the Doctor of Pharmacy program, Purdue University College of Pharmacy after the completion of a minimum of 60 credit hours including the prerequisite courses as identified on www.pharmacy.purdue.edu/academics/pharmd/admissions.php. Admission requirements may vary from school to school. It is up to individual students to make sure that their study plans satisfy the admission requirements for any pharmacy school to which they apply. For more information on pharmacy schools and the profession, visit www.PharmCAS.org. Courses listed below are required for those who wish to apply for admission to Purdue University College of Pharmacy Doctor of Pharmacy (Pharm.D.) program in West Lafayette, IN. Generally, a student needs a GPA of at least 3.00 to be competitive. It is not to your advantage to repeat courses to improve your grade and GPA. Required Courses for fall 2015 admissions:

**Biology (24 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 10100</td>
<td>Introductory Biology I</td>
</tr>
<tr>
<td>BIOL 10200</td>
<td>Introductory Biology II</td>
</tr>
<tr>
<td>BIOL 10700</td>
<td>Freshman Experience in Biological Sciences</td>
</tr>
<tr>
<td>BIOL 21300</td>
<td>Human Anatomy and Physiology I</td>
</tr>
<tr>
<td>BIOL 21400</td>
<td>Human Anatomy and Physiology II</td>
</tr>
<tr>
<td>BIOL 22100</td>
<td>Introduction to Microbiology</td>
</tr>
<tr>
<td>or BIOL 31600</td>
<td>Basic Microbiology</td>
</tr>
<tr>
<td>BIOL 56100</td>
<td>Immunology</td>
</tr>
</tbody>
</table>

**Chemistry & Physics (23 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 11500</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHM 11600</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHM 25500</td>
<td>Organic Chemistry (1)</td>
</tr>
<tr>
<td>CHM 25501</td>
<td>Organic Chemistry Lab (1)</td>
</tr>
<tr>
<td>CHM 26600</td>
<td>Organic Chemistry (2)</td>
</tr>
<tr>
<td>CHM 25601</td>
<td>Organic Chemistry Lab (2)</td>
</tr>
</tbody>
</table>

*Students not prepared for CHM 11500 must take CHM 10000 first.*

**Economics (3 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 21000</td>
<td>Principles of Economics</td>
</tr>
</tbody>
</table>

**General Agriculture and Forestry Transfer Program**
(60 CREDITS)

More than 40 programs are offered by the School of Agriculture, Purdue University West Lafayette. Calumet students may complete one-two years of study in these programs by taking coursework offered through the Department of Biological Sciences at Purdue University Calumet. Students can then transfer to the West Lafayette campus to complete a bachelor's degree. Requirements vary in different agriculture options. See advisor for further details. The following is a sample program.

**English and Communication (9 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 10400*</td>
<td>English Composition I</td>
</tr>
<tr>
<td>ENGL 10500*</td>
<td>English Composition II</td>
</tr>
</tbody>
</table>

*Students placed in ENGL 10000 English Composition may use ENGL 10000 (3 credits) with a B or better grade to replace ENGL 10400.*

**Mathematics & Statistics (9 credits)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA 16031</td>
<td>Calculus I for Life Science</td>
</tr>
<tr>
<td>MA 16032</td>
<td>Calculus II for Life Science</td>
</tr>
</tbody>
</table>

*DSTAT 30100 Biostatistics may be substituted for STAT 30100*
core Courses (6 credits)
SCI 20200 Environmental Science – 3 credits
SCI 49100 Environmental Science Internship
or
Senior/capstone/research project with an environmental emphasis in the student’s major (3 credits)

Elective Courses (12 credits; must include a minimum of 6 credits from outside of the student's major)

Biol 21000 Field Biology
Biol 33300* Ecology
Biol 40500* Conservation Biology
Biol 41200* Climate Change and the Environment
Biol 41300* Aquatic Ecology
Biol 41400* Invasive Species Ecology
Biol 58000* Evolution
Biol 58700* Biogeography
Biol 58800* Plant Ecology
Biol 58900* Laboratory in Plant Ecology
Biol 59100* Field Ecology

Biol 49500 or 59500 Special Assignments (related to Environmental Sciences, repeatable for credits. Topics may include but are not limited to Environmental Microbiology* and Wetland Ecology*)

CE 20100* Surveying & GIS
CE 35400 Introduction to Environmental Engineering
CHM 32400* Environmental Chemistry
EAS 22000 Physical Geography
EAS 22300 Ocean Studies
EAS 22200 Weather Studies
ECON 31100* Environmental Economics
HIST 56200* Environmentalism in United States History
POL 22300 Environmental Policy
POL 52200* Energy, Politics, and Public Policy
POL 52300* Environmental Politics and Public Policy
SCI 10300 Survey of the Biological World
SCI 10400 Introduction to Environmental Biology
SCI 13100 Science & Environment
SCI 31500 Environmental Science for Elementary Education

Any course on the subject of the environment, upon approval of the program coordinator
*These courses have prerequisites.

Master of Science in Biology
(30 credits)

The biological sciences department offers a MS in Biology with both Thesis and Non-Thesis Options. Courses are available in biotechnology, molecular and cellular biology, microbiology, human biology, and ecology. Graduate level elective courses are offered in the Fall, Spring, and Summer semesters, making it possible to graduate with a non-thesis option in just three semesters. A diverse course schedule accommodates both full-time and part-time students. Our MS degree program provides an exceptional opportunity for professional development as well as a bridge to doctoral or health professional programs.

Special Admission Requirements: Graduate Record Examination (GRE) scores

Degree Requirements

Plan of Study
A plan of study should be submitted to the Graduate School shortly after acceptance into the program. A Graduate Advisory Committee will work closely with the student to design a program suited to the student’s needs.

Options
Non-Thesis Option
Twenty-nine credits in formal courses and special assignments (independent...
study, research and reading) and one credit in seminar. The special assignment
credits (independent study, research and reading) cannot exceed six; and the reading
credits cannot exceed three. Of the total of thirty credits, twenty-one credits must
in the primary area of biology at 50000 and 60000 levels and 9 credits in supporting
areas. The supporting areas include biology (outside of the primary area), statistics,
computer science, mathematics, education, chemistry, and physics. For example,
students interested in biology teaching would choose education courses for the
supporting area. Up to six credits can be taken from 40000-level formal courses as a part of the supporting area requirement. Students exercising this option must pass a
written comprehensive exam for the degree.

**Thesis Option**
Fifteen credits in formal courses, one credit in seminar, and up to 14 credits in
thesis research. Up to three credits of thesis research can be substituted by special
assignment (independent study, research and reading). Of the total of thirty
credits, twenty-one credits must in the primary area of biology at 50000 and
60000 levels and nine credits in supporting areas. The supporting areas include
biology (outside of the primary area), statistics, computer science, mathematics,
chemistry, and physics. Up to six credits can be taken from 40000-level formal
courses as a part of the supporting area requirement. Students exercising this
option must submit
a formal research proposal, conduct the research, write a thesis, and pass
an oral defense before a faculty committee.

**Required Cumulative Index**
GPA of 3.0 or higher. A grade of “B-” or better is required in all courses in the
primary area. The degree must be completed in 10 semesters within 5 years.

**Transfer of Credit**
A maximum of 9 credits taken from other accredited institutions completed within
10 years prior to completion of degree program may be accepted for supporting
area. Only credit hours associated with graduate courses for which grades of
B- or better were obtained will be eligible for transfer. Check with the Purdue
University Graduate School website (www.gradschool.purdue.edu/downloads/
facstaff/2004PP.pdf) for details.

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**Combined Bachelor of Science and Master of Science Degree Program
in Biological Sciences**

Students graduating from this combined program may receive both the Bach­
elor of Science and Master of Science degrees in Biological Sciences in five years,
as compared to the six years needed to complete the degrees separately. This is
accomplished by offering a supervised and seamless transition from the Bachelor
of Science curriculum to the Master of Science curriculum that is designed to better
enable our graduates to prepare for competitive positions in today’s job market
and/or admission to doctoral level graduate or professional schools.

**Degree Requirements**
Students may apply for admission to the program in their third year and will be care­
fully evaluated to ensure that they meet all university graduation requirements, including
the completion of at least 32 credit hours at the 30000-level or above, for a Bachelor
of Science degree. The Bachelor of Science/Master of Science combined curriculum
consists of all required courses for the Bachelor of Science in Biological Sciences, including
the biology core courses (18 credits), biology concentration required courses (7–8
credits), biology electives (a minimum of 12–14 credits of 30000 level or above), as well as
all of the current graduate course requirements of the traditional Master’s program.

The requirements for admission to the combined program are more stringent than
the admission standards for the traditional Master of Science program. Students are
required to maintain a minimum 3.25 GPA for the first 80 credit hours of course work
and a grade of B- or higher in all biology basic core courses in the plan of study, in
order to be conditionally admitted. Final admission to the graduate program requires
that the student has a minimum 3.25 overall GPA, a minimum 3.25 GPA in all
biology basic core courses, and receives a B- or higher grade in each of the graduate
courses taken during his/her senior year. However, the application requirement of the
traditional Master of Science program to take the GRE is waived.

The total credit hours required for this combined degree program will be
141 for those students awarded both Bachelor of Science and Master of Science
degrees. The traditional Bachelor of Science in Biological Sciences requires 120
hours and the Master of Science in Biological Sciences requires 30 hours, for a
total of 150 hours. The combined program allows an overlap of 9 credit hours,
thereby reducing the number of required hours to 141 and making it possible for
qualified students to complete both degrees in five years. The graduate portion of
the combined program offers both thesis and non-thesis options. The combined
program allows students to receive the Bachelor of Science degree first upon
completion of the undergraduate curriculum and the Master of Science degree
later upon completion of the graduate plan of study. Students can choose to leave
the combined program during the graduate portion of their study and still be
eligible to receive the Bachelor of Science degree.

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**Graduate Biotechnology Certificate**
(16 CREDITS)

This post-baccalaureate Biotechnology Certificate provides students theoretical
as well as laboratory training in molecular biology, genetic engineering, and related
technologies which can be applied to a variety of biological fields. The certificate
is awarded after successful completion of 6 credits of required courses and a
minimum 10 credits of elective courses related to biotechnology. This program
offers exceptional opportunities for individuals with a BS degree in a biological
science to expand their career opportunities. Courses taken to fulfill the certificate
requirements may also be applied toward the MS degree in Biology.

**Certificate Requirements**
A Plan of Study for the Graduate Biotechnology Certificate Program (GS Form
6) must be completed and approved by the Advisory Committee and the Graduate
Coordinator one semester prior to the completion of the certificate program.

**Required courses (6 credits):**
- BIOL 50700 Molecular Biology (3)
- BIOL 50800 Recombinant DNA Techniques (3)

**Elective courses (a minimum of 10 credits)**
- BIOL 52500 Principles of Neurobiology (4)
- BIOL 53300/53400 Medical Microbiology and Lab (5)
- BIOL 56100 Immunology (3)
- BIOL 56600 Developmental Biology (4)
- BIOL 59500 Special Assignments*

*Biology related topics include but not limited to:
- Bioinformatics (3)
- Environmental Microbiology (3)
- Food Microbiology (5)
- Research (variable credits)
Department of Chemistry and Physics

D. Suson, Interim Head.  Faculty:  R. Kramer;  M. O. Longas;  N. Parashar;  L. S. W. Pelter;  M. W. Pelter;  H.W. Pinnick;  A. Rengstorf;  K. L. Rowberg;  S. Slavin

The Department of Chemistry and Physics offers degree programs in Chemistry, Physics, and Physical Sciences. All of these programs include courses with a significant experiential component, and offer a large range of electives. These electives help personalize the program to match student interest and provide a broader base of knowledge for students as they complete their studies and enter the next phase of their professional career. Students should review the course descriptions in astronomy, chemistry, earth and space sciences, and physics, among others, for a detailed list of available courses.

Bachelor of Science in Chemistry degree — American Chemical Society (ACS) certified. Graduation with the ACS-accredited degree meets the eligibility requirements for membership in the American Chemical Society. This program provides a thorough training in the fundamental principles and basic experimental techniques of chemistry. This option is recommended for students who will continue to study or work in chemistry or the natural sciences.

Bachelor of Science degree in Physics, with optional concentrations in Engineering Physics and Computational Physics. These degree options provide strong preparation for those intending to pursue professional careers in physics and related areas. All the options provide a strong background in physics. The standard Physics option is a traditional track that provides students with an exposure to other sciences; the Engineering Physics option augments students' physics training with emphasis in Electrical and Mechanical Engineering; the Computational Physics option provides students with a minor in Computer Science in addition to their physics education.

Bachelor of Science degree in Physical Sciences. This is a broad-based degree providing in-depth training in the physical sciences. The interdisciplinary nature of the degree enables students to tailor their particular focus in emerging areas such as forensics, environmental science, and scientific entrepreneurship, among others. Specific areas of interest should be discussed with one of the department’s advisors.

All of the degree programs in the department provide a strong base for students interested in teaching at the secondary level or continuing on a health-oriented professional program. Students interested in these areas should contact a departmental advisor for additional information.

Research Opportunities in Chemistry

Students may get experience in laboratory procedures and scientific research through internships with regional companies and laboratories, or by working on research projects directed by the chemistry faculty. Areas of research include the biochemistry of complex carbohydrates of the skin, nanotechnology, environmental studies, molecular electronics, organometallics, analytical chemistry, materials science, polymer chemistry, drug design, physical biochemistry, synthetic and theoretical organic chemistry. Chemistry students are encouraged to talk with faculty about research opportunities. Student projects often are funded by the University’s Undergraduate Research Program.

Internships sponsored by regional industrial companies are available for qualified students, providing them with the opportunity to combine learning with on-the-job training.

Research Opportunities in Physics

Many physics students participate in research projects directed by physics faculty including both experimental and theoretical topics. Several students have continued their research at national research labs, such as Argonne and Fermilab in nearby Illinois. The physics faculty have research interests in high energy physics, astronomy, astrophysics, and several areas of theoretical physics. Physics students are encouraged to talk with faculty about research opportunities. Student projects often are funded by the University’s Undergraduate Research Program.

Internships sponsored by regional industrial companies are available for qualified students, providing them with the opportunity to combine learning with on-the-job training.

Chemistry and Physics Club

The Department sponsors the Chemistry and Physics Club, which is the umbrella organization for students interested in joining the ACS Student Affiliate chapter and/or the Society of Physics Students chapter. It hosts seminars, lectures, field trips, and other special events. Students are encouraged to join the Chemistry and Physics Club in order to meet other majors and peers interested in the physical sciences.

Programs

Three (3) Bachelor of Science degrees are offered through the department. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

- Bachelor of Science in Chemistry* (120 credits)
- Bachelor of Science in Physics (120 credits)
  - Optional areas as above nitrination:
    - Engineering Physics
    - Computational Physics
- Nuclear Science - NEW for 2015-2016. See Addendums
- Bachelor of Science, Physical Science (120 credits)
- Optional areas of concentration NEW for 2015-2016 See Addendum.
- Minor in Chemistry (24 credits)
- Minor in Physics (18 credits)

*ACS Minor in Astrophysics (18 credits)
Bachelor of Science in Chemistry:  
(120 CREDITS)

1. General Education Core (30 credits)  
Any course satisfying the general education core with the exception of Natural Science, Mathematics, and Freshman Experience courses. Explicit courses satisfying these requirements are specified below.

2. Science and Mathematics  
A. Science  
(Chemistry: 45 credits; Physics: 9 credits; Science: 2 credits)  
CHM 11500 General Chemistry I  
CHM 11600 General Chemistry II  
CHM 19400 Freshman Chemistry Orientation  
CHM 34200 Inorganic Chemistry  
CHM 26300 Organic Chem. Lab. I  
CHM 26400 Organic Chem. Lab. II  
CHM 26505 Organic Chemistry I  
CHM 26605 Organic Chemistry II  
CHM 34300 Inorganic Chemistry Laboratory  
CHM 29400 Sophomore Chemistry Seminar  
CHM 32100 Analytical Chemistry I  
CHM 33300 Biochemistry  
CHM 37300 Physical Chemistry I  
CHM 37400 Physical Chemistry II  
CHM 37600 Physical Chemistry Lab.  
CHM 42400 Analytical Chemistry II  
CHM 49400 Junior-Senior Chemistry Seminar  
CHM 49800 Undergraduate Research (twice)  
PHY S 15200 Mechanics  
PHY S 25100 Heat, Electricity, and Optics  
SCI 22000 Health and Safety  
B. Math (14 credits)  
MA 16300 Integrated Calculus and Geom. I  
MA 16400 Integrated Calculus and Geom. II  
MA 26100 Multivariate Calculus  
3. Free Electives (29 credits)  
Any course offered by the university that is approved by the student’s advisor.

Minor in Chemistry  
(24 CREDITS)

1. Chemistry Core:  
CHM 11500 General Chemistry I  AND  
CHM 11600 General Chemistry II  
2. Chemistry Electives:  
Sixteen credit hours of chemistry (CHM) courses at the 20000-level or above and a minimum of 3 credit hours at or above the 30000-level is required. SCI 22000 Laboratory Health & Safety and up to 3 credits of CHM 49800 (EXL) (undergraduate research) may be used to fulfill this requirement. A GPA of 2.0 or better is required for all elective courses applied to the minor.

Bachelor of Science in Physics  
(120 CREDITS)

1. General Education Core (30 credits)  
Any course satisfying the general education core with the exception of Natural Science, Mathematics, and Freshman Experience courses. Explicit courses satisfying these requirements are specified below.

2. Math Core (20 credits)  
MA 16300 Integ. Calculus and Geom. I  
MA 16400 Integ. Calculus and Geom. II  
MA 26100 Multivariate Calculus  
MA 26400 Differential Equations  
MA 26500 Linear Algebra  

Computer Science/Programming (6 credits)  
Choose from (substitutions with advisor approval)  
CS 12300 AND CS12400 Programming I:Java AND Programming II:C++  
or  
ENGR 15100 AND ENGR 15200 Software Tools (MATLAB) AND Programming (C)  
or  
CS 16600 AND (CS 26300 or CS 26600) Intro. to Programming AND (Java or C++)

4. Physics (40 credits)  
PHY S 15200 Mechanics  
PHY S 19400 Freshman Physics Orientation  
PHY S 25100 Heat, Electricity and Optics  
PHY S 29400 Sophomore Physics Seminar  
PHY S 31000 Intermediate Mechanics  
PHY S 31100 Quantum Physics I  
PHY S 32200 Intermediate Optics  
PHY S 34200 Modern Physics  
PHY S 34300 Modern Physics Lab.  
PHY S 38000 Advanced Lab  
PHY S 40200 Senior Research I  
PHY S 40300 Senior Research II  
PHY S 49400 Junior-Senior Physics Seminar  
PHY S 51500 Thermodynamics  

Physics Electives (12 credits)  
Any physics course 20000 level or higher; substitutions with advisor approval  

5. Chemistry (8 credits)  
CHM 11500 General Chemistry I  
CHM 11600 General Chemistry II  

6. Free Electives (5 credits)  
Any course offered by the university that is approved by the student’s advisor.

7. EMS Electives (9 credits)  
Choose from (substitutions with advisor approval)  
ASTR - any course  
BIOL - any course excluding 10008, 10010, and 10700  
CHEM - any course excluding 10000, 11100, 11200, and 19400  
CE - any course  
CS - any course excluding 10000  
EAS - any course  
ECE - any course  
ENGR - any course excluding 18600  
MSE - any course  
MA - any course 20000 or higher excluding 21900, 22200, 22300, 22400, 22500, 23700, 23800, and 23900  
ME - any course  
PHYS - any course 20000 or higher  
SCI - any course excluding 10300, 10400, 10500, 11200, 11300, 11400, 20200, and 31500  
STAT - any course 20000 or higher

Bachelor of Science in Physics:  
Computational Physics Concentration  
(120 CREDITS)

1. General Education Core (30 credits)  
Any course satisfying the general education core with the exception of Natural Science, Mathematics, and Freshman Experience courses. Explicit courses satisfying these requirements are specified below.

2. Math Core (20 credits)  
MA 16300 Integ. Calculus and Geom. I  
MA 16400 Integ. Calculus and Geom. II  
MA 26100 Multivariate Calculus  
MA 26400 Differential Equations  
MA 26500 Linear Algebra  

Department of Computer Science/Engineering
### Bachelor of Science Physics: Engineering Physics Concentration

(120 CREDITS)

1. **General Education Core (30 credits)**
   - Any course satisfying the general education core with the exception of Natural Science, Mathematics, and Freshman Experience courses. Explicit courses satisfying these requirements are specified below.

2. **Math Core (20 credits)**
   - MA 16300 Integ. Calculus and Geom. I
   - MA 16400 Integ. Calculus and Geom. II
   - MA 26100 Multivariate Calculus
   - MA 26400 Differential Equations
   - MA 26500 Linear Algebra

3. **Physics (40 credits)**
   - PHYS 15200 Mechanics
   - PHYS 19400 Freshman Physics Orientation
   - PHYS 25100 Heat, Electricity and Optics
   - PHYS 29400 Sophomore Physics Seminar
   - PHYS 31000 Intermediate Mechanics
   - PHYS 31100 Quantum Physics I
   - PHYS 32200 Intermediate Optics
   - PHYS 34200 Modern Physics
   - PHYS 34300 Modern Physics Lab.
   - PHYS 38000 Advanced Lab
   - PHYS 40200 Senior Research I
   - PHYS 40300 Senior Research II
   - PHYS 49400 Junior-Senior Physics Seminar
   - PHYS 51500 Thermodynamics

   **Physics Electives (6 credits)**
   - Any physics course 20000 or higher, substitutions with advisor approval

4. **Computer Science (15 credits, satisfies the requirements for a CS minor)**
   - CS 12300 Programming I: Java
   - CS 12400 Programming II: C++
   - CS 22300 Computer Architecture and Assembly Language
   - CS 27500 Data Structures
   - CS 30200 Operating Systems

5. **Computer Science Electives (3 credits)**
   - Any CS course 20000 or higher, substitutions with advisor approval

6. **Chemistry (8 credits)**
   - CHM 11500 General Chemistry I
   - CHM 11600 General Chemistry II

### Bachelor of Science in Physical Sciences

(120 CREDITS)

1. **General Education Core (30 credits)**
   - Any course satisfying the general education core with the exception of Natural Science, Mathematics, and Freshman Experience courses. Explicit courses satisfying these requirements are specified below.

2. **Math Core (6-10 credits)**
   - MA 16300 Integ. Calculus and Geom. I or MA 12300 Introductory Analysis I
   - MA 16400 Integ. Calculus and Geom. II or MA 12400 Introductory Analysis II

3. **Physics (8-9 credits)**
   - PHYS 15200 Mechanics or PHYS 22000 General Physics I
   - PHYS 25100 Heat, Electricity and Optics or PHYS 22100 General Physics II
   - PHYS 29400 Sophomore Physics Seminar
   - PHYS 31000 Intermediate Mechanics
   - PHYS 31100 Quantum Physics I
   - PHYS 32200 Intermediate Optics
   - PHYS 34200 Modern Physics
   - PHYS 34300 Modern Physics Lab.
   - PHYS 35200 Modern Physics Lab.
   - PHYS 38000 Advanced Lab
   - PHYS 40200 Senior Research I
   - PHYS 40300 Senior Research II
   - PHYS 49400 Junior-Senior Physics Seminar
   - PHYS 51500 Thermodynamics
   - MSE 20000 Materials Science
   - ME 30500 Thermodynamics (substitution with advisor approval)

### Minor in Physics

(18 CREDITS)

- **Required:**
  - PHYS 15200 Mechanics
  - PHYS 25100 Heat, Electricity, and Optics (or PHYS 26100 and one credit hour of supplemental laboratory work in PHYS 27000)
  - PHYS 34200 Modern Physics

- **Electives:**
  - Six credit hours at the 30000 level or above from those Physics courses (or equivalent) which are not required for graduation in the student’s major. (PHYS 50000 thru PHYS 50900, inclusive, are not available as such electives.)

### Minor in Astrophysics

(18 CREDITS)

- **Required:**
  - PHYS 15200 Mechanics
  - PHYS 25100 Heat, Electricity, and Optics (or PHYS 26100 and one credit hour of PHYS 27000)
  - PHYS 34200 Modern Physics
  - ASTR 36300 Intermediate Astronomy I
  - ASTR 36400 Intermediate Astronomy II

### Bachelor of Science in Physical Sciences

(120 CREDITS)

- **See 2015-2016 Addendum for Updates**
4. Chemistry (8 credits)
   CHM 11500  General Chemistry I
   CHM 11600  General Chemistry II

5. Biology (4 credits)
   BIOL 10100  General Biology

6. Chemistry or Physics (7 credits)
   PHYS 19400  Freshman Physics Orientation or CHM 19400  Freshman Chemistry Orientation
   PHYS 29400  Sophomore Physics Seminar or CHM 29400  Sophomore Chemistry Seminar
   PHYS 40200  Senior Research I or CHM 49800  Research in Chemistry
   PHYS 40300  Senior Research II or CHM 49800  Research in Chemistry
   PHYS 49400  Junior-Senior Physics Seminar or CHM 49400  Junior-Senior Chemistry Seminar

7. Chemistry, Physics, or Math electives (9 credits)
   Choose from (substitutions with advisor approval)
   - CHM - any course excluding 10000, 11100, 11200, and 19400
   - MA - any course 20000 or higher excluding 21900, 22200, 22300, 22400, 22500, 23700, 23800, and 23900
   - PHYS - any course 20000 or higher

8. EMS Electives (24 credits)
   Choose from (substitutions with advisor approval)
   - ASTR - any course
   - BIOL - any course excluding 10008, 10010, and 10700
   - CHM - any course excluding 10000, 11100, 11200, and 19400
   - CE - any course
   - CS - any course excluding 10000
   - EAS - any course
   - ECE - any course
   - ENGR - any course excluding 11000 and 18600
   - MSE - any course
   - MA - any course 20000 or higher excluding 21900, 22200, 22300, 22400, 22500, 23700, 23800, and 23900
   - ME - any course
   - PHYS - any course 20000 or higher
   - SCI - any course excluding 10300, 10400, 10500, 11200, 11300, 11400, 20200, and 31500
   - STAT - any course 20000 or higher

9. Free Electives (26 credits)
   Any course offered by the university that is approved by the student’s advisor.

Chemistry, Physics, or Physical Sciences Teaching

Students interested in high school or middle school teaching careers in chemistry or physics can readily pursue this pathway within the majors and concentrations in this department. Requirements for licensure are met by taking coursework through the College of Education (see secondary teaching in science and math programs). These courses can be used to fulfill general education and free elective requirements, as well as experiential learning requirements. However, more than 120 credits of coursework may be needed to complete both the BS degree in Physical Sciences (Chemistry or Physics focus) or Physics and the teaching licensure requirements. Please consult your advisor.

Premedical and Healthcare Professional Preparation

The necessary prerequisite courses required for admission to medical and healthcare professional schools are accommodated by many of the majors and concentrations within the department. Specific recommendations are made based on the discipline (medicine, dentistry, veterinary, optometry, podiatry, physician assistant, physical therapy, pharmacy, and occupational therapy). Our preprofessional advisors stay abreast of the specific requirements for professional schools in Indiana, Illinois, and other neighboring states. For more details, students are encouraged to visit our website at websp.purduecal.edu/ems/pre-health-recruiting/ or contact a preprofessional advisor.

Coatings Technology Certificate

(22 CREDITS)

Required:

   CHM 11500  General Chemistry I
   CHM 11600  General Chemistry II
   CHM 26300  Organic Chemistry 1 Lab
   CHM 26400  Organic Chemistry 2 Lab
   CHM 26505  Organic Chemistry 1
   CHM 26605  Organic Chemistry 2
   CHM 35000  Coatings & Resins
   CHM 46400  Polymer Chemistry
Department of Electrical and Computer Engineering

N. Houshangi, Head. Faculty: M. Anan; C. Apostoia; B. G. Burridge (Emeritus); B. Chen; H. L. Gerber (Emeritus); R. L. Gonzales (Emeritus); K. Gopalan; D. L. Gray; T. I. Hentea (Emeritus); D. Kozel; E. S. Pierson (Emeritus); B. Smida; X. Yang

Electrical and computer engineers help to improve the quality of life, the productivity of industry and individuals, and the standard of living for everyone. Engineers are problem-solvers, using science, mathematics, and technology in their solutions. Most solutions involve thinking, computing, innovating, building, and teamwork with other professionals. Graduates from the bachelor's or masters program may choose a career involving design, development, research, manufacturing, testing, or a combination of these. Electrical and computer engineering graduates are in great demand, and starting salaries are excellent.

The undergraduate curriculum leads to a Bachelor of Science in Computer Engineering; Electrical Engineering; or Electrical Engineering with a concentration in Bioinstrumentation, Mechatronics, or Power and Energy Systems. A minor in Computer Science is available to all computer or electrical engineering students. The first semester courses are the same for all engineering students, the first three semesters are the same for all electrical and computer engineering students. Then, students specialize in Computer or Electrical Engineering, both accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). An Interdisciplinary Engineering Option allows students to design their own programs to meet their career needs, such as pre-law or pre-medicine. The flexibility of the engineering program allows students interested in other engineering disciplines not offered at Purdue Calumet, such as aerospace, chemical, etc., to complete one to two years of study before transferring to another university.

Purdue Calumet offers graduate programs in electrical and computer engineering and interdisciplinary engineering leading to a Master of Science in Engineering degree, and/or a Graduate Certificate in Engineering Project Management. Graduates of engineering or related programs are also welcome to take individual courses for professional development and technical currency without pursuing a graduate degree.

Reasons to major in Electrical or Computer Engineering at Purdue University Calumet. Engineering at Purdue Calumet provides an opportunity to earn an internationally-respected Purdue Engineering Degree from a program with excellent job placement and high starting salaries. Engineering classes are small and are taught by qualified faculty members dedicated to teaching or adjunct faculty who have many years of industrial experience. Most faculty members also engage in research, consulting, or other professional activities, and participate in professional engineering societies. Many faculty have received outstanding teaching, research, and service awards. The state of the art laboratory facilities, along with the many laboratory courses, provide a mechanism for students to gain hands-on experience that will aid their understanding of the engineering and scientific theories taught in the lectures. Courses are offered both days and evenings on a publicized schedule to meet the needs of both full-time and part-time students. Incoming students are assigned to an advisor familiar with the problems and special needs of new students. After choosing a major, the student receives an experienced engineering faculty advisor. The programs prepare students for life and for the engineering profession. The electrical and computer engineering programs offer a cost-effective, quality program that was ranked among the top 50 of the Best Undergraduate Engineering Programs at Non-Doctoral Schools in the 2013 US News and World Report.

Senior Engineering Design Projects. A capstone, one-year project for all seniors provides the opportunity to work in multi-disciplinary teams to pursue an engineering idea from conception to design, fabrication, and testing. The senior projects provide a transition from university study to the real world of engineering work, building on Purdue Calumet’s strength in experiential education. Many of the project ideas come from local industry. Special equipment available for senior design projects includes digital image processing systems, virtual reality software, a visualization and simulation lab, personal computers with an array of engineering software packages and data acquisition capability, programmable logic devices, mobile robots, digital signal processing boards, micro-controllers, high-frequency systems, electric drives and power electronics, and specialized electronic tools and software.

Undergraduate Research, Professional Experience Programs, and Cooperative Education. Strong partnerships with industry and funded research provide great opportunities for undergraduate as well as graduate student research. The Professional Experience Program, internships, and other experiential learning programs provide opportunities for students to gain relevant work experience by part-time employment while attending school part-time, or by full-time employment. The Co-op program provides engineering students with the opportunity to work in the engineering profession while obtaining their degree. All provide students practical experience while earning money to pay for their education. These opportunities make the education more meaningful for students and make the students more attractive to employers when they graduate, thus improving employment opportunities.

