Accounting Major

Major Requirements - 66 Total Credits

Lower Division Requirements: 20 cr. hrs.
- ECON 201 Principles of Microeconomics 3 cr.
- ECON 202 Principles of Macroeconomics 3 cr.
- ACCT 231 Principles of Accounting I 3 cr.
- ACCT 232 Principles of Accounting II 3 cr.
- CSIS 215 Information Systems for Business Management 3 cr.
- ECON 226 Introduction to Statistics 3 cr.
  or MATH 226 Fundamentals of Statistics
- CBE 100 First Year Seminar 2 cr.

Required Courses: 40 cr. hrs.
- BLAW 265 Business Law I 3 cr.
- BLAW 266 Business Law II 3 cr.
- MNGT 300 Management and Organizational Behavior 3 cr.
- MKTG 310 Principles of Marketing 3 cr.
- FINC 345 Managerial Finance 3 cr.
- ACCT 321 Intermediate Accounting I 3 cr.
- ACCT 322 Intermediate Accounting II 3 cr.
- ACCT 356 Managerial Cost Accounting 3 cr.
- ACCT 360 Federal Income Tax I 3 cr.
- ACCT 361 Federal Income Tax II 3 cr.
- ACCT 366 Accounting Systems 3 cr.
- ACCT 430 Advanced Accounting 3 cr.
- ACCT 461 Auditing 3 cr.
- CBE 300 Professional Development 1 cr.

Directed Electives: 6 cr. hrs.
Select from Accounting (not ACCT 201),
- Management (not MNGT 150, or MNGT 250),
- Finance (not FINC 210),
- Marketing (not MKTG 311),
- Economics (not ECON 100, ECON 150, or ECON 205),
- Computer Science (not CSIS 105 or CSIS 151),
- ENGL 251 or ENGL 367.

No 9000 level courses (transfer courses with no UWRF equivalent) will apply as directed electives.

MATH 146 College Algebra is required in the General Education Math section.
Adapted Physical Education K-12 Minor

Adapted Physical Education Minor

23 Total Credits

P ED 243 Motor Learning and Development 3cr.
P ED 300 Adapted Physical Education 3 cr.
P ED 305 Developmental Adapted Physical Education 3 cr.
P ED 344 Teaching Adapted Aquatics 2 cr.
P ED 370 Adapted Physical Education Practicum 3 cr.
P ED 420 Disability and Physical Activity Implications
P ED 421 Teaching Sport to Individuals with Disabilities
SPED 330 The Exceptional Child 3 cr.

Department of Health and Human Performance

Falcon Center
A156, HHP Suite
715-425-3705
www.uwrf.edu/HHP/

Chair- Paul Shirilla, Faculty - Jeff Berkhof, Kristen Csiacsek, Ken Ecker, Patti Ford, Steve Freeman, Stacy Furness, Cindy Holbrook, Joe O’Kroy, Robert Ritzer, Jodee Schaben, Katie Vera, Matt Walker, Dana Zimmerman

The Adapted Physical Education minor is for students seeking teacher certification to meet the needs of students with disabilities within Physical Education. This certification is an "add-on" minor for Physical Education-Comprehensive K-12 Physical Education (teacher certifiable) major as part of the baccalaureate program or as a post-baccalaureate program. It is not a stand-alone minor for students seeking any other major. The undergraduate Health and Physical Education Major must complete the PED 370 Adapted Physical Education Practicum course PRIOR to student teaching.
Agricultural Business Major

Major Requirements - 41-42 Total Credits

**Introductory Courses: 20-21 cr. hrs.**
AGEC 101 Economics and Management in Agriculture 3 cr.
AGEC 102 3 cr.
AGEC 205 Agricultural Business Accounting 3 cr.
AGEC 220 Agribusiness Computations 3 cr.
AGEC 230 Agricultural Economics I 3 cr.
AGEC 240 Cooperatives 2 cr.
or ECON 202 Macroeconomics 3 cr.
AGEC 250 World Food and Populations 3 cr.

**Tool Courses: 18 cr. hrs.**
AGEC 320 Statistical Methods 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
Choose 2 from: AGEC 300-399 or AGES 310

**Option Courses: 12 cr. hrs.**
AGEC 430 or AGEC 460 Agri-business Firm Management 3 cr.
Choose 3 from: AGEC 400-499 or AGEC 270 Internship I

**Required Supporting Courses: 3-4 cr. hrs.**
MATH 156 Calculus for Business and Social Science 3 cr.
or MATH 166 Calculus I 4 cr.
or ECON 426 Econometrics and Forecasting 3 cr.

**Directed Electives: 15 cr. hrs.**
15 credits beyond the Foundation Courses in a technical area of agriculture or other related area with consent of department.
Agricultural Business Minor

Required courses 24 cr. hrs.
AGEC 230 Agricultural Economics I 3 cr.
Select 15 cr. from:
AGEC 305 Agricultural Business Accounting 3 cr.
AFES 310 Ag Human Resource Management 3 cr.
AGEC 320 Statistical Methods 3 cr.
AGEC 330 Agricultural Production Economics 3 cr.
AGEC 345 Agricultural Law 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
or AGEC 361 Horticulture Business Management
AGEC 365 Agricultural Finance 3 cr.
Select 6 cr. from:
AGEC 405 Ag Records and Taxes 3 cr.
AGEC 410 Professional Selling 3 cr.
AGEC 440 Agricultural Policy I (writing intensive) 3 cr.
AGEC 450 Introduction to Natural Resource Economics 3 cr.
AGEC 455 Commodity Marketing 3 cr.
AGEC 270/ AGEC 370/ AGEC 490 Experiential Learning1 - 4 cr.
AGEC 460 Agribusiness Firm Management (writing intensive) 3 cr.

Department of Agricultural Economics
131 Agricultural Science
715-425-3298
www.uwrf.edu/AGEC/

Brenda Boelet-Chair, Albert Boaitey, Sierra Howry,
Simon Jette-Nantel, Amber Remble, David
Trechter, Jim White
Agricultural Education Major

Professional Education Requirements
AGED 120 Orientation to Agriculture and Extension Education 1 cr.
AGED 201 Program Delivery in Agricultural, Extension, and Leadership Education 2 cr.
SPED 330 Introduction to Special Education 3 cr.
TED 212 Educational Psychology: Middle and Secondary Education (writing intensive) 5 cr.
TED 252 Foundations of Multicultural Education 3 cr.
TED 422 Content Area Literacy in Middle and Secondary Schools 3 cr.
TED 440 Techniques of Middle/Secondary Education: Agriculture 3 cr.
TED 472 Student Teaching - Initial 12 cr.
or
TED 479 K-12 Internship Teaching 12 cr.
or
TED 474 Student Teaching - COST 12 cr.

Agricultural Education Major
Foundation Requirements-Select five: 14-16 cr.
AGED 202 Leadership and Group Dynamics 3 cr.
AGED 275 Early Field Experience 1 cr.
AGED 369 Foundations of Career and Technical Education 3 cr.
AGED 403 Supervision of Work Experience and Youth Organizations 3 cr.
AGED 462 Curriculum Design in Vocational Education 3 cr.
ANSC 230 Agricultural Economics I 3 cr.
ANSC 111 Introduction to Animal Science 3 cr.
PLSC 161 Introduction to Plant Science 3 cr.
ESM 109 Introduction to Forestry 2 cr.
FDSC 110 The Science of Food 3 cr. and
FDSC 113 Introduction to Food Science Lab 1 cr.
SOIL 120 Introduction to Soil Science 3 cr.

Major Requirements: 35-37 cr. hrs.
Required Courses (22 cr.):
AGED 202 Leadership and Group Dynamics 3 cr.
AGED 275 Early Field Experience 1 cr.
AGED 369 Foundations of Career and Technical Education 3 cr.
AGED 403 Supervision of Work Experience and Youth Organizations 3 cr.
AGED 462 Curriculum Design in Vocational Education 3 cr.
ANSC 230 Agricultural Economics I 3 cr.
CROP 257 Genetics or ANSC 257 Genetics 3 cr.
HORT 169 Introduction to Horticulture 3 cr.
Choose one of the following (2-3 cr.):
AGEC 240 Cooperatives 2 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
Choose one of the following (3 cr.):
AGEC 360 Farm Management 3 cr.
AGEC 361 Horticultural Business Management 3 cr.
AGEC 460 Agribusiness Firm Management 3 cr.
Choose one of the following (3-4 cr.):
AGEN 240 Structures 3 cr.
AET 255 Welding and Metal Manufacturing 3 cr.
AET 320 Internal Combustion Engines 3 cr.
AET 333 Landscape Construction 3 cr.
AET 350 Applied Electricity 3 cr.
AET 440 Soil and Water Conservation 4 cr.
Directed CAFES Electives: 5-7 cr. hrs.
General Education Requirements for the Agricultural Education Major

The following general education courses are required to meet teacher licensing requirements of the WI Department of Public Instruction:

**CW** (Communication - Reading and Writing)
ENGL 100 Academic Reading and Writing (3)

**CS** (Communication - Speaking and Listening)
COMS 101 Fundamentals of Oral Communication (3)
or COMS 116 Business and Professional Communication (3)

**CA** (Advanced Communication)
ENGL 200 Investigating Ideas: Reading, Writing, and the Disciplines (3)

**SB** (Social and Behavioral Sciences)
HIST 201 Introduction to Asian Civilization (3)

**HF** (Humanities and Fine Arts)
ART 100-Introduction to Art (3)
or DANC 100 History/Appreciation of Dance (3)
or MUS 100 Understanding Music (3)
or PHIL 310/ ART 310-Philosophy and History of Visual Art (3)
or THEA 105 Introduction to Theater and Drama (3)

**ENGL** 105 Literature and Human Experience (3)
or ENGL 106 Literature: Introduction to Fiction, Poetry, and Drama (3)
or ENGL 107 Heroes in Literature (3)

**M** (Mathematics)
MATH 146-College Algebra (3)

**SL** (Scientific Investigation)
BIOL 150 General Biology (3)
CHEM 115 Concepts in General Chemistry (3)

**EC** (Ethical Citizenship)
PLSC 120 Plants and Society (3)

**MD** (Multidisciplinary)
ESM 300 Environmental Education (3)
Major Requirements - 58 Total Credits

Core Courses: 58 cr. hrs.
AET 251 Introduction to Instrumentation - 3
AET 325 Alternate Energy Systems - 3
AET 350 Applied Electricity - 3
AET 361 Machinery Management - 3
AGEN 322 Internal Combustion Engine Analysis - 3
AGEN 330 Watershed Engineering - 4
AGEN 352 Food and Process Engineering - 3
AGEN 451 Instrumentation Systems - 3
AGEN 461 Off Road Vehicle Engineering - 3
AGEN 465 Fluid Power Systems - 3
GENG 121 Engineering Drawing - 3
GENG 135 Introduction to Engineering - 2
GENG 165 Engineering Project Management - 3
GENG 305 Machine Design Laboratory - 1
GENG 316 Engineering Thermodynamics - 3
GENG 336 Engineering Fluid Mechanics - 3
GENG 345 Machine Design I - 3
GENG 346 Machine Design II - 3
SOIL 120 Introduction to Soil Science - 3

Advanced Analytical Elective - 3
Choose one course from:
AGEC 230 Agricultural Economics I
AGEC 320 Statistical Methods
MATH 226 Fundamentals of Statistics
MATH 316 Mathematical Modeling
MATH 346 Numerical Analysis I

Required Supporting Courses: 30 cr. hrs.
CSIS 161 Programming I - 3
ENGL 367 Technical Writing - 3
MATH 167 Calculus II - 4
MATH 266 Calculus III - 3
MATH 331 Differential Equations - 3
PHYS 132 Physics II - 5
PHYS 250 Statics - 3
PHYS 252 Dynamics - 3
PHYS 254 Mechanics of Materials - 3
Agricultural Engineering Technology Major

Major Requirements 55-60 Total Credits

Core Courses: 33 cr. hrs.
AET 185 Ag Engineering Technology Professional Seminar I 1 cr.
AGEN 240 Structures 3 cr.
AET 285 Ag Engineering Technology Professional Seminar II 1 cr.
AET 350 Applied Electricity 3 cr.
AGEN 352 Food and Process Engineering 3 cr.
AGEN 355 Irrigation and Drainage 3 cr.
AET 385 Ag Engineering Technology Professional Seminar III 1 cr.
AET 485 Ag Engineering Technology Professional Seminar IV 1 cr.
GENG 121 Engineering Drawing 3 cr.
GENG 215 Engineering Project Management 3 cr.
GENG 345 Machine Design I 3 cr.
GENG 265 Engineering Graphics 3 cr.
PHYS 121 Algebra-Based Physics I 5 cr.
or PHYS 131 Calculus-Based Physics I 5 cr.

Choose one of the following three options:

Agricultural Engineering Technology Department
192 Agricultural Engineering Addition
715-425-3985
www.uwrf.edu/AGEN/
Joseph Shakal-Chair, Matthew Digman, Youngmi Kim, Dean Olson, Joel Peterson
Agricultural Engineering Technology Minor

Minor Requirements 22 Total Credits

Required Courses: 6 cr. hrs.
AET 150 Introduction to Agricultural Engineering 3
GENG 265 Engineering Graphics 3

Complete one of the following sets of courses: 7-10 cr. hrs.
1 AET 320 Internal Combustion Engines 3
AET 361 Farm Machinery Management 3
AGEN 465 Fluid Power Systems 3
2 AET 350 Applied Electricity 3
AET 251 Introduction to Instrumentation 3
GENG 368 CAD Applications 3
3 AGEN 352 Food and Process Engineering 3
AGEN 455 Advanced Food and Process Engineering 3
GENG 368 CAD Applications 3
4 AGEN 240 Structures 3
AET 333 Site Engineering 3
GENG 215 Engineering Project Management 3
5 AET 355 Irrigation and Drainage (writing intensive) 3
AGEN 365 Waste Management Systems (writing intensive) 3
AET 425 Environmental Engineering Technology 4

Directed electives in Agricultural Engineering Technology or General Engineering: 6-9 cr. hrs.
Agricultural Studies Major

General Education Requirements
As listed under General Education with the following exceptions:
Social and Behavioral: ESM 105, Introduction to Environmental Studies
Sciences: CHEM 121, General Chemistry or CHEM 120, Introduction to General Chemistry
Mathematics: MATH 146, College Algebra, or equivalent

Foundation Requirements 15 cr. hrs.
AGEC 230 Agricultural Economics I 3 cr.
AET 150 Agricultural and Environmental Engineering Technology 3 cr.
CROP 161 Introduction to Plant Science
or HORT 161 Introduction to Plant Science 3 cr.
ANSC 111 Introduction to Animal Science 3 cr.
SOIL 120 Introduction to Soil Science 3 cr.

Agricultural Studies Major
The Agricultural Studies major enables the student to gain a breadth of knowledge in many areas within the field of agriculture, food and environmental science. A relatively large course elective component allows students to be flexible in taking courses that fit their individual needs. For example, students may elect courses in agricultural communications under this major.

Agricultural Studies
Dean's Office
210 Agricultural Science
715-425-3841
Agricultural Studies is a four-year Bachelor of Science degree program. Students majoring in Agricultural Studies will acquire broad knowledge in the fields of agriculture, food and the environmental sciences. Students may also pursue individual special interests through elective classes. In consultation with an adviser, students may choose elective courses in areas such as agronomy, animal science, communications, marketing, management, international studies, etc.

Learn more about the Agricultural Studies Program

College Requirements

General Education Requirements

University Requirements
General Education Requirements

As listed with the following exceptions:

CS (Communication/Speaking and Listening) designator:
COMS 101 or COMS 116 is required

SL (Scientific Investigation) / S (Sciences) designator:
BIOL 150 is required
CHEM 120 or CHEM 121 is required or CHEM 115 may be taken instead for the Management Option only

Foundation Courses in Agriculture: 9-12 cr. hrs., depending on emphasis

Required Courses for all emphases:
ANSC 111 Introduction to Animal Science 3 cr.
AGEC 230 Agricultural Economics I 3 cr.

Meat Animal and Equine emphases - choose two
Companion Animal and Veterinary Technology emphases - choose one
AET 150 Introduction to Ag Engineering 3 cr.
FDSC 110 The Science of Food 3 cr.
PLSC 161 Introduction to Plant Science 3 cr.
SOIL 210 Introduction to Soils 3 cr.

Animal Science offers four emphases
Companion Animal, Equine, Meat Animal, Veterinary Technology

Companion Animal
Companion Animal Emphasis
Required Courses: 37 cr. hrs.

ANSC 121 Companion Animals 3 cr.
ANSC 221 Pets in Society 3 cr.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
ANSC 260 Animal Physiology 4 cr.
ANSC 317 Companion Animal Behavior 3 cr.
ANSC 321 Canine and Feline Care and Management 3 cr.
ANSC 345 Animal Health 2 cr.
ANSC 346 Principles of Animal Breeding 3 cr.
ANSC 433 Advanced Nutrition 3 cr.
ANSC 448 Physiology of Reproduction 3 cr.
ANSC 485 Seminar in Animal Science 1 cr.

Management Option
Directed Supporting
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
BIOL 324 Microbiology or FDSC 235 Agricultural Microbiology

Directed Electives - choose two
AFES 310 Agricultural Human Resource Management 3 cr.
AGEC 205 Agricultural Accounting 3 cr.
AGEC 345 Agricultural Law 3 cr.
AGEC 355 Agricultural Market and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 361 Horticultural Business Management
AGEC 365 Agricultural Finance

Select a total of six credits of 200 level or higher courses from Food Science, Agricultural Education, Agricultural Economics, Agricultural Engineering, Plant and Earth Science, Modern Language, or the College of Business and Economics. 6 cr.

Science Option

Directed Supporting
CHEM 231 Organic Chemistry I 3 cr.
CHEM 360 or CHEM 361 Biochemistry
BIOL 324 Microbiology 4 cr.

Required Courses
CHEM 122 General Chemistry 5 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 or CHEM 246 Organic Chemistry Lab I 1-2 cr.
CHEM 237 or CHEM 247 Organic Chemistry Lab II 1 cr.
MATH 147 or MATH 149 or MATH 166 3-4 cr.
ANSC 341 Biometrics 3 cr.
PHYS 121 or PHYS 131 General Physics I 4 cr.

Directed Electives - choose one
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell Biology 3 cr.
PHYS 122 Algebra-Based Physics II or PHYS 132 Calculus-Based Physics II 5 cr.
ANSC 447 Endocrinology 2 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 461 Pharmacology 3 cr.

Minor Option: 22-24 cr. hrs.
As an alternative to the Management or Science option, students can pair the Animal Science major with an academic minor to develop a more in-depth understanding of a second area of interest. Any minor (other than Animal Science, Dairy Science, or Ag Studies) of 22-24 credits or a second major.