Graduate Internship in Engineering. The Graduate Internship program allows students who have been accepted into the Master of Science in Engineering program to work part-time in the engineering profession while attending the University and working toward a degree. Students will have the opportunity to compile a portfolio of their experience.

Programs

Three (3) Bachelor of Science degrees are offered through the department. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

- **Bachelor of Science in Electrical Engineering***
  - Optional areas of concentration:
    - Bioinstrumentation**
    - Mechatronics**
    - Power and Energy Systems**
- **Bachelor of Science in Computer Engineering**
- **Bachelor of Science in Engineering, Interdisciplinary Engineering**
- **Minor in Electrical and Computer Engineering**
- **Master of Science in Engineering**
- **Graduate Certificate in Engineering Project Management**

*Accredited by the Engineering Accreditation Commission of ABET (EAC-ABET)
**Accredited as a subset of Electrical Engineering.
Computer and Electrical Engineering Program Educational Objectives

The Computer Engineering curriculum provides a broad education in the fundamentals of Computer Engineering. Students may pursue a general program or may choose a specialization in areas such as Computer Hardware or Computer Software. A minor in Computer Science is available.

The Electrical Engineering curriculum provides a broad education in the fundamentals of Electrical Engineering. Students may pursue a general program or may choose a specialization in areas such as Communication and Signal Processing, Electronics, Digital Systems, Control Systems, or Power and Energy systems. There are concentrations in Bioinstrumentation, Mechatronics, and Power and Energy Systems. A minor in Computer Science is also available.

The educational objectives are to provide each graduate with:
1. Engineering Competence — Graduates are competent and engaged professionals in their field.
2. Continuous Learning Skills — Graduates continue developing professionally.
3. Professional Skills — Graduates demonstrate teamwork and leadership skills, and are contributors in their profession.
4. Societal Awareness — Graduates recognize the societal, ethical, and global impacts of their work.

Bachelor of Science in Electrical Engineering or Computer Engineering

Special Admission Requirements.
Students must have adequate preparation in mathematics and chemistry to complete the freshman year in two semesters.

Math
All new students must take a math placement exam. Students with no high school trigonometry or low placement score should take MA 15900.

Chemistry
Students without one year of high school chemistry with an average grade of C or better should take CHM 10000 prior to CHM 11500.

Requirements common for Bachelor of Science in Computer Engineering or Electrical Engineering

1. English and Communication
ENGL 10400 English Composition I
COM 11400 Fundamentals of Speech
COM/ENGL 30700 Written and Oral Communication for Engineers

2. Science and Mathematics
CHM 11500 General Chemistry
PHYS 15200 Mechanics
PHYS 26100 Electricity Optics
MA 15900 Calculus and Analytic Geometry I
MA 16400 Calculus and Analytic Geometry II
MA 26100 Multivariate Calculus
MA 26400 Differential Equations
MA 26500 Linear Algebra

3. Humanities and Social Sciences (9 credits)
PHIL 12200 Ethics for the Professions (3 cr) which meets the General Education requirement for Humanities
One course (3 credits) that meets the General Education requirement for Social Sciences
The balance (3 credits) is selected by the student and advisor to give the student an opportunity to explore areas within the humanities and social sciences. Credit for ECON 21000 is not allowed. Subject areas not acceptable are skills courses such as writing and speaking, accounting, industrial management, personal finance, ROTC, and personnel administration. Credit is not allowed for a student’s native language.

Bachelor of Science in Computer Engineering
(122 CREDITS) EAC OF ABET ACCREDITED
Requirements common for Bachelor of Science in Computer Engineering or Electrical Engineering plus:

1. Electrical and Computer Engineering
ECE 25100 Object Oriented Programming
ECE 37100 Computer Organization & Design

2. Computer Science
CS 27500 Data Structures
CS 30900 Discrete Mathematical Structures

3. Computer Engineering Electives
Three courses from a list approved by the Engineering Undergraduate Committee.*

4. Technical Elective
One course in Engineering (any), Science, Mathematics, Computer Science, Statistics, or Management from a list approved by the Engineering Undergraduate Committee.*

Bachelor of Science in Electrical Engineering
(123 CREDITS) EAC OF ABET ACCREDITED
Requirements common for Bachelor of Science in Computer Engineering or Electrical Engineering plus:

1. Electrical and Computer Engineering
ECE 33500 Electronics-Systems
ECE 38400 Linear Control Systems

2. Electrical and Computer Engineering Electives
Three courses from a list approved by the Engineering Undergraduate Committee.*

3. Engineering Elective
Selected from ME 27100 Basic Mechanics I (Statics), ME 30500 General Thermodynamics I, or MSE 20000 Materials Science

4. Engineering/Science Elective
One Engineering (any) or Science course from a list approved by the Engineering Undergraduate Committee.*

5. Technical Elective
One course in Engineering (any), Science, Mathematics, Computer Science, Statistics, or Management from a list approved by the Engineering Undergraduate Committee.*

*The list of electives is available in the Department of Electrical and Computer Engineering office (Potter 121) and at http://webp.purdue.edu/ece/undergraduate-programs/plans-of-study/
Bachelor of Science in Electrical Engineering with a concentration in Bioinstrumentation
(124 CREDITS) EAC of ABET ACCREDITED
Requirements common for the Bachelor of Science in Electrical Engineering with the six electives (three Electrical and Computer Engineering, Engineering, Engineering/Science, and Technical) replaced by:
ME 27100 Basic Mechanics I: Statics
ECE 47600 Digital Signal Processing
ECE 50600 Biomedical Instrumentation Design
ECE 50700 Introduction to Biomedical Imaging
One of the following courses:
ECE 55400 Electronic Instrumentation and Control Circuits Analysis
ECE 56900 Introduction to Robotic Systems
ECE 59500 Digital Image Processing
One of the following courses:
BIOL 10100 Introductory Biology
BIOL 21300 Human Anatomy and Physiology I

Bachelor of Science in Electrical Engineering with a concentration in Mechatronics
(123 CREDITS) EAC of ABET ACCREDITED
Requirements common for the Bachelor of Science in Electrical Engineering with the six electives (three Electrical and Computer Engineering, Engineering, Engineering/Science, and Technical) replaced by:
ME 27100 Basic Mechanics I: Statics
ME 27500 Basic Mechanics II: Dynamics
ME 32500 Dynamics of Physical Systems
ECE 38000 Computers in Engineering Analysis
ECE 42600 Electric Drives
Elective, select one from:
ECE 45100 Industrial Automation
ECE 48300 Digital Control Sys. – Analysis & Design
ME 30500 General Thermodynamics I
ME 32000 Kinematic Analysis and Design

Bachelor of Science in Electrical Engineering with a concentration in Power and Energy Systems
(121 CREDITS) EAC of ABET ACCREDITED
Requirements common for the Bachelor of Science in Electrical Engineering with the six electives (three Electrical and Computer Engineering, Engineering, Engineering/Science, and Technical) replaced by:
ME 27100 Basic Mechanics I: Statics
ME 27500 Basic Mechanics II: Dynamics
ME 32500 Dynamics of Physical Systems
ECE 38000 Computers in Engineering Analysis
ECE 42600 Electric Drives
Elective Course (3 credits) Choose one of the following:
ECE 42600 Electric Drives
ME 32000 General Thermodynamics II

Minor in Electrical and Computer Engineering
(17 CREDITS)
Required Courses (14 credits)
ECE 20100 Linear Circuit Analysis I and ECE 20700 Electronic Measurement Techniques (4 credits)

Bachelor of Science in Engineering, Interdisciplinary Engineering Option
(120 CREDITS)
The Interdisciplinary Engineering Option provides a maximum degree of flexibility for those students who want this flexibility and do not require an ABET-accredited degree. The degree features a strong, broad engineering problem-solving base in both electrical and mechanical engineering with the ability to take the large number of technical electives toward each student’s specific interests and/or goals. It is particularly appropriate for those students planning to pursue post-graduate education in law, management, medicine, pharmacy, etc.

1. English and Communication (9 credits)
ENGL 10400 English Composition I
COM 11400 Fundamentals of Speech
COM/ENGL 30700 Written and Oral Communication for Engineers

2. Science and Mathematics (32 credits)
CHM 11500 General Chemistry
PHYS 15200 Mechanics
PHYS 26100 Electricity Optics
MA 16000 Calculus and Analytic Geometry I
MA 16400 Calculus and Analytic Geometry II
MA 26100 Multivariate Calculus
MA 26400 Differential Equations
MA 26500 Linear Algebra

3. Humanities and Social Sciences (9 credits)
PHIL 32400 Ethics for the Professions (3 cr.) which meets the General Education requirement for Humanities

4. General Engineering (26 credits)
ECE 15200 Programming for Engineers
ENGR 15100 Software Tools for Engineers
ENGR 18600 Engineering Freshman Seminar
ENGR 19000 Elementary Engineering Design
ME 11500 Engineering Drawing I
ECE 30100/ME 32500 Signals and Systems or Dynamics of Mechanical Systems
ECE 31200/ECE 31100 Engineering Economics and Project Management
ECE 38400/ECE 48500/CE 48900 Control Systems
ECE/ECE/ME 42900/CE 49000 Senior Engineering Design I
ECE/ECE/ME 43900/CE 49000 Senior Engineering Design II

5. Electrical and Computer Engineering (11 credits)
ECE 20100 Linear Circuit Analysis I
ECE 20700 Linear Circuit Analysis II
ECE 20700 Electronic Measurement Techniques
ECE 21800 Linear Circuits Lab II
ECE 23300 Microcomputers in Engineering

6. Mechanical Engineering (9 credits)
   CE 27101/ME 27100 Basic Mechanics I: Statics
   CE/ME 27500 Basic Mechanics II: Dynamics
   ME 30900 General Thermodynamics I

7. Materials Science (3 credits)
   MSE 20000 Materials Science

8. Technical Electives (21 credits)
   Technical electives are selected by students in consultation with their advisor.

Master of Science in Engineering
(30 CREDITS)

Purdue University Calumet offers graduate programs in Electrical and Computer Engineering, Mechanical Engineering, and Interdisciplinary Engineering leading to a Master of Science in Engineering degree. Courses are available in computer, electrical, mechanical, civil, metallurgical, and industrial engineering. The program has the flexibility to allow students to elect courses in one or several engineering disciplines.

Assistantships
Teaching and research assistantships are available to qualified graduate students.

Special Admission Requirements
1. Bachelor’s degree in Engineering from an institution accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). Other students having adequate mathematical preparation with bachelor’s degrees in non-engineering fields may be admitted on a conditional basis — they must complete 18-27 undergraduate credits in the engineering field of their choice with a GPA of 3.0/4.0 or better before being considered for full admission to the Master of Science in Engineering program.
2. Undergraduate GPA of 3.0/4.0 or better. Conditional admission may be granted to students with lower GPAs, with the stipulation that they must receive a grade of B or better for the first 9 credits of graduate work. Some students may be advised to complete prerequisite or additional courses which will not count toward their degree.
3. Post-baccalaureate admission. Students may enroll to meet individual needs for continuing education rather than for pursuing a degree. Enrollment as a post-baccalaureate student does not imply later approval for degree-seeking status, nor does it guarantee acceptance toward a degree of credit taken as a post-baccalaureate student.

Degree Requirements
1. Non-thesis Option: 30 semester credits.
2. Thesis Option: 30 semester credits, with 9 credits for the thesis research.
3. GPA of 3.0/4.0 for all courses on the approved plan of study. Some advisory committees may require grades higher than C in specific courses.
4. An advisory committee with at least three members and at least one member to represent a related engineering area. Students will consult with a major advisor assigned upon admission.
5. A plan of study established in consultation with the major advisor or professor and reviewed by members of the advisory committee, and the chair of the Graduate Committee.

Credit for Pre-Admission Course Work: a maximum of 12 semester credits of courses with grades of B or better and satisfying course requirements on the approved plan of study may be used, subject to approval of the student’s advisory committee. This limit applies to all pre-admission course work, including post-baccalaureate credit at Purdue, undergraduate excess credit, and transfer credit.

Time limit on reentry: A new plan of study must be approved if a student is inactive in the program for five years, usually excluding courses previously taken.

Graduate Certificate in Engineering Project Management

The Graduate Certificate in Engineering Project Management can be earned by completing four courses from the following graduate courses:

- Advanced Engineering Project Management (Required)
- Advanced Engineering Economics (Required)
- Quality Control
- Industrial Applications of Statistics
- Systems Engineering

All course taken for the certificate can be used for the Master of Science in Engineering degree if admitted to that program. Admission to the certificate program requires a Bachelor’s degree in Engineering or approval of the Engineering Graduate Coordinator.
Department of Mathematics, Computer Science, and Statistics

Catherine M. Murphy, Department Head. Faculty: G. Aryal; R. D. Bechtel (Emeritus); Y. C. Chen (Emeritus); T. S. Chihara (Emeritus); J. J. Coffey; A. Elmendorf; J. Gregg; B. L. Jahn-Schaffrath (Emeritus); N. L. Johnson; R. L. Kraft; W. C. Lordan (Emeritus); J. P. McLaughlin (Emeritus); R. R. Mekovskiy; C. Murphy; W. Ruan; Nicolea Tafulea; Nicoleta Tafulea; D. J. Troy (Emeritus); P. Turbek; D. Underwood-Gregg; M. Weinhold; E. B. Yackel (Emeritus); J. Yackel (Emeritus); S. Yang; R. L. Yates (Emeritus); R. Zhang; H. Zhao; N. Elias (Visiting Assistant Professor)

A careers-for-today-and-the-future approach provides the framework for programs in the department of mathematics, computer science, and statistics. All programs are based on an understanding of mathematics as one of humankind’s most impressive intellectual achievements. Mathematics is a balance of art and science which enriches other areas of human endeavor and draws from these areas some seeds of its own, thus continuing growth. Computer Science and Statistics, with roots deep in the traditions of mathematics, are exciting, rapidly expanding fields which provide the basis for many contemporary applications which affect us daily in such areas as commerce, industry, medicine, and environmental issues. Mathematics education focuses on deep conceptual understanding of mathematical content knowledge and on the psychological and sociological aspects of mathematics learning. Within each degree and option, majors choose a blend of mathematics, computer science, and statistics appropriate to building strong foundations for professional development.

Undergraduate majors in the department select from three options of study to meet a variety of interests and goals. The department also offers all students at Purdue Calumet instruction in the areas of mathematical sciences they will need in their chosen fields of study.

The Master of Science in Mathematics is a strong program in mathematics for students employed in business, industry, or government as well as those students planning to teach at two-year colleges or to pursue a Ph.D. degree in mathematics or mathematics education.

The Master of Science in Computer Science is the program that prepares students for rewarding careers in computer science by laying the foundations for developing expertise in algorithm analysis and implementing sophisticated practical applications.

Programs

Two (2) Bachelor of Science degrees are offered through the department. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

- Bachelor of Science in Mathematics
  - Optional areas of concentration:
    - Core Mathematics
    - Mathematics Education
  - Bachelor of Science in Computer Science

Bachelor of Science Programs

All majors must satisfy the following general degree requirements. Mathematics courses below MA 163 do not count toward graduation. All required Mathematics, Computer Science, and Statistics courses must be passed with a grade of C- or better. All students must successfully complete two (2) courses designated as Experiential Learning (ExL). General Education courses must be chosen from a list of courses approved by the University Senate. Some general education and experiential learning requirements are met with courses required by the major.

Bachelor of Science, Mathematics

(120 CREDITS)

Core Mathematics provides preparation for graduate study in mathematics, employment in business, industry, or government. It also prepares one for advanced work in other fields where strong mathematical backgrounds are valuable—for example, science, finance, educational research, psychology, law, and medicine.

1. Required Mathematics, Computer Science, and Statistics Courses (45 credits)

- MA 10000 An Introduction to Mathematical Sciences (1 cr.)
- MA 16300 Integrated Calculus and Analytic Geometry I (5 cr.)
- MA 16400 Integrated Calculus and Analytic Geometry II (5 cr.)
- MA 26100 Multivariate Calculus (4 cr.)
- MA 26400 Differential Equations
- MA 26500 Linear Algebra
- MA 31500 Introduction to Abstract Mathematics
- MA 33000 Concepts in Geometry
- MA 34800 Discrete Mathematics
- MA 44600 Introduction to Real Analysis
- MA 45300 Elements of Algebra
- MA 47200 Introduction to Applied Mathematics
- CS 20600 Computer Algebra and Programming
- STAT 34500 Statistics

2. Additional Program Requirements (28-33 credits)

A. English Composition (6 credits)
   - ENGL 10400
   - ENGL 10500

B. Communications (3 credits)
   - COM 11400

C. Science (9-12 credits)
   - A minimum of 3 approved science courses, two of which have laboratory components. One of the science courses with laboratory component must be chosen from the University Senate’s list of approved General Education courses.

D. Humanities, Social Science, Wellness, and Technology in Society (10-12 credits)
   - Four approved general education courses, one from each of the following areas.
   - i) Humanities
   - ii) Social Science
   - iii) Wellness Education
   - iv) Technology in Society

3. Selected Area or Minor
   - A minimum of 18 credits including at least three courses beyond the introductory level.

4. Experiential Learning
   - Two courses designated as ExL

5. Approved Electives
   - As needed to meet 120 credit hours required for graduation.
Concentration in Mathematics Education  
(120 CREDITS)

Mathematics Education provides the mathematical preparation necessary for teaching secondary school mathematics in Indiana. Requirements for teacher certification vary from state to state. Requirements for other states may be obtained by writing to the Certification Office, Department of Teacher Education, in the capital city of the state of interest. Graduation in this concentration is open only to those who fulfill the academic requirements for licensure to teach mathematics in Indiana’s secondary schools.

1. Required Mathematics, Computer Science, and Statistics Courses (45 credits)
   - MA 10000 An Introduction to Mathematical Sciences (1 cr.)
   - MA 16300 Integrated Calculus and Analytic Geometry I (5 cr.)
   - MA 16400 Integrated Calculus and Analytic Geometry II (5 cr.)
   - MA 26100 Multivariate Calculus (4 cr.)
   - MA 26400 Differential Equations
   - MA 26500 Linear Algebra
   - MA 31500 Introduction to Abstract Mathematics
   - MA 33000 Concepts in Geometry
   - MA 34800 Discrete Mathematics
   - MA 46600 Introduction to Real Analysis
   - MA 45300 Elements of Algebra
   - MA 47200 Applied Mathematics
   - CS 20600 Computer Algebra and Programming
   - STAT 34500 Statistics

2. Additional Program Requirements (28-33 credits)
   - A. English Composition (6 credits)
     ENGL 10400 and ENGL 10500
   - B. Communications (3 credits)
     COM 11400
   - C. Science (9-12 credits)
     Three approved science courses, two of which must have a laboratory component. One of the science courses with a laboratory component must be chosen from the University Senate’s list of approved General Education courses.
   - D. Humanities, Social Science, Wellness, and Technology in Society (10-12 credits)
     Four approved general education courses, one from each of the following areas:
     i) Humanities
     ii) Social Science
     iii) Wellness Education
     iv) Technology in Society

3. Professional Education Courses (36 credits)
   - EDFA 20000 History and Philosophy of Education
   - EDPS 22000 Psychology of Learning
   - EDPS 26000 Introduction to Special Education
   - EDCI 30900 Reading in Middle and Secondary Schools
   - EDCI 35500 Teaching and Learning in the K-12 Classroom
   - EDCI 36600 Use of Assessment in K-12 Classroom
   - EDCI 37000 Teaching Students with Diverse Learning Needs
   - EDCI 34400 Mathematics Teaching in Middle School, Jr. High, High School
   - EDCI 49702 Professional Semester (12 credits)

4. Experiential Learning
   Requirements met by successful completion of EDCI 35500 and EDPS 37000.

5. Approved Electives
   As needed to meet 120 credit hours for graduation.

Bachelor of Science, Computer Science  
(120 CREDITS)

Computer Science is a young and rapidly developing field. As a result, the curriculum must be revised frequently to keep it up to date. Please check with the department for the latest information. The computer science program prepares students for a wide variety of professional opportunities in business, industry, and government where the computer scientist is involved in applying, designing, and implementing application software, programming languages, computer graphics systems, computer operating systems, internet distributed computing systems, new computer algorithms. This program also prepares students for graduate study in computer science.

1. Required Mathematics, Computer Science, and Statistics Courses (43 credits)
   - CS 10000 An Introduction to Computer Science (1 cr.)
   - CS 12300 Programming I: Java
   - CS 12400 Programming II: C++
   - CS 22300 Computer Architecture and Assembly Language
   - CS 27500 Data Structures
   - CS 30200 Operating Systems
   - CS 30900 Discrete Mathematical Structures
   - CS 31600 Programming Languages
   - CS 33200 Algorithms
   - CS 40400 Distributed Systems
   - CS 41000 Automata and Computability
   - CS 41600 Software Engineering
   - CS 42000 Senior Design Project
   - CS 44200 Database Systems
   - CS 45500 Computer Graphics

2. Additional Program Requirements (31-36 credits)
   - A. English Composition (6 credits)
     ENGL 10400 and ENGL 10500
   - B. Communications (3 credits)
     COM 11400
   - C. Science (9-12 credits)
     A minimum of 3 approved science courses, two of which have laboratory components. One of the science courses with a lab component must be chosen from the University Senate’s list of approved General Education courses.
   - D. Humanities, Social Science, Wellness, Technology in Society, and Computer Utilization (13-15 credits)
     Five approved general education courses, one from each of the following areas:
     i) Humanities
     ii) Social Science
     iii) Wellness Education
     iv) Technology in Society
     v) Computer Utilization (CS 20600 recommended)

3. Required Mathematics and Statistics Courses (20 credits)
   - MA 16300 Integrated Calculus and Analytic Geometry I (5 credits)
   - MA 16400 Integrated Calculus and Analytic Geometry II (5 credits)
   - MA 26100 Multivariate Calculus (4 credits)
   - MA 26500 Linear Algebra
   - STAT 34500 Statistics

   NOTE: MA 26400, Differential Equations, is strongly recommended for those who plan to attend graduate school or pursue careers in scientific computer science.

4. Experiential Learning
   Two designated EXL courses, one of which is satisfied by successful completion of CS 42000.

5. Approved Electives
   As needed to meet 120 credit hours for graduation.

MCSS Course Repetition Policy
Effective: Fall 2010

DEFINITIONS:
1. This policy will apply to students who are majors in any MCSS undergraduate program in Fall 2010 or later.
2. The courses to which this policy applies are: CS 20600 and all courses numbered 30000 and above offered by the department.
3. An attempt at a course means that the course appears on the student’s record with the registrar, including with the grade of “W.” Attempts will be counted beginning in Fall 2010.

POLICY
1. A student may attempt any one of these courses a maximum of three times; the third attempt must result in a “C” or better.
2. Once a student has attempted one of these courses three times, the student may attempt any other of these courses at most twice; the second attempt must result in a “C” or better.
3. If a student has attempted four of these courses more than once, the student must pass remaining required courses in one attempt with a “C” or better.
4. Any exceptions to this policy must be granted in writing by the Department Head on the advice of the student’s advisor.

Premedical and Healthcare Professional Preparation
The necessary prerequisite courses required for admission to medical and healthcare professional schools are accommodated by majors within the department. Specific recommendations are made based on the discipline (medicine, dentistry, veterinary, optometry, podiatry, physician assistant, physical therapy, pharmacy, and occupational therapy). Our preprofessional advisors stay abreast of the specific requirements for professional schools in Indiana, Illinois, and other neighboring states. For more details, students are encouraged to visit our website at web. purduecal.edu/ems/pre-health-recruiting/ or contact a preprofessional advisor.

Minors offered by the Department of Mathematics, Computer Science, and Statistics
The department offers two minors in mathematics, a minor in computer science, and a minor in mathematics for pre-service elementary education majors.

Quality Requirements for Minors: For the minors in Computer Science, Mathematics, and Applied Mathematics, all courses must be passed with “C” or better.

Minor in Computer Science
(18 CREDITS)
- CS 12300 Programming I: Java
- CS 12400 Programming II: C++
- CS 22300 Computer Architecture and Assembly Language
- CS 27500 Data Structures
- CS 30200 Operating Systems
  One of the following:
  - CS 31600 Programming Languages
  - CS 33200 Algorithms
  OR
  - One 4000-level CS course.

NOTE: MA 19000 is a prerequisite for CS 22300. One of MA 16300 or MA 21900 or MA 22300 with “C-” or better is a prerequisite for CS 27500.

Minor in Mathematics
(23 CREDITS)
- MA 16300 (5 credits) Integrated Calculus and Analytic Geometry I
- MA 16400 (5 credits) Integrated Calculus and Analytic Geometry II
- MA 26100 (4 credits) Multivariate Calculus
- MA 26400 Differential Equations
- MA 26500 Linear Algebra
- One of MA 47200 Applied Mathematics or STAT 34500 Statistics.

Minor in Applied Mathematics
(23 CREDITS)
- MA 16300 (5 credits) Integrated Calculus and Analytic Geometry I
- MA 16400 (5 credits) Integrated Calculus and Analytic Geometry II
- MA 26100 (4 credits) Multivariate Calculus
- MA 26400 Differential Equations
- MA 26500 Linear Algebra
- One of MA 47200 Applied Mathematics or STAT 34500 Statistics.

Minor in Mathematics for Preservice Elementary Education Majors
(18 CREDITS)
- MA 13700 Mathematics for Elementary Teachers I
- MA 13800 Mathematics for Elementary Teachers II
- MA 13900 Mathematics for Elementary Teachers III

Quality Requirement: All of MA 13700, MA 13800, and MA 13900 must be passed with “B” or better. All of MA 23700, MA 23800, and MA 23900 must be passed with “C-” or better.

- MA 23700 Advanced Topics in Mathematics for Elementary School Teachers I
- MA 23800 Advanced Topics in Mathematics for Elementary School Teachers II
- MA 23900 Advanced Topics in Mathematics for Elementary School Teachers III

GRADUATE PROGRAMS
Master of Science in Mathematics
(33 CREDITS)

Description
The Master of Science in Mathematics is designed to provide students with a course of study that will enhance their knowledge of the fundamental areas of the mathematical sciences. The elective courses allow each student to add the emphasis which most fits with that student’s academic and career plans.

Special Program Requirements
1. No more than six credits of coursework with grade of “C.”
2. “B” average must be maintained.
3. Plan of Study submitted to Student’s Advisory Committee before the end of nine semester credits; must be approved by the Graduate School before the student registers for the semester in which the degree is to be awarded.

Degree Requirements
1. Five Core Courses
- MA 52500 Intro. Complex Analysis
- MA 54000 Analysis I
- MA 54100 Analysis II
- MA 55300 Intro. Abstract Algebra
- MA 55400 Linear Algebra

2. Statistics
One approved course

3. Approved Electives (5 courses)
Up to six credits may be chosen from approved courses in other departments.

Transfer of credit: No more than three courses accepted from other institutions.
Master of Science in Computer Science
(30 CREDITS)

Description
The Master of Science in Computer Science integrates fundamental theoretical concepts with sophisticated practical applications. Graduates will be prepared for employment in the field, and for those students who are so interested, for further studies in computer science. Students must have the necessary prerequisite knowledge to undertake the study of advanced computer science topics.

Program Requirements
1. No more than six credits of coursework with a grade of “C.” “B” average must be maintained.
2. All courses taken as a temporary student must post grades of “A” or “B.”
3. Plan of Study submitted to Student Advisory Committee before the end of nine semester credits; must be approved by the Graduate School before the student registers for the semester in which the degree is to be awarded.
4. No more than three courses accepted from other institutions may be used on a Plan of Study. Please refer to the section on graduate study for other regulations governing graduate study at Purdue Calumet.

Degree Requirements:
Core Courses (9 credits)
-- Compiling and Programming Systems
-- Operating Systems
-- Algorithm Design, Analysis, and Implementation

Electives (21 credits)
7 approved courses.

Department Head: Catherine M. Murphy
e-mail: cmmurphy@purduecal.edu
Undergraduate Advisor: Nancy Johnson
e-mail: johnsonn@purduecal.edu
Graduate Advisor M.S. in Mathematics: Anthony Elmendorf
e-mail: aelmendo@purduecal.edu
Graduate Advisor M.S. in Computer Science: Hairong Zhao
e-mail: hairong@purduecal.edu and Ruijian Zhang e-mail: zhang@purduecal.edu
Department of Mechanical Engineering

G. A. Nnanma, Head. Faculty: H.A. Abramowitz; E.H. Buyco (Emeritus); Chien-Chung Chen; Hansung Kim; Y.B. Kin (Emeritus); M. Mojtahe'd; B.K. Pai; R. Rescot; C. Viswanathan; X. Wang; C. Q. Zhou;

Civil and mechanical engineers help to improve the quality of life, the productivity of industry and individuals, and the standard of living for everyone. Engineers are problem-solvers, using science, mathematics, and technology in their solutions. Most solutions involve thinking, calculating, innovating, building, and teamwork with other professionals. Graduates from the bachelor's or masters programs may choose a career involving design, development, research, manufacturing, testing or a combination of these. Civil and mechanical engineering graduates are in great demand, and starting salaries are excellent.

The undergraduate curriculum leads to a Bachelor of Science in Civil Engineering, Mechanical Engineering, or Mechanical Engineering with a concentration in Mechatronics. The first semester courses are the same for all engineering students. Then, students specialize in Civil or Mechanical Engineering, both accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). An Interdisciplinary Engineering Option allows students to design their own programs to meet their career needs, such as pre-law or pre-medicine. The flexibility of the engineering program allows students interested in other engineering disciplines not offered at Purdue Calumet, such as aerospace, chemical, etc., to complete one to two years of study before transferring to another university.

Purdue Calumet offers graduate curriculum programs in mechanical engineering, interdisciplinary engineering, and electrical and computer engineering leading to a Master of Science in Engineering degree, and/or a Graduate Certificate in Engineering Project Management. Graduates of engineering or related programs are also welcome to take individual courses for professional development and technical currency without pursuing a graduate degree.

Reasons to major in Civil or Mechanical Engineering at Purdue University Calumet. Engineering at Purdue Calumet provides an opportunity to earn an internationally-respected Purdue Engineering Degree from a program with excellent job placement and high starting salaries. Engineering classes are small and are taught by qualified faculty members dedicated to teaching or adjunct faculty who have many years of industrial experience. Most faculty members also engage in research, consulting, or other professional activities, and participate in professional engineering societies. Many faculty have received outstanding teaching, research, and service awards. Some of the faculty are Licensed Professional Engineers. The state of the art laboratory facilities provide a mechanism for students to gain hands-on experience that will aid their understanding of the engineering and scientific theories taught in the lectures. Incoming students are assigned to an advisor familiar with the problems and special needs of new students. After choosing a major, the student receives an experienced engineering faculty advisor. The programs prepare their graduates for life and for the engineering profession. The civil and mechanical engineering programs offer a cost-effective, quality program that was ranked among the top 50 of the Best Undergraduate Engineering Programs at Non-Doctoral Schools in the 2013 US News and World Report.