Equine

Equine Emphasis

Required Courses: 36 cr. hrs.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
ANSC 260 Animal Physiology 4 cr.
ANSC 345 Animal Health 2 cr.
ANSC 346 Principles of Animal Breeding 3 cr.
ANSC 433 Advanced Nutrition 3 cr.
ANSC 448 Reproductive Physiology 3 cr.
ANSC 485 Seminar: Animal Science 1 cr.
ANSC 167 Equine Management and Equitation 2 cr.
ANSC 168 Equine Equitation and Management Lab 2 cr.
ANSC 369 Equine Production 4 cr.
ANSC 261 Advanced Horsemanship 3 cr.
or ANSC 268 Balanced Seat Applications 3 cr.

Management Option: 22 cr. hrs.

Required Courses: 6 cr. hrs.
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.

Directed Electives: 12 cr. hrs. - choose two
AGEC 205 Agricultural Accounting 3 cr.
AGEC 345 Agricultural Law 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
AFES 310 Agriculture Human Resource Management 3 cr.

Select a total of six credits of 200 level or higher courses from Food Science, Agricultural Education, Agricultural Economics, Agricultural Engineering, Plant and Earth Science, Modern Language, or the College of Business and Economics. 6 cr.

Science Option: 32-37 cr. hrs.
Required Courses:
CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
or CHEM 246 Synthetic and Analytical Techniques I 2 cr.
CHEM 232 Organic Chemistry II 3 cr.
or CHEM 237 Organic Chemistry Lab II 1 cr.
or CHEM 247 Synthetic and Analytical Techniques II 2 cr.
CHEM 360 or CHEM 361 Biochemistry I 3 cr.
MATH 147 College Algebra and Trigonometry 3 cr.
or MATH 149 Precalculus 4 cr.
or MATH 166 Calculus I 4 cr.
PHYS 121 or PHYS 131 General Physics I 4 cr.
ANSC 341 Biometrics 3 cr.
BIOL 324 Microbiology 4 cr.

Directed Electives: 2-4 cr. hrs. - choose one
ANSC 447 Endocrinology 2 cr.
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell Biology 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 461 Pharmacology 3 cr.
PHYS 122 General Physics II 4 cr.
PHYS 132 General Physics II 4 cr.

Minor Option: 22-24 cr. hrs.
As an alternative to the Management or Science option, students can pair the Animal Science major with an academic minor to develop a more in-depth understanding of a second area of interest.

Any minor of 22-24 credits or second major (other than Animal Science, Dairy Science, or Ag Studies). In addition to the minor or second major the following two courses are required:
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.

Meat Animal
Meat Animal Emphasis
Required Courses: 34 cr. hrs.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
ANSC 260 Animal Physiology 4 cr.
ANSC 345 Animal Health 2 cr.
ANSC 346 Principles of Animal Breeding 3 cr.
ANSC 433 Advanced Nutrition 3 cr.
ANSC 448 Reproductive Physiology 3 cr.
ANSC 485 Seminar: Animal Science 1 cr.
ANSC 238 Meat and Meat Products 3 cr.
ANSC 366 Swine Production 3 cr.
or ANSC 367 Beef Production 3 cr.
and choose one from:
ANSC 240 Meat Product Processing 3 cr.
or ANSC 467 Feedlot Management 3 cr.
or a second production course from ANSC 365, ANSC 366, ANSC 367, or ANSC 368 3 cr.

Management Option: 22 cr. hrs.
Required Courses: 10 cr. hrs.
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
BIOL 324 Microbiology 4 cr.

Directed Electives: 12 cr. hrs. - choose two
AGEC 205 Agricultural Accounting 3 cr.
AGEC 345 Agricultural Law 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
AFES 310 Agriculture Human Resource Management 3 cr.

Select a total of six credits of 200 level or higher courses from Food Science, Agricultural Education, Agricultural Economics, Agricultural Engineering, Plant and Earth Science, Modern Language, or the College of Business and Economics. 6 cr.

Science Option: 32-37 cr. hrs.
Required Courses:
CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
or CHEM 246 Synthetic and Analytical Techniques I 2 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
or CHEM 247 Synthetic and Analytical Techniques II 2 cr.
CHEM 360 or CHEM 361 Biochemistry I 3 cr.
MATH 147 College Algebra and Trigonometry 3 cr.
or MATH 149 Precalculus 4 cr.
or MATH 166 Calculus I 4 cr.
PHYS 121 or PHYS 131 General Physics 4 cr.
ANSC 341 Biometrics 3 cr.
BIOL 324 Microbiology 4 cr.

Directed Electives: 2-4 cr. hrs. - choose one
ANSC 447 Endocrinology 2 cr.
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell Biology 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 461 Pharmacology 3 cr.
PHYS 122 General Physics II 4 cr.
PHYS 132 General Physics II 4 cr.

Minor Option: 22-24 cr. hrs.
As an alternative to the Management or Science option, students can pair the Animal Science major with an academic minor to develop a more in-depth understanding of a second area of interest.

Any minor of 22-24 credits or second major (other than Animal Science, Dairy Science, or Ag Studies). In addition to the minor or second major the following three courses are required:
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
BIOL 324 Microbiology 4 cr.

**Veterinary Technology**

**Veterinary Technology Emphasis**

**Required Courses: 79 cr. hrs.**

ANSC 121 Companion Animals 2 cr.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
ANSC 260 Animal Physiology 4 cr.
ANSC 345 Animal Health 2 cr.
ANSC 346 Principles of Animal Breeding 3 cr.
ANSC 433 Advanced Nutrition 3 cr.
ANSC 448 Reproductive Physiology 3 cr.
ANSC 485 Seminar: Animal Science 1 cr.
CHEM 230 General Organic Chemistry
or CHEM 231 Organic Chemistry I 3 cr.
AGBI 251 Agricultural Biochemistry
or CHEM 361 Biochemistry I 3 cr.
BIOL 230 General Zoology 3 cr.
BIOL 324 Microbiology 4 cr.

39 credits transferred from an accredited Veterinary Technician program
Animal Science Minor

Minor Requirements: 22 cr. hrs.
Required Courses: 12 cr. hrs.
ANSC 111 Introduction to Animal Science 3 cr.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
Direct Electives 3-4 cr. hrs.
Choose one course from the following:
ANSC 365 Poultry Production 3 cr.
ANSC 366 Swine Production 3 cr.
ANSC 367 Beef Production 3 cr.
ANSC 368 Sheep Production 3 cr.
ANSC 369 Equine Production 4 cr.
Animal Science Electives 6-7 cr. hrs.
Any combination of additional Animal Science (ANSC) courses to bring total credits in minor to a minimum of 22 cr. hrs.

Department of Animal and Food Science
247 Agricultural Science
715-425-3704
www.uwrf.edu/ANFS/
Gary Onan-Chair, Casie Bass, Larry Baumann, Dennis Cooper, Michelle Famer, Young Dal Jang, Sylvia Kehoe, Steve Kelm, Justin Luther, Melkaye Melka, Nathan O'Connor, Amy Radunz, Beth Rausch, Peter Rayne, Kurt Vogel, Bonnie Walters, Steve Watters
Anthropology Minor

Anthropology Minor—24 Total Credits

Required Courses 12 cr. hrs.
- ANTH 100 Introduction to Anthropology
  (supporting course - counts 3 cr. hrs. in general education)
- SOCI 231 Sociology of Globalization 3 cr.
- SOCI 314 / ANTH 314 Faces of Culture 3 cr.
- SOCI 333 / ANTH 333 Human and Cultural Origins 3 cr.

Choose one of the following:
- SOCI 220 Sociology of Diversity: Race, Class and Gender 3 cr.
- SOCI 220 / ANTH 322 Race and Ethnicity 3 cr.

General Electives in Sociology/Anthropology 12 cr. hrs.
Choose from:
- SOCI 316 / ANTH 316 Social and Cultural Change 3 cr.
- SOCI 326 / WGST 326 Sociology of Gender Roles 3 cr.
- SOCI 331 / ANTH 331/WGST 331 Global Perspectives on Women 3 cr.
- SOCI 332 Environmental Sociology 3 cr.
- SOCI 338 / ANTH 338 Global Perspectives on Health and Disease 3 cr.
- SOCI 342 / WGST 342 Sociology of the Family 3 cr.
- SOCI 395 / ANTH 395 Belize Study Tour 3 cr.
Applied Computing

Overview of Program

Degree Requirements: 61 total credits

The Bachelor of Science in Applied Computing consists of 21 courses. Each student is required to successfully complete all courses to graduate. There are no electives in the program. The Capstone course is usually taken in the last semester.

- APC 300 Programming 1
- APC 310 Math for Computer Science
- APC 320 Introduction to Business
- APC 330 Technical and Professional Communication
- APC 340 Legal and Ethical Responsibilities of the IT Professional
- APC 350 Programming 2
- APC 360 Database Management 1
- APC 370 Systems Analysis and Design
- APC 380 Project Management Techniques
- APC 390 Object Oriented Programming
- APC 400 Applied Communication Networks
- APC 410 Database Management 2
- APC 440 Web Development
- APC 430 Applied Data Structures and Algorithms
- APC 420 Computer Security 1
- APC 450 Operating Systems Theory and Practice
- APC 460 Software Engineering Practices
- APC 470 IS Strategy and Management
- APC 480 Computer Security 2
- APC 490 Capstone Project Preparation
- APC 495 Capstone Project

Prerequisites

- College Algebra (MATH 146 or equivalent)

General Education and University Requirements

All students enter this program with at least 60 college-level semester credits of transferable coursework with a 2.0 or better grade point average (GPA). In addition to the general education requirements, UW-River Falls students must complete two, university-required courses in American cultural diversity and global perspectives. See list of approved courses.

Contacts

Academic Adviser and Director: Hossein Najafi
Email

Program Manager: Debra Hare
Email
715-425-3557

At UW-River Falls, the Applied Computing major is housed in the College of Business and Economics.

Program Description

The Bachelor of Science in Applied Computing is a collaborative effort of UW-Extension and five University of Wisconsin campuses - UW-Milwaukee, UW-Oshkosh, UW-Platteville, UW-River Falls, and UW-Stevens Point. This 100% online degree is designed to produce graduates who can perform programming, software engineering, graphic applications, networking, and operating systems management in a variety of environments, while at the same time promoting power skills such as business communications, ethics, and project management.
### Bachelor of Fine Arts (BFA) in Art History

**Degree Program (67 credits)**

All classes are 3 credits unless otherwise specified.

#### Required Supporting Course (3 credits)

University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.

**ART 100 Introduction to Visual Art (Section 6)**

#### BFA Core Requirements (28 credits)

- **ART 121 2D Design Foundation**
- **ART 122 3D Design Foundation**
- **ART 131 Drawing I**
- **ART 132 Drawing II**
- **ART 211 Western Art to 1500**
- **ART 212 Renaissance to Early Modern Art History**
- **ART 213 Art Since 1945: Modern and Contemporary Art History**
- **ART 320 Drawing from the Figure**
- **ART 485 Art Seminar**
- **ART 486 Senior Exhibition (1 cr.)**

#### Introductory Courses (18 credits)

Select at least 18 credits from the following:

- **ART 226 Introduction to Fibers**
- **ART 227 Introduction to Ceramics**
- **ART 229 Introduction to Glass**
- **ART 230 Cold Glass**
- **ART 235 Introduction to Photography**
- **ART 236 Introduction to Printmaking**
- **ART 237 Introduction to Sculpture**
- **ART 238 Introduction to Painting**
- **ART 241 Graphic Design I**
  - **ART 289 Special Topics (1-3 cr.)**
- **ART 292 Introduction to Art Therapy**
  - **ART 392 Pre-Columbian Art History**

#### Art History Emphasis Area (15 credits)

Select at least 15 credits from the following:

- **ART 291 Asian Art History**
- **ART 308 History of Design**
- **ART/PHIL 310 Philosophy and History of Visual Art**
- **ART 321 Gender and Art**
  - **ART 389 Special Topics (1-3 cr.)**

#### Secondary Emphasis Area (6 credits)

Select at least 6 credits from the following:

- **ART 242 Design Studio I**

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**Art Department**

172 Kleinpell Fine Arts
715-425-3266
www.uwrf.edu/ART/

**FACULTY**

- Eoin Breadon, (Chair), Glass
- Heather Delisle, Art Education
- Brett Kallusky, Photography
- Jeannine Kitzhaber, Painting, Art Seminar
- Ann Lawton, Introduction to Visual Art, Introduction to Art Therapy
- Peter Mak, Painting, Drawing
- Dan Paulus, Graphic Design
- Mary Rohl, Graphic Design
- Nikki Schneider, Printmaking
- Kaylee Spencer, Art History
- Lyz Wendland, Drawing, Introduction to Visual Art
- Rhonda Willers, Ceramics, Introduction to Visual Art

**ACADEMIC DEPARTMENT ASSOCIATE**

- Susie Zimmer
  
  Nikki Schneider
ART 243 Typography I
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences courses with consent from advisor.

ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT 200 / FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 277 Experience Ireland: Culture and Landscape
ENGL 300 / FILM 300 / WGST 300 Women, Film and Society
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 387 Technical and Professional Editing
FILM 200 Introduction to Film Studies
FILM 310 Sociology Through Film
FILM 442 World Cinema (g)
GEOG 120 Human Geography
HIST 371 Study Tour Research
HIST 382 Culture and Civilization of Italy: History and Art from Antiquity to Baroque (g)
JOUR 123 Editing for Print Media
JOUR 240 Introduction to Visual Communication
MARC 360 Advertising
MODL 376 Mexico: Cultural Experience (g)
PHY 350 Science and Art
PSYC 236 Developmental Psychology:
  Childhood and Adolescence
PSYC 336 Developmental Psychology: Adulthood and Aging
SOCI 395 / ANTH 395 Belize Study Tour (g)
THEA 105 Introduction to Theatre & Drama
THEA 131 Design for the Theatre
THEA 227 World Puppetry (g)
THEA 339 American Theatre
UNIV 379 International Internship
WIS 310 Scotland: Heritage & Culture

Bachelor of Fine Arts (BFA) in Art History
Degree Program (67 credits)
All classes are 3 credits unless otherwise specified.

**Required Supporting Course (3 credits)**
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

**BFA Core Requirements (28 credits)**
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

**Introductory Courses (18 credits)**
Select at least 18 credits from the following:
** Indicates required Art History emphasis course.
* Indicates a repeatable course used to accumulate credits.
ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 292 Introduction to Art Therapy
** ART 392 Pre-Columbian Art History

**Art History Emphasis Area (15 credits)**
Select at least 15 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 291 Asian Art History
ART 308 History of Design
ART310 / PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 389 Special Topics (1-3 cr.)

**Secondary Emphasis Area (6 credits)**
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences courses with consent from advisor.

ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT200 / FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 277 Experience Ireland: Culture and Landscape
ENGL300 / FILM 300 / WGST 300 Women, Film and Society
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 387 Technical and Professional Editing
FILM 200 Introduction to Film Studies
FILM 310 Sociology Through Film
FILM 442 World Cinema (g)
GEOG 120 Human Geography
HIST 371 Study Tour Research
HIST 382 Culture and Civilization of Italy: History and Art from Antiquity to Baroque (g)
JOUR 123 Editing for Print Media
JOUR 240 Introduction to Visual Communication
MARC 360 Advertising
MODL 376 Mexico: Cultural Experience (g)
PHY 350 Science and Art
PSYC 236 Developmental Psychology: Childhood and Adolescence
PSYC 336 Developmental Psychology: Adulthood and Aging
SOCI 395 / ANTH 395 Belize Study Tour (g)
THEA 105 Introduction to Theatre & Drama
THEA 131 Design for the Theatre
THEA 227 World Puppetry (g)
THEA 339 American Theatre
UNIV 379 International Internship
WIS 310 Scotland: Heritage & Culture
BFA Core Requirements (28 credits)

ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

Introductory Courses (18 credits)
Select at least 18 credits from the following:
** Indicates required Ceramics emphasis course.
* Indicates a repeatable course used to accumulate credits.
ART 226 Introduction to Fibers
** ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Ceramics Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Ceramics emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 327 Studio-Ceramics
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences...
courses with consent from advisor.

**ANTH 100** Introduction to Anthropology  
**CBE 370** International Study Tour for Business & Economics  
**COMS 207** Listening Skills  
**COMS 311** Persuasion  
**DANC 100** Dance Appreciation  
**DFT/FILM 200** Introduction to Film Studies  
**DFT 353** Mass Media & Popular Culture  
**ENGL 251** Advanced Composition  
**ENGL 262** Creative Writing  
**ENGL 266** Business Writing  
**ENGL 367** Technical Writing  
**ENGL 272** Visual Rhetoric: Document Design and Graphics  
**ENGL 277** Experience Ireland: Culture and Landscape  
**ENGL/FILM/WGST 300** Women, Film and Society  
**ENGL 374** Cyberliteracy and Writing on the Web  
**ENGL 387** Technical and Professional Editing  
**FILM 200** Introduction to Film Studies  
**FILM 310** Sociology Through Film  
**FILM 442** World Cinema (g)  
**GEOG 120** Human Geography  
**HIST 371** Study Tour Research  
**HIST 382** Culture and Civilization of Italy: History and Art from Antiquity to Baroque (g)  
**JOUR 123** Editing for Print Media  
**JOUR 240** Introduction to Visual Communication  
**MARC 360** Advertising  
**MODL 376** Mexico: Cultural Experience (g)  
**PHY 350** Science and Art  
**PSYC 236** Developmental Psychology: Childhood and Adolescence  
**PSYC 336** Developmental Psychology: Adulthood and Aging  
**SOCI/ANTH 395** Belize Study Tour (g)  
**THEA 105** Introduction to Theatre & Drama  
**THEA 131** Design for the Theatre  
**THEA 227** World Puppetry (g)  
**THEA 339** American Theatre  
**UNIV 379** International Internship  
**WIS 310** Scotland: Heritage & Culture

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**Drawing**

**Bachelor of Fine Arts (BFA) in Drawing**  
**Degree Program (67 credits)**

All classes are 3 credits unless otherwise specified.

**Required Supporting Course (3 credits)**

University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.  
**ART 100** Introduction to Visual Art (Section 6)

**BFA Core Requirements (28 credits)**

**ART 121** 2D Design Foundation  
**ART 122** 3D Design Foundation  
**ART 131** Drawing I  
**ART 132** Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

Introductory Courses (18 credits)
Select at least 18 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 225 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Drawing Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Drawing emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 330 Studio-Drawing
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences courses with consent from advisor.
ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
Bachelor of Fine Arts (BFA) in Glass
Degree Program (67 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

BFA Core Requirements (28 credits)
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)
Introductory Courses (18 credits)
Select at least 18 credits from the following:
** Indicates required Glass emphasis course.
* Indicates a repeatable course used to accumulate credits.
ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
** ART 229 Introduction to Glass
** ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Glass Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Glass emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 329 Studio-Glass
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below below or from any College of Arts and Sciences courses with consent from advisor.
ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT/FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
Bachelor of Fine Arts (BFA) in Graphic Design
Degree Program (67 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

BFA Core Requirements (28 credits)
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 449 Graphic Design Practice
ART 486 Senior Exhibition (1 cr.)