Senior Engineering Design Projects. A capstone, one-year project for all seniors provides the opportunity to work in multi-disciplinary teams to pursue an engineering idea from conception to design, fabrication, and testing. The senior projects provide a transition from university study to the real world of engineering work, building on Purdue Calumet's strength in experiential education. Many of the project ideas come from local industry. Special equipment available for senior design projects includes personal computers with an array of engineering software packages such as data acquisition capability, rapid prototyping and computer-aided design (CAD), computational fluid dynamics (CFD), finite element analysis (FEA), and specialized civil engineering software. Also available are fatigue and strength testing equipment including tensile, creep, and impact testing machines; heat-treating equipment; metrology equipment; optical and scanning electron microscopes; a wind tunnel; robotics; nanofluids systems; a visualization and simulation lab; a well-equipped soils lab; a survey lab; a hydrology and hydraulics lab; and a complete machine shop including CNC machines.

Undergraduate Research, Professional Experience Programs, and Cooperative Education. Strong partnerships with industry and funded research provide great opportunities for undergraduates as well as graduate student research. The Professional Experience Program, internships, and other experiential learning programs provide opportunities for students to gain relevant work experience by part-time employment while attending school part-time, or by full-time employment. The Co-op program provides engineering students with the opportunity to work in the engineering profession while obtaining their degree. All provide students practical experience while earning money to pay for their education. These opportunities make the education more meaningful for students and make the students more attractive to employers when they graduate, thus improving employment opportunities.

Graduate Internship in Engineering. The Graduate Internship program allows students who have been accepted into the Master of Science in Engineering program to work part-time in the engineering profession while attending the University and working toward a degree. Students will have the opportunity to compile a portfolio of their experience.

Programs

Three (3) Bachelor of Science degrees are offered through the department. The general degree plan provides the greatest flexibility of elective course choice, while concentrations in some degrees allow students to receive in-depth education in specific areas in the discipline.

- Bachelor of Science in Civil Engineering*
- Bachelor of Science in Mechanical Engineering*
  
  Optional area of concentration:
  — Mechatronics**
- Bachelor of Science in Engineering, Interdisciplinary Engineering
- Minor in Civil Engineering
- Minor in Mechanical Engineering
- Master of Science in Engineering
- Graduate Certificate in Engineering Project Management

*Accredited by the Engineering Accreditation Commission of ABET (EAC-ABET)
**Accredited as a subset of Mechanical Engineering.
Civil and Mechanical Engineering Program

Educational Objectives

The Civil Engineering curriculum provides a broad education in the fundamentals of Civil Engineering. Students may pursue a general program or may choose to specialize in Environmental, Structural, or Transportation areas.

The Mechanical Engineering curriculum provides a broad education in the fundamentals of Mechanical Engineering. Students may pursue a general program or may choose a specialization in areas such as Thermal and Fluid Sciences, Solid Mechanics, or Mechatronics.

The educational objectives provide each graduate with:

1. Engineering Competence — Graduates are competent and engaged professionals in their field.
2. Continuous Learning Skills — Graduates continue developing professionally.
3. Professional Skills — Graduates demonstrate teamwork and leadership skills, and are contributors in their profession.
4. Societal Awareness — Graduates recognize the societal, ethical, and global impacts of their work.

Bachelor of Science in Civil Engineering

(122 CREDITS) EAC OF ABET ACCREDITED

Special Admission Requirements

Students must have adequate preparation in mathematics and chemistry to complete the freshman year in two semesters.

Math

All new students must take a math placement exam.

Students with no high school trigonometry or low placement score should take MA 15900.

Chemistry

Students without one year of high school chemistry with an average grade of 'C' or better should take CHM 10000 prior to CHM 11500.

1. English and Communication
   - ENGL 10400 English Composition I
   - COM 11400 Fundamentals of Speech
   - COM/ENGL 30700 Written and Oral Communication for Engineers

2. Science and Mathematics
   - CHM 11500 General Chemistry
   - PHYS 15200 Mechanics
   - PHYS 26100 Electricity Optics
   - MA 16300 Calculus and Analytic Geometry I
   - MA 16400 Calculus and Analytic Geometry II
   - MA 26100 Multivariate Calculus
   - MA 26400 Differential Equations
   - MA 26500 Linear Algebra
   - STAT 34500 Statistics
   - Science Elective*

* The Science Elective has to be an in an area of science other than PHYS or CHM, and consistent with the program educational objectives. The list of science electives is available in the Department of Mechanical Engineering office (Powers 211) and at www.purduecal.edu/me/

3. Humanities and Social Sciences (9 credits)
   - PHIL 32400 Ethics for the Professions (3 cr.)
   - ENGR 15100 Software Tools for Engineers
   - ENGR 18600 Engineering Freshman Seminar
   - ENGR 19000 Elementary Engineering Design
   - CE 11500 Engineering Drawing I
   - CE 11600 Engineering Drawing II
   - CE 42900 Senior Engineering Design I
   - CE 43900 Senior Engineering Design II

5. Civil Engineering

- CE 20100 Surveying & G.I.S
- CE 27400 Mechanics of Materials
- CE 27401 Mechanics of Materials Lab.
- CE 27500 Basic Mechanics II: Dynamics
- CE 30800 Construction Engineering Management
- CE 31200 Fluid Mechanics
- CE 32300 Soil Engineering
- CE 33400 Structural Analysis
- CE 34200 Engineering Hydrology and Hydraulics
- CE 35100 Intro to Transportation Engineering
- CE 35400 Intro to Environmental Engineering
- CE 47100 Reinforced Concrete Design

Bachelor of Science in Mechanical Engineering

(122 CREDITS) EAC OF ABET ACCREDITED

Special Admission Requirements

Students must have adequate preparation in mathematics and chemistry to complete the freshman year in two semesters.

Math

All new students must take a math placement exam.

Students with no high school trigonometry or low placement score should take MA 15900.

Chemistry

Students without one year of high school chemistry with an average grade of 'C' or better should take CHM 10000 prior to CHM 11500.

1. English and Communication
   - ENGL 10400 English Composition I
   - COM 11400 Fundamentals of Speech
   - COM/ENGL 30700 Written and Oral Communication for Engineers

2. Science and Mathematics
   - CHM 11500 General Chemistry
   - PHYS 15200 Mechanics
   - PHYS 26100 Electricity Optics
   - MA 16300 Calculus and Analytic Geometry I
   - MA 16400 Calculus and Analytic Geometry II
   - MA 26100 Multivariate Calculus
   - MA 26400 Differential Equations
   - MA 26500 Linear Algebra

3. Humanities and Social Sciences (9 credits)
   - PHIL 32400 Ethics for the Professions (3 cr.)
   - ENGR 15100 Software Tools for Engineers
   - ENGR 18600 Engineering Freshman Seminar
   - ENGR 19000 Elementary Engineering Design
   - CE 11500 Engineering Drawing I
   - CE 11600 Engineering Drawing II
   - CE 42900 Senior Engineering Design I
   - CE 43900 Senior Engineering Design II

4. General Engineering
   - ENGR 15100 Software Tools for Engineers
   - ENGR 18600 Engineering Freshman Seminar
   - ENGR 19000 Elementary Engineering Design
   - CE 11500 Engineering Drawing I
   - CE 11600 Engineering Drawing II
   - CE 42900 Senior Engineering Design I
   - CE 43900 Senior Engineering Design II

6. Mechanical Engineering

- ME 30500 General Therodynamics I

7. Materials Science

- CE 20400 Civil Engineering Materials

8. Civil Engineering Elective*

Three courses from a list approved by the Engineering Undergraduate Committee.*

**The list of electives is available in the Department of Mechanical Engineering office (Powers 211) and at www.purduecal.edu/me/
3. Humanities and Social Sciences (9 credits)
   PHIL 3xxx  Engineering Ethics (3 cr.) which meets the
   General Education requirement for Humanities
   One course (3 credits) that meets the General Education
   requirement for Social Sciences
   The balance (3 credits) is selected by the student and advisor to give the student an opportunity to
   explore areas within the humanities and social sciences. Credit for ECON 21000 is not allowed.
   Subject areas not acceptable are skills courses such as writing and speaking, accounting, industrial
   management, personal finance, ROTC, and personnel administration. Credit is not allowed for a
   student’s native language.

4. General Engineering
   ENGR 15100  Software Tools for Engineers
   ENGR 18600  Engineering Freshman Seminar
   ENGR 19000  Elementary Engineering Design
   ME 11500  Engineering Drawing I
   ME 11600  Engineering Drawing II
   ME 31100  Engineering Economics and Project Management
   ME 42900  Senior Engineering Design I
   ME 43900  Senior Engineering Design II

5. Electrical and Computer Engineering
   ECE 20100  Programming for Engineers
   ECE 20200  Linear Circuit Analysis II
   ECE 21800  Linear Circuits Laboratory II
   ECE 23300  Microcomputers in Engineering
   ECE 38000  Computers in Engineering Analysis
   ME 48500  Linear Control Systems
   Elective, select one from:
   ECE 42600  Electric Drives
   ECE 45100  Industrial Automation
   ME 30600  General Thermodynamics II
   ME 42600  Heating and Air Conditioning Analysis and Design
   ME 40400  Introduction to Finite Element Analysis and Design
   ME 48600  Introduction to Manufacturing Engineering
   MSE 34400  Materials in Engineering

Minor in Civil Engineering
(21 CREDITS)
   Required Courses (15 credits)
   CE 27101  Basic Mechanics I: Statics (3 credits)
   CE 27500  Basic Mechanics II: Dynamics (3 credits)
   CE 27300  Mechanics of Materials (3 credits)
   ME 30500  General Thermodynamics I (3 credits)
   STAT 34500  Statistics (3 credits)

   Elective Courses (6 credits) Choose any one of the following five groups:

   Group 1:
   CE 20100  Surveying & G.I.S. (3 credits)
   CE 35100  Introduction To Transportation (3 credits)

   Group 2:
   CE 20400  Civil Engineering Materials (3 credits)
   CE 30800  Construction Engr. Mgmt. (3 credits)

   Group 3:
   CE 31200  Fluid Mechanics (3 credits)
   CE 32300  Soil Engineering (3 credits)

   Group 4:
   CE 31200  Fluid Mechanics (3 credits)
   CE 34200  Engr. Hydrology and Hydraulics (3 credits)

   Group 5:
   CE 33400  Structural Analysis (3 credits)
   CE 47100  Reinforced Concrete Design (3 credits)

   Required Prerequisite Courses: MA16300, 16400, 26100, and 26400; PHYS 15200
   and 26100.
   Grades of C- or above are required for all CE, ME, & STAT courses as well as the
   prerequisite course.

Minor in Mechanical Engineering
(22 CREDITS)
   Required Courses (15 credits)
   ME 27100  Basic Mechanics I: Statics (3 credits)
   ME 27500  Basic Mechanics II: Dynamics (3 credits)
   ME 30500  General Thermodynamics I (3 credits)
   ECE 20100  Linear Circuit Analysis I (3 credits)

   Elective Courses (7 credits) Choose any one of the following three groups:

   Group 1:
   ME 31200  Fluid Mechanics (3 credits)
   ME 31300  Fluid Mechanics Laboratory (1 credit)
   ME 30600  General Thermodynamics II (3 credits)

   Group 2:
   MSE 20000  Materials Science (3 credits)
   ME 46100  Machine Design I (4 credits)

   Group 3:
   ECE 20700  Electronic Measurement Techniques (1 credit)
   ME 32500  Dynamic of Physical Systems (3 credits)
   ME 34500  Mechanical Engineering Experimentation (3 credits)

Bachelor of Science in Mechanical Engineering with a concentration in
Mechatronics
(125 CREDITS) EAC/ABET ACCREDITED

Requirements for the Bachelor of Science in Mechanical Engineering with
ME 46100 and all engineering electives replaced by:
ECE 15200  Programming for Engineers
ECE 20200  Linear Circuit Analysis II
ECE 21800  Linear Circuits Laboratory II
ECE 23300  Microcomputers in Engineering
ECE 38000  Computers in Engineering Analysis
ME 48500  Linear Control Systems
Elective, select one from:
ECE 42600  Electric Drives
ECE 45100  Industrial Automation
ME 31200  Fluid Mechanics (3 credits)
ME 31300  Fluid Mechanics Laboratory (1 credit)
ME 30600  General Thermodynamics II (3 credits)
ME 27100  Basic Mechanics I: Statics (3 credits)
ME 27500  Basic Mechanics II: Dynamics (3 credits)
ME 27300  Mechanics of Materials (3 credits)
ME 30500  General Thermodynamics I (3 credits)
STAT 34500  Statistics (3 credits)
ECE 20100  Linear Circuit Analysis I (3 credits)
ME 31200  Fluid Mechanics (3 credits)
ME 31300  Fluid Mechanics Laboratory (1 credit)
ME 30600  General Thermodynamics II (3 credits)
ME 27100  Basic Mechanics I: Statics (3 credits)
ME 27500  Basic Mechanics II: Dynamics (3 credits)
ME 27300  Mechanics of Materials (3 credits)
ME 30500  General Thermodynamics I (3 credits)
STAT 34500  Statistics (3 credits)
Bachelor of Science in Engineering, Interdisciplinary Engineering Option (120 CREDITS)

The Interdisciplinary Engineering Option provides a maximum degree of flexibility for those students who want this flexibility and do not require an ABET-accredited degree. The degree features a strong, broad engineering problem-solving base in both electrical and mechanical engineering with the ability to tailor the large number of technical electives toward each student’s specific interests and/or goals. It is particularly appropriate for those students planning to pursue post-graduate education in law, management, medicine, pharmacy, etc.

1. English and Communication (9 credits)
   - ENGL 10400 English Composition I
   - COM 11400 Fundamentals of Speech
   - ENGL/COM 30700 Written and Oral Communication for Engineers

2. Science and Mathematics (32 credits)
   - CHM 11500 General Chemistry
   - PHYS 15200 Mechanics
   - PHYS 26100 Electricity Optics
   - MA 16300 Calculus and Analytic Geometry I
   - MA 16400 Calculus and Analytic Geometry II
   - MA 26100 Multivariate Calculus
   - MA 26200 Differential Equations
   - MA 26500 Linear Algebra

3. Humanities and Social Sciences (9 credits)
   - PHIL 32400 Ethics for the Professions (3 cr.) which meets the
     General Education requirement for Humanities

   One course (3 credits) that meets the General Education requirement for Social Sciences

   The balance (3 credits) is selected by the student and advisor to give the student an opportunity to explore areas within the humanities and social sciences. Credit for ECON 21000 is not allowed.

   Subject areas not acceptable are skills courses such as writing and speaking, accounting, industrial management, personal finance, ROTC, and personnel administration. Credit is not allowed for a student’s native language.

4. General Engineering (26 credits)
   - ECE 15200 Programming for Engineers
   - ENGR 15100 Software Tools for Engineers
   - ENGR 16600 Engineering Freshman Seminar
   - ENGR 19000 Elementary Engineering Design
   - ME 11500 Engineering Drawing I
   - ECE 30100/ME 32500 Signals and Systems or Dynamics
   - ECE 31200/ME 31100 Engineering Economics and Project Management
   - ECE 38400/ME 48500 Linear Control Systems
   - CE/ECE/ME 42900 Senior Engineering Design I
   - CE/ECE/ME 43900 Senior Engineering Design II

5. Electrical and Computer Engineering (11 credits)
   - ECE 20100 Linear Circuit Analysis I
   - ECE 20200 Linear Circuit Analysis II
   - ECE 20700 Electronic Measurement Techniques
   - ECE 21800 Linear Circuits Lab II
   - ECE 23300 Microcomputers in Engineering

6. Mechanical Engineering (9 credits)
   - CE/ECE/ME 27100 Basic Mechanics I: Statics
   - CE/ECE/ME 27500 Basic Mechanics II: Dynamics
   - ME 30500 General Thermodynamics I

7. Materials Science (3 credits)
   - MSE 20000 Materials Science

8. Technical Electives (21 credits)

   Technical electives are selected by students in consultation with their advisor.

Master of Science in Engineering (30 CREDITS)

Purdue University Calumet offers graduate programs in Electrical and Computer Engineering, Mechanical Engineering, and Interdisciplinary Engineering leading to a Master of Science in Engineering Degree. Courses are available in computer, electrical, mechanical, civil, metallurgical, and industrial engineering. The program has the flexibility to allow students to elect courses in one or several engineering disciplines.

Assistantships

Teaching and research assistantships are available to qualified graduate students.

Special Admission Requirements

1. Bachelor’s degree in Engineering from an institution accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET). Other students having adequate mathematical preparation with bachelor’s degrees in non-engineering fields may be admitted on a conditional basis—they must complete 18–27 undergraduate credits in the engineering field of their choice with a GPA of 3.0/4.0 or better before being considered for full admission to the Master of Science in Engineering program.

2. Undergraduate GPA of 3.0/4.0 or better. Conditional admission may be granted to students with lower GPAs, with the stipulation that they must receive a grade of B or better for the first 9 credits of graduate work. Some students may be advised to complete prerequisites or additional courses which will not count toward their degree.

3. Post-baccalaureate admission. Students may enroll to meet individual needs for continuing education rather than for pursuing a degree. Enrollment as a post-baccalaureate student does not imply later approval for degree-seeking status, nor does it guarantee acceptance toward a degree of credit taken as a post-baccalaureate student.

Degree Requirements

1. Non-thesis Option: 30 semester credits.
2. Thesis Option: 30 semester credits, with 9 credits for the thesis research.
3. GPA of 3.0/4.0 for all courses on the approved plan of study. Some advisory committees may require grades higher than C in specific courses.

4. An advisory committee with at least three members and at least one member to represent a related engineering area. Students will consult with a major advisor assigned upon admission.

5. A plan of study established in consultation with the major advisor or professor and reviewed by members of the advisory committee, and the chair of the Graduate Committee.

Credit for Pre-Admission Course Work: a maximum of 12 semester credits of courses with grades of B or better and satisfying course requirements on the approved plan of study may be used, subject to approval of the student’s advisory committee. This limit applies to all pre-admission course work, including post-baccalaureate credit at Purdue, undergraduate excess credit, and transfer credit.

Time limit on reentry: A new plan of study must be approved if a student is inactive in the program for five years, usually excluding courses previously taken.
Graduate Certificate in Engineering Project Management

The Graduate Certificate in Engineering Project Management can be earned by completing four courses from the following graduate courses:

- Advanced Engineering Project Management (Required)
- Advanced Engineering Economics (Required)
- Quality Control
- Industrial Applications of Statistics
- Systems Engineering

All courses taken for the certificate can be used for the Master of Science in Engineering degree if admitted to that program. Admission to the certificate program requires a Bachelor’s degree in Engineering or approval of the Engineering Graduate Coordinator.
Secondary Teaching in Science and Math Programs

The Secondary Education program in Engineering, Mathematics, and Science is designed for those interested in teaching math or science disciplines in middle schools or high schools. The College of Engineering, Mathematics, and Science partners with the College of Education to provide this program to meet both science or math major degree requirements, and instruction needed to meet teaching licensure requirements. Students may receive a secondary education teaching license in Physical Sciences, Biology, Chemistry, Physics, or Mathematics.

All students must complete the BS requirements in major. The courses listed below are applicable to secondary teaching programs in Mathematics, Biology (Life Science), Physical Science, Chemistry, and Physics. These courses may be used to meet elective and general education courses in the student’s major, where applicable. In some instances this may require more than 120 credits to complete both the degree and licensure requirements.

Gate 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Number</th>
<th>Semester Offered</th>
<th>Credit Hours</th>
<th>Min Grade</th>
<th>Ex/L Course</th>
<th>Pre/Co-Requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>History &amp; Philosophy of Education</td>
<td>EDFA 20000</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
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<tr>
<td>Introduction to Special Education</td>
<td>EDPS 260000</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>Psychology of Education</td>
<td>EDPS 22000</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
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</tbody>
</table>

Gate 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Number</th>
<th>Semester Offered</th>
<th>Credit Hours</th>
<th>Min Grade</th>
<th>Ex/L Course</th>
<th>Pre/Co-Requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Learning in the K-12 Classroom</td>
<td>EDCI 35500</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
<td>Yes</td>
<td>ENG 10400, ENG 10500, COM 11400, EDPS 22000, EDFA 20000, EDPS 26000</td>
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<tr>
<td>Use of Assessment in the Classroom</td>
<td>EDCI 36600</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
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<td>ENG 10400, ENG 10500, COM 11400, EDPS 22000, EDFA 20000, EDPS 26000</td>
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Gate 3

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<th>Course</th>
<th>Course Number</th>
<th>Semester Offered</th>
<th>Credit Hours</th>
<th>Min Grade</th>
<th>Ex/L Course</th>
<th>Pre/Co-Requisite</th>
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</thead>
<tbody>
<tr>
<td>Teaching Students with Diverse Learning Needs</td>
<td>EDPS 37000</td>
<td>SP, SUM</td>
<td>3</td>
<td>C</td>
<td>Yes</td>
<td>EDCI 35500</td>
</tr>
<tr>
<td>Reading in Middle and Secondary Schools</td>
<td>EDCI 30900</td>
<td>FA, SP</td>
<td>3</td>
<td>C</td>
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<td>EDCI 35500</td>
</tr>
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</table>

One of the following, depending upon the student’s major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Number</th>
<th>Semester Offered</th>
<th>Credit Hours</th>
<th>Min Grade</th>
<th>Ex/L Course</th>
<th>Pre/Co-Requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Teaching in Middle School, Jr High, High School</td>
<td>EDCI 34600</td>
<td>FA</td>
<td>3</td>
<td>C</td>
<td>Yes</td>
<td>EDCI 35500</td>
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<tr>
<td>Strategies of Mathematics Instruction in Senior High, Junior &amp; Middle School</td>
<td>EDCI 34400</td>
<td>FA</td>
<td>3</td>
<td>C</td>
<td>Yes</td>
<td>EDCI 35500</td>
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Gate 4

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<th>Course</th>
<th>Course Number</th>
<th>Semester Offered</th>
<th>Credit Hours</th>
<th>Min Grade</th>
<th>Ex/L Course</th>
<th>Pre/Co-Requisite</th>
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<tbody>
<tr>
<td>Student Teaching in the Secondary Classroom</td>
<td>EDCI 49700</td>
<td>FA, SP</td>
<td>12</td>
<td>P</td>
<td>Yes</td>
<td>EDCI 34600, EDPS 37000</td>
</tr>
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</table>

Additional Information and Guidelines

Admission to Gate 2 courses (EDCI 35500) requires application screening by Department of Teacher Preparation Advisor.
Admission to Gate 3 and beyond requires Admission to Teacher Preparation Program and passing of state licensure exams. Courses marked with (f) require field observations.
Students may not receive more than 2 C’s in professional education courses.
Pre-Medical and Healthcare Professions Gateway

The Pre-Medical and Healthcare Professions Gateway provides students with the guidance to obtain the foundation of science and general education courses in preparation for professional programs in medical and healthcare fields. Students explore pathways leading to their desired career goal, and individual advising assists students in deciding on the path best for them. Preparation for admission to medical or healthcare professional schools does not require specific majors. The necessary prerequisite courses, which vary for each profession, can be accommodated within many of the majors and concentrations on campus.

Medical sciences include allopathic and osteopathic medicine, dentistry, veterinary medicine, podiatry, and optometry. Additional healthcare professions include pharmacy, physical therapy, occupational therapy, and public health. Students should indicate an interest in one of these careers, or undecided pre-health, in order to ensure assignment of a dedicated advisor.

The undecided pre-health program provides an opportunity for students to learn about the University and its programs but does not offer a degree itself. All students in the undecided program must move to a degree-granting program before the end of their second year at the University.

For more information about Pre-Medical and Healthcare Professional Gateway contact the Office of the Dean (EMS@purduecal.edu) to begin planning your path to success.

The courses needed for admission to professional schools can be part of a major's requirements, or counted as electives. Courses required or recommended by professional schools may include:

- ANSC 22100 Principles of Animal Nutrition
- BIOL 10100 Introductory Biology (1)
- BIOL 10200 Introductory Biology (2)
- BIOL 35700 Introductory Animal Physiology
- BIOL 21300 Human Anatomy and Physiology I
- BIOL 21400 Human Anatomy and Physiology II
- BIOL 22100 or 31600 Introduction to/Basic Microbiology
- BIOL 56100 Immunology
- BIOL 24300 Introductory Cell Biology
- BIOL 24400 Genetics
- BIOL 50700 Molecular Biology
- CHM 11500 General Chemistry (1)
- CHM 11600 General Chemistry (2)
- CHM 25500 Organic Chemistry (1)
- CHM 25501 Organic Chemistry Lab (1)
- CHM 25600 Organic Chemistry (2)
- CHM 25601 Organic Chemistry Lab (2)
- CHM 33300 Biochemistry
- PHYS 22000 General Physics I
- PHYS 22100 General Physics II
- MA15300 Algebra and Trigonometry I
- MA 16031 Calculus I for Life Sciences
- MA 16032 Calculus II for Life Sciences
- STAT 30100 Elementary Statistics
- STAT 33001 Biostatistics
- ENGL 10400 English Composition I
- ENGL 10500 English Composition II
- COM 11400 Fund. Speech Communication
- SOC 10000 Introduction to Sociology
- PSY 12000 Elementary Psychology
- PSY 35000 Abnormal Psychology
- CDFS 21001 Introduction to Human Development
COLLEGE OF
LIBERAL ARTS
AND
SOCIAL SCIENCES
The College of Liberal Arts and Social Sciences (LASS) houses the following departments:

- **Behavioral Sciences** (Anne B. Edwards, head; 219/989-2384, Porter Hall, Room 213)
- **Communication and Creative Arts** (Thomas Roach, head; 219/989-2393, Porter Hall, Room 118)
- **English and Philosophy** (Daniel Punday, head; 219/989-2261, Classroom Office Bldg., Room 217)
- **Foreign Languages and Literatures** (Luisa Garcia-Verdugo, head; 219/989-2632, Porter Hall, Room 209)
- **History and Political Science** (Paul McGrath, head; 219/989-2347, Classroom Office Bldg., Room 215)

### Bachelor’s Degree Programs

- Communication
  - Advertising
  - Broadcasting
  - International Communication
  - Journalism
  - Media Studies
  - Public Relations
  - Visual Communication
- English
  - Literature
  - Professional Writing
  - Teaching
- French
- French-International Studies
- French Teaching
- Spanish
- Spanish Teaching
  - Heritage
  - Non-Heritage
- History (and Pre-Law)
- Political Science (and Pre-Law)
- Social Studies Teaching
- Human Development and Family Studies
  - Child and Family Services
  - Early Childhood Development
- Philosophy
- Psychology
- Sociology
  - Criminal Justice
  - General Sociology

### Master’s Degree Programs

- Child Development and Family Studies,
  - Specialization in Human Development and Family Studies
  - Specialization in Marriage and Family Therapy
- Communication
- English
- History

### Career and Advanced Education Opportunities

Graduates of Purdue University Calumet’s College of Liberal Arts and Social Sciences may work in a number of fields which are as varied as are our programs. Our degrees will equip our students with the skills necessary for success in professional careers such as broadcast journalist, law enforcement professional, cardiac rehabilitation assistant, social studies teacher, public information officer, Spanish translator, technical writer, criminologist, media coordinator, public relations director, communications director, television director, customer service manager, English teacher, mental health clinic staff member, social welfare agency employee, policy analyst, senior citizen facility administrator, probation officer, child center director, French teacher, foreign service officer, visual communication designer, and more. Our undergraduate programs also prepare students for graduate and professional studies in law, medicine, education, business, behavioral and social sciences, library and information sciences, and humanities.
The Department of Behavioral Sciences offers students a broad-based liberal education, enabling them to function effectively in a world of rapid change, in careers in such fields as government, business, mental health, child care, gerontology or social services. The department provides students with skills and strategies to understand individual and group behavior, to learn how to relate well to others, and to understand the relationships between social problems and the social environment.

As one of the most diverse academic units on campus, the department offers courses in a variety of disciplines concerned with human behavior: Anthropology; Early Childhood Education; Human Development and Family Studies; Psychology; Sociology; Criminal Justice and Gerontology. Certificates, baccalaureate degrees and two master’s degree level plans of study are offered by the department.

On-campus internships are offered in the graduate program in our Couple and Family Therapy Clinic and the Charlotte R. Riley Child Care Center. Off-campus internships are available in a number of human services and non-profit agencies throughout the region. A two-semester practicum experience is required in the Gerontology and Early Childhood Development programs. A one-semester field experience is required in criminal justice. Such experiences provide practical experience under supervision and allow first-hand experience and observation of various institutions’ responses to human needs and quality of life issues.

The campus Child Center serves as a laboratory for the Early Childhood Development program. The psychology laboratory is a computer-assisted student laboratory equipped with an array of tools used to conduct qualitative and quantitative social science research, including computer-assisted telephone and web-based surveys and geographic information systems mapping projects.

Programs
- Child Development Associate (CDA) Preparation and Advising Program
- Certificate, Infant/Toddler
- Certificate in Gerontology
- Bachelor of Arts, Psychology
- Bachelor of Arts, Sociology, options in General Sociology and Criminal Justice
- Bachelor of Arts, Human Development & Family Studies; Specializations in Child and Family Services and Early Childhood
- Master of Science in Child Development and Family Studies: Specialization in Human Development and Family Studies
- Masters of Science in Child Development and Family Studies: Specialization in Marriage and Family Therapy
- Post-Baccalaureate Certificate in Early Childhood
- Minors in Early Childhood, Gerontology, Human Services, Psychology, Sociology

Child Development Associate (CDA) Preparation & Advising Program

**NON-DEGREE** (12 CREDITS)

CDA stands for the Child Development Associate National Credentialing Program. The purpose of the program is to enhance the quality of child care by defining, evaluating and recognizing the competence of child care providers and home visitors.

The program is administered by the Council for Early Childhood Professional Recognition in Washington, D.C. The CDA Credential is a certificate that is awarded to a person who demonstrates competence in caring for young children by successfully completing the CDA assessment process.

(Note: Completion of this course work does not award a degree or certificate. However, the courses count toward an associate or a bachelor degree in early childhood development.)

**Required Coursework**

Complete all of the following:

- HDFS 21600 Introduction to Early Childhood Education
- HDFS 21700 Issues in Early Childhood Education (May substitute PSY 36100)
- HDFS 23500 CDA Portfolio and Experience

**Elective:** Choose one appropriate additional course according to your area of focus:

- HDFS 30800 Language and Literacy in Early Childhood
  (Appropriate for any of the CDA certificates)
  
  or

- HDFS 22800 Developmental Infant & Toddler Care
  (Appropriate only for Infant/Toddler CDA)

**Certificate - Infant/Toddler Certificate**

**(18 CREDITS)**

This certificate is designed for non-traditional students employed full-time.

- BHS 10100-Working with Parents
- HDFS 21000-Intro to Human Development
- HDFS 22800-Developmental Infant and Toddler Care
- BHS 20300-Advanced Infant/Toddler Curriculum
- BHS 20200-Infant/Toddler Supervised Experience
- HDFS 34000-Teaching Very Young Children with Special Needs
Bachelor of Arts, Psychology
(120 CREDITS)

1. Communication (18-25 credits)
   ENGL 10000/10400 English Composition I
   ENGL 10500 English Composition II
   OR
   ENGL 10800 Accel First Yr Compos
   COM 11400 Fund. Speech Comm.
   Foreign Language 10100, 10200, 20100, 20200

2. Science and Mathematics (12 credits)
The required 12 hours will consist of three hours of a laboratory science, three hours of mathematics at the College Algebra (MA 15300) level or higher and three hours of Computer Science (CS 20400). Lab Science — SCI 10500, BIO 10100 or BIOL 21300. The remaining three hours may be filled with any Science, Mathematics (above 15300), Logic (PHIL 15000), or non-lab science (F&N 30300) courses.