Introductory Courses (18 credits)
Select at least 18 credits from the following:
** Indicates required Graphic Design emphasis course.
ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
** ART 241 Graphic Design I
** ART 242 Design Studio I
** ART 243 Typography I
ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Graphic Design Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Graphic Design emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 308 History of Design
** ART 341 Graphic Design II
** ART 342 Design Studio II
** ART 343 Typography II
ART 344 Advertising Design
ART 345 Information Graphics
ART 346 Package Design
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below below or from any College of Arts and Sciences courses with consent from advisor.
ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT/FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
Bachelor of Fine Arts (BFA) in Painting
Degree Program (87 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

BFA Core Requirements (28 credits)
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

Introductory Courses (18 credits)
Select at least 18 credits from the following:
** Indicates required Painting emphasis course.
* Indicates a repeatable course used to accumulate credits.
ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
** ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Painting Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Painting emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below below or from any College of Arts and Sciences courses with consent from advisor.

ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT/FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 277 Experience Ireland: Culture and Landscape
ENGL/FILM/WGST 300 Women, Film and Society
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 387 Technical and Professional Editing
FILM 200 Introduction to Film Studies
FILM 310 Sociology Through Film
FILM 442 World Cinema (g)
GEOG 120 Human Geography
HIST 371 Study Tour Research
HIST 382 Culture and Civilization of Italy: History and Art from Antiquity to Baroque (g)
JOUR 123 Editing for Print Media
JOUR 240 Introduction to Visual Communication
MARC 360 Advertising
MODL 376 Mexico: Cultural Experience (g)
PHY 350 Science and Art
PSYC 236 Developmental Psychology: Childhood and Adolescence
PSYC 336 Developmental Psychology: Adulthood and Aging
SOCI/ANTH 395 Belize Study Tour (g)
THEA 105 Introduction to Theatre & Drama
THEA 131 Design for the Theatre
THEA 227 World Puppetry (g)
THEA 339 American Theatre
UNIV 379 International Internship
WIS 310 Scotland: Heritage & Culture

Bachelor of Fine Arts (BFA) in Photography
Degree Program (67 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

BFA Core Requirements (28 credits)
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

Introductory Courses (18 credits)
Select at least 18 credits from the following:
** Indicates required Photography emphasis course.
* Indicates a repeatable course used to accumulate credits.
ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 228 Introduction to Glass
ART 230 Cold Glass
** ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Photography Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Photography emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 335 Studio-Photography
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 336 Studio-Printmaking
* ART 337 Studio-Sculpture
* ART 238 Introduction to Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences courses with consent from advisor.
ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT/FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 277 Experience Ireland: Culture and Landscape
ENGL/FILM/WGST 300 Women, Film and Society
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 387 Technical and Professional Editing
FILM 200 Introduction to Film Studies
FILM 310 Sociology Through Film
FILM 442 World Cinema (g)
GEOG 120 Human Geography
HIST 371 Study Tour Research
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
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<td>HIST 382</td>
<td>Culture and Civilization of Italy: History and Art from Antiquity to Baroque (g)</td>
</tr>
<tr>
<td>JOUR 125</td>
<td>Editing for Print Media</td>
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<td>JOUR 240</td>
<td>Introduction to Visual Communication</td>
</tr>
<tr>
<td>MARC 360</td>
<td>Advertising</td>
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<tr>
<td>MODL 376</td>
<td>Mexico: Cultural Experience (g)</td>
</tr>
<tr>
<td>PHY 350</td>
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</tr>
<tr>
<td>SOCI/ANTH 395</td>
<td>Belize Study Tour (g)</td>
</tr>
<tr>
<td>THEA 105</td>
<td>Introduction to Theatre &amp; Drama</td>
</tr>
<tr>
<td>THEA 131</td>
<td>Design for the Theatre</td>
</tr>
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<td>THEA 227</td>
<td>World Puppetry (g)</td>
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<tr>
<td>THEA 330</td>
<td>American Theatre</td>
</tr>
<tr>
<td>UNIV 379</td>
<td>International Internship</td>
</tr>
<tr>
<td>WIS 310</td>
<td>Scotland: Heritage &amp; Culture</td>
</tr>
</tbody>
</table>

**Printmaking**

**Bachelor of Fine Arts (BFA) in Printmaking**

**Degree Program (67 credits)**

All classes are 3 credits unless otherwise specified.

**Required Supporting Course (3 credits)**

University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.

ART 100 Introduction to Visual Art (Section 6)

**BFA Core Requirements (28 credits)**

ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 320 Drawing from the Figure
ART 485 Art Seminar
ART 486 Senior Exhibition (1 cr.)

**Introductory Courses (18 credits)**

Select at least 18 credits from the following:

** Indicates required Printmaking emphasis course.
* Indicates a repeatable course used to accumulate credits.

ART 226 Introduction to Fibers
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 237 Introduction to Sculpture
ART 238 Introduction to Painting
ART 241 Graphic Design I
ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Printmaking Emphasis Area (15 credits)
Select at least 15 credits from the following:
** Indicates required Printmaking emphasis course.
* Indicates a repeatable course used to accumulate credits.
** ART 336 Studio-Printmaking
* ART 389 Special Topics (1-3 cr.)

Secondary Emphasis Area (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 242 Design Studio I
ART 243 Typography I
ART 308 History of Design
ART/PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 326 Studio-Fibers
* ART 327 Studio-Ceramics
* ART 328 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 337 Studio-Sculpture
* ART 238 Introduction to Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History

Supporting Courses (3 courses)
College level requirement. Credits not included in BFA program credit count. Choose from the recommended supporting courses listed below or from any College of Arts and Sciences courses with consent from advisor.
ANTH 100 Introduction to Anthropology
CBE 370 International Study Tour for Business & Economics
COMS 207 Listening Skills
COMS 311 Persuasion
DANC 100 Dance Appreciation
DFT/FILM 200 Introduction to Film Studies
DFT 353 Mass Media & Popular Culture
ENGL 251 Advanced Composition
ENGL 262 Creative Writing
ENGL 266 Business Writing
ENGL 367 Technical Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 277 Experience Ireland: Culture and Landscape
ENGL/FILM/WGST 300 Women, Film and Society
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 387 Technical and Professional Editing
FILM 200 Introduction to Film Studies
FILM 310 Sociology Through Film
FILM 442 World Cinema (g)
GEOG 120 Human Geography
HIST 371 Study Tour Research
HIST 382 Culture and Civilization of Italy: History and Art
from Antiquity to Baroque (g)
JOUR 123 Editing for Print Media
JOUR 240 Introduction to Visual Communication
MARC 360 Advertising
MODL 376 Mexico: Cultural Experience (g)
PHY 350 Science and Art
PSYC 236 Developmental Psychology: Childhood and Adolescence
PSYC 336 Developmental Psychology: Adulthood and Aging
SOCI/ANTH 395 Belize Study Tour (g)
THEA 105 Introduction to Theatre & Drama
THEA 131 Design for the Theatre
THEA 227 World Puppetry (g)
THEA 339 American Theatre
UNIV 379 International Internship
WIS 310 Scotland: Heritage & Culture

Art
Art (BS)
Degree Program (57 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in BFA degree program credit count. Special section of ART 100 for art degree seeking students.
ART 100 Introduction to Visual Art (Section 6)

Core Requirements (24 credits)
ART 121 2D Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History
ART 213 Art Since 1945: Modern and Contemporary Art History
ART 485 Art Seminar

Introductory Courses (18 credits)
Select at least 18 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 238 Introduction to Painting
ART 241 Graphic Design I
ART 242 Design Studio I
* ART 289 Special Topics (1-3 cr.)
ART 291 Asian Art History
ART 292 Introduction to Art Therapy

Upper Division Courses (15 credits)
Select at least 15 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 308 History of Design
ART310 / PHIL 310 Philosophy and History of Visual Art
ART 321 Gender and Art
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 330 Studio-Drawing
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)
ART 392 Pre-Columbian Art History
ART 486 Senior Exhibition (1 cr.)

Art Minor (24 credits)
All classes are 3 credits unless otherwise specified.

Foundation Courses (9 credits)
Select at least 9 credits from the following:
 ART 121 2D Design Foundation
 ART 131 Drawing I
 ART 211 Western Art to 1500
 ART 212 Renaissance to Early Modern Art History

Introductory Courses (6 credits)
Select at least 6 credits from the following:
 * Indicates a repeatable course used to accumulate credits.
 ART 225 Advertising Design I
 ART 226 Introduction to Fibers
 ART 227 Introduction to Ceramics
 ART 229 Introduction to Glass
 ART 235 Introduction to Photography
 ART 236 Introduction to Printmaking
 ART 237 Introduction to Sculpture
 ART 238 Introduction to Painting
 * ART 289 Special Topics (1-3 cr.)

Upper Division Courses (9 credits)
Select at least 9 credits from the following:
 * Indicates a repeatable course used to accumulate credits.
  * ART 326 Studio-Fibers
  * ART 327 Studio-Ceramics
  * ART 329 Studio-Glass
  * ART 335 Studio-Photography
  * ART 336 Studio-Printmaking
  * ART 337 Studio-Sculpture
  * ART 338 Studio-Painting
  * ART 389 Special Topics (1-3 cr.)

Art Education

Art Education

Degree Program (58-59 credits, art portion of degree)
All classes are 3 credits unless otherwise specified.

Core Requirements (26-27 credits)
ART 121 Design Foundation
ART 122 3D Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 211 Western Art to 1500
ART 212 Art History Since 1500
ART 485 Art Seminar

**Addition Art History Course (2-3 Credits)**
Select at least 2 credits from the following:
* Indicates a repeatable course used to accumulate credits.
- ART 308 History of Design
- ART310 / PHIL 310 Philosophy and History of Visual Art
- ART 321 Gender and Art
- ART 392 Pre-Columbian Art History
- *ART 389 Special Topics (1-3 cr.)

**Introductory Courses (18 credits)**
Select at least 18 credits from the following:
* Indicates a repeatable course used to accumulate credits.
- ART 225 Advertising Design I
- ART 227 Introduction to Ceramics
- ART 229 Introduction to Glass
- ART 230 Cold Glass
- ART 235 Introduction to Photography
- ART 236 Introduction to Printmaking
- ART 238 Introduction to Painting
- ART 241 Graphic Design I
- Art 250 Child Art (2 cr.)
- Art 251 Middle and Secondary Art (2 cr. spring only)
- * ART 289 Special Topics (1-3 cr.)
- ART 291 Asian Art History
- ART 292 Introduction to Art Therapy

**Upper Division Courses (14 credits)**
Select at least 15 credits from the following:
* Indicates a repeatable course used to accumulate credits.
- ART 242 Design Studio I
- ART 243 Typography I
- * ART 327 Studio-Ceramics
- * ART 329 Studio-Glass
- * ART 330 Studio-Drawing
- * ART 335 Studio-Photography
- * ART 336 Studio-Printmaking
- * ART 338 Studio-Painting
- * ART 389 Special Topics (1-3 cr.)

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**Required Teacher Education Courses**
- TED 120 Education and Technology
- TED 212 Educational Psychology: Middle & Secondary Education
- TED 252 Foundation of Multicultural Education
- SPED 330 Introduction to Special Education

**NOTE:** Must be accepted into Teacher Education to take following courses.

- TED 420 School and Society
- TED 422 Secondary School and Content Area Reading
TED 430 Techniques in Art
TED 472 Student Teaching - Initial
or
TED 479 K-12 Internship Teaching
or
TED 474 Student Teaching - COST
Art Minors

Art
Art Minor (24 credits)
All classes are 3 credits unless otherwise specified.

Foundation Courses (9 credits)
Select at least 9 credits from the following:
ART 121 2D Design Foundation
ART 131 Drawing I
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History

Introductory Courses (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)

Upper Division Courses (9 credits)
Select at least 9 credits from the following:
* Indicates a repeatable course used to accumulate credits.
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)

Art History
Art History Minor: 24 Credits
Required Core Courses: 9 Credits
ART 211 West Art to 1500 3 cr.
ART 212 West Art Since 1500 3 cr.
ART 213 Art since 1945: Modern and Contemporary Art History 3 cr.

Directed Art History Electives: 9 Credits
Choose 6 Credits from Modern and Contemporary Art History Electives
ART 308 History of Design 3 cr.
PHIL 310 Philosophy and History of Visual Art 3 cr.
ART 321 Gender and Art 3 cr.
Choose 3 Credits from Global Art History Electives
ART 291 Asian Art History (GP)* 3 cr.
ART 392 Pre-Columbian Art History (MD) 3 cr.

Directed Studio Art Electives: 6 Credits
Choose 3 Credits from 2-D Studio Electives
ART 131 Drawing I 3 cr.
ART 235 Introduction to Photography 3 cr.
ART 236 Introduction to Printmaking 3 cr.
ART 238 Introduction to Painting 3 cr.
ART 241 Graphic Design I 3 cr.

Choose 3 Credits from 3-D Studio Electives
ART 227 Introduction to Ceramics 3 cr.
ART 229 Introduction to Glass 3 cr.
ART 230 Cold Glass

Required Supporting Course
ART 100 Introduction to Art (3 Credits count in General Education)

* indicates prerequisite: junior standing or higher

Graphic Design
Graphic Design Minor (24 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in minor credit count.
ART 100 Introduction to Visual Art (Section 6)

Core Requirements (12 credits)
ART 121 Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 308 History of Design

Required Graphic Design Courses (9 credits)
ART 241 Graphic Design I
ART 242 Design Studio I
ART 243 Typography I

Elective (3 credits)
Select from the following:
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 238 Introduction to Painting
Asian Studies Minor

Asian Studies Minor: 24 total credits

Required Core Courses: 15 cr. hrs.
- CHIN 102 Beginning Chinese II or JAPN 102 Beginning Japanese II 4 cr.
- CHIN 201 Intermediate Chinese I or JAPN 201 Intermediate Japanese I 4 cr.
- CHIN 202 Intermediate Chinese II or JAPN 202 Intermediate Japanese II 4 cr.
- HIST 201 Introduction to Asian Civilization 3 cr. (GP)

Elective Courses – Select any three courses: 9 cr. hrs.
- ART 291 Asian Art History 3 cr. (GP)
- ENGL 317 / FILM 317 Modern East Asian Literature and Cinema 3 cr. (GP)
- GEOG 344 Asia and Oceana 3 cr. (GP)
- HIST 336 Traditional East Asia Prehistory-1800 3 cr.
- HIST 334 Modern China 3 cr.
- HIST 335 Modern Japan 3 cr.
- HIST 333 Silk, Spice, and Silver: The Making of the Global Exchange System to 1800 3 cr. (GP, MD)
- MNGT 355 International Business 3 cr. (GP)
- MKTG 355 International Marketing 3 cr.
- PHIL 245 Eastern Religions and Islam 3 cr. (GP)
- POLS 348 Politics of East Asia 3 cr.
- HIST 371 Study Tour Research – China/Japan Study Tour 3 cr.

General Education

Required Supporting Course: 4 cr. hrs.
- CHIN 101 Beginning Chinese I
- or JAPN 101 Beginning Japanese I 4 cr.
Biology Major
Biology Major - Liberal Arts and Education

Major requirements 44 Total Credits

Biology Options:

**General Biology**

General Biology Option

**BIOL Core and Elective Courses = 44 cr.**

Required core courses (26-27 cr.)

- **BIOL 110** Freshman Colloquium, 1 cr.
- **BIOL 102** Biological Evolution, 3 cr.
- **BIOL 210** Botany, 3 cr.
- **BIOL 230** General Zoology, 3 cr.
- **BIOL 240** Cell & Molecular Biology, 3 cr.
- **BIOL 324** Microbiology, 4 cr.
- **BIOL 350** Genetics, 3 cr.
- **BIOL 360** Ecology, 3 cr.

Electives courses (17-18 cr. from the following to reach a total of 44 cr.)

Recommended Electives: (not a complete list)

- **BIOL 195** Freshman Research Exper., 3 cr.
- **BIOL 243** Intro to Biol. Greek-Latin, 2 cr.
- **BIOL 295** Lab Research Experience, 2 cr.
- **BIOL 305** App. in Molecular Biology, 3 cr.
- **BIOL 307** Human Heredity, 2 cr.
- **BIOL 310** Identification of Plants, 3 cr.
- **BIOL 314** Plant Pathology, 3 cr.
- **BIOL 320** Plant Physiology, 3 cr.
- **BIOL 325** Medical Microbiology, 3 cr.
- **BIOL 341** Anatomy & Physiology I, 4 cr.
- **BIOL 342** Anatomy & Physiology II, 4 cr.
- **BIOL 345** Immunology, 3 cr.
- **BIOL 361** Epigenetics, 3 cr.
- **BIOL 353** Histology, 4 cr.
- **BIOL 356** Neurobiology, 3 cr.
- **BIOL 364** Developmental Biology, 3 cr.
- **BIOL 365** Cancer Biology, 3 cr.
- **BIOL 451** Molecular Biology, 4 cr.
- **BIOL 453** Virology, 3 cr.
- **BIOL 463** Animal Cell Culture, 3 cr.
- **BIOL 464** Stem Cells & Reg. Med., 3 cr.

**BIOL 379** Internship, 3-6 cr.
**BIOL 389** Special Topics in Biology, 3 cr.
**BIOL 496** Undergraduate Research, 3 cr.
**BIOL 499** Independent Study, 1-3 cr.

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Note: Up to 6 elective credits may be taken from outside the Biology Department, by program exception.
Biomedical Sci.
Biomedical Sciences Option

BIOL Core and Elective Courses = 44 cr.

**Required core courses (28-29 cr.)**

- **BIOL 110** Freshman Colloquium, 1 cr
- **BIOL 103** Biological Evolution, 3 cr.
- **BIOL 230** General Zoology, 3 cr.
- **BIOL 240** Cell & Molecular Biology, 3 cr.
- **BIOL 324** Microbiology, 4 cr.
- **BIOL 341** Anatomy & Physiology I, 4 cr.
- **BIOL 342** Anatomy & Physiology II, 4 cr.
- **BIOL 350** Genetics, 3 cr.

**Electives courses (15-16 cr. from the following to reach 44 total cr.)**

*Recommended Electives: (not a complete list)*

- **BIOL 195** Freshman Research Experience, 3 cr.
- **BIOL 210** Botany, 3 cr.
- **BIOL 243** Intro to Biol. Greek-Latin, 2 cr.
- **BIOL 295** Lab Research Experience, 2 cr.
- **BIOL 305** App. in Molecular Biology, 3 cr.
- **BIOL 307** Human Heredity, 2 cr.
- **BIOL 325** Medical Microbiology, 3 cr.
- **BIOL 345** Immunology, 3 cr.
- **BIOL 351** Epigenetics, 3 cr.
- **BIOL 352** Histology, 4 cr.
- **BIOL 356** Neurobiology, 3 cr.
- **BIOL 364** Developmental Biology, 3 cr.
- **BIOL 365** Cancer Biology, 3 cr.
- **BIOL 451** Molecular Biology, 4 cr.
- **BIOL 453** Virology, 3 cr.
- **BIOL 463** Animal Cell Culture, 3 cr.
- **BIOL 464** Stem Cells & Reg. Med., 3 cr.

- **BIOL 379** Internship, 3-6 cr.
- **BIOL 389** Special Topics in Biology, 3 cr.
- **BIOL 495** Undergraduate Research, 3 cr.
- **BIOL 499** Independent Study, 1-3 cr.

**Chemistry supporting courses (10-11 cr.): 1 year of CHEM**

- **CHEM 111** General Chemistry I, 4 cr.
  - **CHEM 116** General Chemistry Lab I, 1 cr.
- **CHEM 112** General Chemistry II, 4 cr.
  - **CHEM 117** General Chemistry Lab II, 1 cr. or **CHEM 130** Intro. to Organic Chemistry, 5 cr.
  - **CHEM 233** Foundations of Organic Chem., 5 cr.

**Additional supporting courses (11-12 cr.):**

- **PHYS 121** Algebra-based Physics, 5 cr. or **131** calculus-based Physics, 5 cr.
- **MATH 147** Algebra & Trigonometry, 3 cr. or **149** Precalculus, 4 cr.
- **MATH 231** Biostatistics, 3 cr. or **ANSC 341** Biometrics, 3 cr.
Note: Up to 6 elective credits may be taken from outside the Biology Department, by program exception.

Field Biology

Field Biology Option

**BIOL Core and Elective Courses = 44 cr.**

**Required core courses (22-23cr.) - 8 courses**

- BIOL 110 Freshman Colloquium, 1 cr.
- BIOL 103 Biological Evolution, 3 cr.
- BIOL 210 Botany, 3 cr.
- BIOL 230 General Zoology, 3 cr.
- BIOL 295 Field Research Experience, 2 cr.
- BIOL 324 Microbiology, 4 cr.
- BIOL 360 Ecology, 3 cr.

**Electives courses (21-22 cr. from the following to reach a total of 44 cr.)?**

*Recommended Electives: (not a complete list)*

- BIOL 195 Freshman Research Experience, 3 cr.
- BIOL 240 Cell & Molecular Biology, 3 cr.
- BIOL 305 App. in Molecular Biology, 3 cr.
- BIOL 310 Identification of Plants, 3 cr.
- BIOL 314 Plant Pathology, 3 cr.
- BIOL 320 Plant Physiology, 3 cr.
- BIOL 333 Entomology, 3 cr.
- BIOL 344 Wildlife Biology, 4 cr.
- BIOL 354 Freshwater Biology, 3 cr.
- BIOL 434 Ichthyology, 3 cr.
- BIOL 444 Ornithology, 3 cr.

- BIOL 379 Internship, 3-6 cr.
- BIOL 495 Undergraduate Research, 3 cr.
- BIOL 499 Independent Study, 1-3 cr.

Education

**Biology with Broad Field Science Education Option**

**Required General Science Core:**

- BIOL 150 General Biology 3 cr.
  or
- BIOL 160 General Biology - Freshmen Research Focus 4 cr.
- CHEM 111 General Chemistry 4 cr.
- CHEM 116 General Chemistry Laboratory I 1 cr.
- CHEM 112 General Chemistry II 4 cr.
- CHEM 117 General Chemistry II Laboratory 1 cr.
- PHYS 117 Basic Astronomy 3 cr.

*Select one of the following course sequences*
PHYS 121 Algebra-Based Physics I 5 cr.
PHYS 122 Algebra-Based Physics II 5 cr.
OR
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.

Biology Core:

BIOL 110 Freshman Colloquium 1 cr.
BIOL 210 General Botany 3 cr.
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell & Molecular Biology 3 cr.
BIOL 350 Genetics & Evolution 3 cr.
BIOL 360 Ecology 3 cr.
BIOL 471 Lab Experiences 1 cr.

Advanced Biology Electives:
Choose 14 credits from the following courses:

BIOL 243, BIOL 295, BIOL 296, BIOL 305, BIOL 307, BIOL 310, BIOL 324, BIOL 333, BIOL 341,
BIOL 342, BIOL 344, BIOL 345, BIOL 351, BIOL 353, BIOL 354, BIOL 364, BIOL 434, BIOL 444,
BIOL 451, BIOL 453, BIOL 481, BIOL 490

Required supporting courses
Choose one of the following course sequences

GEOL 269 Environmental Geology 3 cr.
GEOL 102 Introduction to Geology Laboratory 1 cr.
ESM 302 Broadfield Science Environmental Education Lab 1 cr.
OR
ESM 300 Environmental Education 3 cr.
GEOL 101 Introduction to Geology 3 cr.
GEOL 102 Introduction to Geology Laboratory 1 cr.
OR
ESM 300 Environmental Education 3 cr.
GEOL 269 Environmental Geology 3 cr.
GEOL 102 Introduction to Geology Laboratory 1 cr.

Earth and Space Science License (optional)
GEOG 212 Weather and Climate 3 cr.

Select two of the following courses:
GEOL 150 Geological Perspectives of Global Change 3 cr.
PHYS 318 Astrophysics 3 cr.
GEOL 305 Geology of the Planets 3 cr.
GEOL 441 Introduction to Geophysics 3 cr.

Recommended Supplemental Coursework:
GEOL 115 Oceanography 4 cr.
ESM 360 Hydrology & Water Quality 4 cr.

Required Supporting Courses: 21 cr. hrs.
Required for all options in the biology major.
Some professional schools and graduate programs may require additional credits in Chemistry, Math and/or Physics; consult your adviser.
Chemistry supporting courses (10- cr.): 1 year of CHEM

CHEM 111 General Chemistry I, 4 cr.
  + CHEM 116 General Chemistry Lab I, 1 cr.
CHEM 112 General Chemistry II, 4 cr.
  + CHEM 117 General Chemistry Lab II, 1 cr. or CHEM 130 Intro. to Organic Chemistry, 5 cr.

Additional supporting courses (11-12 cr.):
PHYS 121 Algebra-based Physics, 5 cr. or 131 calculus-based Physics, 5 cr.
MATH 147 Algebra & Trigonometry, 3 cr. or 149 Precalculus, 4 cr.
MATH 231 Biostatistics, 3 cr. or ANSC 341 Biometrics, 3 cr.

Education majors take:

Also, see Physical Science Major and Broadfield Science Licensure
Minor Requirements 22 Total Credits

**Required Courses:**
BIOL 150 General Biology 3 cr.

**Liberal Arts majors take:**
BIOL 210 General Botany or BIOL 230 General Zoology 3 cr.

**Directed Electives: 16 cr. hrs.**
Choose from any Biology courses except BIOL 100, BIOL 253, BIOL 308.
At least one course must be at the 300 level or above.

**Education majors take:**
BIOL 210 General Botany 3 cr.
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell and Molecular Biology 3 cr.
BIOL 350 Genetics and Evolution (writing intensive) 3 cr.
BIOL 360 Ecology (writing intensive) 3 cr.

**Directed Electives: 4 cr. hrs.**
Choose from any Biology courses except BIOL 100, BIOL 253, BIOL 308.
Biotechnology Major

Core

Biotechnology

Biotechnology Core: 40-41 cr. hrs.
AFES 222 Introduction to Biotechnology 2 cr.
BIOL 150 General Biology 3 cr.
BIOL 240 Cell and Molecular Biology 3 cr.
BIOL 324 Microbiology 4 cr.
BIOL 350 Genetics and Evolution (writing intensive) 3 cr.
or ANSC 257 Genetics 3 cr.
BIOL 451 Molecular Biology 4 cr.
BIOT 280 Sophomore Seminar 0.5 cr.
BIOT 380 Junior Seminar 0.5 cr.
BIOT 480 Biotech Seminar 1 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
or CHEM 246 Synthetic & Analytical Techniques in Organic Chemistry I 2 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
or CHEM 247 Synthetic & Analytical Techniques in Organic Chemistry II 1 cr.
CHEM 355 Separation Science Laboratory 1 cr.
CHEM 361 Biochemistry I 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Lab 1 cr.
FDSC 460 Fermentation Technology 3 cr.
or HORT 369 Plant Tissue Culture 3 cr.
or BIOL 463 Animal Cell Culture 3 cr.

Electives

Biotechnology

Biotechnology Electives: 6 cr. hrs.
Choose at least six credits from the following additional courses to obtain additional training in methods and content particularly relevant to biotechnology. Fermentation Technology, Animal Cell Culture or Plant Tissue Culture may be chosen as electives after one of the courses is completed as a core course (no double counting as core and elective).
BIOL 345 Immunology 3 cr.
BIOL 453 Virology 3 cr.
BIOT 373 / CSIS 373 Bioinformatics 3 cr.
BIOT 295 Biotechnology Lab Research 1 cr.
BIOT 379 Biotechnology Internship 1-4 cr.
BIOT 495 Biotechnology Thesis 1-3 cr.
FDSC 335 Food Microbiology 4 cr.
FDSC 460 Fermentation Technology 3 cr.
HORT 369 Plant Tissue Culture 3 cr.
BIOL 463 Animal Cell Culture 3 cr.

Specialization

Biotechnology

Specialization Area: 9 cr. hrs.
In consultation with a biotechnology faculty advisor, the student will develop a plan that includes at least 9 additional credits of specialization. Up to four credits may include an internship in the specialization area. The total number of internship credits distributed between the Biotechnology Interdisciplinary Program

Interdisciplinary Program
261 Centennial Science Hall
715-425-3577
www.uwrf.edu/BIOT
Karl Peterson-Director

The Biotechnology major is an interdisciplinary program that is focused on the molecular basis of life processes and the techniques utilized to both study and control these processes under in vivo and in vitro conditions. The Biotechnology curriculum draws upon the expertise and course offerings of the participating departments: Biology, Chemistry, Animal and Food Science, and Plant and Earth Science. The Biotechnology major is designed to provide those students who are interested in pursuing careers at the interface of biology and chemistry with the academic background required to either secure entry level positions in the biotechnology industry or to continue their education in graduate or professional schools. A student may elect to complete a B.S. degree in Biotechnology in either the College of Arts and Sciences, 715-425-3777, or the College of Agriculture, Food and Environmental Sciences 715-425-3841.

General Education Requirements

BA and BS Liberal Arts majors as listed.
BS Agriculture, Food and Environmental Sciences majors as listed.
Courses in the major or required supporting courses may be double counted to satisfy the General Education science requirements. Therefore, the total General Education credit hour requirement is reduced by the courses that can be double-counted.
Electives and Specialization Area may not exceed 4 credits. The plan will be submitted to the Biotechnology Program Director by the end of the first semester of the junior year for recording and approval. The senior seminar should focus on a research project the student worked on or a topic intimately related to the area of specialization.

Some possible specialization areas/emphases might include:
- Production Animal Biotechnology
- Production Crop Biotechnology
- Business/Management
- Computational Biotechnology/Bioinformatics
- Criminal Justice/Forensic Biotechnology
- Environmental Biotechnology
- Food Science Biotechnology
- Industrial Biotechnology
- Materials Science Biotechnology
- Medical Biotechnology
- Pharmaceutical Biotechnology
- Veterinary Medical Biotechnology

**Supporting Courses**

**Biotechnology**

**Required Supporting Courses 18-20 cr. hrs.**

- MATH 166 Calculus I 4 cr.
- or ANSC 341 Biometrics 3 cr.
- or MATH 226 Fundamentals of Statistics

- CHEM 120 Introduction to General Chemistry 6 cr.
- or CHEM 121 General Chemistry I 5 cr.
- and CHEM 122 General Chemistry II 5 cr.

**Either sequence A or B below:**

A. PHYS 151 Algebra-Based Physics I 4 cr.
   PHYS 152 Algebra-Based Physics II 4 cr.
   PHYS 156 Algebra-Based Physics Laboratory I 1 cr.
   PHYS 157 Algebra-Based Physics Laboratory II 1 cr.

B. PHYS 161 Calculus-Based Physics I 4 cr.
   PHYS 162 Calculus-Based Physics II 4 cr.
   PHYS 166 Calculus-Based Laboratory I 1 cr.
   PHYS 167 Calculus-Based Laboratory II 1 cr.
Broadfield Science Licensure

A person with a broadfield science (BFS) license may teach any science class, middle-school level through grade 10, and any basic science class in grades 11-12 which is not a college-preparatory course, advanced placement (AP) course, or an elective course with more depth of content than a basic course. However, you may teach advanced courses in your science major (Biology, Chemistry or Physics).

Biology

Minor in Physics–Liberal Arts or Education

Physics Minor Requirements 24 Total Credits

Required Courses 14 cr. hrs.

- PHYS 121 Algebra-Based Physics I 5 cr.
- PHYS 122 Algebra-Based Physics II 5 cr.

or

- PHYS 131 Calculus-Based Physics I 5 cr.
- PHYS 132 Calculus-Based Physics II 5 cr.

- PHYS 264 Modern Physics 4 cr.

Directed Electives for Both Minors: 10 cr. hrs.

- PHYS 204 Intermediate Physics Laboratory (writing intensive) 1 cr.
- PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
- PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
- PHYS 311 Electronics: Circuits and Devices 4 cr.
- PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
- PHYS 313 Digital Electronics 4 cr.
- PHYS 318 Astrophysics 3 cr.
- PHYS 324 Acoustics 3 cr.
- PHYS 415 Thermodynamics 3 cr.
- PHYS 420 Optics 4 cr.
- PHYS 426 Nuclear and Particle Physics 4 cr.
- PHYS 427 Condensed Matter Physics 4 cr.
- PHYS 441 Classical Mechanics 4 cr.
- PHYS 442 Electricity and Magnetism 4 cr.
- PHYS 465 Quantum Mechanics 3 cr.

Additional Choice for Directed Elective for Secondary Education Minor:

- PHYS 331 Curriculum Physics 3 cr.

Required Supporting Courses 11 cr. hrs.

- may be taken under Gen Ed or under Major
- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- PHYS 361 Mathematics of Physics and Engineering I 3 cr.

or MATH 266 Calculus III

Chemistry

Broadfield Science Licensure: Chemistry

- BIOL 150 General Biology 3 cr.
- BIOL 210 General Botany
- or BIOL 230 General Zoology
- or BIOL 240 Cell and Molecular Biology 3 cr.
- CHEM 121 General Chemistry I 5 cr.

Interdisciplinary Program

261 Centennial Science Hall
715-425-3577
www.uwrf.edu/BIOT

Karl Peterson–Director

The Biotechnology major is an interdisciplinary program that is focused on the molecular basis of life processes and the techniques utilized to both study and control these processes under in vivo and in vitro conditions. The Biotechnology curriculum draws upon the expertise and course offerings of the participating departments: Biology, Chemistry, Animal and Food Science, and Plant and Earth Science. The Biotechnology major is designed to provide those students who are interested in pursuing careers at the interface of biology and chemistry with the academic background required to either secure entry level positions in the biotechnology industry or to continue their education in graduate or professional schools. A student may elect to complete a B.S. degree in Biotechnology in either the College of Arts and Sciences, 715-425-3777, or the College of Agriculture, Food and Environmental Sciences 715-425-3841.

General Education Requirements

BA and BS Liberal Arts majors as listed.

BS Agriculture, Food and Environmental Sciences majors as listed.

Courses in the major or required supporting courses may be double counted to satisfy the General Education science requirements. Therefore, the total General Education credit hour requirement is reduced by the courses that can be double-counted.
CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 122 General Chemistry II 5 cr.
ESM 302 Environmental Education Lab 1 cr.
GEOL 102 Introductory Geology Lab 1 cr.
PHYS 117 Astronomy 3 cr.

PHYS 121 Algebra-Based Physics I 4 cr.
PHYS 122 Algebra-Based Physics II 4 cr.
PHYS 131 Calculus-Based Physics 1 cr.
PHYS 132 Calculus-Based Physics II 1 cr.

CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 361 Biochemistry I 3 cr.
CHEM 340 Physical Chemistry of Biological Systems 3 cr.
CHEM 322 Inorganic Chemistry 4 cr.
CHEM 480 Chemical Communications and Research 1 cr.
CHEM 261 Laboratory Safety 2 cr.

**Advanced Lab and Research Series: (choose one)**
CHEM 355 Separation Science Laboratory 1 cr.
CHEM 356 Chemical Instrumentation Lab 1 cr.
CHEM 366 Biochemistry Laboratory 1 cr.
CHEM 495 Undergraduate Research 1 cr.

**Required Supporting Coursework:**
GEOL 269 Environmental Geology (counted in general education) 0 cr.

**Earth and Space Science Licensing**
An Earth and Space Science license will be earned upon completion of the coursework listed below. This additional concentration is based on 16-19 total credits of earth and space science coursework. Overlap with required and elective coursework in the major will allow for this add-on license to be completed with an additional 5-11 credits.

GEOL 269 Environmental Geology 3 cr. (completed in major)
GEOL 102 Introductory Geology Lab 1 cr. (completed in major)
ESM 302 Environmental Education Lab 1 cr. (completed in major)
PHYS 117 Astronomy 3 cr. (completed in major)
GEOL 330 Meteorology 3 cr.

**Choose 2 of the following courses:**
GEOL 150 Historical Geology 4 cr.
PHYS 318 Astrophysics 3 cr. (possible elective in major)
GEOL 305 Geology of the Planets 2 cr.
GEOL 441 Introduction to Geophysics 4 cr.

**Recommended Supplemental Coursework:**
GEOL 202 Oceanography 3 cr.
ESM 360 Hydrology and Water Quality 4 cr.

**Physics**

**Broadfield Science Licensure: Physics 57-58 cr. hrs.**
BIOL 150 General Biology 3 cr.
BIOL 210 General Botany
or BIOL 230 General Zoology
or BIOL 240 Cell and Molecular Biology 3 cr.
CHEM 121 General Chemistry I 5 cr.
or CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 122 General Chemistry II 5 cr.
ESM 302 Environmental Education Lab 1 cr.
GEOL 102 Introductory Geology Lab 1 cr.
PHYS 117 Astronomy 3 cr.

PHYS 121 Algebra-Based Physics I 5 cr.
PHYS 122 Algebra-Based Physics II 5 cr.
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.

MATH 167 Calculus II 4 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 204 Intermediate Physics Lab 1 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 485 Senior Seminar 1 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Choose 6 credits from the following electives:

PHYS 220 Science of Light 3 cr.
PHYS 250 Statics 3 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 331 Curriculum Physics 3 cr.