3. Humanities and Social Sciences (24 credits)
   Economics 21000 or 25100
   Psychology 12000
   Sociology 10000 or Anthropology
   and one course each from:
   Aesthetics
   History
   Literature
   Philosophy (not Logic)
   Political Science

4. Psychology and Behavioral Sciences Core (25 credits)
   BHS 10300 Freshmen Experience in Behavioral Sciences (1 cr)
   BHS 20100 Statistical Methods for the Behavioral Sciences (PSY 50000 accepted)
   PSY 20300 Intro. Research Methods
   PSY 20500 Testing and Measurement
   PSY 31100 Human Memory
   PSY 31400 Intro. to Learning
   PSY 33900 Advanced Social Psych (SOC 34000 accepted)
   PSY 43000 Sys. Theories of Psych.
   One of:
   PSY 31000 Sensation and Perception Proc.
   PSY 32200 Neuroscience of Motivated Behavior
To be admitted into the following courses student must receive:
   A grade of C or better in all PSY courses.
   For PSY 20300 and 20500:
      A grade of "C" or better in PSY 12000, BHS 20100/PSY 50000 and MA 15300
   For PSY 31000, PSY 31100, PSY 31400 and PSY 32200:
      A grade of "C" or better in PSY 20300 and PSY 20500
   For PSY 33900:
      A grade of "C" or better in PSY 20300
   For PSY 43000:
      A grade of "C" or better in PSY 31100, PSY 31400, and either PSY 31000
      or PSY 32200

5. Additional Requirements for the Major (15 credits)
   Any five courses in Psychology at the 30000 level or above

6. Electives or Minor (19-26 credits)

Please note: Two courses in Experimental Learning are required for all students enrolled Fall 2008 and beyond. This is also a requirement for transfer students with more than 2 semesters of enrollment remaining and more than 32 credit hours needed for degree.

Psychology Minor
(18 CREDITS)

   PSY 12000 Elem. Psychology
   BHS 20100 Statistical Methods for the Behavioral Sciences (PSY 50000 accepted)
   PSY 20300 Intro. Research Methods

   Nine credits of Psychology at 300-500 level

Certificate in Gerontology
(27 CREDITS)

This Certificate is for those who are already working with the elderly and want to have a specialized Credential in gerontology to enhance their career, or who are considering a change in career. The Certificate would be available to students who do not have a Baccalaureate degree, as well as those who have a Baccalaureate degree in another field of study.

18 Credits to include the following courses:
   PSYS 12000 Introduction to Psychology
   OR
   SOC 10000 Introduction to Sociology
   HDFS 37500 Physical Aging, Health and Behavior
   SOC 43000 Sociology of Aging
   SOC 43100 Services to the Aged
   SOC 46000 Field Experience in Gerontology
   PSY 36300 Human Development III: Adulthood

6 Credits chosen from any one of the following courses:
   COM 36500 Communication and Aging
   COM 37100 Communication and Health
   F&N 36000 Nutrition and aging
   FM 25000 Principles of Adult Fitness
   PSY 53500 Psychology of Death and Dying
   SOC 44000 Sociology of Health and Health Care
   Independent Studies on issues relevant to aging
   3 general elective credits chosen from any university department

Bachelor of Arts, Sociology
(120 CREDITS)

Requirements for all Sociology degrees

1. Communication (18-25 credits)
   ENGL 10000/10400 English Composition I
   ENGL 10500 English Composition II
   OR
   ENGL 10800 Accel First Yr Compos
   COM 11400 Fund. Speech Comm.
   Foreign Language 10100-10200-20100-20200

2. Science and Mathematics (12 credits)
The required 12 hours will consist of three hours of laboratory science, three hours of mathematics or statistics (STAT 13000), and three hours of computer Science (CS 20400). The remaining three hours may be filled with any Science, Mathematics, Logic (PHIL 15000), or non-lab science (F&N 30300) course.

3. Humanities and Social Sciences (24 credits)
   Economics 21000 or 25100
   Psychology 12000
   Sociology 10000 or Anthropology
   and one course each from:
   Aesthetics
   History
   Literature
   Philosophy (not Logic)
   Political Science

Please note: Two courses in Experimental Learning are required for all students enrolled Fall 2008 and beyond. This is also a requirement for transfer students with more than 2 semesters of enrollment remaining and more than 32 credit hours needed for degree.
Bachelor of Arts, General Sociology Option
(120 CREDITS)

Requirements for Sociology degree plus: (34 credits)

BHS 10300 Freshman Experience in Behavioral Sciences (1 cr.)
SOC 22000 Social Problems
SOC 31400 Race and Ethnic Relations OR
SOC 41100 Social Stratification
BHS 20100 Statistics for the Behavioral Sciences
SOC 38300 Intro. to Methods of Social Research II
SOC 40200 Principles of Sociology

18 additional credits in Sociology at 3000 level or above

*Prerequisite to SOC 40200: 12 hours of Sociology and a 2.25 GPA in all Sociology courses.

Electives or Minor (25-32 credits)

Please note: Two courses in Experiential Learning are required for all students enrolled Fall 2008 and beyond. This is also a requirement for transfer students with more than 2 semesters of enrollment remaining and more than 32 credit hours needed for degree.

Minor in Gerontology
(15 CREDIT HOURS)

15 Credits to include the following courses:

HDFS 37500 Physical Aging, Health and Behavior
SOC 43000 Sociology of Aging
SOC 43100 Services to the Aged
SOC 46000 Field Experience in Gerontology
PSY 36300 Human Development III: Adulthood

3 Credits chosen from any one of the following courses

COM 36500 Communication and Aging
COM 37100 Communication and Health
F&N 36000 Nutrition and aging
PSY 53500 Psychology of Death and Dying
SOC 44000 Sociology of Health and Health Care
Independent Studies on issues relevant to aging

Bachelor of Arts, Sociology-Criminal Justice Option
(120 CREDITS)

Requirements for Sociology degree plus: (34 credits)

BHS 10300 Freshman Experience in Behavioral Sciences (1 cr.)
SOC 22000 Social Problems
SOC 42200/CRJU 32400 Criminology
POL 34600 Law and Society
SOC 34300/CRJU 15000 Intro. Criminal Just.
SOC 44300 Practicum Criminal Just.
BHS 20100 Statistics for the Behavioral Sciences
SOC 38300 Intro. to Methods of Social Research II
CRJU 42100 Juvenile Deliquency
CRJU 30700 Victimology
CRJU 23000 Policing in America
CRJU 24000 Corrections — or —
SOC/CRJU 3000 Incarceration in Society
SOC 40200 Principles of Sociology**
SOC 31400 Race and Ethnic Relations — or —
SOC 41100 Social Stratification

Two of:

HIST 33600 History of Organized Crime in America
PSY 35500 Child Abuse Neglect
CRJU 34100 Criminal Investigation

Sociology Minor
(18 CREDITS)

SOC 10000 Introduction to Sociology
SOC 22000 Social Problems

12 Sociology credits at 3000-5000 level

Bachelor of Arts, Human Development and Family Studies
(120 CREDITS)

Requirements for all Specializations:

1. General Education Requirements (18-25 credits)

   Communication
   ENGL 10000/10400 English Composition I
   ENGL 10500 English Composition II
   OR
   ENGL 10800 Accel First Yr Compos
   COM 11400 Fund. Speech Comm.

   Foreign Language 10100-10200-20100-20200

2. Science and Mathematics (12 credits)

   The required 12 hours will consist of three hours of laboratory science, three hours of mathematics or statistics (STAT 13000), and three hours of computer science (CIS 20400). The remaining three hours may be filled with any Science, Mathematics, Logic (PHIL 15000), or non-lab science (F&N 30300) course.

3. Humanities and Social Sciences (24 credits)

   Economics 21000 or 25100
   Psychology 12000
   Sociology 10000 or Anthropology
   and one course each from:
   Aesthetics
   History
   Literature
   Philosophy (not Logic)
   Political Science

4. Human Development and Family Studies Core (25 credits)

   HHS 10300 Freshman Experience in Behavioral Sciences (1 cr.)
   BHS 20100 Statistical Methods for the Behavioral Sciences (PSY 50000 accepted)
   SOC 38300 Research Methods
   HDFS 20500 Intro to Family Dynamics
   HDFS 21000 Intro to Human Dev.
   SOC 35000 Social Psychology of Marriage
Complete one course from the following: (18 CREDITS)

Early Childhood Specialization

4. Human Development and Family Studies Core (25 credits)
   - BHS 10300 Freshman Experience in Behavioral Sciences (1 cr.)
   - BHS 20100 Statistical Methods for the Behavioral Sciences (PSY 50000 accepted)
   - SOC 38300 Research Methods
   - HDFS 20500 Intro to Family Dynamics
   - HDFS 21000 Intro to Human Development
   - SOC 30500 Social Psychology of Marriage
   - HDFS 35400 Practicum I ExL
   - HDFS 45501 Practicum II ExL
   - OR
   - HDFS 45601 Practicum with Infants & Toddlers ExL
   - PSY 43300 Theories in Human Development

5. Early Childhood Specialization (36 credits)
   Complete ALL of the courses listed below:
   - HDFS 21600 Introduction to Early Childhood Education
   - HDFS 21700 Issues in Early Childhood Education
   - HDFS 22800 Developmental Infant & Toddler Care
   - HDFS 30501 Art, Music & Movement in Early Childhood
   - HDFS 30800 Language & Literacy in Early Childhood
   - HDFS 31001 Math, Science & Social Studies in Early Childhood
   - HDFS 33201 Child Care Administration
   - HDFS 34000 Teaching Very Young Children with Special Needs
   - HDFS 42100 Children's Social Development
   - HDFS 43101 Observational Assessment in Early Childhood ExL
   - PSY 36100 Human Development I: Infancy and Childhood

   Complete one course from the following:
   - EDPS 26000 Introduction to Special Education
   - F&N 26000 Food & Nutrition in Early Childhood Development Classrooms
   - PSY 34400 Human Sexuality

6. Electives (6 credits)
   Restricted, Two of:
   - SOC 36100 The Institution of Social Welfare
   - SOC 44000 Sociology of Health & Illness
   - WOST 12100 Intro to Women's Studies
   - COM 31000 Family Communications
   - PSY 33500 Child Abuse and Neglect
   - PSY 43500 Intro to Marriage & Family Therapy
   - PSY 53200 Psychological Disorders of Childhood
   - PSY 55000 Introduction to Clinical Psychology

7. Electives (Open) (10-17 credits)
   Possible Electives
   - EDPS 42100 Children's Social Development
   - HDFS 30501 Art Music & Movement in Early Childhood
   - HDFS 43101 Observational Assessment in Early Childhood (ExL)
   - HDFS 22800 Developmental Infant & Toddler Care
   - HDFS 34000 Teaching Children with Special Needs

   *Note: Some students may already have coursework that approximates that of some required courses. Alternative courses should enrich the student's familiarity with the topics or issues addressed in the required courses. Alternative courses must be chosen in consultation with program advisors.

Minor in Human Services

A minor in Human Services will prepare students to act as a multi-disciplinary practitioner when assisting individuals, families, and communities to respond to events that require intervention. The generic competencies of the human service
professional will reflect the continuum of skills necessary to work with persons whose needs arise from problems within the larger social system or to improve individual social functioning. These areas include crime and delinquency, chemical abuse and addiction, poverty, education, job training and employment, mental illness physical and sexual abuse, homelessness and disability.

Requirements:
SOC 22000 Social Problems
SOC 26100 Basic Helping Skills for Human Services
SOC 30600 Case Management in Human Services
SOC 30700 Practicum in Human Services
SOC 36400 Child and Family Welfare
Any three hours from the following:
  PSY 35500 Child Abuse and Neglect
  SOC 31400 Race and Ethnic Relations
  SOC 36100 The Institution of Social Welfare
  SOC 41100 Social Stratification
  SOC 42100 Juvenile Delinquency
  SOC 42200 Criminology
  SOC 43000 Sociology of Aging
  SOC 45000 Gender Roles in Modern Society

Minor in Early Childhood
(18 CREDITS BEYOND PSY 36100)
The prerequisite for this minor is PSY 36100, C or better

A. Requirements for Minor in Early Childhood
Development: (Prerequisite for minor: PSY 36100; Grade of “C” or better)
All of the following:
HDFS 21600 Introduction to Early Childhood Education
HDFS 21700 Issues in Early Childhood Education
HDFS 30800 Language & Literacy in Early Childhood II
Notes:
* Prerequisite for HDFS 21700: HDFS 21600
  * Co-requisite for HDFS 30800: HDFS 21600

B. Choose one course from the following:
  HDFS 22800 Developmental Infant & Toddler Care
  HDFS 31000 Math, Science & Social Studie in Early Childhood
  HDFS 34000 Teaching Very Young Children with Special Needs
  HDFS 42100 Children’s Social Development
Notes:
* Prerequisite for HDFS 31001: HDFS 21600, 30800 and PSY 36100
  * Co-requisite for HDFS 31001: HDFS 21700, HDFS 30501
* Prerequisite for HDFS 42100, HDFS 43101: PSY 36100
* Prerequisite for HDFS 34000: HDFS 21700 or PSY 36100

C. Choose one course from the following:
  F&N 260 Food & Nutrition in Early Childhood Development Classrooms
  HDFS 30501 Art, Music & Movement in Early Childhood
  HDFS 33201 Administration in Early Childhood Development Programs
  HDFS 43101 Observational Assessment in Early Childhood
Notes:
* Co-requisite for HDFS 30501: HDFS 21600
  * Prerequisite for HDFS 33201: PSY 36100

D. Practical Internship:
HDFS 35001 Internship in Early Childhood

Master of Science in Child Development and Family Studies: Specialization in Human Development and Family Studies
(36 CREDITS)

1. Common Core
HDFS 60200 Advanced Family Studies
HDFS 61500 Research Methods in Child and Family Studies
HDFS 61800 Program Development and Evaluation
HDFS 59000 Current Research Topics in Child Development & Family Studies
PSY 60500 Applied Multivariate Statistics
HDFS 59000 Administration of Social Service Not-for-Profit Agencies
HDFS 68000 Professional Issues for Child and Family Specialists
HDFS 59000/69800 6-hours of Directed Research or M. S. Thesis

2. Electives
Note: Credit Hours of electives representing one of the following specialties at the 6000-7000 level or other courses in consultation with your advisor:
Early Childhood Development Area
Child & Family Studies Area
Disabilities Studies Area
Gerontology Area


Master of Science in Child Development and Family Studies: Specialization in Marriage and Family Therapy
(61 CREDITS)
(Accredited by the Commission on Accreditation for Marriage and Family Therapy Education of the American Association for Marriage and Family Therapy)

Special Admission Requirements
1. A 1000-word autobiographical statement demonstrating that the student has adequate preparation.
2. Combined verbal and math Graduate Record Examination score of 300.

Degree Requirements
1. Required courses:
HDFS 59000 Couple Therapy
HDFS 60100 Adv. Child Development
HDFS 60300 Theories Fam. Therapy
HDFS 61500 Research Methods
HDFS 65700 Social Constructionist Family Theories
HDFS 66000 Family Therapy Skills
HDFS 66300 Structural Fam. Therapies
HDFS 66500 Trans. Fam. Therapies
HDFS 66700 Pract. in Marriage Counseling (2 sem.)
HDFS 66900 Practicum Fam. Therapy (3 sem.)
HDFS 67100 Sex Therapy
HDFS 68000 Professional Issues
HDFS 69800 Research M. S. Thesis (6 credits)
PSY Elective
PSY 60500 Applied Multivariate Analysis
PSY 67300 Psy. Behavior Disorders
2. 500 hours of face-to-face contact with clients
3. Completed thesis and oral defense of thesis
Department of Communication and Creative Arts

Thomas J. Roach, Head. Faculty: L. Artz; Ken Bronowski (RTV Production Coordinator/Studio Supervisor); T. M. Carilli; D. M. Dunn; C. M. Gillotti; L. J. Goodnight; P. Hales; Y. R. Kamalipour; N. A. Nemeth; M. B. O’Connor; W. L. Robinson; Y. Zhang

Academic Advisor: L. Bilyk
Office Manager: R. McCammon (temporary)

Programs in the Department of Communication and Creative Arts prepare students for careers that require exceptional skill in communication. The Department offers a broad curricula ranging from communication and media studies to performing and creative arts, with a strong liberal arts education. The Bachelor of Arts, seven concentrations, and ten minors, and the Masters Degree prepare students for a variety of careers in communication professions. Students can select concentrations and minors to enhance their professional, creative, and artistic skills to expand their career options.

Communication is a highly diverse and broad discipline. Communication graduates find careers in advertising, broadcasting, community service, corporate communication, education, human relations, journalism, non-profit agencies, public relations, publishing, visual communication and more.

Experiential learning, internships, and practicums allow communication majors the opportunity to expand their learning and career opportunities by engaging in projects and working directly with professionals at radio and TV stations, advertising agencies, PR firms, civic organizations, and other sites.

The fully equipped radio and television studios on campus allow students hands-on experience in producing radio and video programming. Students can work with the campus newspaper, The Purdue Chronicle, on Calumet Perspectives, (a weekly student-produced TV program aired on local stations), and in other broadcasting projects.

Programs

- Bachelor of Arts in Communication, with concentrations in Advertising, Broadcasting, International Communication, Journalism, Media Studies, Public Relations, Visual Communication
- Master of Arts, Communication

The Following General Education Courses (57-60 credits) are required for the Bachelor of Arts in Communication:

120 CREDIT HOURS REQUIRED FOR GRADUATION, INCLUDING THE FOLLOWING:

A. General Education Requirements (55-63 credits):

- ENGL 10000/10400-10500 or 10800
- COM 11400
- CIS 20400
- MA or STAT
- LAB Science
- PHIL 15000
- Philosophy (not Logic)
- History
- Aesthetics
- Economics
- Political Science
- Psychology 12000
- Sociology 10000 or Anthropology
- Foreign Language 12-hour sequence: FR, GER, SPAN, or JAP (10100, 10200, 20100, 20200)
- COM 10300 Freshman Experience
  (or other Freshman Experience Course, 1-3 credits)

B. Department Core (15 credits)

- COM 10300 Freshman Seminar in Communication
  (or other Freshman Seminar Course 1-3 cr. hrs.)
- COM 22500 Rhetoric and Social Influence
- COM 22800 Intro to Communication Studies
- COM 25000 Media and Society
- COM 30000 Communication Theory and Research
- COM 30900       Visual Communication
  OR
- COM 34300       Performance Studies

C. Communication Electives (21 credits)

Must include 12 credits numbered 30000 or above.
Electives may include courses in a COM concentration, as shown below.

D. Electives (21-29 credits)

Must include 6 credits of Experiential Learning in sections C and/or D.

CONCENTRATIONS IN COMMUNICATION BACHELOR OF ARTS DEGREE
18 CREDITS IN EACH CONCENTRATION REQUIRED (AS PART OF C. COMMUNICATION ELECTIVES)

Advertising

120 CREDIT HOURS REQUIRED FOR GRADUATION

Advertising

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 30900</td>
<td>Visual Communication (from Department core)</td>
</tr>
<tr>
<td>COM 25300</td>
<td>Intro Public Relations</td>
</tr>
<tr>
<td>COM 25600</td>
<td>Intro Advertising</td>
</tr>
<tr>
<td>COM 33100</td>
<td>Audio Production</td>
</tr>
<tr>
<td>COM 33200</td>
<td>TV Production</td>
</tr>
<tr>
<td>COM 43400</td>
<td>Practicum Radio/TV</td>
</tr>
<tr>
<td>COM 43900</td>
<td>Focus Groups</td>
</tr>
</tbody>
</table>

Broadcasting

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 30900</td>
<td>Visual Communication (from Department core)</td>
</tr>
<tr>
<td>COM 33100</td>
<td>Audio Production</td>
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<tr>
<td>COM 43400</td>
<td>Practicum TV</td>
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<tr>
<td>COM 43600</td>
<td>Script Writing</td>
</tr>
<tr>
<td>COM 44100</td>
<td>Advanced TV Production</td>
</tr>
<tr>
<td>COM 44500</td>
<td>TV Editing</td>
</tr>
</tbody>
</table>
### International Communication
- COM 23600  | MEDIA AND CULTURE
- COM 30101  | POLITICAL ECONOMY OF MEDIA
- COM 30102  | MEDIA GLOBALIZATION AND DEVELOPMENT
- COM 32700  | INTERNATIONAL COMM
- COM 33000  | MEDIA THEORIES
- COM 35000  | INTERCULTURAL COMM

### Journalism
- COM 30900  | VISUAL COMM (from Department core)
- COM 25500  | NEWS REPORTING AND WRITING
- COM 30500  | NEWS EDITING
- COM 30600  | ADVANCED NEWS REPORTING AND WRITING
- COM 33400  | JOURNALISM FOR ELECTRONIC MEDIA
- COM 40300  | COMMUNICATION ETHICS
- COM 45100  | MAGAZINE JOURNALISM
- 45200  | JOURNALISM PRACTICUM

### Media Studies
- COM 23600  | MEDIA AND CULTURE
- COM 24200  | BROADCAST NEWS
- COM 30101  | POLITICAL ECONOMY OF MEDIA
- COM 33000  | MEDIA THEORIES
- COM 46300  | MEDIA CRITICISM

### Public Relations
- COM 25300  | INTRO PUBLIC RELATIONS
- COM 25500  | NEWS REPORTING AND WRITING
- COM 31800  | PERSUASION
- COM 32500  | INTERVIEWING
- COM 35300  | PROBLEMS IN PR
- COM 46000  | ADVANCED PR

### Visual Communication
- COM 23800  | Introduction to Communication Studies
- COM 25000  | Media and Society (from Department core)
- A&D 10500  | Design I
- A&D 10600  | Design II
- A&D 11200  | Typography
- A&D 11300  | Basic Drawing
- A&D 20400  | Digital Imaging I
- A&D 22200  | Photography
- A&D 30100  | Color & Composition
- A&D 32800  | Visual Communication Design I
- A&D 32900  | Visual Communication Design II
- A&D 44800  | Visual Communication Design III
- A&D 44900  | Visual Communication Design IV
- A&D 40300  | Portfolio Process & Presentation
- A&D XXXX  | Digital Imaging II (ExL)
- A&D XXXX  | Motion Graphics
- COM 30900  | Visual Communication (from Department core)

### Minors in Communication Studies

#### Communication Minors
18 CREDIT HOURS FOR EACH MINOR, AS FOLLOWS:

**Advertising Minor**
- **A. Required 12 credits:**
  - COM 25600 Advertising
  - COM 30900 Visual Communication
  - COM 33100 Audio Production
  - COM 43400 Practicum TV
- **B. Electives -- 6 credits, from the following:**
  - COM 25000 Media & Society
  - COM 25300 Public Relations
  - COM 31800 Persuasion
  - COM 33000 Media Theories
  - COM 33200 TV Production
  - COM 43900 Focus Groups
  - COM 44300 Advertising Media
  - COM 46500 Visual Aesthetics in TV/Film

**Broadcasting**
- **A. Required 12 credits:**
  - COM 25600 Advertising
  - COM 30900 Visual Communication
  - COM 33100 Audio Production
  - COM 33200 TV Production
  - COM 44100 Advanced TV Production
- **B. Electives -- 6 credits, from the following:**
  - COM 25000 Media & Society
  - COM 33000 Media Theories
  - COM 34200 Broadcast News
  - COM 34700 Radio/TV Performance
  - COM 43400 TV Practicum
  - COM 43600 Script Writing
  - COM 44500 TV Editing
  - COM 46500 Visual Aesthetics in TV/Film

**Communication**
- **A. Required 12 credits:**
  - COM 22500 Rhetoric and Social Influence OR
  - COM 31400 Advanced Presentational Speaking
  - COM 22800 Communication Theories
  - COM 25000 Media & Society
  - COM 30000 Communication Research OR 32500 Interviewing
- **B. Electives -- 6 credits, from the following:**
  - COM 25300 Public Relations
  - COM 25500 Reporting and Writing
  - COM 25600 Advertising
  - Any course numbered above 30000

**Health Communication**
- **A. Required 12 credits:**
  - COM 21400 Interpersonal Communication
  - COM 36500 Communication & Aging
  - COM 37100 Health Communication
  - COM 40300 Communication Ethics
B. Electives -- 6 credits, from the following:
- COM 31000 Family Communication
- COM 31800 Persuasion
- SOC 44000 Sociology of Health
- PSY 53500 Psychology of Death & Dying

International Communication

A. Required 12 credits:
- COM 25000 Media & Society
- COM 32700 International Communication
- COM 30101 Political Economy of Media OR 30102 Media Globalization and Development
- COM 35000 Intercultural Communication

B. Electives -- 6 credits, from the following:
- COM 30101 Political Economy of Media OR 30102 Media Globalization and Development
- COM 33000 Media Theories
- COM 33600 Media & Culture

Any 50000 level course in International Media

Journalism

A. Required 12 credits:
- COM 25000 Media & Society
- COM 25500 News Reporting and Writing
- COM 30500 News Editing
- COM 30600 Advanced News Reporting

B. Electives -- 6 credits, from the following:
- COM 25300 Public Relations
- COM 30200 Publications Design
- COM 32500 Interviewing
- COM 33000 Media Theories
- COM 33400 Journalism Electronic Media
- COM 34200 Broadcast News
- COM 35200 Mass Communication Law
- COM 40300 Communication Ethics
- COM 45100 Magazine Journalism
- COM 45200 Practicum Journalism
- ENGL 40600 Review Writing

Media & Culture

A. Required 12 credits:
- COM 25000 Media & Society
- COM 33000 Media Theories
- COM 33600 Media & Culture
- COM 46300 Media Criticism

B. Electives -- 6 credits, from the following:
- COM 22500 Rhetoric & Social Influence
- COM 31800 Persuasion
- COM 32700 International Communication
- COM 35000 Intercultural Communication
- COM 42600 Identity & Communication
- COM 47000 Women & Media
- COM 47500 Identity & Film

Public Relations

A. Required 12 credits:
- COM 25300 PR
- COM 25500 News Reporting & Writing
- COM 35300 Problems in Public Relations
- COM 46000 Advanced Public Relations

B. Electives -- 6 credits, from the following:
- A&D 22200 Photography
- COM 22400/31900 Rhetoric
- COM 25000 Media & Society
- COM 30500 News Editing
- COM 30600 Advanced News Reporting
- COM 31800 Persuasion
- COM 32500 Interviewing
- COM 33000 Media Theories
- COM 34200 Broadcast News
- COM 40300 Communication Ethics
- COM 43900 Focus Groups
Master of Arts in Communication

36 CREDITS

The Master’s degree program within the Department of Communication and Creative Arts at Purdue University Calumet offers a broad range of courses covering theories and research methodologies in the following areas: mass communication, interpersonal communication, organizational communication, performance studies, political communication, and rhetoric. The program is highly flexible and allows each graduate student to plan his/her course of study in consultation with a graduate faculty or advisor. After admission into the program, students will meet with advisor to determine their course of study based on their interests and professional goals.

The program was originally designed to meet the needs of individuals who live and work in northwest Indiana and who want to complete advanced courses of study in communication studies. Today, a diverse student body—including international—is enrolled in the program. Numerous graduate students have successfully completed the program to qualify for career advancement, to prepare for doctoral study, or to satisfy their own curiosity about the most fundamental human behavior:

Communication.

Admission Requirements (Degree seeking students)
1. Complete on-line application http://www.purduecal.edu/gradschool
2. Three letters of recommendation
3. Applicant’s statement of purpose
4. Two copies of official transcripts from all colleges/universities attended
5. Pay application fee on-line when submitting application

Admission Process

Official Admission
1. An undergraduate grade point average of 3.0, based on a 4.0 scale.
2. An undergraduate degree in Communication, related disciplines, or strong minor.
3. Completion of regular application process (application form, application fee, 2 copies of official transcripts from all colleges/universities attended, 3 letters of recommendation, statement of purpose).

Conditional Admission
1. A prospective student whose overall undergraduate GPA is below 3.0, may be admitted conditionally. He/she is required to maintain a 3.0 graduate index for the first 9-12 credit hours in order to continue in the program. The department may pose other requirements for official admission.
2. Any prospective student may enroll in graduate-level courses, prior to applying for official admission into the graduate program, by completing a temporary (Post-Baccalaureate application form (on-line). These courses (limited to 4 graduate-level courses or 12 credit hours) may be applied toward the degree requirements upon official admission.

Required Coursework
1. A total of 36 credit hours are required for completion of the master’s program.
   - 9 hours of Theory courses
   - 9 hours of Application/Research Methods courses
   - 15 hours of elective work
2. All graduate students must complete either COM 58200 or COM 58400 regardless of their program emphasis.

Advisor Selection/Examination Committee
1. Upon completion of 9 credit hours, student must select a graduate faculty mentor/advisor (examination committee chair).
2. The student and the advisor will plan a course of study for the remaining 27 credit hours.
3. Prior to the completion of the 24th credit hour, students must select two remaining committee members for their advisory committees.
4. The student and the committee will discuss and determine an appropriate graduation examination format. Usual options include:
   - Comprehensive Exams
   - Conference Quality Paper
   - Performance/Creative Project
   - Thesis

Transfer of Credits
No more than 9 credits (3 courses) from other accredited institutions, taken within 10 years prior to completion of degree program, may be accepted at the discretion of the Department.

More Information
For inquiries and/or further information about the Department, Faculty, Facilities, Assistantships, Courses, and degree offerings, visit our Web site www.purduecal.edu/cca or contact the Department at (219) 989-2393.

Master of Arts in Communication

Required Courses:
1. COM 58200 Descriptive/Exp. Research
2. COM 58400 Historical/Critical Research

Nine hours of THEORY from the courses listed below:
1. COM 50800 Nonverbal Communication
2. COM 51200 Interpersonal Communication
3. COM 51700 Communication & Politics
4. COM 51800 Persuasion
5. COM 52000 Small Group Communication
6. COM 52100 Rhetoric
7. COM 53200 Telecommunication Systems Management
8. COM 53400 Comparative Telecommunication
9. COM 54500 Oral Interpretation
10. COM 56000 Rhetoric & Mass Media

DEPARTMENTS / COLLEGES | 2014-2016 | 109
COM 57400 Organizational Communication
COM  Communication Elective *

Nine hours of RESEARCH METHODS/APPLICATION from courses listed below:
COM 51500 Persuasion & Social Movements
COM 52500 Advanced Interviewing
COM 53100 Special Topics in Mass Com
COM 53300 Documentary Television
COM 53600 Radio & Television Writing
COM 53700 Educational/Institutional Media
COM 54000 Advanced Oral Interpretation
COM 54100 Ensemble Interpretation
COM 55900 Current Trends in Mass Com Research
COM 58300 Research & Assessment in Orgs
COM  Communication Elective*
COM  Communication Elective*

*Depending on the topic and approach, the following courses could fulfill requirements in the above categories. Students need to get the faculty member's approval to count one of the following as either Theory or Research:
COM 61200 Seminar in Interpersonal Communication
COM 62100 Seminar in Rhetoric
COM 63200 Seminar in Mass Communication
COM 67400 Seminar in Organizational Communication

Fifteen (15) hours of elective coursework
(Please note that no more than 9 hours may be taken outside the department.)
The Department of English and Philosophy offers students from all majors in the university coursework in literature, writing, and philosophy. The mission of the department is to help students learn to think critically and in-depth about the important issues involved in interpersonal relationships and to communicate their thinking in writing.

In freshman reading and writing courses, students are introduced to the demands of college reading and writing so that they will be prepared for the rest of their academic careers and for their lives beyond college. English literature and teaching majors take a variety of literature courses to prepare for careers in teaching or the professions, or to prepare for further, graduate-level study of literature. Writing majors learn the practical aspects of communicating on the job, in business or in industry, to prepare for careers in publishing, editing, writing, and technical communication.