Required Supporting Coursework:

GEOL 269 Environmental Geology (counted in general ed) (0 cr.)

Earth and Space Science Licensing

An Earth and Space Science license will be earned upon completion of the coursework listed below. This additional concentration is based on 16-19 total credits of earth and space science coursework. Overlap with required coursework in the major will allow for this add-on license to be completed with an additional 5-7 credits.

GEOL 269 Environmental Geology 3 cr. (completed in major)
GEOL 102 Introductory Geology Lab 1 cr. (completed in major)
ESM 302 Environmental Education Lab 1 cr. (completed in major)
PHYS 117 Astronomy 3 cr. (completed in major)
GEOL 330 Meteorology 3 cr.

Choose 2 of the following courses:

GEOL 202 Oceanography 3 cr.
ESM 360 Hydrology and Water Quality 4 cr.
Broad Field Social Studies Major

**Broad Field Social Studies Major—History Emphasis**

134 Total Credit Hours

**History Emphasis Requirements: 33 credit hours**

A. **History core:** three courses
   - HIST 102 History of the Modern World, 1500-Present
   - HIST 215 United States History to 1865
   - HIST 216 U.S. History from 1865

B. **U.S. history (300-level or above):** two courses

C. **World history (300-level or above):** two courses

D. **Environmental history:** HIST 365 American Environmental History

E. **History elective (300-level or above):** one course

F. **Research and historiography:** HIST 485 History Seminar

**Social Studies Requirements: 24 credit hours**

A. **Social Studies core** - 3 cr.
   - BFSS 200 Introduction to Social Science for Teachers

B. **Social science distribution courses (non-history)** - 12 cr.
   - SOCI 100 Introduction to Sociology
   - POLS 230 Introduction to Political Philosophy and Ideology or POLS 114 American Government and Politics
   - POLS 260 Introduction to International Relations (g)
   - ECON 201 Principles of Microeconomics or ECON 202 Principles of Macroeconomics

C. **Social Science electives** - 9 cr. (Students interested in teaching in Wisconsin should take all three elective courses from the same social science discipline: economics, political science, geography, psychology or sociology.)
   - **Psychology:** PSYC 201 Behavioral Statistics, PSYC 216 Research Methods, and another PSYCH course of your choice
   - **Geography:** GEOG 120 Human Geography and two other GEOG courses at the 200 or 300 level
   - **Economics:** ECON 201 Principles of Microeconomics, ECON 202 Principles of Macroeconomics and ECON 340 Contemporary International Trade

**Education Requirements: 43 credit hours**

A. **Education** - 18 cr.
   - TED 155 Intro to Tech Integration and the Reflective Multimedia
   - TED 212 Educational Psychology: Middle & Secondary Education
   - TED 414 Development of the Transcendent
   - TED 420 School & Society
   - SPED 330 Introduction to Special Education

B. **Social Studies Methods Block** - 13 cr. (You should take “block” classes in the fall semester of your senior year.)

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**Department of History and Philosophy**

307 Kleinfell Fine Arts
715-425-3164
Zhiguo Yang, Director

The Broad Field Social Studies (BFSS) degree is the preferred degree for secondary teaching in the area of social studies. This degree offers many options and great versatility. The program requires that the student have a concentration (a major) in one of the social sciences and then additional work in the other social sciences.

**General Education Requirements**

Social and Behavioral Science:
BS Education majors as listed.
TED 433 Techniques in Social Studies
TED 463 Content Area Literacy in Middle & Secondary School Social Science
TED 466 Management Strategies for the Secondary Social Science Classroom
BFSS 400 Curriculum Development for Social Studies

C. **Student teaching** - 12 cr.
   TED 472 Student Teaching - Initial
   or
   TED 479 K-12 Internship Teaching
   or
   TED 474 Student Teaching - COST

**General Education and University Requirements: 40 credit hours**

*General Education Requirements:*

A. **GOAL 1 Communication** - 9 cr.
   - ENGL 100 Academic Reading/Writing
   - COMS 101 Fundamentals of Oral Communication
   - ENGL 200 Investigating Ideas: Reading, Writing, and the Disciplines

B. **GOAL 2** - 12 cr.
   - **Social and behavioral sciences** - 6 cr: HIST 101 Origins of Civilization and PSYC 101 General Psychology
   - **Humanities and fine arts** - 6 cr: ART 100 Intro to Visual Art or MUS 100 Understanding Music or DANC 100 Dance Appreciation (3 cr.); and ENGL 105 Literature and Human Experience or ENGL 106 Literature: Introduction to Fiction, Poetry, and Drama or ENGL 107 Heroes in Literature (3 cr.)

C. **GOAL 3 Math and science** - 9 cr.
   - MATH 126 Activities in Math
   - BIOL 100 Introduction to Biology
   - GEOG 110 Physical Environment: Patterns & Systems

D. **GOAL 5 Individual responsibility to self, society, world** - 4 cr.
   - **Individual responsibility to self, society, world**: PE 108 Health and Fitness for Life
   - **Ethical citizenship (EC)** - choose one course from this [complete list](#)

**University Requirements**

A. **American Cultural Diversity (ACD)** - 3 cr: TED 252 (3 cr.)

B. **Global Perspectives (GP)** - 3 cr: choose from: HIST 201 Intro. to Asian Civilization, HIST 202 Intro. to Latin American Civilizations, HIST 203 The Mediterranean: A Survey, or HIST 209 Intro. to African History

*Remember to periodically review your Degree Audit Report (DAR) in eSIS!*
Business Administration Major

Business Administration Major: 45 Total Credits

Lower Division 21 cr. hrs.
Required of all majors before enrolling in any upper level division courses.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
ACCT 231 Principles of Accounting I 3 cr.
ACCT 232 Principles of Accounting II 3 cr.
CSIS 215 Information Systems for Business Management 3 cr.
ECON 226 Introduction to Statistics 3 cr.
or MATH 226 Fundamentals of Statistics
BLAW 265 Business Law I 3 cr.

Upper Division 18 cr. hrs.
MNGT 300 Management and Organizational Behavior 3 cr.
MKTG 310 Principles of Marketing 3 cr.
FINC 345 Managerial Finance 3 cr.
ECON 326 Statistical Methods for Economics and Business 3 cr.
MNGT 361 Operations Management 3 cr.
MNGT 485 Strategic Management 3 cr.

Business Electives 6 cr. hrs.
Choose 6 credits of courses 300 level or higher from MKTG, MNGT or FINC.

Required Supporting Courses: 7-8 cr.
A. CBE 100 CBE First Year Seminar 2 cr.
CBE 300 Professional Development 1 cr.
B. COMS 101 Fundamentals of Oral Communication 3 cr.
(waived if taken as GenEd)
or ENGL 266 Business Writing 3 cr.
C. ECON 205 Quantitative Analysis 3 cr.
or MATH 156 Calculus for Business and Social Sciences 3 cr.
or MATH 166 Calculus I 4 cr.

Undergraduate Business Administration students may not transfer more than six credits of 300/400 level courses from non-AACSB accredited programs and institutions into the major.

Business Administration - Finance
Business Administration - Management
Business Administration - Marketing
## Business Administration Minor

**Business Administration Minor: 24 Total Credits**  
Prerequisites: ECON 201, ECON 202, and ECON 226 (or MATH 226)

### Required Courses 21 cr. hrs.
- ACCT 231 Principles of Accounting I 3 cr.
- ACCT 232 Principles of Accounting II 3 cr.
- CSIS 215 Information Systems for Business Management 3 cr.
- BLAW 265 Business Law I 3 cr.
- FINC 345 Managerial Finance 3 cr.
- MNGT 300 Management and Organizational Behavior 3 cr.
- MKTG 310 Principles of Marketing 3 cr.

### Business Electives: 3 cr. hrs.
Courses 300 level or higher from MKTG, MNGT or FINC

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Prior to taking the 300 level courses required in the Business Administration minor (FINC 345, MKTG 310, and MNGT 300), the following courses must first be completed: ACCT 231, ACCT 232, CSIS 215, ECON 201, ECON 202, and either MATH 226 or ECON 226. It is recommended that business minors complete at least Math 146 (College Algebra).
Broad Area Business Administration Major
(no minor required; must choose one of the options listed below)

- Finance
- Management
- Marketing

Undergraduate Business Administration students may not transfer more than six credits of 300/400 level courses from non-AACSB accredited programs and institutions into the major.

Dean's Office
College of Business and Economics
124 South Hall
715-425-3335

General Education Requirements
The General Education mathematics requirement for business majors can be met by taking ECON 205 Quantitative Analysis, MATH 156 Calculus for Business and Social Sciences, or MATH 166 Calculus I.

Admission Requirements
1. For all majors in the College of Business and Economics (CBE):
   Completion of at least 27 required general education credits with a minimum GPA of 2.25.

2. Additionally, the following must be completed, or in progress for completion, during the semester preceding admission.
   GPA of 2.50 in ACCT 231, ACCT 232; CBE 100; ECON 201; CSIS 215; ECON 205 or MATH 156 or MATH 166; ECON 226 or MATH 226; CSTA 116 or ENGL 266.
Chemistry Major

Chemistry

Track A Requirements: 56-59 cr. hrs.

CHEM 111 General Chemistry I 4 cr. and CHEM 116 General Chemistry I Lab 1 cr.
  OR CHEM 121 General Chemistry I 5 cr.
  OR CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 112 General Chemistry II 4 cr. and CHEM 117 General Chemistry II Lab 1 cr.
  OR CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.
CHEM 322 Inorganic Chemistry 3 cr.
CHEM 325 Inorganic Chemistry Lab 1 cr.
CHEM 341 Chemical Thermodynamics and Kinetics (3 cr.) or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 360 Foundations of Biochemistry 4 cr. OR CHEM 361 Biochemistry I 3 cr.
CHEM 380 Chemistry Junior Seminar 1 cr.
CHEM 480 Chemical Communications and Research 1 cr.

BIOL 150 Introduction to Biology 3 cr. OR BIOL 160 General Biology - Freshman Research Focus 4 cr.

MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH elective 2 (3-4 cr.)

PHYS 121 Algebra-Based Physics I 4 cr.
PHYS 122 Algebra-Based Physics II 4 cr.
Or
PHYS 131 Calculus-Based Physics I 4 cr.
PHYS 132 Calculus-Based Physics II 4 cr.

Track A In-depth elective courses: 12 credits, including at least 6 lab credits, one of which must be CHEM 366 or CHEM 345.

CHEM 311 Polymer Chemistry 3 cr.
CHEM 316 Polymer Chemistry Lab 1 lab cr.
CHEM 333 Organic Synthesis 2 cr.
CHEM 334 Organic Synthesis Lab 2 lab cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr. or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 345 Physical Chemistry Laboratory 1 lab cr.
CHEM 355 Separation Science Laboratory 1 lab cr.
CHEM 356 Chemical Instrumentation Lab 1 lab cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Laboratory 1 lab cr.
CHEM 378 Semester Abroad 1-4 cr.; includes 1-4 cr. Lab
CHEM 379 Internship 1-4 cr.; includes 1-4 cr. lab
CHEM 461 Pharmacology 3 cr.
CHEM 489 Special Topics in Chemistry 1-4 cr.
CHEM 495 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.
BIOL 451 Molecular Biology 4 cr.; includes 1 lab cr.

Department of Chemistry and Biotechnology

253 Centennial Science Hall
715-425-3523
www.uwrf.edu/CHEM/

Karl Peterson -Chair, Samuel Alvarado, Ross Jilk, Ekaterina Kadnikova, Michael Kahlow, Lisa Kroutil, Daniel Marchand, Kevin McLaughlin, Barb Nielsen, Matt O’Reilly, Jamie Schneider, Kurt Torgersen

The Department of Chemistry and Biotechnology offers several options for chemistry majors, all of which are based on a core curriculum with additional requirements based on each option.

1. The Chemistry major is designed for students who desire a general education in chemistry as a background for careers in many fields such as polymer science, environmental analysis, industrial chemistry, materials science, or various fields related to medical science.

2. The Biochemistry option is designed for students who wish to pursue a career in biotechnology, the medical sciences or who desire a strong background in the chemistry of biological systems.

3. The Preprofessional option is a Biochemistry degree designed for students who wish to pursue professional degrees including medical school, veterinary school, pharmacy, or other medical or health related fields.

4. The education option chemistry major is designed for prospective secondary school teachers. The curriculum is planned so as to give the student (1) a broad general education, (2) specialized preparation in chemistry with a minor in a supporting field and (3) professional training necessary for effective teaching. Contact the Chemistry Department chair for further information.

Substitution of other courses for degree requirements is possible upon application and approval by the department. This is on a case-by-case basis and particularly may affect students who change to a chemistry major or who transfer to UWRF. Students should confer with their adviser and/or the department chair.
Track B Requirements: 56-59 cr.
CHEM 130 Introduction to Organic Chemistry 5 cr.
CHEM 233 Foundations of Organic Chemistry 5 cr.
CHEM 240 Foundations of Inorganic Chemistry 4 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.
CHEM 322 Inorganic Chemistry 3 cr.
CHEM 325 Inorganic Chemistry Laboratory 1 cr.
CHEM 333 Organic Synthesis 2 cr.
CHEM 334 Organic Synthesis Laboratory 2 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr. or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 360 Foundations of Biochemistry 4 cr. OR 361 Biochemistry I 3 cr.
CHEM 380 Junior Seminar 1 cr.
CHEM 480 Chemical Communications and Research 1 cr.

BIOL 150 Introduction to Biology 3 cr. OR BIOL 160 General Biology - Freshman Research Focus 4 cr.

MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH elective (3-4 cr.)

PHYS 121 Algebra-Based Physics I 4 cr.
PHYS 122 Algebra-Based Physics II 4 cr.
Or
PHYS 131 Calculus-Based Physics I 4 cr.
PHYS 132 Calculus-Based Physics II 4 cr.

Track B In-depth elective courses: 12 credits, including at least 4 lab credits, one of which must be CHEM 366 or CHEM 345.
CHEM 311 Polymer Chemistry 3 cr.
CHEM 316 Polymer Chemistry Lab 1 lab cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr. or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 345 Physical Chemistry Lab 1 lab cr.
CHEM 355 Separation Science Laboratory 1 lab cr.
CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 lab cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Laboratory (writing intensive) 1 lab cr.
CHEM 379 Internship 1-4 cr.; includes 1-4 cr. lab
CHEM 461 Pharmacology 3 cr.
CHEM 489 Special Topics in Chemistry 1-4 cr.
CHEM 495 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.
BIOL 451 Molecular Biology 4 cr.; includes 1 lab cr.
PHYS 465 Quantum Mechanics 4 cr.

1. Both CHEM 341 and CHEM 342 are strongly recommended for students considering graduate education in chemistry.
3. CHEM 378, CHEM 379 and CHEM 489 could be worth 1-4 credits each for a combined maximum of 4 credits counting toward the in-depth electives. Actual credits will be determined.
based on department approval at the time of enrollment.

4. A maximum of 3 credits of CHEM 495 can count toward the in-depth electives.
5. A maximum of 4 credits of non-chemistry courses may count toward the in-depth electives.

**Biochem.**

*Biochemistry*

**Track A Requirements: 71-73 cr. hrs.**

CHEM 111 General Chemistry I 4 cr. and CHEM 116 General Chemistry I Lab 1 cr.

OR CHEM 121 General Chemistry I 5 cr.

OR CHEM 120 Introduction to General Chemistry 6 cr.

CHEM 112 General Chemistry II 4 cr. and CHEM 117 General Chemistry II Lab 1 cr.

OR CHEM 122 General Chemistry II 5 cr.

CHEM 231 Organic Chemistry I 3 cr.

CHEM 232 Organic Chemistry II 3 cr.

CHEM 236 Organic Chemistry Lab I 1 cr.

CHEM 237 Organic Chemistry Lab II 1 cr.

CHEM 250 Foundations of Analytical Chemistry 4 cr.

CHEM 261 Laboratory Safety 2 cr.

CHEM 322 Inorganic Chemistry 3 cr.

CHEM 325 Inorganic Chemistry Laboratory 1 cr.

CHEM 341 Biochemistry I 3 cr. or CHEM 342 Molecular Structure and Spectroscopy 3 cr.

CHEM 361 Biochemistry I 3 cr.

CHEM 362 Biochemistry II 3 cr.

CHEM 366 Biochemistry Laboratory 1 cr.

CHEM 380 Junior Chemistry Seminar 1 cr.

CHEM 480 Chemical Communications and Research 1 cr.

BIOL 150 Introduction to Biology 3 cr.

BIOL 240 Cell and Molecular Biology 3 cr.

BIOL 324 Microbiology 4 cr.

BIOL 350 Genetics and Evolution 3 cr.

BIOL 451 Molecular Biology 4 cr.

MATH 166 Calculus I 4 cr.

MATH 167 Calculus II 4 cr.

PHYS 131 Calculus Based Physics I 5 cr.

PHYS 132 Calculus Based Physics II 5 cr.

OR

PHYS 121 Algebra Based Physics I 5 cr.

PHYS 122 Algebra Based Physics II 5 cr.

**Track A In-depth elective courses: A minimum of 4 lab credits, taken from**

CHEM 316 Polymer Chemistry Laboratory 1 cr. (corequisite CHEM 311)

CHEM 334 Organic Synthesis Laboratory 2 cr. (corequisite CHEM 333)

CHEM 345 Physical Chemistry Laboratory 1 cr.

CHEM 355 Separation Science Laboratory 1 cr.

CHEM 356 Chemical Instrumentation Lab 1 cr.

CHEM 378^2 Semester Abroad 1-4 cr.

CHEM 379^2 Internship 1-4 cr.

CHEM 489^2 Special Topics in Chemistry 1-4 cr.

CHEM 495^3 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.

**Track B Requirements: 70 cr.**

CHEM 130 Introduction to Organic Chemistry 5 cr.
CHEM 233 Foundations of Organic Chemistry 5 cr.
CHEM 240 Foundations of Inorganic Chemistry 4 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.
CHEM 322 Inorganic Chemistry 3 cr.
CHEM 325 Inorganic Chemistry Laboratory 1 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr. or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 361 Biochemistry I 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 380 Junior Chemistry Seminar 1 cr.
CHEM 480 Chemical Communications and Research 1 cr.

BIOL 150 Introduction to Biology 3 cr.
BIOL 240 Cell and Molecular Biology 3 cr.
BIOL 324 Microbiology 4 cr.
BIOL 350 Genetics and Evolution 3 cr.
BIOL 451 Molecular Biology 4 cr.

MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.

PHYS 131 Calculus Based Physics I 5 cr.
PHYS 132 Calculus Based Physics II 5 cr.
PHYS 121 Algebra Based Physics I 5 cr.
PHYS 122 Algebra Based Physics II 5 cr.

**Track B In-depth elective courses: A minimum of 3 lab credits, taken from**
CHEM 316 Polymer Chemistry Laboratory 1 cr. (corequisite CHEM 311)
CHEM 345 Physical Chemistry Laboratory 1 cr.
CHEM 355 Separation Science Laboratory 1 cr.
CHEM 356 Chemical Instrumentation Lab 1 cr.
CHEM 378 Semester Abroad 1-4 cr.
CHEM 379 Internship 1-4 cr.
CHEM 489 Special Topics in Chemistry 1-4 cr.
CHEM 495 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.

1. Both CHEM 341 and CHEM 342 are strongly recommended for students considering graduate education in chemistry. Both courses require MATH 167, and PHYS 152 or PHYS 162.
2. CHEM 378, CHEM 379, and CHEM 489 could be worth 1-4 credits each for a combined maximum of 4 credits counting toward the in-depth electives. Actual credits will be determined based on department approval at the time of enrollment.
3. A maximum of 3 credits of CHEM 495 can count toward the in-depth electives.

**Preprof.**
**Biochemistry Preprofessional**

**Track A Requirements: 58-61 cr. hrs.**
CHEM 111 General Chemistry I 4 cr. and CHEM 116 General Chemistry I Lab 1 cr.
OR CHEM 121 General Chemistry I 5 cr.
OR CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 112 General Chemistry II 4 cr. and CHEM 117 General Chemistry II Lab 1 cr.
OR CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.
CHEM 322 Inorganic Chemistry 3 cr.
CHEM 325 Inorganic Chemistry Laboratory 1 cr.
CHEM 340 Chemical Thermodynamics and Kinetics (3 cr.)
CHEM 361 Biochemistry I 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Laboratory 1 cr.
CHEM 380 Junior Chemistry Seminar 1 cr.
CHEM 480 Chemical Communications and Research (writing intensive) 1 cr.

BIOL 150 General Biology 3 cr. OR BIOL 160 General Biology - Freshman Research Focus 3 cr.

MATH 166 Calculus I 4 cr.
MATH elective 2 3-4 cr.

PHYS 121 Algebra Based I Physics I 5 cr.
PHYS 122 Algebra Based I Physics II 5 cr.
OR
PHYS 131 Calculus Based Physics I 5 cr.
PHYS 132 Calculus Based Physics II 5 cr.

**Track A In-depth elective courses: Eight credits minimum including at least 3 lab credits, chosen from**

CHEM 311 Polymer Chemistry 3 cr.
CHEM 316 Polymer Chemistry Laboratory 1 cr.
CHEM 333 Organic Synthesis 2 cr.
CHEM 334 Organic Synthesis Laboratory 2 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr.
CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 345 Physical Chemistry Laboratory 1 cr.
CHEM 355 Separation Science Laboratory 1 lab cr.
CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 lab cr.
CHEM 3782 Semester Abroad 1-4 cr.; includes 1-4 cr. Lab
CHEM 3792 Internship 1-4 cr.; includes 1-4 cr. lab
CHEM 461 Pharmacology 3 cr.
CHEM 4892 Special Topics in Chemistry 1-4 cr.
CHEM 4953 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.
BIOL 3504 Genetics and Evolution 3 cr.
BIOL 4514 Molecular Biology 4 cr.; includes 1 lab cr.

**Track B Requirements: 52-54 cr.**

CHEM 130 Introduction to Organic Chemistry 5 cr.
CHEM 233 Foundations of Organic Chemistry 5 cr.
CHEM 240 Foundations of Inorganic Chemistry 4 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.
CHEM 322 Inorganic Chemistry 3 cr.
CHEM 325 Inorganic Chemistry Laboratory 1 cr.
CHEM 340 Chemical Thermodynamics and Kinetics (3 cr.)
CHEM 361 Biochemistry I 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Laboratory 1 cr.
CHEM 380 Junior Chemistry Seminar 1 cr.
CHEM 480 Chemical Communications and Research (writing intensive) 1 cr.
BIOL 150 General Biology 3 cr. OR BIOL 160 General Biology - Freshman Research Focus 3 cr.

MATH 166 Calculus I 4 cr.
MATH elective 2 3-4 cr.

PHYS 121 Algebra Based Physics I 5 cr.
PHYS 122 Algebra Based Physics II 5 cr.
OR
PHYS 131 Calculus Based Physics I 5 cr.
PHYS 132 Calculus Based Physics II 5 cr.

Track B In-depth elective courses: 13 credits minimum with at least 3 lab credits, chosen from
CHEM 311 Polymer Chemistry 3 cr.
CHEM 316 Polymer Chemistry Laboratory 1 cr.
CHEM 333 Organic Synthesis 2 cr.
CHEM 334 Organic Synthesis Laboratory 2 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr.
CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 345 Physical Chemistry Laboratory 1 cr.
CHEM 355 Separation Science Laboratory 1 lab cr.
CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 lab cr.
CHEM 378 Seminar/Abroad 1-4 cr.; includes 1-4 cr. Lab
CHEM 379 Internship 1-4 cr.; includes 1-4 cr. lab
CHEM 461 Pharmacology 3 cr.
CHEM 489 Special Topics in Chemistry 1-4 cr.
CHEM 495 Undergraduate Research 1-3 cr.; includes 1-3 lab cr.
BIOL 350 Genetics and Evolution 3 cr.
BIOL 451 Molecular Biology 4 cr.; includes 1 lab cr.

1. Math electives could include: MATH 226 Fundamentals of Statistics, MATH 167 Calculus II, MATH 236 Discrete Mathematics, MATH 256 Linear Algebra, or MATH 326 Applied Statistics
2. CHEM 378, CHEM 379 and CHEM 489 could be worth 1-4 credits each for a combined maximum of 4 credits counting toward the in-depth electives. Actual credits will be determined based on department approval at the time of enrollment.
3. A maximum of 3 credits of CHEM 495 can count toward the in-depth electives.
4. A maximum of 4 credits of non-chemistry courses may count toward the in-depth electives.

Education
Chemistry Major-Education

Major Requirements - Secondary Education 35-36 Total Credits
Core Requirements: 22-24 cr. hrs.
Required Supporting Courses: 21 cr. hrs. (not counted in total for major)

Secondary Education Option
Required Courses: 12-14 cr. hrs.

CHEM 236 Organic Chemistry Lab I 1 cr. (Core A only)
CHEM 237 Organic Chemistry Lab II 1 cr. (Core A only)
CHEM 341 Chemical Thermodynamics and Kinetics (3 cr.) or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 lab cr.
CHEM 401 Advanced Chemistry Lab I (writing intensive) 1 lab cr.
CHEM 402 Advanced Chemistry Lab II (writing intensive) 1 lab cr.
CHEM 422 Advanced Inorganic Chemistry 3 cr.

Physical Science Option
Broadfield Science Licensure

Dual Degree
Chemistry-Dual Degree (Engineering)
This major is awarded jointly with a B.S. in engineering after the student has successfully completed a three-year program at UW-River Falls with a minimum grade point average of 3.0 and a two-year program at either UW-Madison or the University of Minnesota.

Required Courses 29-30 cr. hrs.
CHEM 121 General Chemistry I 5 cr. or CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 246 Synthetic and Analytical Techniques in Organic Chem I 2 cr.
CHEM 247 Synthetic and Analytical Techniques in Organic Chem II 1 cr.
CHEM 251 Analytical Chemistry 2 cr.
CHEM 256 Analytical Chemistry Lab 1 cr.
CHEM 341 Chemical Thermodynamics and Kinetics (3 cr.)
or CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 355 Separation Science Laboratory 1 cr.

Credits transferred from Engineering School 30 cr. hrs.
Required supporting courses at UWRF 34 cr. hrs.
PHYS 131 Calculus-Based Physics I 4 cr.
PHYS 132 Calculus-Based Physics II 4 cr.
PHYS 166 Calculus-Based Physics Laboratory I 1 cr.
PHYS 167 Calculus-Based Physics Laboratory II 1 cr.
PHYS 211 Scientific Programming 3 cr.
PHYS 264 Modern Physics 4 cr.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 331 Differential Equations 3 cr.
Chemistry Minor

Liberal Arts and Education Minor: 22-25 Total Credits
Required Courses: 10-11 cr. hrs.

Option A
CHEM 121 General Chemistry I 5 cr.
or CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 122 General Chemistry II 5 cr.

Option B
CHEM 130 Introduction to Organic Chemistry 5 cr
CHEM 233 Foundations of Organic Chemistry 5 cr

Directed electives: Liberal Arts Minor: 12 cr. hrs.
or Secondary Education Minor: 14 cr. hrs.
At least one course must be at the 300 level or above.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr. (Core A only)
CHEM 237 Organic Chemistry Lab II 1 cr. (Core A only)
CHEM 240 Foundations of Inorganic Chemistry 4 cr.
CHEM 246 Synthetic and Analytical Techniques in Organic Chem I 2 cr.
CHEM 247 Synthetic and Analytical Techniques in Organic Chem II 1 cr.
CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 311 Polymer Chemistry 3 cr.
CHEM 333 Organic Synthesis 4 cr.
CHEM 340 Physical Chemistry of Biological Systems 3 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr.
CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 355 Separation Science Laboratory 1 cr.
CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 cr.
CHEM 361 Biochemistry I 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 366 Biochemistry Laboratory (writing intensive) 1 cr.
CHEM 411 Polymer Science 3 cr.
CHEM 416 Polymer Laboratory 1 cr.
CHEM 422 Advanced Inorganic Chemistry (writing intensive) 3 cr.
CHEM 432 Advanced Organic Chemistry 3 cr.
CHEM 461 Pharmacology 3 cr.
CHEM 495 Undergraduate Research 1 cr.
Coaching Minor

Minor Requirements
Minor in Athletic Coaching - 24 credit hours

Required Courses:
EXSS 465 Scientific Principles of Conditioning 3 cr.
(Pre-req = HEAL 262 or 263 AND EXSS 366)
HEAL 262 Human Anatomy and Physiology 3 cr.
(or HEAL 263 and HEAL 366 Liberal Arts) (Pre-req = BIOL 150)
P E 131 Weight Training .5 cr.
P ED 213 Care and Prevention of Athletic Injury 2 cr.
(Pre-req = HEAL 262 or 263 AND SFED 200)
P ED 351 Coaching Young Athletes 2 cr
P ED 354 Biomechanics 3 cr.
(Pre-req = HEAL 262 or 263)
P ED 363 Psychology of Coaching 3 cr.
P ED 472 Coaching Practicum 3 cr.
(Pre-req = Permission of Instructor)
SFED 200 First Aid and Basic Life Support .5 cr.

Coaching Theory Classes: 4 cr. hrs.
Required to take at least two coaching theory classes.
P ED 358 Track Coaching 2 cr.
P ED 359 Volleyball Coaching 2 cr.
P ED 365 Football Coaching 2 cr.
P ED 367 Basketball Coaching 2 cr.
P ED 368 Ice Hockey Coaching 2 cr.
P ED 369 Baseball/Softball Coaching 2 cr.
P ED 166 Football Officiating 1 cr.
P ED 167 Basketball Officiating 1 cr.

Updated Sept 2015
Communication Studies Major

Core Requirements: 12 Credits
COMS 106 Interpersonal Communication 3 cr.
COMS 286 Introduction to Communication Studies 3 cr.
COMS 386 Communication Theory and Qualitative Research 3 cr.
COMS 486 Senior Capstone 3 cr.

Goal Requirements: 12-14 credits
Students will take courses to fulfill the five goals of the Communication Studies Program. Courses may be counted in up to two separate goals. For example, if a student takes COMS 306, it may count for BOTH Goal One and Goal Three.

Goal One: Students must take TWO of the following courses to fulfill the goal "Ability to Collaborate."
COMS 206 Family Communication
COMS 308 Small Group Communication
COMS 316 Organizational Communication
COMS 318 Communication and Leadership
COMS 416 Training and Development

Goal Two: Students must take ONE of the following courses to fulfill the goal "Ability to Comprehend Research."
COMS 306 Nonverbal Communication
COMS 319 Freedom to Speak
COMS 440 Gender Communication
COMS 314 Rhetorical Criticism

Goal Three: Students must take TWO of the following courses to fulfill the goal "Ability to be Innovative, Strategic and Effective Communicators."
COMS 206 Family Communication
COMS 211 Public Speaking
COMS 213 Intercultural Communication
COMS 216 Communication in the Interview
COMS 306 Nonverbal Communication
COMS 308 Small Group Communication
COMS 312 Argumentation
COMS 315 Communication and Social Change
COMS 318 Communication and Leadership
COMS 416 Training and Development

Goal Four: Students must take ONE of the following courses to fulfill the goal "Ability to Comprehend Communication Literacy."
COMS 206 Family Communication
COMS 306 Nonverbal Communication
COMS 308 Small Group Communication
COMS 314 Rhetorical Criticism
COMS 315 Communication and Social Change
COMS 316 Organizational Communication
COMS 319 Freedom to Speak
COMS 416 Training and Development
COMS 440 Gender Communication

Goal Five: Students must take TWO of the following courses to fulfill the goal "Ability to Communicate Ethically."
COMS 211 Public Speaking
COMS 213 Intercultural Communication
COMS 315 Communication in Social Change
COMS 318 Communication and Leadership
COMS 319 Freedom to Speak
COMS 314 Rhetorical Criticism

Individual Study Requirements: 3-4 Credits
Students will take one of the following to complement their course of study in consultation with their advisor.

- COMS 379 Communication Studies Internship (3-4 hours)
- COMS 499 Independent Study (3 hours)

**Directed Electives: up to 9 credits**

Students must take additional credits in COMS to equal a minimum of 36 credits in the major.

**Supporting Course**

Students must take either COMS 101 or COMS 116 as a supporting course for the major.
Communication Studies Minor

Communication Studies Minor - Elementary Education

Communication Studies Minor - Elementary Education 24 Total Credits

Required Courses: 9 cr. hrs.
- COMS 223 Oral Interpretation of Literature 3 cr.
- COMS 306 Nonverbal Communication 3 cr.
- COMS 407 Listening Instruction 3 cr.

Directed Electives: 9 cr. hrs.
- COMS 208 Problem Solving in Small Group Communication 3 cr.
- COMS 327 Children's Theatre and Puppetry 3 cr.
- COMS 328 Creative Dramatics for Children and Special Populations 3 cr.
- COMS 335 Directing I 3 cr.
  or
- COMS 231 Stage Technology and Scene Painting

Electives in COMS: 6 cr. hrs.
A research/writing course experience is required in the major or another field; COMS 284 Sophomore Seminar or another course approved by the department chair, will satisfy this requirement. A senior portfolio experience is required in the major or another field; COMS 484, Senior Portfolio Seminar or another course approved by the department chair, will satisfy this requirement.

Communication Studies Minor - Liberal Arts, B.S.

24 Total Credits

Required Courses: 12 cr. hrs.
- COMS 106 Interpersonal Communication 3 cr.
- COMS 207 Listening Skills 3 cr.
- COMS 306 Nonverbal Communication 3 cr.
- COMS 311 Persuasion 3 cr.

Directed Electives: 12 cr. hrs.
- COMS 208 Problem Solving in Small Group Communication 3 cr.
  or
- COMS 316 Organizational Communication
- COMS 211 Public Speaking 3 cr.
- COMS 312 Argumentation and Decision Making 3 cr.
- COMS 313 Intercultural Communication 3 cr.
- COMS 314 Introduction to Criticism for Oral Communication 3 cr.
- COMS 319 Freedom to Speak 3 cr.
- COMS 414 Speech in History 3 cr.
- COMS 440 Gender Communication 3 cr.
- COMS 370 Intercollegiate Debate 1 cr.
  or
- COMS 379 Internship in COMS 3-12 cr.
  or
- COMS 499 Independent Study/Independent Research 1-3 cr.

A research/writing course experience is required in the major or another field; COMS 284 Sophomore Seminar or another course approved by the department chair, will satisfy this requirement. A senior portfolio experience is required in the major or another field; COMS 484, Senior Portfolio Seminar or another course approved by the department chair, will satisfy this requirement.
Communication Sciences and Disorders Major

Liberal Arts and Education: 38 Total Credits
Required Courses: 38 cr. hrs.
CSD 160 Introduction to Communication Sciences and Disorders 3 cr.
CSD 261 Language Development 4 cr.
CSD 262 Speech Systems 4 cr.
CSD 263 Phonetics 3 cr.
CSD 264 Speech Science 3 cr.
CSD 275 Practicum: Observation/Discussion 1 cr.
CSD 350 Articulatory and Phonological Disorders 3 cr.
CSD 360 Audiology I, 3 cr.
CSD 362 Language Appraisal and Intervention 3 cr.
CSD 460 Voice Disorders 2 cr.
CSD 463 Behavior Modification/Stuttering 3 cr.
CSD 466 Aural Rehabilitation 3 cr.
CSD 479 Clinical Procedures and Experience 3 cr.
Electives:
CSD 162 Introduction to American Sign Language 3 cr.

Professional Education Requirements: 11-14 cr. hrs.
TED 211 Educational Psychology: Elementary Education 5 cr.
TED 422 Content Area Literacy in Middle and Secondary Schools 3 cr.
or TED 461 The Psychology and Pedagogy of Literacy 3 cr.
SPED 330 Introduction to Special Education 3 cr.
Communication Sciences and Disorders Minor

Three different emphases 22 Total Credits

Required Courses: 4 cr. hrs.
- CSD 160 Introduction to Communicative Disorders 3 cr.
- CSD 275 Practicum: Observation/Discussing 1 cr.


CSD Electives-Choose 3 courses from:
- CSD 261 Language Development 4 cr.
- CSD 262 Speech Systems 4 cr.
- CSD 263 Phonetics 3 cr.
- CSD 350 Articulatory and Phonological Disorders 3 cr.
- CSD 360 Introduction to Audiology 3 cr.
- CSD 362 Language Appraisal and Intervention 3 cr.
- CSD 466 Aural Rehabilitation 3 cr.

Early Childhood Directed Electives: 9 cr. hrs.
Choose 3 courses from:
- CSTA 207 Listening Skills 3 cr.
- ENGL 250 Literature for Children 3 cr.
- ENGL 322 Acquisition of Language 3 cr.
- PSYC 201 Behavioral Statistics 3 cr.
- PSYC 236 Developmental Psychology: Childhood and Adolescence 3 cr.
- PSYC 260 Behavior Modification 3 cr.
- PSYC 305 Learning and Motivation 3 cr.
- PSYC 310 Memory and Thinking 3 cr.
- PSYC 315 Psychological Measurement and Evaluation 3 cr.
- TED 225 Developmental Learning Experiences of Young Children 3 cr.
- TED 255 Reading Guidance for Children 3 cr.
- TED 330 Infant and Toddler Programs 3 cr.