Philosophy majors develop excellent critical and analytical abilities by studying traditional questions that we as humans have long considered, including questions about our place in the universe, the meaning of a good life, and the nature and value of knowledge. Both English and Philosophy majors are prepared for careers in business, industry, and the professions with excellent communication skills, fine research methods, and backgrounds in the best thinking and writing that humans have been capable of throughout history.

The program for the master’s degree in English allows students to study such areas as English and American literature, language arts teaching, linguistics, literary theory, and rhetoric and composition.

**Internships and Cooperative Education.** The practical nature of majors in English and philosophy is supplemented by internships in local businesses and government agencies and cooperative education experiences, alternating work and study experiences.

**Supporting Facilities.** The Writing Tutorial Center helps students throughout the university who wish to improve their writing. The department’s computer labs offer writing students opportunity for classroom instruction in word processing and the best technology for producing and editing writing, so that students will know how to use technology to write when they finish their college careers.

**Programs**
- Bachelor of Arts, English, options in Literature, Writing, Teaching
- Bachelor of Arts, Philosophy
- English Language Program (ELP)
- Minor in Philosophy
- Certificate in Writing – Interactive Media
- Master of Arts, English
- Minor in English
- Level 1, Foundations
- Level 2, Low-intermediate
- Level 3, High-intermediate
- Level 4, Advanced

**The English Language Program**

The English Language Program (ELP) is an academic, intensive English program that aims primarily at assisting international students in developing their English language proficiency to the level needed to pursue their education at Purdue University Calumet. The academic year for ELP students consists of four sessions: Fall Semester; Spring Semester; Maymester; and Summer session. The classes include 1) reading, 2) writing and grammar, 3) speaking and listening, and 4) an elective. Students are given placement tests and are enrolled in one of three levels:

<table>
<thead>
<tr>
<th>Program Structure</th>
<th>Fall Semester (15 weeks)</th>
<th>Spring Semester (15 weeks)</th>
<th>Maymester Session (4 weeks)</th>
<th>Summer Semester (8 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>6 hours / week</td>
<td>6 hours / week</td>
<td>N/A</td>
<td>6 hours / week</td>
</tr>
<tr>
<td>Writing/Grammar</td>
<td>6 hours / week</td>
<td>6 hours / week</td>
<td>N/A</td>
<td>12 hours / week</td>
</tr>
<tr>
<td>Speaking/Listening</td>
<td>6 hours / week</td>
<td>6 hours / week</td>
<td>24 hours / week</td>
<td>6 hours / week</td>
</tr>
<tr>
<td>Elective</td>
<td>3 hours / week</td>
<td>6 hours / week</td>
<td>N/A</td>
<td>N / A</td>
</tr>
<tr>
<td>Total Hours/Week</td>
<td>21 hours / week</td>
<td>21 hours / week</td>
<td>24 hours / week</td>
<td>24 hours / week</td>
</tr>
</tbody>
</table>

At the end of each session—if a student meets the requirements of the level—he or she advances to the next level, or, as is the case with a Level 4 student, into mainstream university courses at Purdue Calumet.

**Students**

All of our students are full-time, studying on F-1 visas, and wishing to start undergraduate and graduate programs in the United States. Upon successful completion of the ELP, undergraduate students are automatically matriculated into degree programs. Graduate students, however, must also pass the TOEFL with a minimum score of 18 writing, 18 speaking, 14 listening, 19 reading, and a total score of 77.

**ELP Placement and Exit Criteria**

- Placement into English Language Program (ELP)

New students who join ELP are assessed and placed into pre-academic courses designed to help bring their English proficiency skills to a level at which they can enroll in regular academic courses.

Place placement into one of the four levels of proficiency in the English Language Program is based on a placement test conducted at the beginning of each semester. ETS’s SLEP test (which consists of a listening and a reading / grammar sections), is used for placement. This test is complemented by a writing assignment and an interview. Students will be placed in one of four proficiency levels: Level 1 (Foundations) — Level 2 (Low-intermediate) — Level 3 (High-intermediate) — Level 4 (Advanced)

A student placed in level 2, for example, can expect to spend two semesters of English language study in ELP.

**Exiting ELP**

There are two ways to exit ELP and matriculate into regular degree programs:

- A minimum iBT score of 79 (or 6.5 in IELTS) and passing all ELP classes.
- Successful completion of the advanced level of ELP.

TOEFL and IELTS are not required of undergraduate ELP students; however, these tests still remain in place as requirements for admission into degree programs at Purdue University Calumet.
Hybrid Program

Hybrid students take two ELP courses and up to two non-ELP, 3-credit courses. This program is extended to Level 4 students who are repeating individual ELP courses. These courses may not be substituted for English 10400 or English 10500 nor be counted toward degree requirements. Once students have successfully completed all their ELP courses, they will enroll in English 10000.

Bachelor of Arts, English

All English requirements must be completed with a grade of “C” (2.0) or higher. Requirements for all Bachelor’s degrees:

1. Communication*
   - ENGL 10800 Adv. Freshman Comp.
   - OR
   - ENGL 10000 and ENGL 10400
   - COM 11400 Fundamentals Speech Comm
   - State teacher licensing requires nine credits of oral and written expression. Take ENGL 31900 to complete the nine credit hours.
   - Foreign Language: 10100, 10200, 20100, 20200

2. Science and Mathematics
   - MA or STAT
   - LAB Science (Teaching majors must take one Life and one Physical Science)
   - CIS 20400
   - MA/SCI/STAT/PHIL 15000/F&N 30300

3. Humanities and Social Sciences
   - Twenty-four credits. One course each from:
     - Literature (ENGL 20100 for lit. and teaching options)
     - Philosophy (not Logic) (may not take PHIL 10600, 10700, 15100 to satisfy this requirement)
     - History
     - Aesthetics (A&D 25500, MUS 25000, ENGL 31900, ENGL 28600, COM 34300, THTR 20100)
     - Economics 10100
     - Psychology 12000
     - Political Science
     - Sociology 10000 or Anthropology

4. Freshman Experience Requirement
   - Philosophy 10700

Concentration: English, Literature

(120 CREDITS)

Requirements for Bachelor’s degree plus:

English Requirements (33 credits)

All English requirements must be completed with a grade of “C” (2.0) or higher

Core (24 credits)

Surveys.

Choose four, with at least one covering pre-1700 Literature (ENGL 24000 or 26000), and at three covering English and American literature.

- ENGL 24000 Survey English Literature I (Early)
- ENGL 24100 Survey English Literature II (Late)
- ENGL 35000 Survey American Literature I (Early)
- ENGL 35100 Survey American Literature II (Late)
- ENGL 26000 Survey of World Lit. I (Early)
- ENGL 26100 Survey of World Lit II (Late)

Shakespeare and Literary Theory

- ENGL 40300 Literary Theory
- ENGL 44200 Shakespeare

Junior/Senior Seminar

Choose one:

- ENGL 41100 Studies in Major Authors
- ENGL 41200 Studies in Genre

Electives or Minor (23 or 30 credits)

Concentration: English Teaching

(129-151 CREDITS)

Requirements for Bachelor’s degree plus:

Students will fulfill their humanities literature requirement with ENGL 20100, which should be taken before other required literature courses. They may fulfill their aesthetics requirement with ENGL 31900.

1. English Requirements

- ENGL 20100 Nature of Literary Study
- ENGL 24000 English Literature I
- ENGL 24100 English Literature II
- ENGL 26000 World Literature
- ENGL 35000 American Literature I
- ENGL 35100 American Literature II
ENGL 31900  Creative Writing
ENGL 44200  Shakespeare
ENGL 39100  Comp for English Grammar
ENGL 30800  Modern English Grammar
ENGL 32600  Linguistics
ENGL 49200  English Literature in Secondary School

2. English Elective

3. Education Requirements

- EDFA 20000  History and Philosophy of Education
- EDPS 22000  Psychology of Learning
- EDPS 26000  Introduction to Special Education
- EDCI 35500  Planning and Assessment
- EDCI 34100  English Teaching in Middle School, Junior High, & High School
- EDPS 37000**  Teaching Students w/Diverse Needs in the K-12 Classroom
- EDCI 32300  Educational Technology for Teaching and Learning
- EDCI 36600  Use of Assessment in the K-12 Classroom
- EDCI 49700**  Supervised Teaching

**Admission to Teacher Education required.

Transition Statement: At the time of publication all Education curriculum has been finalized for secondary programs. However, significant content area curriculum reform in secondary education programs has reached final stages of development.

Admission to Teacher Education: Beginning with students admitted to the university Fall 2000, admission to Teacher Education will require nine hours of English beyond ENGL 10400 and ENGL 10500 ENGL 20100 and two literature surveys and a 3.0 GPA in English courses. Additional requirements are listed by the College of Education.

Concentration: English Writing
(120 CREDITS)

Requirements for Bachelor's degree plus:

Core (all students must take 27 credits):

- ENGL/COM 30200  Publications Design
- ENGL 40400  Web Page Design
- ENGL 31900  Creative Writing
- ENGL 40600  Review Writing
- ENGL 41101  Writing for the Health Sciences
- ENGL 42000  Business Writing
- ENGL 42800  Special Topics in Writing*
- ENGL 43100  Web Usability: Reading and Writing on the Web (ExL)
- ENGL 43500  Topics in Writing for Digital Media*
- ENGL 43600  Writing for Informational Interactive Media (ExL)
- ENGL 43700  Writing for Video Games (ExL)
- ENGL/COM 45100  Feature Writing
- ENGL 42700  Senior Writing Project
- ENGL 43500  Topics in Writing for Digital Media
- ENGL 48000  Writing Internship (ExL)

General Electives
Electives: 23 to 27 Credit Hours

Minors in English
(15 CREDITS)

I. Any 15 credits in English beyond English Composition I and II. Students may concentrate in one area, such as Reading, Writing, Literature, Linguistics, or across areas.

Certificate in Writing for Interactive Media*
(15 CREDITS)

- ENGL 42501  Writing for New Media
- ENGL 43100  Web Usability: Writing and Reading on the Web
- ENGL 43600  Writing for Informational Interactive Media (ExL)
- ENGL 43700  Writing for Narrative Interactive Media (ExL)
- ENGL 43500  Topics in Writing for Digital Media

Repeated with a different topics for a total of 6 credit hours

*All courses offered on-line

Bachelor of Arts, Philosophy
(120 CREDITS)

1. Communication

- ENGL 10800  Adv. Freshman Comp.
  OR
- ENGL 10000/10400/10500  English Comp. I and II
- COM 11400  Fundamentals Speech Comm.
- Foreign Language 10100-10200-20100-20200

2. Science and Mathematics

- MA or Stat
- LAB Science (Teaching majors must take one Life and one Physical Science)
- CIS 20400
- MA/SCI/STAT/CIS/PHIL 15000/F&N 30300

3. Humanities and Social Sciences

One course each from:

- Literature
- Philosophy (not Logic)
- History
- Aesthetics
- Economics 10100
- Political Science
- Psychology 12000
- Sociology 10000 or Anthropology

4. Freshman Experience Requirement

- Philosophy 10700

All Philosophy requirements must be completed with a grade of “C” (2.0) or higher.

A. Introductory Philosophy

- PHIL 10100  History of Philosophy
- PHIL 11000  Introduction to Philosophy

Acceptable IUN course

B. Ethics. Two of:

- PHIL 11100  Ethics
- PHIL 32400  Ethics for the Professions

Acceptable PHIL 29300, 49000 or IUN course

C. Logic. One of:

- PHIL 12000  Critical Thinking
- PHIL 15000  Intro Logic

Acceptable PHIL 29300, 49000 or IUN course

D. Topic Areas. Two from each group:

Metaphysics/Epistemology

- PHIL 20600  Phil of Religion
- PHIL 21900  Existentialism
- PHIL 22100  Philosophy of Science

Acceptable PHIL 29300, 49000 or IUN course

History of Philosophy

- PHIL 301  Ancient Philosophy
PHIL 303  Modern Philosophy
Acceptable PHIL 29000, 49000 or IUN course

E. Philosophy Electives
Any 2 additional Philosophy courses not used to fulfill the above requirements; may include PHIL 29000, 49000 or IUN courses.

Note: Philosophy students must take two PHIL 49000 classes on different topics. No single PHIL 49000 may be used to satisfy more than one area requirement.

Minor in Philosophy
(12 CREDITS)
Any 12 credits in Philosophy beyond the general education requirement

Master of Arts, English
(33 CREDITS)

Special Admission Requirements
1. Writing sample
2. Strong undergraduate major or minor in English or equivalent

Requirements for Literature Specialization
ENGL 50100  Introduction to Literary Methods
ENGL 60200  Literary Theory
Twenty-seven additional credits at the graduate level. A student may take a combination of up to six hours credit in either two non-English graduate courses or one non-English graduate course and one English course at the 40000 level. The student must take MA Comprehensive Exams or write a MA thesis (see below).

Requirements for the Composition Specialization
ENGL 50100  Introduction to Literary Methods
ENGL 59100  Introduction to Composition Theory
ENGL 60200  Literary Theory
Twenty-four additional credits at the graduate level. At least nine of these credits must be in composition and six must be in literature. In addition, a student may take a combination of up to six hours credit in either two non-English graduate courses or one non-English graduate course and one English course at the 40000 level. The student must take MA Comprehensive Exams or write a MA thesis (see next column).

Exam and Thesis Options
Every MA student must either write a thesis or pass comprehensive exams.

1. Comprehensive Exams
Exams are given to students in their final semester in the MA program based on their coursework. A plan of study must be submitted to the Graduate School Office one semester prior to writing MA exams.

2. Thesis
The student should choose a professor to serve as thesis chair and two other professors to serve on the thesis committee, and complete ENGL 59000 (a directed study preparing a bibliography and prospectus) and ENGL 69800 (writing the thesis). These courses count as credits towards the degree.

Please see the Department of English and Philosophy's website for additional information about admission and remaining in good standing with the department.
Department of Foreign Languages and Literatures

Maria Luisa Garcia-Verdugo, Head. Faculty: G. R. Barrow; J. Castro-Urioste; M. Garcia-Verdugo; U. Jannausch (Emerita); B. E. Kienbaum (Emerita); S. Lombardo (Emeritus); J. Lu; H. Ramirez-Barradas; J. Román-Lagunas; C. Ruiz (Emeritus); A. J. Russell (Emerita); C. Torres-Robles (Emerita); F. Vauleon; G. Velez-Rendon
Academic Advisor: J. Navarro
Office Manager: M. Lopez

The programs of the Department of Foreign Languages and Literatures develop students’ competence in foreign languages and foster respect for cultural differences among peoples. Languages offered include French, German, Spanish, and Japanese.*

The Department views learning a foreign language and its culture as a way to foster international understanding in an increasingly interdependent world. Students gain an understanding of the contemporary society of the target culture through its literature and its civilization. The programs emphasize strong interpersonal, writing, and speaking skills, a breadth of knowledge, and a sensitivity to language and culture, all of which are assets for careers.

In the international studies option, the inclusion of a practical range of studies from other disciplines prepares the student for a real-life application of language skills in career settings.

* Minimum grade of C required in Levels I, II, III. Experiential Learning Courses (ExL) : SPAN 40800.

Study Abroad: The department sponsors summer study abroad programs in Spain and France. These Programs enable students to study, travel, and increase their cultural horizons using the language, culture and civilization of these countries. The Department feels strongly believes best way to achieve fluency in another language is to use it in an authentic setting. Study abroad programs provide an intimate encounter with the people and their multi-faceted culture.

Foreign Language ExL courses in Study Abroad Programs are: FR 20100, 20200, 26100, 46100, 49000, 51500 and SPAN 20100, 20200, 45100, 48100.

The Department encourages international/educational experiences such as study abroad programs and internships. However, departmental approval is required in order to receive credit.

International Media Center: Language learning in the Department is supported by the International Media Center, a multimedia lab providing state of art technology and the environment necessary to improve foreign language skills and to promote the languages and cultures of many countries.

Degree: Bachelor of Arts
Major in Foreign Languages
Concentrations in:
- French or Spanish
- French Teaching
- Spanish Teaching - Heritage
- Spanish Teaching - Non-Heritage
- Minors in French or Spanish
- Certificate in Spanish Translation

The Following General Education Courses (57-64 credits) are required for the
Bachelor of Arts Degrees:
- Freshman Experience FLL 10300
- ENGL 10000 and/or 10400 and 10500 or 10800 Accelerated First Year Composition
- COM 11400
- Math or Statistics
- Lab Science (Teaching majors must take one Life and one Physical Science)
- CIS 20400
- MA/SCI/STAT/IS/PHIL 15000/F&N 30300
- Literature
- PHIL (not Logic)
- HIST
- Aesthetics (A&D 25500, ENGL 31900, MUS 25000, or THTR 20100)
- ECON 10100
- Political Science
- PSY 12000 (Teaching majors should take EDPS 22000 instead of PSY 12000)
- SOC 10000 or ANTH
- Foreign Language (12 hour sequence)
COLLEGE AND UNIVERSITY REQUIREMENTS FOR THE

Bachelor of Arts in Foreign Language: French
MINIMUM GRADE OF “C” REQUIRED IN CORE SUBJECTS
(120 CREDITS)

College and University Requirements for the Bachelor’s degree plus

1. All of the following courses:
   - FR 26100 Composition
   - FR 36500 Conversation
   - FR 46100 Intermediate Conversation
   - FR 46500 Intermediate Conversation
   Any combination of three of the following (9 hours):
     - French Culture course
     - French Civilization Course
     - FR 30700

Two Literature courses (French or Francophone) (6 hours)
Three French electives (9 hours)
Electives (20-27 credit hours)
Highly recommended to focus on a minor or courses with an international focus (e.g., a second foreign language)

Bachelor of Arts in Foreign Language: Spanish
MINIMUM GRADE OF “C” REQUIRED IN CORE SUBJECTS
(120 CREDITS)

College and University Requirements for the Bachelor’s degree plus:

- SPAN 26100 or SPAN 31400
- SPAN 30400
- SPAN 30600
- SPAN 30700
- SPAN 36500 or SPAN 31300
- SPAN 46100 or SPAN 51500
- SPAN 46500 or SPAN 51100

Spanish literature course (3 credit hours)
Spanish civilization/culture course (3 credit hours)
Latin American civilization/culture course (3 credit hours)
Two Spanish electives (6 credit hours)

Electives (20-27 credit hours)
Highly recommended to focus on a minor or courses with an international focus (e.g., a second foreign language)

French Teaching
(124–130 CREDITS)

College and University Requirements for the Bachelor’s degree plus:

1. French Courses
   - FR 26100 Composition
   - FR 36500 Conversation
   - FR 46100 Intermediate Composition
   - FR 46500 Intermediate Conversation
   - FR 51100 Advanced Conversation
     - two literature
     - one civilization
     - one culture
     - two electives
   (Highly recommended as an Elective is FLL 46400, Comparative Study of Modern Languages.)
   (A student may choose one approved course, in addition to FLL 46400, carrying the major foreign language or FLL prefix, but taught in English.)

2. Education Requirements
   - EDPS 22000 Psychology of Learning
   - EDFA 20000 History and Philosophy of Education
   - EDPS 26000 Introduction to Special Education
   - EDCI 35500 Planning and Assessment
   - EDCI 34200 Foreign Language instruction in Middle School, Junior High, & High School
   - EDCI 37000** Teaching Students w/Diverse Needs in the K-12 Classroom
   - EDCI 32300 Educational Technology for Teaching and Learning
   - EDCI 36600 Use of Assessment in the K-12 Classroom
   - EDCI 49700** Supervised Teaching

**Admission to Teacher Education required.

Spanish Teaching
Heritage and Non-Heritage

SELECT THE HERITAGE OR NON-HERITAGE OPTION
(127–130 CREDITS)

1. Spanish Teaching Heritage
   - SPAN 31300 Spanish for Spanish Speakers I
   - SPAN 31400 Spanish for Spanish Speakers II
   - SPAN 30600 Spanish Grammar
   - SPAN 30400 Readings from the Hispanic World
   - SPAN 45100 Spanish Civilization
   - SPAN 48100 Spanish Culture
   - SPAN 48200 Latin American Civilization
   - SPAN 51100 Advanced Conversation
   - SPAN 51500 Advanced Composition
   - SPAN 40500 Intro to Spanish Literature I
   - SPAN 40600 Intro to Spanish Literature II
   - SPAN 43500 Spanish American Literature to Modernism
   - SPAN 43600 Spanish American Literature from Modernism to Present
   - SPAN 42600 Spanish Linguistics
   - SPAN Electives - 6 credits
   - Any 10100 foreign language course other than SPAN or ENGL

2. Spanish Teaching Non-Heritage
   - SPAN 36500 Conversation
   - SPAN 26100 Composition
   - SPAN 30600 Spanish Grammar
   - SPAN 30400 Readings from the Hispanic World
   - SPAN 46500 Intermediate Conversation
   - SPAN 46100 Intermediate Composition
   - SPAN 45100 Spanish Civilization
   - SPAN 48100 Spanish Culture
   - SPAN 48200 Latin American Civilization
   - SPAN 51100 Advanced Conversation
   - SPAN 51500 Advanced Composition
   - SPAN 40500 Intro to Spanish Literature I
   - SPAN 40600 Intro to Spanish Literature II
   - SPAN 43500 Spanish American Literature to Modernism
   - SPAN 43600 Spanish American Literature from Modernism to Present
   - SPAN 42600 Spanish Linguistics
   - Any 10100 foreign language course other than SPAN or ENGL
3. Education Requirements

EDPS 22000  Psychology of Learning
EDFA 20000  History and Philosophy of Education
EDPS 26000  Introduction to Special Education
EDCI 35500  Planning and Assessment
EDCI 34200  Foreign Language instruction in Middle School, Junior High, & High School
EDPS 37000**  Teaching Students w/Diverse Needs in the K-12 Classroom
EDCI 32300  Educational Technology for Teaching and Learning
EDCI 36600  Use of Assessment in the K-12 Classroom
EDCI 49700**  Supervised Teaching

**Admission to Teacher Education required.

Foreign Language Minor
(15 CREDITS)

Fifteen credits of coursework (not to include departmental credit) beyond 10200, including a course in composition and a course in conversation. (Courses must be in the same language.) Students must maintain a B- in all foreign language courses to obtain the Minor.

Certificate – Spanish Translation
(18 CREDIT HOURS REQUIRED FOR CERTIFICATE COMPLETION)

Required courses:
- SPAN 37300  Spanish Translation
- SPAN 47300  Intermediate Spanish Translation
- SPAN 51500  Advanced Spanish Composition
- ENGL 26000  Introduction to World Literature: to 1700
- ENGL 26100  Introduction to World Literature: since 1700
- ENGL 42000  Business Writing

Highly recommended additional courses (3 class hrs. ea.):
- SPAN 30600  Spanish Grammar
- SPAN 30700  Commercial Spanish
- SPAN 40500  Introduction to Spanish Literature I
- SPAN 40600  Introduction to Spanish Literature II
- SPAN 43500  Spanish American Literature to Modernism
- SPAN 43600  Spanish American Literature from Modernism to Present
- ENGL 24000  Survey of the Literature of England: from the beginnings
- ENGL 24100  Survey of the Literature of England: from the Rise of Romanticism to the Modern Period
- ENGL 35000  Survey of American Literature from its beginnings to 1865
- ENGL 35100  Survey of American Literature from 1865 to the Post World War II Period
- ENGL 38100  The British Novel
- ENGL 42300  Technical Publications Writing
Department of History, Political Science, and Economics

Paul McGrath, Head. Faculty: J. Bigott; A. Clark; F. Colucci; M. Eisenstein; M. W. H. Grote (Emeritus); G. Hong; F. Jackson; M. J. Joyce; E. P. Keleher (Emeritus); S. Lerner; P. Pierce (Emerita); W. St. Jean; T. Stabler; M. Rincker; R. Rupp; K. Tobin N. L. Trusty (Emeritus); R. A. Van Orman (Emeritus)
Academic Advisor: S. VanTil
Office Manager: S. Schultz

The Department of History and Political Science provides programs that offer students an understanding of the development of civilizations and the nature of political behavior within and among nations. The History program is designed to give students comprehension of past institutions, traditions, events, and individuals. This program helps students to develop broad perspectives, assess and analyze the events of their time, and cultivate intellectual growth, research and writing skills and capabilities, critical thinking, and preparation for careers in teaching, graduate and law school, and business.

The program in Political Science provides a social scientific and analytical understanding of the rights and obligations of the citizen, knowledge of the role and operation of government, awareness of international relations and comparative government, an appreciation of public policy issues, and preparation for entry into such professions as law, teaching, law enforcement, and business. Within the Political Science Major, the department also offers a Criminal Justice Option for those interested in careers in law enforcement.

Thus, both History and Political Science programs help students develop skills in research, writing, and critical analysis and provide essential grounding for participation in a variety of career options and human activities.

The Social Studies Teaching Major is housed within the department of History and Political Science. This program, cooperatively developed and supported by the Department and by the College of Education, is specifically designed to provide preparation for teachers of social studies.

Majors in History, Political Science, or Social Studies teaching are excellent preparation for a variety of activities requiring a solid liberal arts background. Internship and Experiential Learning within the majors provide work experience that makes the education more meaningful for students and, on graduation, make students more attractive to employers.

Programs
- Bachelor of Arts, History
- Bachelor of Arts, Political Science
- Bachelor of Arts, Political Science, Option in Criminal Justice
- Bachelor of Arts, Social Studies Teaching
- Master of Arts, History
- Minors in Political Science and History

The Following General Education Courses (54-57 credits) are required for the Bachelor of Arts Degrees:

- ENGL 10000/10400-10500 or 10800
- COM 11400
- CIS 20400
- MA or STAT
- LAB Science
- PHIL 15000 or F&N 30300 or any MA/SCI/STAT/CIS
- Literature
- Philosophy (not Logic)
- History
- Aesthetics (A&D 25500, ENGL 40500, MUS 25000, or THTR 20100)
- Economics 21000
- Political Science 10100
- Psychology 12000
- Sociology 10000 or Anthropology
- Foreign Language 12-hour sequence: French, German, Spanish or Japanese
Bachelor of Arts, History
(120 CREDITS)

General Education Requirements
HIST 10600 Freshman Experience
Nine hours of 100 level history courses
Research and methods in History:
HIST 29500 History and Writing
HIST 36900 Research in History
Two American (U.S.) History Courses
Two Non-American (Non-U.S.) History Courses
Twelve additional hours of History at 30000 level or higher
Electives or Minor (21 or 24 credits)

Bachelor of Arts, Political Science
(120 CREDITS)

POL 20000 Intro. to the Study of Political Science. (Freshman Experience)
POL 30000 Introduction to Political Analysis
Three courses chosen from 2 of the 3 Areas of Political Science
(one of these courses must be numbered 30000 or higher) (6 credit hours)
Six other 3-credit courses in political science, at least two of which shall be numbered 40000 or higher. Students must select one course from two areas other than those in requirement
POL 40100 Practicum in Local Government,
OR
POL 40600 Internship in Public Agency, OR Study Abroad (3 credit hours)
OR
POL 49100 Senior Seminar

The three AREAS of Political Science
(Far area assignment of courses not listed below contact departmental advisor)
AREA 1: American Political Systems, Processes, and Behavior:
AREA 2: Political Theory and Methodology;
AREA 3: International Relations and Comparative Political Systems, Processes, and Behavior:
Electives and/or Minor Requirements (27 or 30 credits)

Political Science Minor
(15 CREDITS)

POL 20000 and any 12 credits in political science classes at the 20000 level or above

Bachelor of Arts, Social Studies Teaching

1. General Education and College Requirements
HIST 10600 Freshman Experience
ENGL 10800 Adv. Freshman Comp.
OR
ENGL 10000/10400 & 10500 English Comp. I and II
COM 11400 Fund. Speech Com.
Foreign Language 10100–10200–20100–20200
(French, German, Spanish or Japanese)
(Students must pass the previous level with a C- or better to continue to the next language course.

Science and Mathematics
3 credits of Mathematics or Statistics

3 credits of Life Science (NRES/SCI 10300, 10400, 10500, 11400)
3 credits of Physical Science (CHM/EAS/ASTR/SCI 11200 or 11300S)
Computer Utilization (CIS 20400)

3. Humanities and Social Sciences
One course each from:
Literature
Philosophy
History
Aesthetics (A&D 25500, MUS 25000, THTR 21000, ENGL 40500, or PHIL 10600)
Economics (including ECON 21000, ECON 37500/HIST 37400, or ECON 25100)
Political Science
Psychology (EDPS 22000 fulfills this requirement)
Sociology or Anthropology

Social Studies Requirements:
Three 15–24 credit hour intense areas must be taken from among Economics, Government, Historical Perspectives, Psychology, and Sociology. (3.0 GPA required in each prior to student teaching.)

Description of Intense Areas for Social Studies Teaching:
Economics: (Minimum Math prerequisite for this area is MA 15300)
ECON 25100 Microeconomics
ECON 25200 Macroeconomics
Plus three courses from the options list below:
OPTIONS LIST IN ECONOMICS:
ECON 31100 Environmental Economics
ECON 32200 Public Finance
ECON 35100 Intermediate Microeconomics
ECON 35200 Intermediate Macroeconomics
ECON 37500/ U.S. Economic History
HIST 37400
ECON 38000 Money and Banking
ECON 41900 Managerial Economics
ECON 43400 International Trade
ECON 46500 Economic Forecasting Techniques
MA 225 00 Calc For Bus & Econ I
AND / OR
MGMT 22500 Fund Managerial Stat

All four of the following courses:

Historical Perspectives:
HIST 11000 The Pre-modern World
HIST 10400 The Modern World
HIST 15100 American History to 1877
HIST 15200 US Since 1877
HIST 29500 Research and Writing in History

Government:
POL 10100 American Government
AND
POL 13000 Intro. Intl. Relations
OR
POL 14100 Governments of the World

Psychology:
PSY 12000 Elem. Psychology
PSY 36100 OR 36200 Human Devolp. I or II
PSY 33900 Adv. Social Psychology
OR
SOC 34000 General Social Psychology

One additional course from among:
PSY 34400 Human Sexuality
PSY 35000 Abnormal Psychology
PSY 42800 Drugs and Behavior
Sociology:
SOC 10000 Intro. Sociology
SOC 22000 Social Problems

Plus three additional credits in Psychology at the 300 level or above.

Education Requirements:  (See page 00 for more information)
EDFA 20000 History and Philosophy of Education
EDPS 22000 Psychology of Learning (3 credits)
EDPS 26000 Introduction to Special Education
EDCI 35500** Teaching and Learning in the K-12 Classroom
EDCI 36600** Use of Assessment in the K-12 Classroom
EDPS 37000** Teaching Students w/Diverse Needs in the K-12 Classroom
EDCI 34700** Strategies of Instruction in the Senior High School
EDCI 32300** Educational Technology for Teaching and Learning
EDCI 49700** Supervised Teaching

**Admission to Teacher Education Program required prior to registration in courses indicated.

GPA Requirements in Social Studies Teaching:
—3.00 GPA required for admission to professional semester (student teaching), if admitted to the
University beginning Spring, 2004.
—No grades of "D" in Education or major area courses.
—No more than two repeats permitted, once the student has been coded to teaching major.
—No more than two grades of "C" in Education courses.

Master of Arts, History
(33 CREDITS)

Special Admission Requirements:
Scores from the Graduate Record Exam or GRE (at the discretion of the depart-
ment) may be required. The GRE is mandated for students with an undergraduate
GPA below 3.0/4.0.

An undergraduate History major or a strong minor.

Completion of the application process (submission of official transcripts of all
undergraduate work, three recommendations, a 300 to 500-word essay on why
the student wishes to attend graduate school and a completed on-line application
form). The student may take as many as 12 credits in a temporary or post-
baccalaureate status prior to being admitted to the program.

Degree Requirements
Non-Thesis option (33 cr.) divided into primary area (27 cr.) and related area
(6 cr.). Related areas need not be in History. All classes must be 50000- or
60000-level.
At least 12 credits of History at 60000 level.
Written and/or oral comprehensive examinations after completion of coursework.

Thesis option (30 to 33 cr.) divided into primary area (24 to 27 cr.) and related
area (6 cr.). Related areas need not be in History. All classes must be 50000- or
60000-level.
At least 12 credits of History at 60000 level, including at least three credits of thesis
enrollments.
Completion of a thesis, in accordance with criteria of the Graduate School.
Defense of thesis.

Transfer of Credit
No more than two courses from another accredited institution.
Women’s Studies

Rebecca Stankowski, Director. Instructional Faculty in the Women’s Studies Program: Jane Campbell; Theresa Carilli; Ralph Cherry; Anne Edwards; Karen Lee Fontaine; Lisa Goodnight; Zenobia Mistri; Colette Morrow; Meg Rincker; Tanya Stabler; Kathleen Tobin

Web site (general information): www.purduecal.edu/wost/
E-mail (Rebecca Stankowski): rhs@purduecal.edu
Phone: (219) 989-2208

The Women’s Studies Program offers courses that can be taken individually or combined into the Women’s Studies minor or the Associate of Arts degree with a concentration in Women’s Studies. These programs provide a special focus on gender issues as they relate to the student’s major field of study.

Mission Statement:
The Women’s Studies Program will offer an academic curriculum informed by feminist theories and methodologies and will sponsor activities focusing on women’s issues.

The Women’s Studies curriculum provides all students with a threefold opportunity: (1) to examine the role of gender in social institutions, in the formation of identity, and in the development of knowledge; (2) to explore physical and mental health and wellness issues of particular importance to women; and (3) to increase awareness of women’s endeavors and contributions throughout time.

The Women’s Studies Program provides courses from a variety of disciplines leading to a minor in Women’s Studies and with a concentration in Women’s Studies. The Women’s Studies Program sponsors activities that address the personal, professional, cultural and educational needs of a diverse population of women, both on the campus and in the community.

Programs

- Minor in Women’s Studies

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Minor in Women’s Studies
(15 CREDITS)

1. Women’s Studies Core
   WOST 12100 Introduction to Women’s Studies

2. Women’s Studies Electives
   Four from:
   - WOST 10300 Freshman Experience
   - WOST/F&N 20800 Nutrition in Women’s Health
   - WOST/COM 40500 Rhetoric Women’s Rights
   - WOST/COM 47000 Women in the Media
   - WOST/ENGL 32000 By and About Women
   - WOST/HIST 36500 Women in America
   - WOST/PSY 34900 Psychology of Women
   - WOST/SOC 35000 Social Psych. of Marriage
   - WOST/ENGL 23600 Mothers and Daughters Lit.
   - WOST/ENGL 32400 International Women’s Lit.
   - WOST/ENGL 34000 Literature by Women of Color
   - WOST/SOC 45000 Sex Roles Modern Society
   - WOST 49000 Topics in Women’s Studies
BA in Multidisciplinary Studies (MDS)

The Bachelor of Arts degree in Multidisciplinary Studies (MDS) provides a flexible and individualized program of study for students at Purdue University Calumet. The MDS program provides students with the opportunity to combine courses based on his or her specific educational and career interests, and is designed to allow students to acquire a broad, well-rounded education that expands the traditional scope of disciplinary, departmental, and college boundaries. MDS encourages creativity, innovation, critical thinking, and integrative learning by encouraging students to examine problems, issues, or topics from more than one academic perspective.

Students in MDS will take courses in two 18-credit related Areas of Study, and will also complete a capstone course in one of the two Areas, which is designed to integrate study from both concentrations of study. The capstone also provides students with the option to combine Service Learning or another type of Experiential Learning with coursework while creating a professional portfolio.

Students in MDS select their areas of study and the design of their program, including the capstone course, in consultation with faculty from the two selected Areas and with an academic advisor.

The MDS degree requires 120 credits, including general education, the two related Areas of Study and accompanying capstone, and customizable electives. Any student interested in pursuing the BA in Multidisciplinary Studies degree program may get further information by contacting Dr. Rebecca Stankowski, Executive Director of Multidisciplinary Studies and Learning Outcomes Assessment, College of Liberal Arts and Social Sciences, at 219-989-2208; rhs@purduecal.edu
COLLEGE OF
NURSING
COLLEGE OF NURSING

Peggy Gerard, Dean
www.purduecal.edu/nursing

Undergraduate Nursing Program
219/989-2814, 800-HI-PURDUE, ext. 2814, CLO 313

Graduate Nursing Program
219/989-2815, 800-HI-PURDUE, ext. 2815, CLO 316

Undergraduate Degree Programs
- Bachelor of Science Degree, Nursing
  — Professional Option
  — Accelerated Second Degree BS Option
  — LPN Transitioning to BS Option
  — Online RNBS, Completion Option

Graduate Level Programs
- Master of Science Degree, Nursing
  — Adult-Gerontology Clinical Nurse Specialist
  — Family Nurse Practitioner Option
  — Nurse Executive Option
- Post-Master’s Level Nursing Education Certificate Program
- Post-Master’s Level Family Nurse Practitioner Certificate Program
- Post-Master’s Level Adult-Gerontology Clinical Nurse Specialist Certificate Program

All programs are accredited by the National League for Accreditation Commission for Education in Nursing (ACEN).

Career Opportunities

Graduates of the College of Nursing may work as registered nurses in hospitals, long-term care facilities, outpatient centers and a variety of community settings. Students who earn or post-master’s certificates may pursue careers as Adult-Gerontology nurse specialists, Family nurse practitioners in family health nursing, and Nurse Executives.
College of Nursing

Peggy S. Gerard, Dean. Faculty: R. Alexander (Emeritus); M. Block; J. Boling; L. Buechley (Emeritus); M. Cahn (Emeritus); C. Cooke; J. Dobbin; J. Dorman; T. Eastland; M. G. Engel (Emeritus); F. Faun (Emeritus); R. Fife; K. Fontaine; R. M. Givens (Emeritus); K. Herbert; L. Hopp; D. Huffman; D. Kark; P. Kelly-Heidenthal (Emeritus); K. Kleefisch; J. Landrum; M. Marthaler; E. McGuire (Emeritus); L. Miskovich; S. Misner; E. Moore; C. Moreich; K. Nix; L. Orlich (Emeritus); M. M. Plawecki (Emeritus); C. Reid (Emeritus); L. Rittenmeyer; C. Robbins; G. Smokvina (Emeritus); J. Stryczek (Emeritus); R. Zahara-Such; J. Tazbir; M. A. Thomas (Emeritus); B. Voterro; J. Walker; B. Watts (Emeritus); G. Wegner; J. Zweig

Nursing Advisors: Angelo Cicco; Heather Cook; Kathleen Galovic; Patricia Mellon
Nursing Resource Center Coordinator: Carol Magliola
Coordinator Instructional Design: Jill Ullmann

The College of Nursing offers innovative program options to meet the professional needs of students for entry into nursing or for advanced preparation. The undergraduate program offerings which prepare nurses to enter practice and meet eligibility requirements for NCLEX are: Bachelor of Science Professional Option, Accelerated Second Degree B.S. Option and LPN transitioning to Bachelor of Science. These programs and the RNBS, Nursing Completion Option are designed to prepare a nurse-generalist to provide comprehensive nursing care for people of all ages within a variety of health care settings. In addition, the degree options provide academic preparation for advanced degrees in Nursing. The Master’s level program prepares Clinical Nurse Specialists in Adult-Gerontology, Family Nurse Practitioners, and Nurse Executives. Three master’s level certificate programs in Nursing Education, Adult-Gerontology Health Clinical Nurse Specialist, and Family Nurse Practitioner are also available. The graduate program has a strong clinical emphasis and prepares graduates for diverse leadership roles. All programs are accredited by the Accreditation Commission for Education in Nursing (ACEN).

Throughout the programs, various part-time and full-time employment opportunities are available in local health care agencies giving students work experience that relates to their university studies. Flexible schedules allow students to pursue programs part-time and full-time. These are university programs, with students sharing in the social and cultural aspects of college life, while developing their potential as persons, citizens, and nurses. Admission to nursing programs is competitive and is determined by program admission committees in the College of Nursing. Special requirements for admission and progression are available through the College.

Programs

- Undergraduate
  - Bachelor of Science, Nursing
    ~ Professional Option
    ~ Accelerated Second Degree B.S. Option
    ~ LPN to BS Option
    ~ Online RNBS, Completion Option

- Graduate
  - Master of Science, Nursing
    ~ Family Nurse Practitioner (on-campus or on-line)
    ~ Nursing Executive
  - Post-Master’s level Nursing Education certificate program
  - Post-Master’s level Family Nurse Practitioner certificate program (on-campus or on-line)
  - Post-Master’s level Adult-Gerontology Clinical Nurse Specialist certificate program (on-campus or on-line)

Admission Requirements for the UNDERGRADUATE PROGRAM (LEADING TO THE RN) FOR BACHELOR’S PROFESSIONAL OPTION APPLICANTS

The applicant must be officially accepted by the University before his or her application can be considered for admission to the College of Nursing. Application forms for admission to the University must be obtained from the Office of Admissions, LaVanche Hall, Purdue University Calumet, Hammond, IN 46323. If the applicant has previously attended Purdue University Calumet, but has not been enrolled for three semesters or longer, he/she must make reapplication to the University Admissions Office. Admissions are once yearly for the Fall semester and applications must be completed by February 1st. This is a limited enrollment program. Admission is competitive. Applicants are considered on the basis of test scores, prior academic achievement and space available.

When more qualified applicants than openings are available, applicants will be ranked by the Undergraduate Nursing Admission, Progression and Graduation Committee. The best qualified applicants will be admitted. If you have any questions please see your advisor.

The following admission criteria must be submitted to the Office of Admissions:

1. Application to the Undergraduate Degree Program in Nursing
2. High School transcript or high school equivalence credentials; the applicant with a GED must complete 9 hours of University credit or have a SAT composite in Critical Reading and Math of 1000 or above before they will be considered for admission.
3. Post-high school transcripts.
4. SAT/ACT scores

Each applicant is responsible for submitting the above admission criteria. Consideration for admission will not be given unless all records are received in this department by the deadline date.

1. BEGINNING STUDENTS
   (students who have not attended any college/university)
   A. SAT/ACT composite scores 1000 or higher in Critical Reading and Math,
      (or equivalent English/Mathematics Placement Test Scores).
   B. Meets following high-school subject matter:
      English 8 sem.
      Algebra 4 sem.
      Geometry 2 sem.
      Chemistry 2 sem.
      Biology 2 sem.
      Add'l. Lab Science 2 sem.
      (Biology, Physics, Anatomy and Physiology recommended)
      Note: Applicants who do not meet the Nursing admission requirements but do meet general university requirements will be admitted to Center for Student Achievement.
2. CHANGE OF DEGREE, TRANSFER, OR SECOND DEGREE STUDENTS

Eligibility for admission by the Nursing Admission, Progression and Graduation Committee is determined by the following minimum criteria:

1. Minimum 2.75/4.0 cumulative grade point average is required in 12 semester credit hours of required core courses from the undergraduate nursing curriculum plan.
2. The required twelve semester credit hours must include a minimum of six (6) semester credit hours of laboratory science with a minimum 2.0 (C) grade in each course.
3. Required non-science courses must be taken from the following: English 10400, English 10500, (or its equivalent); Psychology 12000. Required science courses must be taken from the following: Chemistry 11900; Biology 21300 and 21400; Biology 22100 or equivalencies.
4. All required courses must have a grade of 2.0 (C) or better.
5. A grade of less than 2.0 in any three (3) prerequisite courses required in the Undergraduate Nursing Curriculum Plan of Study will result in ineligibility for admission.
6. Repeated core science courses, for the purpose of admission, will be factored together to produce a cumulative GPA.
7. Students are allowed only one withdrawal from the same science course. This withdrawal policy does not include courses dropped during the refund period.
8. Laboratory science courses for non-RN students need to have been completed within five (5) years of an application to the College of Nursing. Special consideration may be given to applicants with a four year degree in science or a medically related field.
9. Nursing students transferring from another nursing program must submit a letter of good standing from the Dean or designee of their previous nursing program.
10. Applicants who have been admitted to the College of Nursing will be required to submit a record of a comprehensive physical examination completed within the last 6 months, a complete immunization record and/or lab titres, PPD within 3 months of entry or chest x-ray, and Cardiopulmonary Resuscitation Certification prior to registration. In addition, students must meet agency requirements as they are mandated.
11. Criminal background check must be completed as a condition of acceptance. The College of Nursing will provide information on the process.

NOTE: Simply meeting the above requirements does not guarantee admission to the Nursing Program. All applicants to Nursing are reviewed and the best qualified are admitted. Enrollment is limited.

Baccalaureate Degree in Nursing
(Professional Option)

(120 CREDITS)

Semester 1

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
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<tr>
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<tr>
<td>BIOL 21300</td>
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<td>PSY 12000</td>
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Semester 2

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<tr>
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<td>ELECTIVE</td>
<td>Communication</td>
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<td>NUR 18200</td>
<td>Conceptual and Theoretical Thinking in Nursing</td>
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<td>NUR 27400</td>
<td>Essential Pharmacokinetics for Nursing</td>
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<tr>
<td>BIOL 21400</td>
<td>Human Anatomy &amp; Physiology II</td>
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<td>ENG 10500</td>
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Semester 3

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<td>Intro to Microbiology</td>
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<td>Essentials of Nutrition</td>
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<td>NUR 29400</td>
<td>Essential Pharmacotherapeutics for Nursing</td>
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<tr>
<td>NUR 19600</td>
<td>Foundations of Psychosocial Nursing (First 8 weeks)</td>
<td>3</td>
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<td>NUR 18800</td>
<td>Foundations of Health Assessment and Health Promotion</td>
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Semester 4

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<td>NUR 41500</td>
<td>Pathophysiology</td>
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<td>NUR 38400</td>
<td>Concepts of Role Development in Professional Nursing</td>
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<tr>
<td>NUR 28600</td>
<td>Mental Health Nursing (First 8 wks)</td>
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<td>NUR 28700</td>
<td>Mental Health Nursing Practicum (Second 8 wks)</td>
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<td>NUR 19200</td>
<td>Foundations of Nursing (First 8 weeks.)</td>
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<td>Practicum I (Second 8 weeks)</td>
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Semester 5

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<td>NUR 28200</td>
<td>Adult Nursing I</td>
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<tr>
<td>NUR 28300</td>
<td>Practicum II</td>
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<tr>
<td>BHS 20100</td>
<td>Statistical Methods for the Behavioral Sciences</td>
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<tr>
<td>NUR 45100</td>
<td>Nursing Informatics</td>
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<td>NUR 39400</td>
<td>Health Promotion and Education</td>
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<tr>
<td>NUR 39100</td>
<td>Professional Ethics</td>
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Semester 6

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<td>Nursing Care of Women Through the Lifespan</td>
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<td>NUR 31800</td>
<td>Maternity Practicum</td>
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<tr>
<td>NUR 27500</td>
<td>Alternative Therapies for Nursing Practice</td>
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<tr>
<td>NUR 39000</td>
<td>Nursing Research</td>
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<td>NUR 39700</td>
<td>Nursing Care of the Aged, Disabled &amp; Chronically Ill</td>
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Semester 7

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<tr>
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<td>Pediatric Nursing (First 8 weeks)</td>
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<td>Community Health Nursing Practicum</td>
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<td>Community Health Nursing</td>
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<td>NUR 45200</td>
<td>Quality and Safety in Professional Nursing Leadership</td>
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Semester 8

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<td>NUR 39200</td>
<td>Adult Nursing II</td>
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<td>NUR 39300</td>
<td>Practicum III</td>
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<td>NUR 39900</td>
<td>Nursing Elective</td>
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<tr>
<td>NUR 48700</td>
<td>Transitions Into Professional Nursing Practice</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>NUR 49800</td>
<td>Capstone Course in Nursing</td>
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Baccalaureate Degree in Nursing
(Professional Option)

(120 CREDITS)

Admission Requirements for the
ACCELERATED SECOND DEGREE IN NURSING OPTION

Purdue University Calumet College of Nursing offers an accelerated program for non-nurses who possess a minimum of a baccalaureate degree in another discipline. This intense and innovative program is designed specifically for full-time, academically talented students, who are mature critical thinkers and motivated to earn a BS degree in nursing in a shortened time frame. Students who have a bachelor’s degree in another major that are not interested in a full time program or do not meet the admission requirements are encouraged to meet with the nursing academic advisor and explore their options in the traditional program.

Admission Requirements:

1. Have a minimum of a baccalaureate degree in any major from an accredited institution.
2. Have a cumulative grade point average of 3.0 from prior baccalaureate and/or graduate program.
3. Have a minimum grade of “C” or better in all prerequisite courses.
4. Provide an essay outlining personal goals and objectives along with a resume.
5. Complete a face-to-face interview with members of the admissions committee.

PROGRAM APPROVED BY BACCALAUREATE CURRICULUM COMMITTEE 02/04/2013

Admission Requirements for
ACCELERATED SECOND DEGREE IN NURSING OPTION

1. Have a minimum of a baccalaureate degree in any major from an accredited institution.
2. Have a cumulative grade point average of 3.0 from prior baccalaureate and/or graduate program.
3. Have a minimum grade of “C” or better in all prerequisite courses.
4. Provide an essay outlining personal goals and objectives along with a resume.
5. Complete a face-to-face interview with members of the admissions committee.
Entrance Requirements:
1. Complete all OSHA requirements prior to enrollment.
2. Criminal background check must be completed as a condition of acceptance. The College of Nursing will provide information on the process.
3. Meet with the nursing academic advisor.
4. Attend the nursing orientations.
5. Successful test out of the NUR 27400 proficiency exam or completion of the course in summer session prior to the fall semester.

Admission Prerequisites:
- Human Anatomy and Physiology* 6-8 credit hours (lab recommended)
- Microbiology* 4 credit hours (lab recommended)
- Computer Information Technology* 3 credit hours
- Statistics 3 credit hours
- Nutrition 3 credit hours
- English Composition 6 credit hours
- Behavioral Sciences 6 credit hours
- Humanities 3 credit hours
- Communication 3 credit hours

Note: Sciences (Anatomy and Physiology, Microbiology and Computer/Information Technology) may not be older than 5 years.

Note: Simply meeting the above requirements does not guarantee admission to the Nursing Program. All applicants to Nursing are reviewed and the best qualified are admitted. Enrollments are limited.

ACCELERATED BACHELOR’S SECOND DEGREE OPTION

Plan of Study
(61 CREDITS)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>LEC</th>
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<tbody>
<tr>
<td>NUR 18800 Foundations of Health Assessment and Health Promotion</td>
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<td>NUR 19200 Foundations of Nursing</td>
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<tr>
<td>NUR 19600 Foundations of Psychosocial Nursing (First 8 weeks)</td>
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<td>NUR 19700 Practicum I (Second 8 weeks)</td>
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<td>NUR 18200 Conceptual and Theoretical Thinking in Nursing</td>
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<td>NUR 29400 Essential Pharmacotherapeutics for Nursing</td>
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<td>NUR 28600 Mental Health Nursing (First 8 weeks)</td>
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<td>NUR 41500 Pathophysiology</td>
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<td>NUR 39100 Professional Ethics</td>
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<td>NUR 39300 Practicum III</td>
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<td>NUR 45200 Quality and Safety in Professional Nursing Leadership</td>
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<td>NUR 48600 Community Health Nursing</td>
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<tr>
<td>NUR 49800 Capstone Course in Nursing</td>
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</table>

All students are required to complete a state board review course prior to receiving the certificate of completion.

Note: Students need to be aware that practicum hours are clinical laboratory hours and are calculated with the formula of 3 contact hours per week, for every practicum hour.

Breakdown of Credit Hours
- 20 cr. Previous Degree
- 39 cr. Prerequisite requirements (some of which might come from previous degree)
- 61 cr. Nursing Major
- 120 cr. hours

At the completion of this program students will receive a BS degree in Nursing and be eligible to take the National Council Licensure Examination to become a Registered Nurse.

PROGRAM APPROVED BY BACCALAUREATE CURRICULUM COMMITTEE 02/04/2013

Online RNBS, Nursing Completion Program Degree Requirements
(120 CREDITS)

Admission Requirements for the Online RN BS, Nursing Completion Option
The Registered Nurse preparing for admission in the RNBS, Nursing Completion Program at Purdue University Calumet must meet the following criteria to be considered for admission:

1. Complete Purdue University Calumet Application and submit application fee.
2. Criminal background check must be completed as a condition of acceptance.
3. Successfully completed an associate’s degree or diploma program in Nursing.
4. Licensure as a Registered Nurse.
5. Completion of 62 semester credit hours of lower division courses, distributed as follows:

<table>
<thead>
<tr>
<th>Science Courses (17 Credits)</th>
<th>Humanities/Social Science Courses (12 Credits)</th>
<th>Elective Courses (3 Credits)</th>
<th>Nursing Courses (30 Credits)</th>
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</thead>
<tbody>
<tr>
<td>Anatomy &amp; Physiology – 8 credits</td>
<td>English Composition – 3 credits</td>
<td>History, Political Science, Philosophy, Arts, Nursing elective or other course – 3 credits</td>
<td>Earned transfer credit or department credit without examination.</td>
</tr>
<tr>
<td>General Chemistry – 3 credits</td>
<td>Introductory Psychology – 3 credits</td>
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<tr>
<td>Pharmacology, Math or Science Course – 2 credits</td>
<td>Growth &amp; Development, Sociology, Child Psychology, Nutrition, or other Social Science course – 6 credits</td>
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<tr>
<td>Microbiology – 4 credits</td>
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Graduates of Associate Degree Nursing Programs who do not have the required 30 hours of nursing credit will have their academic records evaluated on an individual basis.
Online RNBS, Nursing Completion Degree Program

Plan of Study

<table>
<thead>
<tr>
<th>Core Nursing Courses</th>
<th>Credit Hrs.</th>
<th>Non-Nursing Required Courses</th>
<th>Credit Hrs.</th>
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<tbody>
<tr>
<td>NUR 18200 — Conceptual and Theoretical Thinking in Nursing</td>
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<td>BHS 20100 — Statistical Methods</td>
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<td>NUR 38400 — Concepts of Development in Professional Nursing</td>
<td>3</td>
<td>ENGL 10500 — English Composition II</td>
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<tr>
<td>NUR 39000 — Nursing Research</td>
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<td>COM — Communication Elective</td>
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<tr>
<td>NUR 38800 — Nursing of Families and Groups</td>
<td>3</td>
<td>Humanities Elective**</td>
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<td>NUR 39100 — Professional Ethics*</td>
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<td>NUR 39400 — Health Promotion and Education</td>
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<td>NUR 39700 — Nursing Care of the Aged, Disabled &amp; Chronically Ill</td>
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<td>NUR 41500 — Pathophysiology</td>
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<td>NUR 45100 — Nursing Informatics</td>
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<td>NUR 48300 — Community &amp; Public Health Nursing</td>
<td>4</td>
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<tr>
<td>NUR 48200 — Nursing Leadership and Management*</td>
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<td>NUR 49800 — Capstone Course in Nursing***</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 34

LPN to BS Option in Nursing

ADMISSION REQUIREMENTS FOR AN ACCELERATED CURRICULUM TRACK FOR THE LPN TO BS OPTION

PREREQUISITE COURSES FOR ADVANCED PLACEMENT (42 CREDIT HOURS)

The Licensed Practical Nurse preparing to seek admission for advanced placement in the Undergraduate Degree Nursing Program at Purdue University Calumet must:

Step 1:
A. Complete an undergraduate application (available at Enrollment Services Center.)
B. Submit copy of official transcript showing all course work from a state accredited Practical Nurse Program (with date of practical nurse program completed) and other collegiate institutions to Admission Office.
C. Submit copy of current practical nurse licensure to Admissions Office.
When above is completed, Admissions will forward paperwork to nursing Academic advisor. You are then notified of Admission status.
D. Criminal background check must be completed as a condition of acceptance.
The College of Nursing will provide information on the process.
The College of Nursing reserves the right to deny readmission to any student who was previously dismissed from PUC’s Nursing Program or any other Nursing Program.

Step 2:
A. Make an appointment with nursing academic advisor to discuss the criteria for advanced placement.
B. Provide evidence of successful completion of the following prerequisite support courses (27 credits) with a grade of 2.0 (C) or better and a cumulative grade point average of 2.5/4.0 grading scale:

<table>
<thead>
<tr>
<th>PREREQUISITE COURSES FOR ADVANCED PLACEMENT (27 Credit Hours)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Support Courses</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th>Humanities/Social Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15 Credits)</td>
<td>(12 Credits)</td>
</tr>
</tbody>
</table>

| CHEM 11900 | PSY 12000 |
| General Chemistry (3 Credits) | Introduction to Psychology (3 Credits) |

| BIOL 21300 | ENGLISH 10400, 10500 |
| Human Anatomy I (4 Credits) | English Composition I and II (6 Credits) |

| BIOL 21400 | BHS 20100 |
| Human Anatomy II (4 Credits) | (3 Credits) |

| BIOL 22100 |
| Human Anatomy III (4 Credits) |

C. Successful completion of the Foundational HESI Exam with a score of 850 or greater. This satisfies 7 credits of foundational nursing courses.
D. Successful completion of the Pharmacology HESI Exam with a score of 850 or better. This exam satisfies 5 credits for the Pharmacology courses. Credit for the pharmacology courses (NUR 294 and NUR 274) can also be established by taking the courses.
E. Successful completion of NUR 18800 with a C or better.
FIRST YEAR NURSING COURSES
(15 Credit Hours)

Credit by Exam (12 Credit Hours)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 19200</td>
<td>Foundations of Nursing (2 Credits)</td>
<td>2</td>
</tr>
<tr>
<td>NUR 19600</td>
<td>Foundations of Psychosocial Nursing (3 Credits)</td>
<td>3</td>
</tr>
<tr>
<td>NUR 19700</td>
<td>Practicum I (2 Credits)</td>
<td>2</td>
</tr>
</tbody>
</table>

Pharmacology HESI Exam (5 Credits)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 27400</td>
<td>Essential Pharmacokinetics for Nursing (2 Credits)</td>
<td>2</td>
</tr>
<tr>
<td>NUR 29400</td>
<td>Essential Pharmacotherapeutics for Nursing (3 Credits)</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTE: The HESI Exam may be taken only once. Failure to achieve a score of greater than or equal to 850 on the exam will result in ineligibility for advanced placement in the program.

NUR 188 Foundations of Health Assessment and Health Promotion (3 credits) (Students must complete above exam requirements prior to registering for NUR 188)

Plan of Study for LPN to BS Option
(78 CREDIT HOURS)

SEMMESTER 4

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 287</td>
<td>Mental Health Nursing (2nd 8-weeks)</td>
<td>1</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 13 Credits

SEMMESTER 5

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 28200</td>
<td>Adult Nursing I</td>
<td>4</td>
</tr>
<tr>
<td>NUR 28300</td>
<td>Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>NUR 45100</td>
<td>Nursing Informatics</td>
<td>3</td>
</tr>
<tr>
<td>NUR 39400</td>
<td>Health Promotion and Education</td>
<td>3</td>
</tr>
<tr>
<td>NUR 39100</td>
<td>Professional Ethics</td>
<td>2</td>
</tr>
</tbody>
</table>

Semester Total: 14 Credits

SEMMESTER 6

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 31700</td>
<td>Nursing Care of Women through the Lifespan (1st 8-weeks)</td>
<td>3</td>
</tr>
<tr>
<td>NUR 31800</td>
<td>Maternity Practicum (2nd 8 weeks)</td>
<td>1</td>
</tr>
<tr>
<td>NUR 39700</td>
<td>Nursing Care of the Aged, Disabled and Chronically Ill</td>
<td>3</td>
</tr>
<tr>
<td>NUR 390</td>
<td>Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>NUR 27500</td>
<td>Alternative Therapies</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Total: 12 Credits

SEMMESTER 7

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 48600</td>
<td>Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 48500</td>
<td>Community Health Nursing Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NUR 45200</td>
<td>Quality and Safety in Professional Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NUR 36100</td>
<td>Pediatric Nursing (1st 8-weeks)</td>
<td>3</td>
</tr>
<tr>
<td>PHIL</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>NUR 37200</td>
<td>Pediatric Nursing Practicum</td>
<td>1</td>
</tr>
</tbody>
</table>

Semester Total: 16 Credits

SEMMESTER 8

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>TOTAL CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 39200</td>
<td>Adult Nursing II</td>
<td>3</td>
</tr>
<tr>
<td>NUR 39300</td>
<td>Practicum III</td>
<td>3</td>
</tr>
<tr>
<td>NUR 49800</td>
<td>Capstone Course in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NUR 48700</td>
<td>Transitions into Professional Nursing Practice</td>
<td>2</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>Nursing Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Total: 14 Credits
Master of Science, Nursing

Students select among the Adult-Gerontology Clinical Nurse Specialist (47 credits), Family Nurse Practitioner (47 credits) options. Full-time study requires six semesters including summer; part-time study options are available.

Admission Requirements
1. Graduation from an accredited baccalaureate program in nursing.
2. Evidence of current United States registered nurse licensure or licensure.
3. Minimum undergraduate cumulative GPA of 3.0/4.0
4. Basic physical assessment course.
5. Introductory statistics course (within five years prior to admission).
6. Criminal background check clearance (Information about testing to be obtained through College of Nursing.)

An applicant who does not meet one or more of the admission requirements may be considered for conditional admission status. In addition to the preceding requirements for admission, the College of Nursing adheres to Purdue University Graduate School Admission policies regarding English as a foreign language.

Special Graduation Requirements
Final graduation grade point average of a “B” or better on the approved Plan of Study. Minimum grade of “B” in all core and specialty required nursing courses. The program must be completed within 6 years following admission.

1. Advanced Practice in Nursing Core Courses
(Applicable to all Master’s-level study options)

NUR 52300 Nursing Informatics
NUR 59900 Theory and Ethics for the APN
NUR 50100 Foundations of Advanced Practice in Nursing
NUR 50500 Sociocultural Influences on Health
NUR 51000 Nursing Research
NUR 51100 Health Promotion for Advanced Practice in Nursing
NUR 65600 Healthcare Organization, Policy and Economics

2. Additional Clinical Nurse Specialist and Family Nurse Practitioner Core Courses

NUR 50200 Pharmacotherapeutics for Advanced Practice Nursing
NUR 50300 Advanced Health Assessment
NUR 57400 Pathophysiologic Concepts for Advanced Practice Nursing
NUR 57500 Physiologic Concepts for Advanced Practice Nursing II
NUR 59900 Pathophysiology Concepts II

3. Specialty Courses

Clinical Nurse Specialist Option

Adult Adult-Gerontology Clinical Nurse Specialist
NUR 60000 Adult-Gerontology Health Clinical Nurse Specialist I
NUR 60100 Adult-Gerontology Health Clinical Nurse Specialist Practicum I
NUR 61800 Adult-Gerontology Health Clinical Nurse Specialist II
NUR 62000 Adult-Gerontology Health Clinical Nurse Specialist Practicum II
NUR 65800 Adult-Gerontology Health Clinical Nurse Specialist Practicum III: Clinical Synthesis

Family Nurse Practitioner Option

NUR 61100 Primary Care of the Young Family
NUR 61300 Primary Care of the Young Family Practicum
NUR 62200 Primary Care of the Aging Family
NUR 62300 Primary Care of the Aging Family Practicum
NUR 65700 FNP Practicum: Clinical Synthesis

Nurse Executive Option

NUR 52500 Informatics
NUR 65000 Concepts for the Nurse Executive Creating an Environment for Professional Practice
NUR 65100 Role of the Nursing Executive for Professional Practice
NUR 65300 Nursing Administration, Financial Management
SPEA V561 OR Public Human Resources Management
OBHR 63300
NUR 67100 Nurse Executive, Practicum I
NUR 67200 Nurse Executive, Practicum II

4. Electives
(required in the Clinical Nurse Specialist and Nurse Executive Options)
Two to three credits from Nursing or other fields of study

Adult-Gerontology Clinical Nurse Specialist Post-Master’s Certificate Programs

Purpose:
The purpose of the Adult-Gerontology Clinical Nurse Specialist Certificate Programs at Purdue University Calumet will be to provide Clinical Nurse Specialist (CNS) preparation to qualified Master’s prepared nurses. CNSs are advanced practice nurses who are uniquely prepared to meet complex patients’ needs for expert nursing care. In addition, CNSs advance the practice of nursing through their positive influence on nurses, nursing practice and healthcare systems. The target audience for this program includes master’s prepared nurses that are interested in becoming clinical nurse specialists.