2. School Age Emphasis 9 cr. hrs.

CSD Electives-Choose 3 courses from:
- CSD 261 Language Development 4 cr.
- CSD 262 Speech Systems 4 cr.
- CSD 263 Phonetics 3 cr.
- CSD 350 Articulatory and Phonological Disorders 3 cr.
- CSD 360 Introduction to Audiology 3 cr.
- CSD 362 Language Appraisal and Intervention 3 cr.
- CSD 460 Voice Disorders 3 cr.
- CSD 463 Behavior Modification/Stuttering 3 cr.
- CSD 466 Aural Rehabilitation 3 cr.

School Age Directed Electives: 9 cr. hrs.
Choose 3 courses from:
- COUN 410 Introduction to Counseling 3 cr.
- CSTA 207 Listening Skills 3 cr.
- CSTA 222 Voice and Articulation 3 cr.
- ENGL 250 Literature for Children 3 cr.
- ENGL 322 Acquisition of Language 3 cr.
- ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
- PSYC 201 Behavioral Statistics 3 cr.
- PSYC 236 Developmental Psychology: Childhood and Adolescence 3 cr.
- PSYC 260 Behavior Modification 3 cr.
- PSYC 305 Learning and Motivation 3 cr.
- SPED 420 Introduction to Learning Disabilities
TED 255 Reading Guidance for Children 3 cr.
TED 461 The Psychology and Pedagogy of Literacy 3 cr.
Directed electives that are applicable for Learning Disability certification are COMD 261, SPED 420 and TED 461

3. Adult Emphasis 9 cr. hrs.
CSD Electives-Choose 3 courses from:
CSD 262 Speech Systems 4 cr.
CSD 263 Phonetics 3 cr.
CSD 350 Articulatory and Phonological Disorders 3 cr.
CSD 360 Introduction to Audiology 3 cr.
CSD 460 Voice Disorders 3 cr.
CSD 463 Behavior Modification/Stuttering 3 cr.

Adult Directed Electives: 9 credits
Choose 3 courses from:
COUN 410 Introduction to Counseling 3 cr.
CSTA 207 Listening Skills 3 cr.
CSTA 222 Voice and Articulation 3 cr.
CSTA 306 Nonverbal Communication 3 cr.
ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
PSYC 201 Behavioral Statistics 3 cr.
PSYC 260 Behavior Modification 3 cr.
PSYC 305 Learning and Motivation 3 cr.
PSYC 310 Memory and Thinking 3 cr.
PSYC 315 Psychological Measurement and Evaluation 3 cr.
PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
SOCI 315 Sociology of Later Life 3 cr.
SOCI 300 Research Methods (writing intensive) 3 cr.
or SOWK 300 Research Methods
Program Overview

Bachelor of Applied Science: 120 credits of which 60 credit hours must be at UW-River Falls

General Education/University Electives: 29-30 credit hours

Degree Requirements
(30 Credit hours)
CSIS 161 Programming I, 3 cr.
CSIS 162 Programming II, 3 cr.
CSIS 215 Information Systems for Business Management, 3 cr.
CSIS 225 Web Development I, 3 cr.
CSIS 247 Introduction to Computer Networks, 3 cr.
CSIS 333 Database Management Systems, 3 cr.

Directed Electives, 9 cr.
To be selected from 200-400 CSIS courses in consultation with advisor.

Required Supporting Math Course
MATH 146 College Algebra, 3 cr.
Computer Science and Information Systems Major

Computer Science
Computer Science Option: 56-57 Total Credits
This option has a technical and theoretical emphasis providing students with a comprehensive understanding of software engineering, computing techniques and the underlying theories. Graduates will develop skills relevant to the analysis, design and implementation of sophisticated software/hardware systems and communication networks.

**Required Courses: 39 cr. hrs.**
CSIS 161 Programming I 3 cr.
CSIS 162 Programming II 3 cr.
CSIS 225 Web Development I 3 cr.
CSIS 235 Object-Oriented Programming 3 cr.
CSIS 237 Data Structure and Algorithm 3 cr.
CSIS 247 Introduction to Computer Networks 3 cr.
CSIS 248 Operating Systems Programming 3 cr.
CSIS 333 Database Management Systems 3 cr.
CSIS 343 Software Engineering and Capstone Project 3 cr.
CSIS 355 Computer Organization and Assembly Language 3 cr.
CSIS 429 Operating Systems 3 cr.
CSIS 435 Computer and Information Security 3 cr.
CSIS 484 Senior Capstone Seminar 3 cr.
or CSIS 379 Internship in Computer Science 3 cr.

Undergraduate CSIS students with CS option may apply for admission to the accelerated MSCS program once they have successfully completed CSIS 343.

**Directed Electives 9 cr. hrs.**
To be selected from 200-400 level CSIS-CS courses, excluding CSIS 215. In consultation with advisor, student may take up to three (3) credits from CSIS 423, CSIS 440, MATH 346, MATH 347, or GEOG 250.

Students admitted to the accelerated bachelor's to master's program are able to complete a maximum of 9 credit hours of 600-level MSCS courses in place of their Directed Elective. Students will be able to count these credit hours as both undergraduate and graduate credits applied to the MSCS graduate program and their corresponding undergraduate program. The directed electives available to students admitted to the accelerated bachelor's to master's program include CSIS 630, CSIS 631, and CSIS 634.

**Required supporting courses: 10-11 cr. hrs.**
MATH 156 Calculus for Business and Social Science 3 cr.
or MATH 166 Calculus I 4 cr.
MATH 236 Discrete Mathematics 4 cr.
CBE 100 CBE First Year Seminar 2 cr.
CBE 300 Professional Development 1 cr.

Information Systems
Information Systems Option: 55-56 Total Credits
The analysis and design of information systems with an emphasis on managing, storing, transmitting and providing ready access to information is the key to the IS option. Graduates will develop skills relevant to the analysis, design and implementation of sophisticated information systems.

**Required Courses: 30 cr. hrs.**
CSIS 161 Programming I 3 cr.
CSIS 162 Programming II 3 cr.
CSIS 215 Information Systems for Business Management 3 cr.
CSIS 235 Object-Oriented Programming 3 cr.
CSIS 247 Introduction to Computer Networks 3 cr.
CSIS 333 Database Management Systems 3 cr.
CSIS 423 Introduction to System Analysis I 3 cr.
CSIS 433 Design Analysis MIS 3 cr.
CSIS 440 Information Systems Project Management 3 cr.
CSIS 484 Senior Capstone Seminar 3cr
or CSIS 379 Internship in Computer Science 3 cr.

Directed Electives: 6 cr. hrs.
Two (2) courses to be selected from the following:
CSIS 225 Web Development I
ECON 326 Statistical Methods for Economics and Business 3 cr.
MNGT 318 Operations Research 3 cr.
MNGT 340 Ethical Leadership 3 cr.
MNGT 350 Decision Making 3 cr.
GEOG 250 Introduction to GISci 3 cr.
Other 300-400 CSIS level courses in consultation with advisor

Required supporting courses: 19-20 cr. hrs.

• Business Domain: 12 cr. hrs.
  COMS 116 Business and Professional Communication 3 cr.
or ENGL 266 Business Writing 3 cr.
  MNGT 300 Management and Organizational Behavior 3 cr.
  MNGT 365 Business Process Management 3 cr.
  One (1) course from:
    MNGT 320 Human Resource Management 3 cr.
or ACCT 231 Principles of Accounting I 3 cr.
or MNGT 361 Operations Management 3 cr.
or MKTG 310 Principles of Marketing 3 cr.

• Math: 6-7 cr. hrs.
  MATH 156 Calculus for Business and Social Sciences 3 cr.
or MATH 166 Calculus I 4 cr.
  ECON 226 Introduction to Statistics 3 cr.
or MATH 226 Fundamentals of Statistics 3 cr.

• CBE required courses for all majors: 3 cr. hr.
  CBE 100 CBE First Year Seminar 2 cr.
  CBE 300 Professional Development 1 cr.
Computer Science Option: 31-32 Total Credits

**Required Courses: 18 cr. hrs.**
- CSIS 161 Programming I 3 cr.
- CSIS 162 Programming II 3 cr.
- CSIS 225 Web Development I 3 cr.
- CSIS 235 Object-Oriented Programming 3 cr.
- CSIS 247 Introduction to Computer Networks 3 cr.
- CSIS 333 Database Management Systems 3 cr.

**Directed Electives 6 cr. hrs.**
Directed electives 6 cr. hrs. In consultation with advisor, six (6) credits to be selected from 200-400 level CSIS courses, excluding CSIS 215.

Student may take up to three (3) credits from CSIS 423, CSIS 440, MATH 346, MATH 347, or GEOG 250 with advisor consultation.

**Required supporting math courses: 7-8 cr. hrs.**
- MATH 156 Calculus for Business and Social Science 3 cr.
- or MATH 166 Calculus I 4 cr.
- MATH 236 Discrete Mathematics 4 cr.

Information Systems Option: 24 Total Credits

**Required Courses: 18 cr. hrs.**
- CSIS 161 Programming I 3 cr.
- CSIS 162 Programming II 3 cr.
- CSIS 215 Information Systems for Business Management 3 cr.
- CSIS 247 Introduction to Computer Networks 3 cr.
- CSIS 333 Database Management Systems 3 cr.
- CSIS 423 Introduction to System Analysis I 3 cr.

**Directed Electives: 6 cr. hrs.**
One (1) course to be selected from the following:
- CSIS 225 Web Development I 3 cr.
- CSIS 235 Object-Oriented Programming 3 cr.
- CSIS 433 Design Analysis MIS 3 cr.
- CSIS 440 Information Systems Project Management 3 cr.
- Other 300-400 level CSIS course in consultation with advisor.

One (1) course to be selected from the following:
- ECON 326 Statistical Methods for Economics and Business 3 cr.
- MNGT 318 Operations Research 3 cr.
- MNGT 340 Ethical Leadership 3 cr.
- MNGT 350 Decision Making 3 cr.
- MNGT 365 Business Process Management 3 cr.

**Required supporting math courses: 6-7 cr. hrs.**
- MATH 156 Calculus for Business and Social Sciences 3 cr.
- or MATH 166 Calculus I 4 cr.
- or MATH 226 Fundamentals of Statistics 3 cr.
Conservation Minor

Conservation Minor 22 cr. hrs.
ESM 105 Introduction to Environmental Studies 2 cr.
ESM 109 Introduction to Forestry 2 cr.
ESM 151 Introduction to Land Use Theory and Practice 3 cr.
ESM 343 Woodlot Management 3 cr.
ESM 360 Applied Hydrology and Water Quality 4 cr.
SOIL 120 Introduction to Soil Science 3 cr.
SOIL 440 Soil and Water Conservation 4 cr.

Department of Plant and Earth Science
324 Agricultural Science
715-425-3345
www.uwrf.edu/PES/

Donavon Taylor-Chair, Jill Coleman Wasik, Holly Dolliver, Allison Gale, Todd Johnson, Veronica Justen, Kerry Keen, Natasha Macnack, Yoana Newman, Eric Sanden, Brian Smith, Dan Waletzko, Ian Williams, David Zlesak, Steven DeBroux, Kevyn Juneau
Conservation and Environmental Planning

University Requirements
Global Perspectives: GEOL 350 Geological Destinies of Nations (recommended) 3 cr.
American Cultural Diversity: ENGL 228 Literature of Environmental Justice (recommended) 3 cr.

General Education
BIOL 150, CHEM 115, ESM 105

Core Courses
ESM 151 Introduction to Land Use Theory and Practice 3 cr.
ESM 220 Environmental Sustainability 3 cr.
ESM 245 Foundations of Ecological Restoration 2 cr.
ESM 270 Internship 2-4 cr.
ESM 303 Environmental Policies and Administration 3 cr.
ESM 333 Remote Sensing of Natural Resources 3 cr.
OR ESM 363 GIS Applications in Resource Management 3 cr.
ESM 360 Hydrology and Water Quality 4 cr.
ESM 485 Seminar: Resource Management 1 cr.

Support Courses
SOIL 120 Introduction to Soils 3 cr.
AGEC 230 Introduction to Agricultural Economics 3 cr.
GEOG 250 Introduction to GIS 3 cr.
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.

Conservation Option
SOIL 440 Soil and Water Conservation 4 cr.
GENG 235 Surveying 3 cr.
BIOL 210 General Botany 3 cr.
OR BIOL 230 General Zoology 3 cr.
BIOL 344 Wildlife Biology 4 cr.
BIOL 360 Ecology 3 cr.
AGEC 450 Introduction to Natural Resources Economics 3 cr.
ESM 109 Introduction to Forestry 2 cr.

Directed Electives - 15 credits

General Electives - 5-10 credits

Environmental Planning Option
ESM 251 Community Decision-Making 3 cr.
ESM 351 Planning for Sustainable Communities 3 cr.
ESM 411 Site and Landscape Planning 4 cr.
ESM 435 Advanced Land Use Planning and Design 4 cr.
AGEC 445 / ESM 445 Land Use and Sustainable Agricultural Law 3 cr.
GEOL 269 Environmental Geology 3 cr.

Directed Electives - 15 credits
ESM 343, ESM 345, ESM 363, SOIL 250, SOIL 311, SOIL 325, SOIL 350, AET 333, AET 355,
AGEN 365, BIOL 230, BIOL 333, BIOL 354, BIOL 434, BIOL 444, GEOG 360, GEOG 366, GEOG 368, GEOG 460, GENG 121, GENG 368, GEOL 327, GEOL 445, CROP 263, CROP 266, CROP 267, CROP 368, CROP 466, HORT 250, HORT 255, HORT 268, HORT 310, HORT 327, HORT 347, HORT 352

General Electives - 7-12 credits
Creative Writing Minor

Creative Writing Minor: 24 credits

Required Courses 12 credits
- ENGL 251 Advanced Composition
- ENGL 253 Introduction to Literary Studies
- ENGL 262 Creative Writing
- ENGL 368 Writing Poetry
- ENGL 369 Writing Fiction
- ENGL 382 Writing Workshop Poetry & Prose

Directed Electives 12 credits

Select two courses from the following
- ENGL 370 Writing Nonfiction
- ENGL 381 Screenwriting

Select one genre course
- ENGL 230 International Short Fiction (g)
- ENGL 231 The Short Story
- ENGL 232 Contemporary Drama
- ENGL 233 Introduction to Poetry
- ENGL 234 Modern Novels

Department of English
245 Kleinpell Fine Arts
715-425-3537
www.uwrf.edu/ENGL/

Marshall Toman-Chair, Greta Gaard, Annette Klemp, Steven Luebke, Mialisa Moline, Michelle Parkinson, Vladimir Pavlov, Joseph Rein, Catherine Ross-Stroud, Elizabeth Schneider-Rebozo, Douglas Margolis

The Creative Writing minor is a preparation for writing for personal pleasure as well as for publication. This minor can be taken in combination with an English major; however, students should consult this handbook to plan substitutions for overlapping requirements. Students who choose the Creative Writing minor should plan their programs with Dr. Jennifer Brantley or Joseph Rein.
Criminology Major

Criminology Major - 36 Total Credits
Core Requirements 18 cr. hrs.
CRIM 130 Intro. to Crime, Law, and Society (required supporting – counts Gen. Ed.)
SOCI 200 Sociological Inquiry 3 cr.
CRIM 201 Theories of Crime 3 cr.
CRIM 210 Criminal Behavior 3 cr.
SOCI 250 Social Statistics 3 cr.
SOCI 300 Research Methods 3 cr.
SOCI 480 Senior Seminar 3 cr.

Directed Electives: 18 cr. hrs.
At least 6 credits from Criminal Behavior
SOCI 218 Deviant Behavior 3 cr.
CRIM 311 Juvenile Crime and Justice 3 cr.
CRIM 312 Gangs and Gang Behavior 3 cr.
CRIM 313 White Collar Crime 3 cr.
CRIM 321 Race and Crime 3 cr.
CRIM 389 Special Topics in Crime and Justice 3 cr.
CRIM 490 Readings in Criminology 1-2 cr.
CRIM 499 Independent Study in Criminology 1-2 cr.

At least 6 credits from Crime and Justice
CRIM 241 Victimology 3 cr.
CRIM 341 Restorative Justice 3 cr.
CRIM 351 Women, Crime, and Justice 3 cr.
POLS 359 Criminal Justice Politics and Policy 3 cr.
CRIM 379 Internship in C. and J. 6-12 cr.
CRIM 399 Law Enforcement Cert. 6–12 cr.
CRIM 441 Trends/Issues in Incarceration 3 cr.
CRIM 442 Alternatives to Incarceration. 3 cr.

Department of Sociology, Criminology and Anthropology
333 Kleinpell Fine Arts
715-425-3992
www.uwrf.edu/SOCI/

Rich Wallace-Chair, Rahul Mahajan, B. Paige Miller, Shawn Trusten, Desiree Wiesen-Martin, Tracy Zank

Options
Majors
- Criminology
- Sociology - Liberal Arts (Sociology Major may be used as part of a Broad Field Social Studies Major)

Minors
- Sociology - Liberal Arts
- Criminology
- Anthropology

For those who wish to Broad Field Social Studies Major.
Criminology Minor

Criminology Minor 24 Total Credits

**Required Courses:** 12 cr. hrs.
- CRIM 130 Introduction to Crime, Law, and Society 3 cr.
- CRIM 201 Theories of Crime 3 cr.
- CRIM 210 Criminal Behavior 3 cr.
- SOCI 210 Social Problems 3 cr.

**Directed Electives:** 12 cr. hrs.
- SOCI 218 Deviant Behavior 3 cr. hrs.
- CRIM 241 Victimology 3 cr.
- CRIM 311 Juvenile Crime and Justice 3 cr.
- CRIM 312 Gangs and Gang Behavior 3 cr.
- CRIM 313 White Collar Crime 3 cr.
- CRIM 321 Race and Crime 3 cr.
- CRIM 341 Introduction to Restorative Justice 3 cr.
- CRIM 351 Women, Crime, and Justice 3 cr.
- CRIM 359 Criminal Justice Politics and Policy 3 cr.
- CRIM 379 Internship in Crime and Justice 6-12 cr.
- CRIM 389 Special Topics in Crime and Justice 3 cr.
- CRIM 399 Law Enforcement Certification 6–12 cr.
- CRIM 441 Trends and Issues in Incarceration 3 cr.
- CRIM 442 Alternatives to Incarceration 3 cr.
Crops and Soils Major

Foundation Courses in Agriculture 12 cr. hrs.
PLSC 161 Introduction to Plant Science 3 cr.
SOIL 120 Introduction to Soil Science 3 cr.
AGEC 230 Agricultural Economics I 3 cr.
Select one from:
AET 150 Agricultural & Environmental Engineering Technology 3 cr.
ANSC 111 Introduction to Animal Science 3 cr.
FDSC 110 The Science of Food 3 cr.