Admission Requirements

The admission process for the Adult Health or Critical Care Clinical Nurse Specialist Post-Master’s Certificate Programs adheres to Graduate School Admission policies regarding English as a foreign language and parallels that for students seeking a Master’s Degree in Nursing. Specific requirements are:
1. Master’s degree in nursing from an accredited institution or admission and enrollment in a master’s degree program in nursing.
2. Minimum graduate GPA of 3.0/4.0 with the possibility of conditional admission for applicants who do not meet this requirement.
3. Evidence of current United States nurse licensure.
4. A minimum of one year or 1500 hours of experience as a registered nurse.
5. Criminal background check clearance (Information about testing to be obtained through College of Nursing).

Completion Requirements

The certificate requires students to complete a minimum of 12 credit hours and a maximum of 30 credit hours consisting of the following courses.

Adult-Gerontology Clinical Nurse Specialist

NUR 50200 Pharmacotherapeutics for Advanced Practice Nursing* (3 credits)
NUR 50300 Advanced Health Assessment* – 3 credits
NUR 57400 Pathophysiologic Concepts I for Advanced Practice Nursing* (4 credits)
NUR 57500 Pathophysiologic Concepts II
NUR 51100 Health Promotion for Advanced Practice in Nursing* (3 credits)

Adult Health

NUR 60000 Adult-Gerontology Health CNS I (3 credits)
NUR 60100 Adult–Gerontology Health CNS Practicum I (3 credits)
NUR 61800 Adult–Gerontology Health CNS II (3 credits)
NUR 62000 Adult–Gerontology Health CNS Practicum II (3 credits)
NUR 65800 Adult-Gerontology Health CNS Practicum III: Clinical Synthesis (2 credits)

*May be waived if student has taken a comparable course at Purdue University Calumet or another accredited nursing program within 5 years prior to application to this program.
Family Nurse Practitioner Post-Master’s Certificate Program

Purpose:
The purpose of the Family Nurse Practitioner Certificate Program at Purdue University Calumet is to increase the numbers of family nurse practitioners prepared to provide primary care. Primary care is currently undergoing a period of expansion in order to meet the increasing healthcare needs of our nation’s citizens. The post-master’s certificate program at Purdue University Calumet exists to address the need for increased numbers of primary care providers. The target audience for this program includes master’s prepared nurses that are interested in becoming family nurse practitioners.

Admission Requirements

The admission process for the Family Nurse Practitioner Certificate Program adheres to Graduate School Admission policies regarding English as a foreign language and parallels that for students seeking a Master’s Degree in Nursing. Specific requirements are:
1. Master’s degree in nursing from an accredited institution or admission and enrollment in a masters degree program in nursing.
2. Minimum graduate GPA of 3.0/4.0 with the possibility of conditional admission for applicants who do not meet this requirement.
3. Evidence of current registered nurse licensure.
4. A minimum of one year or 1500 hours of experience as a registered nurse.
5. Criminal background check clearance (Information about testing to be obtained through College of Nursing.).

Completion Requirements

Credit Hour Requirements:
The certificate requires students to complete a minimum of 12 and a maximum of 30 credit hours consisting of the following courses:
- NUR 50200 Pharmacotherapeutics for Advanced Practice Nursing* (3 credits)
- NUR 50300 Advanced Health Assessment* (3 credits)
- NUR 57400 Pathophysiologic Concepts I
- NUR 47500 Pathophysiologic Concepts II
- NUR 51100 Health Promotion for Advanced Practice in Nursing* (3 credits)
- NUR 61100 Primary Care of the Young Family (3 credits)
- NUR 61300 Primary Care of the Young Family Practicum (3 credits)
- NUR 62200 Primary Care of the Aging Family (3 credits)
- NUR 62300 Primary Care of the Aging Family Practicum (3 credits)
- NUR 65700 FNP Practicum: Clinical Synthesis (2 credits)

*May be waived if student has taken a comparable course at Purdue University Calumet or another accredited nursing program within 5 years prior to application to this program.

Post-Master’s Certificate in Nursing Education

Purpose
The purpose of the Post-Master’s Certificate in Nursing Education Program at Purdue University Calumet is to increase the numbers of nurse educators and improve the quality of nursing education. This purpose is accomplished by: providing knowledge and experience in curriculum development; teaching methods to enable qualified master’s prepared nurses to assume the role of beginning faculty; and providing faculty who wish to acquire formal academic preparation in teaching the means to do so. The target audience for this program consists of master’s students and master’s prepared advanced practice nurses, as well as faculty interested in continuing their formal education in teaching.

Admission Requirements

The admission process for the Post-Master’s Certificate in Nursing Education adheres to Graduate School Admission policies regarding English as a foreign language and parallels that for students seeking a Master’s Degree in Nursing. Specific requirements are:
1. Master’s degree in nursing from an accredited institution or admission and enrollment in a masters degree program in nursing.
2. Minimum graduate GPA of 3.0/4.0 with the possibility of conditional admission for applicants who do not meet this requirement.
3. Evidence of current registered nurse licensure.
4. Criminal background check clearance (Information about testing to be obtained through College of Nursing.)

Credit Hour Requirements:
The certificate requires students to complete 10 credit hours consisting of the following courses:
- EDCI 57200 Introduction to Learning Systems Design (3 credits)
- NUR 66000 Curriculum Development in Nursing (3 credits)
- NUR 66200 Teaching Strategies for Nursing (4 credits)
COLLEGE OF TECHNOLOGY
Academic programs offered by the College of Technology include state-of-the-art curricula to meet the ever-changing demands of business and industry for highly-trained technical professionals. The College of Technology offers small class sizes, research opportunities, and the opportunity to profit from real-world laboratory experiences.

- **Computer Information Technology and Graphics** (Charles Winer, Acting Head; 219/989-2035, Anderson Bldg., Room 145A)
- **Construction Science and Organizational Leadership** (Anthony Gregory, Head; 219/989-2332, Anderson Bldg., Room 212)
- **Engineering Technology** (Susan Scachitti, Head; 219/989-2471, Anderson Bldg., Room 143)

### Bachelor Degree Programs
- Computer Graphics Technology
- Computer Information Technology
- Construction Management & Engineering Technologies
- Electrical Engineering Technology
- Industrial Engineering Technology
- Mechanical Engineering Technology
- Mechatronics Engineering Technology
- Organizational Leadership and Supervision

### Master’s Degree Programs
- Technology
- Online Technology Leadership and Management Concentration
- Modeling, Simulation and Visualization

### Career Opportunities
The degree programs within Purdue University Calumet’s College of Technology offer “real-world” experience that sets PUC graduates apart from others in their job search. Graduates are prepared for such career opportunities as a Process Engineer, Plant Manager, Safety Specialist, Database Administrator, Quality Assurance Manager, Product Design Engineer, Process Control Instrumentation Technologist, Human Resource Specialist, Computer Network Technologist, Corporate Trainer, Biomedical Instrumentation Technologist, Construction Scheduler, Multimedia Specialist, Survey Crew Chief, Estimator, CAD Operator/Manager, Graphic Artist, Animator, Virtual Reality Developer, Web Designer/Developer, Lead Software Developer, Software Application Architect, Network Security Technician, Expediter, Manufacturing Supervisor, Materials Technician, System Administrator, Information Technology Consultant, Software Engineer, Programmer, Computer Hardware/Software Technologist, Application Developer, System Analyst, Mechatronics Technician and more.
Department of Computer Information Technology and Graphics

Charles Winer, Professor and Acting Department Head. Faculty: R. Calix; M. Chandramouli; K. Jiang; G. Jin; T. Kim; B. Nicolai; M. Roller; M. Tu; Y. Yang
Emeritus Faculty: S. Rados
Academic Advisor: Debra Armand, Computer Information Technology and Computer Graphics Technology
Staff: B. Marczewski, Department Secretary; D. Alt, CIT&G Technology Specialist

The Department of Computer Information Technology and Graphics (CIT&G), offers Bachelor of Science (B.S.) Degree programs in computer information technology and computer graphics technology. The programs blend the theoretical with the practical and emphasize business applications.

The mission of the Computer Information Technology and Graphics Department at Purdue University Calumet is to provide superior academic programs to our students, acclaimed service to the Calumet Region, and excellence in scholarship to the information technology community. Through classroom and lab interaction with experienced faculty and the ability of students to perform applied research and experiential learning, our graduates are able to begin their professional work activities with the confidence and knowledge to be successful in their chosen field of work. Our computer lab facilities and industry standard software enable students to be on the leading edge of what they will encounter in the real world of information technology and graphics.

The department supports four state-of-the-art and cutting edge technology virtual classrooms/labs in the Powers Building allowing students to access our courses and labs from anywhere at any time. Digitally recorded modules may be archived and available as Podcasts or viewed as live or recorded Webcasts so students can work on a self-paced basis.

For further information, please call the Computer Information Technology and Graphics office at (219) 989-2035. The department homepage can be accessed at: http://webs.purduecal.edu/citg/

Computer Information Technology and Graphics Bachelor of Science degrees:

- Bachelor of Science, Computer Information Technology*
- Bachelor of Science, Computer Graphics Technology**

Notes: ITS (Information Technology Systems) is the CIT program’s subject code designator CGT (Computer Graphics Technology) is the CGT program’s subject code designator
*Accredited by the Computing Accreditation Commission of ABET www.abet.org
**Accredited by the Association of Technology, Management, and Applied Engineering of ATMAE www.atmae.org
Bachelor of Science, Computer Information Technology

(120 CREDIT HOURS)

This program is based on curriculum standards of the Association for Computing Machinery/Special Interest Group Information Technology Education (ACM/SIGITE) core curriculum that meets the requirements of Purdue University Calumet instructional guidelines. The curriculum has the student experience each individual topic in their first two years. The SIGITE core is made up of general education courses and specific Information Technology requirements of the accreditation guidelines. The core courses span knowledge areas that include computational thinking / problem solving, algorithm development, database implementation, project management, human computer interaction, information assurance and security, networking technologies, platform technologies, and operating systems implementation. Through classroom and lab interaction with experienced faculty and the ability to perform applied research and experiential learning, Computer Information Technology graduates are able to begin their professional work activities with the confidence and knowledge to be successful in their chosen field of work.

1. English and Communications
   ENGL 10400 English Composition
   ENGL 22000 Technical Report Writing
   COM 11400 Fundamentals of Speech Communications

2. Mathematics and Science
   MA 14700 Algebra and Trigonometry for Technology
   MA 20500 Discrete Mathematics for IT
   STAT 30100 Elementary Statistical Methods

3. Natural Science — defined as one of the following: Science 11200, Astronomy, Geology, Biology, Physics or Chemistry.

4. Humanities and Social Science
   Humanities — defined as one of the following: American History, English Literature, Modern Language, Philosophy, World History, World Literature, or Aesthetics (Fine Arts, Music, and Theater).
   Social Sciences — defined as one of the following: Anthropology, Communication, Economics, Political Science, Psychology or Sociology

5. Open Elective — (Consisting of 3 credit hours)

6. Computer Information Technology
   ITS 10000 Information Technology Fundamentals
   ITS 11000 Web Systems Technologies
   ITS 12000 Introduction to Human-Computer Interaction
   ITS 13500 Operating Systems Technologies
   ITS 14000 Introduction to Computer Algorithms and Logic
   ITS 17000 Networking Technologies
   ITS 20000 Ethical and Legal Issues in IT
   ITS 24000 IT Programming Fundamentals
   ITS 24500 Integrative Programming
   ITS 25000 Fundamentals of Information Assurance
   ITS 26000 Applied Database Technologies
   ITS 27000 Internetworking Technologies
   ITS 33000 Advanced Operating Systems
   ITS 34000 Advanced Programming
   ITS 35000 Systems Assurance
   ITS 35200 Disaster Recovery and Planning
   ITS 36000 Distributed Application Architecture and Design
   ITS 36200 Distributed Application Development
   ITS 36400 Database Modeling and Implementation
   ITS 37000 Data Communications and Networking
   ITS 37200 System Administration and Management
   ITS 45000 Software Assurance
   ITS 45200 Computer Forensics
   ITS 45400 Assured Systems Design and Implementation
   ITS 46200 Application Integration
   ITS 47000 Large Scale High Performance Systems
   ITS 47200 Network Design and Implementation
   ITS 48000 IT Project Development and Management
   ITS 49000 Senior Project/Undergraduate Research

Program Notes:
1. The program requirements are determined by the date a student officially becomes a CIT major.
2. A student who is not qualified to take at least ENGL 10400 and MA 14700 courses is considered deficient and cannot take any ITS courses until the deficiency is removed.
3. A grade of a “C” or better is required in each ITS major course. ITS courses in which lower grades have been received must be retaken before progressing to the next course in the sequence. An incomplete is not considered a passing grade.
4. Only two ITS courses may be repeated because of an unsatisfactory (D or F) grade. These courses may only be repeated one time.
5. No student shall choose the pass/not pass option for an ITS course. Advisor agreement is required for any other course.
6. Students must meet the University requirements for freshman experience, general education, and experiential learning prior to graduation. Students will utilize general education selective with advisor consent in the category listed.
7. It is expected that students taking 20000, 30000, 40000 level courses have taken all of the previous levels courses regardless of prerequisites.

Computer Information Technology (CIT)

The following are the Program Educational Objectives (PEO’s) for the Baccalaureate Degree in Computer Information Technology (CIT):

Program Educational Objective 1:
The program will produce graduates that are information technologists with applied research, critical thinking and problem solving skills.

Program Educational Objective 2:
The program will produce graduates that are professionals, leading industry direction with excellence in providing solutions to business needs.

Program Educational Objective 3:
The program will produce graduates that are future information technology leaders.

Program Educational Objective 4:
The program will produce graduates that are life-long learners who have a commitment to service within the community.

Program Educational Objective 5:
The program will produce graduates that are citizens of the world, sensitive to state, national and global initiatives through technological solutions.

Computer Graphics Technology (CGT)

The Computer Graphics Technology program is designed to prepare students for employment as graphics technicians. Students work in computer labs developing their graphics skills, techniques, concepts, and management ability through individual and team-based projects.

Graduates of this program work as graphics practitioners to produce engineering drawings, technical manuals, multimedia products, technical illustrations, and web pages.

The courses in the curriculum develop skills and knowledge critical to all areas of computer graphics specialization. They embrace the teaching of ten (10) core behaviors including...
Bachelor of Science, Computer Graphics Technology
(120 CREDIT HOURS)

1. English and Communications
   ENGL 10400  English Composition I
   ENGL 22000  Technical Report Writing
   COM 11400  Fundamentals of Public Speaking

2. Mathematics and Science
   PHYS 22000  General Physics I
   Elective  See * below if transferring to West Lafayette CGT
   MA 14700  Algebra & Trigonometry for Technology I
   MA 14800  Algebra & Trigonometry for Technology II
   Elective  See ** below if transferring to West Lafayette CGT

* If transferring to West Lafayette CGT, you will need to include MA 22100, PHYS 22100 and a 4-credit Lab Science.

** Programming course C++ and/or JAVA. Electives: any course offered by Purdue University Calumet approved by the CGT advisor except general studies or any classes taken to remove high school deficiencies, e.g., beginning and intermediate algebra and English

3. General Education
   ECON 10100  Survey of Economics

4. Humanities Elective
   Any course in literature, history, philosophy, foreign language, art, music, theater, or appropriate interdisciplinary humanities courses.

5. Social Science Elective:
   Any course in anthropology, psychology, sociology, political science, economics, or appropriate interdisciplinary social sciences courses.

   CGT 10100  Introduction to Computer Graphics Technology
   CGT 11100  Design for Visualization and Communication
   CGT 11200  Sketching for Visualization and Communication
   CGT 11600  Geometric Modeling for Visualization and Communication
   CGT 14100  Internet Foundations, Technologies, and Development
   CGT 21100  Raster Imaging for Computer Graphics
   CGT 21500  Computer Graphics Programming I
   CGT 21600  Vector Imaging for Computer Graphics
   CGT 24100  Introduction to Animation and Spatial Graphics
   CGT 25600  Human Computer Interface Theory and Design
   CGT 30700  Advanced Graphic Design for Web and Multimedia
   CGT 30800  Pre Press Production
   CGT 30900  Internship in Computer Graphics Technology
   CGT 31000  Drawing, Acting and Scripts for Animation
   CGT 33000  Multimedia Animation and Video Game Design and Development
   CGT 34000  Digital Lighting & Rendering
   CGT 34100  Motion for Computer Animation
   CGT 34600  Digital Video and Audio
   CGT 35100  Interactive Multimedia Design
   CGT 35300  Principles of Interactive & Dynamic Media
   CGT 35600  Web Programming, Development & Data Integration
   CGT 4xx00  Contemporary Problems in Applied Computer Graphics
   CGT 41600  Senior Design Project
   CGT 44200  Production for Computer Animation
   CGT 44600  Post-Production & Special Effects for Computer Animation
   CGT 45100  Multimedia Application Development
   CGT 45600  Advanced Web Programming, Development & Data Integration
   CGT 49100  Special Topics
   CGT 35600  Web Programming, Development & Data Integration

7. Programming Courses (2 courses)
   CGT 21500  Computer Graphics Programming I
   and Programming course or technical elective

SELECT ONE OF THE FOLLOWING AND/OR
Approved Programming course or approved technical elective

8. Technical Elective
   Two Technical Electives (6 credit hours) with advisor approval.
   Technical Elective = any course in CGT, College of Technology, A&D, CGT related and approved by the CGT advisor.

9. Management/Supervision
   OLS 25200  Human Relations in Organizations
   OLS 37500  Training Methods
   OLS 47700  Conflict Management
   OR
   OLS 35100  Entrepreneurship Organizational Leadership
   OLS 35000  Applied Creativity for Business and Industry

The following are the Program Educational Objectives (PEO’s) for the Baccalaureate Degree in Computer Graphics Technology (CGT):

Program Educational Objective 1:
The program will produce graduates that are primed for successful careers in the disciplines associated with or related to computer graphics technology.

Program Educational Objective 2:
The program will produce graduates that will understand the overall human context in which computer graphics technology activities take place.

Program Educational Objective 3:
The program will produce graduates that will develop conceptual principles, processes, and techniques essential to all areas of computer graphics and digital media production.

Program Educational Objective 4:
The program will produce graduates that will work and interact, through hands-on experiences, to design, develop, produce, and edit electronically generated imagery using a wide range of sophisticated graphical tools and techniques.

Program Educational Objective 5:
The program will produce graduates that are capable of working within a team framework to accomplish a common computer graphics goal and communicate with a range of audiences.

Program Educational Objective 6:
The program will produce graduates that are life-long learners who engage within communities for which Computer Graphics can serve.

Program Educational Objective 7:
The program will produce graduates that are computer graphics technologists with applied research, critical thinking, and problem solving skills in the evolving field of computer graphics.
Department of Construction Science and Organizational Leadership

A.M. Gregory, Department Head

Faculty: J.A. Colwell; R.E. Evans; C.F. Jenks; J.R. Johnson; J.H. Lee; S. Nakayama; R. Ocon; J.A. Pena
Emeritus Faculty: E.A. Dudek; W.F. Glowicki; B.M. Meeker; N.G. Scarlatis

Academic Advisor: Amber Schuler, Construction Management and Engineering Technologies and Organizational Leadership and Supervision
Staff: Sheree Kayden, Department Secretary

The Construction Science and Organizational Leadership department offers Bachelor of Science (B.S.) degrees in Construction Management and Engineering Technologies (CMET), and in Organizational Leadership and Supervision (OLS). The CMET Bachelor of Science degree is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org. Also included in the CMET program is an option in Surveying Technology that has received endorsements by both the State of Indiana Board of Registration for Land Surveyors, and the Land Surveying Licensing Board of the Illinois Department of Professional Regulation.

The Organizational Leadership and Supervision Bachelor of Science degree is accredited by the Applied Science Accreditation Commission of ABET and is the first and only OLS program accredited in the nation. The primary objective of the OLS degree program is to develop the philosophy, skills, and techniques required of successful, first-line leadership in business, education, government, industry, and service organizations. The Organizational Leadership and Supervision Bachelor of Science Degree also offers an Area of Specialization in Environmental Health & Safety (EHS).

The faculty of the Construction Science and Organizational Leadership department have a wealth of real world experience and are leaders in their respective disciplines. As a result, the department curricula are kept current through continuous improvement.

For further information, please call the Construction Science & Organizational Leadership office at (219) 989-2332. The department homepage can be accessed at: http://webs.purduecal.edu/csol/

Construction Science & Organizational Leadership Bachelor of Science degrees:

- Bachelor of Science, Construction Management & Engineering Technologies*
- Bachelor of Science, Organizational Leadership and Supervision**

*Accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org
**Accredited by the Applied Science Accreditation Commission of ABET, www.abet.org

Bachelor of Science, Construction Management and Engineering Technologies

The Construction Management and Engineering Technologies (CMET) program prepares graduates for various positions within the construction industry. The construction industry includes large general construction firms, specialized contractors, residential contractors, materials suppliers, consulting engineering firms, and architectural firms. The program combines course focus areas in Architectural Engineering Technology, Civil Engineering Technology, Surveying Technology, and Construction Management.

Students in the CMET program benefit from the availability of internships offered within the construction industry. The combination of high quality education with actual work experience produces graduates that are prepared for immediate employment and the ability to advance in their careers.

Graduates of the CMET program are working in successful careers nationwide as estimators, field superintendents, construction schedulers, project engineers, project managers, survey crew chiefs, materials technicians, architectural/civil engineering draftspersons, and cost engineers.

Bachelor of Science, Construction Management & Engineering Technologies

(120 CREDITS)

The objective of the Bachelor of Science degree program in Construction Management & Engineering Technologies (CMET) is to provide a broad background in the areas of construction project management, construction engineering, construction methods, inspection, supervision, scheduling and management with additional emphasis on business and communication. The intent of the bachelor of science program is to prepare students to take advantage of opportunities in management positions in which direction of personnel, as well as construction projects, is required.

Note: A grade of C or better in all courses having the "ARET, CET and CMET" designator is required to obtain the CMET B.S. degree, certificates, and option.

This program does not lead to professional registration in architecture or engineering.

1. Communication

| ENGL 10400 | English Comp. I |
| ENGL 22000 | Technical Report Writing |
| COM 11400 | Fundamentals of Speech |

One Communications Elective (300 level and above)

2. Science and Mathematics

| Science |
| PHYS 22000 | General Physics |

One Science elective: any lab science approved by CMET department

| Math |
| MA 14700 | Algebra and Trig. for Technology I |
| MA 14800 | Algebra and Trig. for Technology II |
| MA 21900 | Calculus for Tech I |
| STAT 30100 | Elementary Statistical Methods I |

3. General Education

One general education elective from: Psychology, Philosophy, Sociology, Political Science, History, Foreign Languages, Anthropology, Art History, or English Literature.

4. Major Requirements

| ARET 11700 | Construction Drafting |
| ARET 17000 | Materials and Systems of Construction |
| ARET 22200 | Arch. Construction II |
| ARET 27600 | Specifications and Contract Documents |
| ARET 28300 | Mech. & Elec. Equip for Bldg. |
| CET10400 | Elementary Surveying |
| CET 16000 | Statics |
| CET 20900 | Land Surveying & Subd. |
| CET 25300 | Hydraulics & Drainage |
| CET 26000 | Strength of Materials |
| CET 26600 | Materials Testing |
| CET 28000 | Structural Calculations |
Bachelor of Science, Construction Management & Engineering Technologies – Surveying Technology Option

The Construction Management & Engineering Technologies program includes a Surveying Technology Option. This option includes numerous additional courses in land surveying within the 120 credit hour plan of study. The purpose of the option is to prepare students for licensure as a Professional Land Surveyor. This option has been previously approved by the licensing boards for land surveyors in both Indiana and Illinois. Note that additional courses may be required to satisfy current state requirements.

For further information, please contact the department of Construction Science & Organizational Leadership at (219) 989-2332.

Note: A grade of C or better in all courses having the "ARET, CET and CMET" designator is required to obtain the CMET B.S. degree, certificates, or option.

Program Educational Objectives for Construction Management Engineering Technologies

The following are the Program Educational Objectives (PEO’s) for the Baccalaureate Degree in Construction Management and Engineering Technologies (CMET):

Program Educational Objective 1:
The program produces graduates that will grow as professionals after graduation to be effective as they advance within the field of construction and adapt to changing environments.

Program Educational Objective 2:
The program produces graduates that will effectively lead, work and communicate in multidisciplinary environments in the construction industry and related fields.

Program Educational Objective 3:
The program produces graduates that will demonstrate professionalism and ethics in making decisions in leadership and management roles in their discipline.

Program Educational Objective 4:
The program produces graduates that will demonstrate professional competence in the application of technical standards and codes.
Electives

CIS Elective — any course designated as Computer Information Systems (CIS).
Career Specialization Elective — a concentration of job-related courses from the same subject area.
Communication Elective — COM 31800, COM 32300, COM 32500, COM 42600.
Elective — any course offered by Purdue University Calumet approved by the OLS advisor except General Studies or any classes taken to remove high school deficiencies e.g., beginning and intermediate algebra.
Humanities Elective — any course in Literature, History, Philosophy, Foreign Language, Art, Music, Theater, or appropriate interdisciplinary humanities courses.
Laboratory Science Elective — any science class with a laboratory e.g., Biology, Physics, Chemistry, Geoscience.
OLS Elective — OLS 27400, OLS 35100, OLS 36400, OLS 47900, OLS 48200, OLS 48500, OLS 48600, OLS 49100, OLS 57400, OLS 59000.
Social Science — any course in Anthropology, Psychology, Sociology, Political Science, Economics, or appropriate interdisciplinary social sciences courses.
Technical Elective — any course from a College of Technology program and approved by the OLS advisor.

Bachelor of Science, Organizational Leadership and Supervision - Area of Specialization in Environmental Health and Safety

(120 CREDITS)
The Organizational Leadership and Supervision program includes an area of specialization in Environmental Health and Safety (EHS). This area provides a diverse education for students interested in obtaining careers as leaders and professionals in EHS. The program provides specialized courses that include Occupational Safety and Health, Fundamentals of Risk Management, Hazardous Materials, Fundamentals of Industrial Hygiene, Fundamentals of Environmental Health, and Incident Investigation. EHS Graduates are working as safety professionals within various industries: communication, consulting, construction, government, health care, insurance, manufacturing, transportation, petroleum and utilities.

For further information, please contact the department of Construction Science & Organizational Leadership at (219) 989-2332.

Note: A grade of C or better in all courses having the “OLS” designator is required to obtain the OLS B.S. degree, certificates, area of specialization or minor.

Organizational Leadership and Supervision — Minor

(15 CREDIT HOURS)
A grade of C or better is required in all OLS courses for successful completion of this minor

OLS 16300 Fundamentals of Self-Leadership
OLS 25200 Human Relations in Organizations
OLS 37400 Supervision Management
OLS 37600 Human Resource Issues
OLS 38400 Leadership Process
or any OLS 40000-level course, excluding safety courses

Program Educational Objections for Organizational Leadership and Supervision

The following are the Program Educational Objectives (PEO’s) for the Baccalaureate Degree in Organizational Leadership and Supervision (OLS):

Program Educational Objective 1:
Graduates of the Organizational Leadership and Supervision (OLS) Bachelor of Science program will lead people and organizations as they advance in careers as human resource, safety, and supervision professionals.

Program Educational Objective 2:
Graduates of the Organizational Leadership and Supervision (OLS) Bachelor of Science program will develop and grow professionally after graduation in order to remain effective as they practice within their field.

Program Educational Objective 3:
Graduates of the Organizational Leadership and Supervision (OLS) Bachelor of Science program will demonstrate professionalism and ethical behavior in making decisions in leadership and management roles in business, institutional, and technical settings.
Department of Engineering Technology

S. Scachitti, Department Head. Faculty: J. P. Agrawal; A. Ahmed; C. Engle; O. Farook; M. Fathizadeh; J. Higley; A. Hossain; L. Mapa; G. Neff; C. Sekhar; S. Tickoo; M. Zahraee
Emeritus Faculty: M. Kay; G. Kvitok; D. Rosé; N. Sorak
Academic Advisor: E. Perosky
Staff: TBD, Department Secretary; J. Najzer, Electronics Supervisor ET/Engineering Labs

The Department of Engineering Technology (ET) at Purdue University Calumet offers four separate Bachelor of Science (B.S.) degrees in: 1) Electrical Engineering Technology*, 2) Industrial Engineering Technology*, 3) Mechanical Engineering Technology*, and 4) Mechatronics Engineering Technology*.


The mission of the department is to provide career educational opportunities to students who have hands-on aptitude and are oriented towards applications. The programs offered by this department are designed to teach students the practical aspects of their disciplines along with the underlying concepts and theories, and inculcate students with an aptitude of applying their knowledge with scientific and objective reasoning.

The department’s goal is to produce graduates who are equipped with marketable skills and potential for growth to meet the technical manpower needs of society. The curriculum provides a strong background in technical subjects integrating theory with extensive hands-on laboratory training, mathematics, science, and rounding off with courses in humanities and general education.

The Engineering Technology programs deal with the application of knowledge of mathematics, natural and engineering sciences, and current engineering practices. The Bachelor of Science (B.S.) degree programs within the Engineering Technology Department involve solutions of design problems, implementation, operation, and testing of engineering and manufacturing systems. Engineering Technology emphasizes an integrated approach to teaching by including both theory and practice in most of the courses which have laboratories integrated into these courses.

Our cutting edge laboratory facilities allow our students to acquire these hands-on experiences in modern laboratories which are constantly equipped and updated with instruments and software either through technology fee moneys or donations from industries.

The Department of Engineering Technology owes its strength to its faculty. All faculty are published scholars and experienced engineers who bring this experience to the classroom. The ET faculty publish books, attend conferences on regular basis, are involved in grant writing, research, and are in constant engagement with local industries for donations and rewarding partnerships. Graduate students from the College of Technology Graduate Program are often employed as Research Assistants or Teaching Assistants to assist faculty in their research or teaching assignments.

The ET department measures its success by the demand of its graduates. These graduates are highly sought in industry, with excellent placement rates and competitive starting salaries. The need for technical graduates with a Bachelor of Science (B.S.) degree in either Electrical Engineering Technology, Industrial Engineering Technology, Mechanical Engineering Technology, or Mechatronics Engineering Technology is growing at an accelerated pace, making the Engineering Technology Department a great place to start a successful career.

Senior Design Project and Experiential Learning: As a two-semester capstone course, the senior design project is required from all seniors in all four Bachelor of Science (B.S.) degrees, and fulfills the Purdue University Calumet Experiential Learning component required for graduation. The senior design project provides the opportunity for students to work in teams in a multi-disciplinary environment in order to pursue an idea from conception to design and then to execution into a demonstrable project. The project culminates with a showcase that is open to the general public. This capstone course helps students to bridge the gap between theory and practice, and ensures that students transition seamlessly and with confidence into the real industrial world.

For further information, please call the Engineering Technology Department office at (219) 989-2471. The department homepage can be accessed at: http://webs.purduecal.edu/et/

Engineering Technology Bachelor of Science degrees:
- Bachelor of Science, Electrical Engineering Technology*
- Bachelor of Science, Industrial Engineering Technology*
- Bachelor of Science, Mechatronics Engineering Technology*
- Bachelor of Science, Mechanical Engineering Technology*

Bachelor of Science, Electrical Engineering Technology

A Bachelor of Science in Electrical Engineering Technology leads to a career in an established profession that has been adapting continuously to meet the changing technological needs of society. This profession is integrated into all aspects of society allowing for students to apply the skills they learn to almost any interest area they may have; computers, power, healthcare, sustainable energy, telecommunications, manufacturing and many more.

Given the sophistication dictated by the emerging technologies within the vast field of electronics and electrical engineering, the Bachelor of Science degree in Electrical Engineering Technology is designed to give graduates a strong background to help them enter the job market and be productive in society. Graduates of the program are readily employable because of their theoretical and practical skills in each technical subject and their extensive hands-on laboratory training. They are prepared to work within organizations in the areas of engineering, manufacturing, management and service.

The Bachelor of Science Degree in Electrical Engineering Technology provides knowledge in:
- Circuits and Network Theory
- Switching Theory (Digital Circuits)
- Analog Electronics
- Embedded System Design
- System Diagnostics
- Microprocessor Based Systems
- Hardware/Software Integration
- Computer Hardware Technology
- Computer Networking
- Process Control
- Computer Aided Electronic Fabrication
- Programmable Logic Controllers
- Telecommunications
- Biomedical Instrumentation
- Digital Signal Processing
- Power and Power Electronics
- IP Telephony
- Wireless Networking

The program consists of 120 credit hours.

Bachelor of Science, Electrical Engineering Technology
(120 CREDITS)

1. Electrical Engineering Technology Required Courses (79 Credits)
   - ECET 10000 Introduction to Electrical & Computer Engineering Technology
   - ECET 10200 Electrical Circuits I
   - ECET 10900 Digital Fundamentals
   - ECET 11000 Computer System Architecture
   - ECET 15200 Electrical Circuits II
   - ECET 15400 Analog Electronics I
   - ECET 15900 Digital Applications
   - ECET 20900 Introduction to Microcontrollers
   - ECET 21000 Struct C++ Program for Elec Sys
   - ECET 21200 Electrical Power and Machinery
   - ECET 26200 Programmable Logic Controllers
   - ECET 26500 Computer Networks
   - ECET 27300 Modern Energy Systems

2. EE Electives (3 Credits)
   One course from the following list of EET electives:
   - ECET 30300 Communications I
   - ECET 31200 Power Electronics
   - ECET 36200 Process Control Instrumentation
   - ECET 38400 Advanced Mathematical Methods in EET
   - ECET 39200 Digital Signal Processing
   - IET 30800 Project Management
   - ECET 40400 Wireless Communications & Networking
   - ECET 45500 C++ Object Oriented Programming
   - ECET 45600 Computer Hardware Design
   - ECET 49000 Senior Design Project, Phase I
   - ECET 49100 Senior Design Project, Phase II

3. Communication (9 Credits)
   - ENGL 10400 English Composition I
   - COM 11400 Fundamentals of Speech Communication
   - ENGL 22000 Technical Report Writing

4. Science and Mathematics (17 Credits)
   - MA 14700 Algebra and Trigonometry for Technology I
   - MA 14800 Algebra and Trigonometry for Technology II
   - MA 21900 Calculus for Technology I
   - PHYS 22000 General Physics I
   - MA 22200 Calculus for Technology II

5. General Education (3 Credits)
   - SOC 10000 Introduction to Sociology

6. Other Electives (9 Credits)
   Humanities Selective courses that have been approved by the Faculty Senate to meet the Critical Appreciation for the Arts and Works of Human Expression general education requirements (3 credits), Humanities and/or Social Science Selective (3 credits), and one Natural Science or Math/Statistics course (3 credits).

The following are the Program Educational Objectives for the Baccalaureate Degree in Electrical Engineering Technology:

Program Educational Objective 1:
The program will prepare graduates with the technical skills for successful careers in the design, application, installation, manufacturing, testing, documentation, operation, maintenance, analysis, development, implementation, and oversight of electrical/electronic(s) and computer systems.

Program Educational Objective 2:
The program will prepare graduates to work as effective team members with commanding oral and written communication skills, as well as to advance in their careers and continue their professional development.

Program Educational Objective 3:
The program will prepare graduates to exercise ethics in their profession and to recognize the global impacts of their profession on society.
Bachelor of Science,
Industrial Engineering Technology

Increased sophistication in technology and management systems is fueling the need for graduates with capabilities in both technology and business. Industrial Engineering Technology (IET) students are usually interested in people and the environments in which they work. They are very practical and logical and often prefer a hands-on method of learning over the theoretical method. Increased job openings will occur for graduates as automation and modernization continue to be applied in business and industry. This program prepares students for problem solving and decision making tasks required in management and technological positions.

Graduates from the IET program are prepared for positions in a variety of industries including manufacturing, service and healthcare. IET graduates obtain positions such as Manufacturing Engineer, Process Engineer, Quality Engineer, Plant Manager, Six Sigma Black Belt, Lean Leader or Healthcare Management Engineer.

The Bachelor of Science Degree in Industrial Engineering Technology provides knowledge in:
- Ergonomics
- Quality
- Production Planning & Control
- Lean Work Design
- Job Evaluation
- Project Management & Economic Analysis
- Plant Layout & Material Handling
- Logistics
- Statistical Process Control
- Quality Management
- Lean & Six Sigma Methodologies
- Production Cost Analysis
- Radio Frequency Identification (RFID)
- Supply Chain Management
- Process Simulation

The program consists of 120 credit hours.

Bachelor of Science, 
Industrial Engineering Technology

(120 CREDITS)

1. Communication (15 credits)
   ENGL 10400 English Comp I
   ENGL 22000 Technical Report Writing
   COM 11400 Fund of Speech Comm
   ENGL 42000 Business Writing
   OLS 47400 Conference Leadership

2. Science and Mathematics (24 credits)
   MA 14700 Algebra and Trig I
   MA 14800 Algebra and Trig II
   MA 21900 Calculus for Technology I
   STAT 30100 Elementary Statistics
   CHM 10000 Preparation for General Chemistry
   OR
   BIOL 10100 Preparation for Introductory Biology
   PHYS 22000 General Physics
   PHYS 22100 General Physics II

3. Major Requirements (62 credits)
   MET 10000 Production Drawing & CAD
   MET 14100 Manufacturing Materials I
   MET 16100 Introduction to Engineering Technology
   MET 24200 Manufacturing Processes II
   MET 32500 Thermodynamics
   OR
   MET 32900 Applied Heat Transfer
   IET 10400 Industrial Organization Principles of Total Quality Management
   IET 10600 Principles of Ergonomics
   IET 20400 Techniques of Maintaining Quality
   IET 22400 Production Planning and Control
   IET 26400 Fundamentals of Lean Work Design
   IET 27300 Principles of Quality and Process Improvement
   IET 40200 Logistics and Global Supply Chain
   IET 30800 Engineering Project Management and Economic Analysis
   IET 35500 Statistical Process Control I
   IET 49500 Senior Project Survey
   IET 49700 Senior Project
   ECET 21400 Electricity Fundamentals
   ET 15100 Internship Program I
   OLS 25200 Human Relations in Organizations
   OLS 33100 Occupational Safety and Health
   OLS 35000 Applied Creativity for Business and Industry
   POL 30500 Technology & Society

4. Selectives (12 credits)
   Choose Two IET selective courses:
   IET 27200 Job Evaluation
   IET 29900 IET – Independent study
   IET 31100 International Quality Standards
   IET 36500 Statistical Process Control II
   IET 41100 Applications of Lean Six Sigma Methodologies
   IET 49900 IET – Independent study

   Choose one 300-400 level OLS course not otherwise required in the IET plan of study.

   Choose one of the following technical elective courses:
   Any ECET course with advisor approval
   Any CGT course with advisor approval
   Any CET course with advisor approval
   Any ARET course with advisor approval
   Any MET course not otherwise required in the IET plan of study
   Any IET course not otherwise required in the IET plan of study

5. Additional Courses (7 credits)
   A. Humanities General Education Elective — This 3 credit course must be an approved PUC General Education course that satisfies General Education Requirement 4 and General Education Competency 6.
   B. Social Science General Education Elective — This 3 credit course must be an approved PUC General Education course that satisfies General Education Requirement 5.
   C. Non–Technical Elective — This 1 credit course may be from any liberal arts, social science, humanities, wellness course.

Note: In order to qualify for the IET B.S. degree a student must attain a grade of “C” or better in all IET courses.

The following are the Program Educational Objectives for the Baccalaureate degree in Industrial Engineering Technology:

Program Educational Objective 1:
The program will prepare graduates for career fields in the areas associated with the development, implementation, and improvement of integrated systems that include people, materials, information, equipment, and energy by exposure to specialty topics emerging from quality and/or manufacturing practices.

Program Educational Objective 2:
The program will prepare graduates that advance in their careers and continue their professional development.

Program Educational Objective 3:
The program will prepare graduates that understand the overall human context in which engineering technology activities take place.
Bachelor of Science, Mechanical Engineering Technology

Mechanical Engineering Technology (MET) applies scientific and engineering principles to support businesses and solve problems related to the growing demand for modern and complex industrial machinery, machine tools, robotics, and computer controlled processes. As a student of mechanical engineering technology, you will explore, analyze, and design both products and manufacturing processes through the use of computers and state-of-the-art equipment while gaining practical experience. Many MET students enjoy working on machinery and vehicles and find opportunity to intertwine hobbies with career interests in this field.

This program prepares students for positions in engineering departments, plant maintenance, production departments, and technical sales. Other areas students are prepared for also include Quality engineering, machine and tool design, technical buying, production expediting, and cost estimating. MET graduates work in the areas of product development, manufacturing processes, quality control, materials identification use and selection, fluid power, heat power, mechanics, design and cost analysis.

The Bachelor of Science Degree in Mechanical Engineering Technology provides knowledge in:
- Production Drawing & Computer Aided Design
- Computer Numerical Control Applications
- Applied Fluid Mechanics and Fluid Power
- Applied Thermodynamics and Heat Transfer
- Automation & Instrumentation
- Materials
- Machine Design
- Manufacturing Processes
- Strength of Materials
- Statics and Dynamics

The program consists of 120 credit hours.

Bachelor of Science, Mechanical Engineering Technology

(120 CREDITS)

1. Communication (12 credits)
   ENGL 10400  English Comp I
   ENGL 22000  Technical Report Writing
   COM 11400  Fund of Speech Comm
   ENGL 42000  Business Writing
   OLS 47400  Conference Leadership

2. Science and Mathematics (27 credits)
   CHM  Elective w ith lab
   PHYS 22000  General Physics
   PHYS 22100  General Physics II
   MA 14700  Algebra and Trig I
   MA 14800  Algebra and Trig II
   MA 21900  Calculus for Technology I
   MA 22200  Calculus for Technology II
   STAT 30100  Elementary Statistical Methods

3. Major Requirements (60 credits)
   ECET 21400  Electricity Fundamentals
   MET 10000  Production Drawing & CAD
   MET 10200  Production Design and Specifications
   MET 11800  Applied Mechanics: Statics
   MET 14100  Manufacturing Materials I
   MET 16100  Introduction to Engineering Technology
   MET 16200  Computational Analysis Tools in MET
   MET 21100  Applied Strength of Materials
   MET 21300  Applied Mechanics: Dynamics
   MET 21400  Machine Elements
   MET 23000  Fluid Power
   MET 24200  Manufacturing Processes II
   MET 31300  Applied Fluid Dynamics
   MET 32500  Applied Thermodynamics
   MET 32900  Applied Heat Transfer
   MET 46100  Computer Integrated Design and Manufacturing
   MET 49500*  Senior Project Survey
   MET 49700  Senior Project
   IET 22400  Production Planning and Control
   IET 30800  Engineering Project Management and Economic Analysis
   OLS 33100  Occupational Safety and Health

*All students must take the CMgt exam during this course.

4. Selectives (12 credits)
   Choose 4 of the following courses for the general MET plan of study:
   MET 30500  Computer Aided Design with Applications
   MET 31500  Mechanism Kinematics
   MET 34700  Programming of Automation Systems
   MET 35500  Automation I
   MET 38400  Instrumentation
   MET 42000  HVAC
   MET 46500  Advanced Topics in Computer-Aided Design
   IET 27300  Principles of Quality and Process Improvement
   IET 35500  Statistical Process Control I
   IET 41100  Applications of Lean and Six Sigma Methodologies
   Any ECET course with advisor approval
   Any IET course with advisor approval
   Any ARET course with advisor approval
   Any MET course not otherwise required in the plan of study

Choose the following courses for the MET plan of study with a Quality Specialization:
   IET 26400  Fundamentals of Lean Work Design
   IET 27300  Principles of Quality and Process Improvement
   IET 35500  Statistical Process Control I
   IET 41100  Applications of Lean and Six Sigma Methodologies

5. Additional courses (9 credits)
   A. Humanities General Education Elective – This course must be an approved PUC General Education course that satisfies General Education Requirement 4 and General Education Competency 6.
   B. Social Science General Education Elective – This course must be an approved PUC General Education course that satisfies General Education Requirement 5.
   C. OLS 35000 or any Social Science or Humanities Elective

The following are the Program Educational Objectives for the Baccalaureate degree in Mechanical Engineering Technology:

Program Educational Objective 1:
The program will prepare graduates for successful careers in the areas associated with the fabrication, testing, documentation, operation, sales, maintenance, analysis, applied design, development, implementation, and oversight of mechanical systems.

Program Educational Objective 2:
The program will prepare graduates who advance in their careers and continue their professional development.

Program Educational Objective 3:
The program will prepare graduates who understand the overall human context in which engineering technology activities take place.
Bachelor of Science, Mechatronics Engineering Technology

Mechatronics is the synergistic combination of electrical, mechanical, control and robotics engineering, computer science, information technology including networking and numerical methods used to design products with built-in intelligence.

The Mechatronics Engineering Technology program at PUC has adapted this synergistic combination into developing student skills that support the growing need for engineers with an advanced learning background in the high-speed packaging industry. This program combines mechanical design, manufacturing and electrical control concepts to satisfy the expectations of the packaging machinery industry. While pursuing their undergraduate degree, students are engaged with packaging industry partners and benefit from internships offered by these partners. Whereas many partners are located close to PUC, careers in this industry are in demand nationwide.

The program is designed to produce graduates that are prepared for successful careers in areas associated with the analysis, applied design, development, implementation and oversight of advanced mechatronics systems. And, whereas the focus of the degree at PUC is on the packaging machinery industry, it is also a valuable degree that can be utilized in a variety of other industries as well, such as the automotive industry.

The Bachelor of Science Degree in Mechatronics Engineering Technology provides knowledge in:
- Computer Hardware & Electric Circuits
- Manufacturing Processes
- Electrical Power & Machinery
- Process Control
- Machine Design
- Programmable Logic Controllers
- Mechanism Kinematics
- Fluid Power & Fluid Mechanics
- Power Electronics
- Digital Applications

The program consists of 120 credit hours.

Bachelor of Science, Mechatronics Engineering Technology
(120 CREDITS)

1. Communication (9 Credits)
   - ENGL 10400 English Comp. I
   - ENGL 22000 Technical Report Writing
   - COM 11400 Fund. of Speech Comm.

2. Science and Mathematics (16 Credits)
   - PHYS 22000 General Physics I
   - MA 15900 Pre-Calculus
   - MA 21900 Calculus for Technology I
   - MA 22200 Calculus for Technology II

3. Major Requirements (82 Credits)
   - ECET 10200 Electrical Circuits I
   - ECET 10900 Digital Fundamentals
   - ECET 11000 Computer Architecture
   - ECET 15200 Electrical Circuits II
   - ECET 21200 Electric Power and Machinery
   - ECET 21700 Introduction to Process Control
   - ECET 26200 Programmable Logic Controllers
   - ECET 33000 Industrial Programming & Networking
   - ECET 36200 Process Control
   - ECET 46200 Advanced Process Control
   - ET 10000 Freshman Experience
   - ET 15100 Internship
   - ET 49500 Senior Project Survey
   - ET 49700 Senior Project
   - IET 30800 Project Management
   - MET 10000 Production Drawing & CAD
   - MET 11800 Applied Mechanics: Statics
   - MET 14100 Materials I
   - MET 21100 Applied Strength of Materials
   - MET 21300 Dynamics
   - MET 21400 Machine Elements
   - MET 23000 Fluid Power
   - MET 24200 Manufacturing Processes II
   - MET 42000 Machine Design
   - OLS 33100 Occupational Safety & Health
   - OLS 35000 Creativity for Business & Industry
   - OLS 47400 Conference Leadership

4. Selectives (6 credits)
   - ECET 15400 Analog Electronics I
   - ECET 15900 Digital Applications
   - ECET 20900 Intro to Microcontrollers
   - ECET 21000 Struct C++ for EM Syst
   - ECET 31200 Power Electronics
   - ECET 45600 Computer Hardware Design
   - IET 26400 Fundamentals of Lean Work Design
   - IET 27300 Principles of Quality and Process Improvement
   - IET 35500 Statistical Process Control I
   - IET 41100 Applications of Lean Six Sigma Methodologies
   - MET 10200 Prod. Design & Specs
   - MET 30500 CAD with Applications
   - MET 31300 Fluid Mechanics
   - MET 31500 Mechanism Kinematics
   - MET 32500 Thermodynamics
   - MET 32900 Heat Transfer
   - MET 34700 Programming of Automation Systems
   - MET 46100 Comp. Integ. Design & Mfg.
   - MET 42100 HVAC

5. Additional Courses (7 credits)
   - A. Humanities General Education Elective — This course must be an approved PUC General Education course that satisfies General Education Requirement 4 and General Education Competency 6.
   - B. Social Science General Education Elective — This course must be an approved PUC General Education course that satisfies General Education Requirement 5.
   - C. Liberal Arts/Social Science/Wellness Elective (1 credit)

The following are the Program Educational Objectives for the Baccalaureate degree in Mechatronics Engineering Technology:

Program Educational Objective 1:
The program will produce graduates that are prepared for successful careers in the area associated with the analysis, applied design, development, implementation, and oversight of advanced mechatronics systems.

Program Educational Objective 2:
The program will prepare graduates that advance in their careers and continue their professional development.

Program Educational Objective 3:
The program will prepare graduates that understand the overall human context in which engineering technology activities take place.
Math Requirements for Engineering Technology Students:
A fundamental of all Engineering Technology Baccalaureate degrees is a solid foundation in math. As such it is critical that all Engineering Technology students graduate with the specified number of math credit hours designated in their plan of study. In order to facilitate proper documentation of these credits no math credits will be waived.

a. If a student has completed higher level math courses upon entry into a program of study and is given credit for the courses toward the plan of study, the student is not required to take the prescribed lower level math courses listed on the plan of study. However, the student is still responsible for satisfying the math credits with math coursework of their choice of courses that are, at minimum, the same level or higher of that listed on their plan of study.

b. If a student’s results from the math placement exam indicate the student is prepared to begin in a higher level math than the first math requirement on the plan of study, the student has the option to begin their math sequence with the higher level math course. If a student chooses to begin with the higher level math course, the student is still responsible for satisfying all of the lower level math credits on their plan of study with math coursework of their choice of courses that are, at minimum, the same level or higher of that listed on their plan of study. In addition, courses which require the lower level math as a prerequisite cannot be taken until the higher level math course is complete thus solidifying that the prerequisite has been met.

c. If a student is currently pursuing an Engineering Technology degree and chooses to take a math course at another institution while at PUC, only courses that are directly articulated in the PUC transfer equivalency system will be accepted onto the Engineering Technology plan of study. Any MA UND or math courses articulated as a course not required on the student’s plan of study will not be accepted. Note “b” also applies in this case.
Master of Science in Modeling, Simulation and Visualization

A 30-credit hour interdisciplinary master of science degree program, the MSV Master of Science degree prepares students in a variety of fields to use modeling, simulation and visualization tools and skills. Students with undergraduate education in science, technology, computer science, engineering, medical/healthcare, and management may be interested in the degree. MSV skills may be used by designers, engineers, technologists, business intelligence developers, software consultants and other professionals in many additional fields, including transportation, healthcare and management.

Plan of Study

The program consists of 30 credit hours, with 18 hours of core courses, 9 hours of electives, and one capstone project (3 credits).

18 hours required core courses (6 courses)

- MGMT 55100 Unified Modeling Languages
- TECH 56500 High Performance Computing
- TECH 56700 Simulation Techniques
- TECH 57500 Software Project Management
- TECH 57600 Design and Analysis of Simulation Experiments
- TECH 57700 Visualization Techniques

9 credit hours of electives (3 courses)

A number of graduate level courses are available for use as electives; electives are approved by the student’s graduate committee for inclusion in the plan of study.

3 credit hours of capstone——TECH 59800 Directed MS Project (taken in two phases, across two semesters)

Admission Requirements

Bachelor’s degree from an accredited four-year college or university in any Science, Technology, Engineering or Mathematics (STEM) related areas. If necessary, students may be required to make-up deficiencies

- In addition, a student must meet the following pre-requisites:
  - 1 Semester Object Oriented Programming (Sophomore level or above);
  - 1 Semester Statistics/Probability (Sophomore level or above); and
  - 2 Semesters Calculus (Differential and Integral), or 1 Semester discrete mathematics or numerical methods (Sophomore level or above)

Undergraduate GPA 3.0 or above for unconditional admission; please check with the College of Technology for conditional admission possibilities

Application Requirements

Applicants must submit all of the following:

- Online application for graduate admissions;
- Statement of purpose or goal statement
- Resume
- Three (3) Letters of Recommendation, either academic or professional.
- Official Transcripts of all academic work listed on application (must include undergraduate degree)
- Optional—writing sample or portfolio of other important accomplishments or skills

The GRE is not required for admission into this program, but may be considered for applicants who do not meet the minimum GPA for unconditional admission.

International Students:

There are additional requirements for international students. International students are encouraged to work through International Student Services, www.purduecal.edu/international.

For admission requirements and additional information, please go to the College of Technology webpage on www.purduecal.edu
Master of Science in Technology

The Master of Science in Technology degree offered by Purdue University Calumet prepares students to become leaders in technology disciplines. The program allows students to pursue an advanced degree in a focus technology discipline, with the flexibility to pursue interdisciplinary interests and develop leadership skills based on ethics and an understanding of global issues affecting technology. Graduates of the Purdue University Calumet Master of Science in Technology degree will not only understand leading-edge concepts, but also be able to strategically apply them.

Designed to allow students to achieve their career objectives, the program is a flexible, 33-hour plan of study in which students can choose their primary focus in any one of the College of Technology programs in which we offer a Bachelor of Science degree, or an approved interdisciplinary area.

Purdue University Calumet College of Technology disciplines:
- Computer Graphics Technology
- Computer Information Technology
- Construction Management & Engineering Technologies
- Electrical Engineering Technology
- Industrial Engineering Technology
- Mechanical Engineering Technology
- Mechatronics Engineering Technology
- Organizational Leadership & Supervision

Purdue University Calumet’s approach of merging technology with other areas of study and allowing students to customize their course of study means that students in the program can study interdisciplinary and specialized aspects of their fields. This broad-based, flexible degree produces graduates who can enter the marketplace with a distinct and sought-after advantage.

Plan of Study
The program consists of 33 hours with three core courses (9 credit hours),
- IT 50700 Measurement and Evaluation in Industry & Technology,
- IT 50800 Quality and Productivity in Industry & Technology, and
- TECH 64600 Analysis and Research in Industry and Technology;
4 primary area courses (12 credit hours) in the area of concentration,
3 courses in technical electives (9 credit hours), and
a directed project course (total of 3 credit hours) or an additional 3 credit hour course with the approval of academic advisor.
The directed project focuses on an applied research issue in the student’s area of interest.

Interested students should contact Prof. Mohammad Zahraee, Assistant Dean for Graduate Studies in the College of Technology, at 219-989-2966, zahraee@purduecal.edu, for further information about the program and the plan of study, or Jody Kidd, Graduate Program Coordinator, at 219-989-2966, jkidd@purduecal.edu, FAX 219-989-8110.

Admission Requirements
Admission will be based on the following criteria and documentation:
- B.S. from an accredited technology program or related fields.
- Undergraduate GPA of 3.0 or greater based on a 4.0 scale.
- Appropriate experience as documented in a resume.
- A goal statement or statement of purpose commensurate with the program and faculty strengths. (A template is available through Jody Kidd).

Students who do not meet the requirements for unconditional admission may be considered for conditional admission.

Application Requirements
Applicants must submit all of the following:
- Online Application - Purdue University Graduate School Electronic Application found at: http://www.gradschool.purdue.edu/indexFlash.cfm;
- Official transcripts of all work listed on the application (must include undergraduate degree);
- Statement of purpose and resume; and
- Three letters of recommendation from academic or professional references (Recommendations from friends or family members are not given weight).

A form can be found at: http://www.gradschool.purdue.edu/admissions/#RL

GRE is not required for the MS Technology degree, but may be considered for those applicants who do not meet the minimum GPA for unconditional admission.

International Students:
There are additional requirements for international students. International students are encouraged to work through International Student Services, www.purduecal.edu/international

For admission requirements and further information, please go to: http://webs.purduecal.edu/techgrad/
Online Technology Leadership and Management Concentration

The Online MS Degree in Technology — Leadership and Management concentration is expected to prepare students to manage and lead in technology professions. It will allow students who currently have a technology area undergraduate degree to acquire skills to prepare them for managerial or leadership roles in their area. Emphasis is placed on preparing students for technical leadership positions in business and industry, faculty positions in technology and engineering technology at community college and university levels, or to continue for a Ph.D. in technology or a closely related field.

Plan of Study

All required coursework for this major will be offered via distance education technology over an eighteen month to two-year period. Students who drop out of sequence will be able to take the course with the next cohort group, but will lengthen the time to complete the degree.

Curriculum plan: (3 cr. hrs. each)

Currently required courses for the MS Degree in Technology (12 hours)
- IT50700 Measurement and Evaluation in Industry and Technology
- IT50800 Quality and Productivity in Industry and Technology
- TECH64600 Analysis of Research in Industry and Technology
- TECH 59800 Directed MS Project or an additional 3 credit hour course with the approval of academic advisor.

Additional Courses required for the Requested Concentration (21 hours)
- IT57100 Project Management in Industry and Technology
- IT53500 Global Supply Chain Management
- OLS 58900 Leadership and Ethics
- IET 51000 Product & Process Development Optimization
- MET52700 Technology from a Global Perspective
- OLS 58000 Interpersonal Skills for Leaders
- OLS 58800 Strategic Planning and Marketing in Technology

Total: 33 credit hours for MS degree in Technology with concentration in Technology Leadership & Management

9 credit hours of electives (3 courses)

A number of graduate level courses are available for use as electives; electives are approved by the student’s graduate committee for inclusion in the plan of study.

3 credit hours of capstone — TECH 59800 Directed MS Project (taken in two phases, across two semesters)

Admission Requirements

Admission will be based on the following criteria and documentation:
- B.S. from an accredited technology program or related fields.
- Undergraduate GPA of 3.0 or greater based on a 4.0 scale.
- Appropriate experience as documented in a resume.
- A goal statement or statement of purpose commensurate with the program and faculty strengths. (A template is available through Jody Kidd).
- Students who do not meet the requirements for unconditional admission may be considered for conditional admission.

Application Requirements

Applicants must submit all of the following:
- Online Application - Purdue University Graduate School Electronic Application found at: http://www.gradschool.purdue.edu/indexFlash.cfm;
- Official transcripts of all work listed on the application (must include undergraduate degree);
- Statement of purpose and resume; and
- Three letters of recommendation from academic or professional references (Recommendations from friends or family members are not given weight).
- A form can be found at: http://www.gradschool.purdue.edu/admissions/#RL

GRE is not required for the MS Technology degree, but may be considered for those applicants who do not meet the minimum GPA for unconditional admission.
CENTER FOR LEARNING AND ACADEMIC SUCCESS
Center for Learning and Academic Success

The Center for Learning and Academic Success consists of several important university initiatives that are known for their role in student retention and success. Academic Advising, Academic Recovery Program, Supplemental Instruction (SI), Tutorial, Success Workshops, as well as General Studies (GNS) 10300 and GNS 29000 are just a few of the CLAS services available to assist students with academic preparation skills.

Academic Advising

Academic advising is a proven activity that helps students become academically successful from matriculation through graduation. CLAS advisors assist undeclared students with academic major decisions. CLAS advisors also work with students who are transitioning into academic majors, as well as those non-degree seeking. The advisors provide an academic presence at various University functions, and have a proven commitment for student success.

Academic Recovery Program

The Academic Recovery Program is designed to encourage both persistence and retention by providing intervention services for students who are at risk of academic dismissal, and are on probation due to their cumulative GPA. Purdue Calumet developed this program based on research and successful programs at other universities. Interventions include enrolling in GNS 290, a study skills course that addresses academic issues to encourage student success, working with an academic advisor to select appropriate courses for the upcoming semester, and developing strategies to assist students in making progress toward their degree objectives.

Learning Communities

New CLAS freshmen participate in learning communities through a predetermined block schedule of first-semester course and activities specifically aimed at first-year students. Taking part in a learning community will provide students the opportunity to develop personal connections with faculty and other students, take courses that research has shown are vital to student success, and broaden their learning experience. A block schedule is designed to give first-semester students the foundation they need to be successful at Purdue Calumet. Courses include Math, English, Speech and a First Year Experience course. Within this framework, students may be enrolled in up to four courses with the same group of students. The cohesive, in-class and out-of-class activities planned around a central theme through the common reading program will offer students a richer academic experience. In addition, students benefit from the opportunity to integrate coursework in an interdisciplinary manner. Learning communities provide students increased faculty-to-student interactions while promoting faculty-to-faculty collaboration.

Student Academic Support (SAS)

The SAS provides tutoring to all Purdue Calumet students. Free open lab tutoring services are available Monday through Friday in most subject areas. A specialized group tutoring program, Supplemental Instruction (SI), is offered for specific traditionally difficult academic courses. SI focuses on both process and content. All tutors are current Purdue Calumet students of high academic standing and recommended by faculty members.

Deborah Beal (2011) Center for Learning and Academic Success Manager of Student Academic Support, B.A., Rutgers University, 1986, M.B.A., Rutgers University, 1993
Dhanfu E. Elston (2012) Director of Student Success and Transition, B.S. Clark Atlanta University, 1996, M.A. Clark Atlanta University, 2003, Ph.D. Georgia State University, 2011
Mary Lee Vance (2013) Center for Learning and Academic Success Director of Academic Advising, B.A., University of Wisconsin-La Crosse, 1979, M.E.P.D., University of Wisconsin La-Crosse, 1983, Ph.D., Michigan State University, 1993