Major Requirements 54-64 Total Credits
Required Courses: 16 cr. hrs.
CROP 263 Forage Crop Production 3 cr.
CROP 266 Crop and Soybean Production 3 cr.
CROP 285 Communication Seminar in Crops and Soils 1 cr.
SOIL 311 Soil Fertility 4 cr.
SOIL 440 Soil and Water Conservation 4 cr.
CROP 485 Seminar in Agronomy 1 cr.

Options (choose one):
Crop Science
Crop Science Option 48 cr. hrs.
CROP 257 Genetics 3 cr.
CROP 260 Plant and Seed Identification 3 cr.
CROP 345 Weed Control 3 cr.
CROP 410 Plant Breeding and Crop Improvement 3 cr.
CROP 435 Crop Physiology 4 cr.
CROP 451 Integrated Pest Management 3 cr.
ANSC 341 Biometrics 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
AGBI 252 Agricultural Biochemistry Lab Techniques 1 cr.
BIOL 314 Plant Pathology 3 cr.
BIOL 333 Entomology 3 cr.
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.
CHEM 230 General Organic Chemistry 3 cr.

Select one course from the following:
AGEC 355 Agricultural Marketing and Production 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
AGEC 410 Professional Selling 3 cr.

Directed Electives 10 cr. hrs.
Any additional CROP course, AGEC 355, AGEC 360, AGEC 410, AET 150, AET 363, ANSC 111, AFES 222, BIOL 210, FDSC 110, HORT 327, HORT 347, SOIL 250, SOIL 350, SOIL 460
These courses cannot be used as directed electives and foundation courses in agriculture simultaneously.

Soil Science
Soil Science Option 39-43 cr. hrs.
SOIL 250 Soil Profile Descriptions 2 cr.
SOIL 325 Hydric Soils and Wetland Environments 3 cr.
SOIL 350 Soil Development 2 cr.
SOIL 460 Soil Physics 3 cr.
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.

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Three options exist for students who select the Crop and Soil Science major: 1) Crop Science, 2) Soil Science, and 3) Sustainable Agriculture. The Crop Science option is designed for students who wish to focus their studies on plants and the use of plants for food, feed and fiber. Students learn about crop management, biotechnology, crop physiology, crop quality, as well as genetics and plant breeding. The Soil Science option is designed for those whose interests include the basic components and properties of soils, soil conservation, soil fertility, soil hydrology, and the management of soils to produce crops in a sustainable way. The Sustainable Agriculture option is the study of economically viable production systems that promote land productivity, energy efficiency, environmental stewardship, and rural community viability.

General Education Requirements
The following general education courses are required in the major: MATH 146 or equivalent, CHEM 115 and BIOL 150. The Sustainable Agriculture option also requires SOCI 100.

University Requirements
Students must complete a three-credit course related to American Cultural Diversity (the University D requirement), as well as a three-credit course related to Global Perspectives (the University G requirement).
CHEM 230 General Organic Chemistry 3 cr.
GEOL 101 Introductory Geology 3 cr.
GEOL 102 Introductory Geology Lab 1 cr.
GEOL 327 Geomorphology and Glacial Geology 4 cr.
ESM 360 Applied Hydrology and Water Quality 4 cr.

Select two courses from the following:
CROP 267 Small Grain and Miscellaneous Crop Production 3 cr.
CROP 345 Weed Control 3 cr.
CROP 363 Pasture Management 2 cr.
CROP 368 Sustainable Agriculture 3 cr.
CROP 435 Crop Physiology 4 cr.
CROP 451 Integrated Pest Management 3 cr.
ESM 305 Environmental Impact Assessment 2 cr.
ESM 412 Fate and Transport of Chemicals in the Environment 3 cr.
ESM 413 Environmental Analysis 4 cr.
GEOL 417 Hazardous Waste Operation & Emergency Response 2 cr.
GEOL 445 Hydrogeology 4 cr.

Select two courses from the following:
AET 363 Precision Agriculture Technology 3 cr.
ANSC 341 Biometrics 3 cr.
ESM 333 Remote Sensing of Natural Resources 3 cr.
ESM 363 GIS Applications in Resource Management 3 cr.
GENG 235 Surveying 3 cr.
GENG 236 Advanced Surveying 3 cr.
GEOG 250 Intro Cartography and GIS 3 cr.
GEOG 360 GIS: Theory and Methods 3 cr.
GEOG 366 Field Methods & GPS 3 cr.

Select one course from the following:
ENGL 266 Business Writing 3 cr.
ENGL 367 Technical Writing 3 cr.

Sustainable Agriculture
Sustainable Agriculture Option 43 cr. hrs.
ESM 105 Introduction to Environmental Studies 3 cr. (counts in EC)
AGEC 250 World Food and Population 3 cr. (counts in GP)
CHEM 215 Chemistry Lab Concepts and Techniques 1 cr.
CROP 368 Sustainable Agriculture 3 cr.
CROP 451 Integrated Pest Management 3 cr.
CROP 468 Organic Agronomic Production Sys 3 cr.
ESM 220 Environmental Sustainability 3 cr.

Select two courses of the following:
AGEC 240 Cooperatives 3 cr.
AGEC 355 Agricultural Marketing 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 361 Horticulture Business Management 3 cr.
AGEC 450 Intro to Natural Resource Economics 3 cr.
AGEC 495 Direct Marketing 3 cr.
AGEC 410 Professional Selling 3 cr.

Select two courses of the following:
AGED 202 Leadership and Group Dynamics 3 cr.
ENGL 228 Literature of Environmental Justice 3 cr. (counts in ACD)
ESM 251 Community Decision-Making 3 cr.
ESM 351 Planning for Sustainable Communities 3 cr.
GEOG 214 World Patterns of Plants and Animals 3 cr.
GEOG 220 Economic Geography 3 cr.
PHIL 240 Social Ethics 3 cr.
PHIL 303 Environmental Ethics 3 cr.
PHIL 304 Business Ethics 3 cr.
SOCI 332 Environmental Sociology 3 cr.

Directed Electives 12 cr.
Select 12 credits in one of the following areas AET, AGEC, AGEN, ANSC, BIOL, CROP, DASC, ESM, FDSC, GEOL, HORT or SOIL. These cannot be used in other areas of the major or as a foundation course in agriculture.
Crop Science Minor

Required Courses: 3 cr. hrs.
CROP 161 Introduction to Plant Science 3 cr.

Select 18 credits from:
AET 363 Precision Ag Technology 3 cr.
CROP 257 Genetics 3 cr.
CROP 260 Plant and Seed Identification 3 cr.
CROP 263 Forage Crop Production 3 cr.
CROP 266 Corn and Soybean Prod (writing intensive) 3 cr.
CROP 267 Small Grains 3 cr.
CROP 270 or CROP 370 Internship 2-4 cr.
CROP 345 Weed Control 3 cr.
CROP 363 Pasture Production 2 cr.
CROP 368 Sustainable Agriculture 3 cr.
CROP 410 Plant Breeding 3 cr.
CROP 435 Crop Physiology 4 cr.
CROP 451 Integrated Pest Management 3 cr.
CROP 468 Organic Production Systems 3 cr.
SOIL 311 Soil Fertility 4 cr.

Department of Plant and Earth Science
324 Agricultural Science
715-425-3345
www.uwrf.edu/PES/

Donavon Taylor-Chair, Jill Coleman Wasik, Holly Dolliver, Allison Gale, Todd Johnson, Veronica Justen, Kerry Keen, Natasha Macnack, Yoana Newman, Eric Sanden, Brian Smith, Dan Waletzko, Ian Williams, David Zlesak, Steven DeBroux, Kevyn Juneau
Dairy Science Major

Dairy Science Major: 63-65 Total Credits

Required Courses: 35 cr. hrs.
DASC 120 Orientation to Dairy Science 1 cr.
ANSC 231 Principles of Nutrition 3 cr.
ANSC 232 Applied Feeds and Feeding 3 cr.
ANSC 257 Genetics 3 cr.
ANSC 260 Animal Physiology 4 cr.
DASC 306 Dairy Production 3 cr.
ANSC 345 Animal Health 2 cr.
ANSC 346 Principles of Animal Breeding 3 cr.
DASC 404 Lactation and Milk Quality 3 cr.
DASC 406 Advanced Dairy Management 3 cr.
ANSC 433 Advanced Nutrition 3 cr.
or DASC 436 Dairy Cattle Nutrition 3 cr.
ANSC 448 Reproductive Physiology 3 cr.
DASC 485 Seminar: Dairy Science 1 cr.

Select Management, Science, or Minor Option

Management Option
Management Option 25 cr. hrs.
CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
DASC 270 Internship I
or DASC 370 Internship II 4 cr.
Choose two from:
AGEC 205 Agricultural Accounting 3 cr.
AGEC 345 Agricultural Law 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
AFES 310 Agricultural Human Resource Management 3 cr.
Additional directed electives: 9 cr. hrs.
Students may select any combination of courses offered by Food Science, Agricultural Education, Agricultural Economics, Agricultural Engineering, Plant and Earth Science, Modern Language, or the College of Business and Economics. At least 6 credit hours must be earned from courses at the 200 level or higher.

Science option
Science Option 28-30 cr. hrs.
CHEM 122 General Chemistry II 5 cr.
CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
or CHEM 246 Synthetic and Analytical Techniques in Organic Chemistry I 2 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
or CHEM 247 Synthetic and Analytical Techniques in Organic Chemistry II 1 cr.
CHEM 360 or CHEM 361 Biochemistry I 3 cr.
MATH 147 College Algebra and Trigonometry 3 cr.
or MATH 149 Precalculus 4 cr.
or MATH 166 Calculus I 4 cr.
PHYS 121 or PHYS 131 General Physics 4 cr.
ANSC 341 Biometrics 3 cr.
BIOL 324 Microbiology 4 cr.

Department of Animal and Food Science
247 Agricultural Science
715-425-3704
www.uwrf.edu/ANFS/

Gary Onan-Chair, Casie Bass, Larry Baumann,
Dennis Cooper, Michelle Farner, Young Dal Jang,
Sylvia Kehoe, Steve Kelm, Justin Luther, Melkaye Melka, Nathan O’Connor, Amy Radunz, Beth Rausch, Peter Rayne, Kurt Vogel, Bonnie Walters, Steve Watters

The Department of Animal and Food Science offers three options for Dairy Science majors. Required core courses within the Dairy Science major are identical, regardless of option. Additional requirements are based on the choice of option. The Dairy Science-Management option is designed for students seeking careers in dairy farm management or supporting industries such as feed, pharmaceutical, or genetics sectors of the dairy industry. The Dairy Science-Science option is designed for students that plan to enroll in graduate or professional degree programs following completion of the Bachelor of Science degree. This option is strongly suggested for students that hope to enroll in a college of veterinary medicine at a future date. The Dairy Science-Minor option is designed for students who wish to supplement their education with an academic minor or second major.

General Education Requirements
As listed with the following exceptions:
CS (Communication/Speaking and Listening) designator:
COMS 101 or COMS 116 is required
SL (Scientific Investigation) / S (Sciences) designator:
BIOL 150 is required
CHEM 120 or CHEM 121 is required

Foundation Courses in Agriculture: 12 cr. hrs.
Required Foundation courses:
ANSC 111 Introduction to Animal Science 3 cr.
AGEC 230 Agricultural Economics I 3 cr.

Then select 2 from the following 4 courses:
AET 150 Introduction to Agricultural Engineering 3 cr.
Choose one from the following:

ANSC 447 Endocrinology 2 cr.
BIOL 230 General Zoology 3 cr.
BIOL 240 Cell and Molecular Biology 3 cr.
CHEM 362 Biochemistry II 3 cr.
CHEM 461 Pharmacology 3 cr.
PHYS 122 General Physics II 4 cr.
PHYS 132 General Physics II 4 cr.

**Minor Option**

**Minor Option 28-30 cr. hrs.**

As an alternative to the Management or Science option, students can pair the Dairy Science major with an academic minor to develop a more in-depth understanding of a second area of interest.

Any minor of 22-24 credits or second major (other than Animal Science, Dairy Science, or Ag Studies).

In addition to the minor or second major the following two courses are required:

CHEM 230 General Organic Chemistry 3 cr.
AGBI 251 Agricultural Biochemistry 3 cr.
Dairy Science Minor

Dairy Science Minor 22 total cr. hrs.

Required courses: 18 cr. hrs.
- ANSC 231 Principles of Nutrition 3 cr.
- ANSC 232 Applied Feeds and Feeding 3 cr.
- ANSC 257 Genetics 3 cr.
- DASC 306 Dairy Production 3 cr.

Choose two from:
- DASC 404 Lactation and Milk Quality 3 cr.
- DASC 406 Advanced Dairy Management 3 cr.
- DASC 436 Dairy Cattle Nutrition 3 cr.

Directed Electives: 4-6 cr. hrs.
Choose 1-3 courses from all courses in DASC, ANSC, AGBI, or FDSC EXCEPT the following:
- courses numbered lower than the 200 level;
- more than one evaluation or independent study course.
DASC 210, DASC 310, DASC 490, ANSC 211, ANSC 313, ANSC 490, FDSC 490

Department of Animal and Food Science
247 Agricultural Science
715-425-3704
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Gary Onan-Chair, Casie Bass, Larry Baumann,
Dennis Cooper, Michelle Farmer, Young Dai Jang,
Sylvia Kehoe, Steve Kelm, Justin Luther, Melkaye Melka, Nathan O'Connor, Amy Radunz, Beth Rausch, Peter Rayne, Kurt Vogel, Bonnie Walters,
Steve Watters
Dairy Science Certification

Dairy Science Two-Year Certificate: 60 total cr. hr.

**General education requirements:** 25-26 cr. hrs.
- BIOL 150 General Biology 3 cr.
- CHEM 120 Introduction to General Chemistry 6 cr.
  or CHEM 121 General Chemistry I 5 cr.
- ENGL 100 Academic Reading and Writing 3 cr.
- ENGL 200 Investigating Ideas: Reading, Writing, and the Disciplines 3 cr.
- ESM 105 Introduction to Environmental Studies 3 cr.
- MATH 146 College Algebra 3 cr.
- P ED 108 Health and Fitness for Life 1 cr.
- P E (Select two 0.5 cr. activities courses) 1 cr.
- COMS 101 Fundamentals of Oral Communication 3 cr.

**Dairy Science requirements:** 30 cr. hrs.
- ANSC 111 Introduction to Animal Science 3 cr.
- ANSC 231 Principles of Nutrition 3 cr.
- ANSC 232 Applied Feeds and Feeding 3 cr.
- ANSC 257 Genetics 3 cr.
- ANSC 345 Animal Health 2 cr.
- DASC 120 Orientation to Dairy Science 1 cr.
- DASC 306 Dairy Production 3 cr.

**CAFES Electives:** 12 cr. hrs.

**General Electives:** 4-5 cr. hrs.
Currently not accepting students into Dance Minor

Minor Requirements 24 credits

Required for Performance and Education Options
- DANC 120 Somatic Practices for the Performing Arts 3 cr.
- DANC 150 Improvisation for the Performing Arts 2 cr.
- DANC 180 Applied Dance Technique 1 cr.
- DANC 221 Contemporary Dance Technique 2 cr.
- DANC 224 Ballet I 1 cr.
- DANC 226 Ballet II 1 cr.
- DANC 250 Dance Composition: An Interrelated Arts Approach 3 cr.
- DANC 260 Dance Production/Repertory 3 cr.
- DANC 310 Jazz and Tap Technique 2 cr.

Required for Performance Option
- DANC 307 Social Dance II 2 cr.
- DANC 350 Choreographic Project 1 cr.

Required for Education Option
- DANC 320 Dance Pedagogy 3 cr.

Required Supporting Course
- DANC 100 Dance Appreciation 3 cr.
Dance Minor

Currently not accepting students into Dance Minor

Minor Requirements 24 credits

Required for Performance and Education Options
DANC 120 Somatic Practices for the Performing Arts 3 cr.
DANC 150 Improvisation for the Performing Arts 2 cr.
DANC 180 Applied Dance Technique 1 cr.
DANC 221 Contemporary Dance Technique 2 cr.
DANC 224 Ballet I 1 cr.
DANC 226 Ballet II 1 cr.
DANC 250 Dance Composition: An Interrelated Arts Approach 3 cr.
DANC 260 Dance Production/Repertory 3 cr.
DANC 310 Jazz and Tap Technique 2 cr.

Required for Performance Option
DANC 307 Social Dance II 2 cr.
DANC 350 Choreographic Project 1 cr.

Required for Education Option
DANC 320 Dance Pedagogy 3 cr.

Required Supporting Course
DANC 100 Dance Appreciation 3 cr.
Data Science and Predictive Analytics

Required Courses
CSIS 161 Programming I 3 cr.
CSIS 162 Programming II 3 cr.
CSIS 215 Information System 3 cr.
CSIS 225 Web Development 3 cr.
CSIS 235 Object Oriented Programming 3 cr.
CSIS 237 Data Structures 3 cr.
CSIS 239 Introduction to Data Science 3 cr.
CSIS 333 Database Management Systems 3 cr.
CSIS 334 Data Visualization 3 cr.
CSIS 339 Massive Data Storage and Retrieval 3 cr.
CSIS 452 Applied Machine Learning 3 cr.
CSIS 488 Capstone Data Science Practicum Project 3 cr.

MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 326 or ECON 326 Applied Statistics 3 cr.
MATH 327 Applied Regression Analysis 3 cr.
ECON 426 Econometrics 3 cr.

In addition to the required core of courses, students must take an additional 12-15 credits in one of the areas of Computer Science, Mathematics, Accounting, Finance, Management, Marketing, Economics or GIS.

Undergraduate Data Science students with CS Option may apply for admission to the accelerated MSCS program once they have successfully complete CSIS 343.

Students admitted to the accelerated bachelor's to master's program are able to complete a maximum of 9 credit hours of 600-level MSCS courses in place of Data Science electives – CSIS 355, CSIS 429, or CSIS 435. Students will be able to count these credit hours as both undergraduate and graduate credits applied to the MSCS graduate program and their corresponding undergraduate program. The directed electives available to students admitted to the accelerated bachelor's to master's program include CSIS 630, CSIS 631 and CSIS 634.
# Stage and Screen Arts Major

**Total Required Credit Hours:** 41

All classes are 3 credits unless otherwise specified.

**Required Courses (30 Credit Hours):**

- SASA 112 Introduction to Storytelling
- SASA 113 Collaborative Problem Solving for Stage and Screen
- SASA 121 Acting for Stage and Screen I
- SASA 131 Visual Elements for Stage and Screen
- SASA 294 Creative and Scholarly Research
- SASA 335 Directing for Stage and Screen I
- SASA 379 Internship
- SASA 490 Entrepreneurship/Senior Capstone for Stage and Screen

Choose One – Required

- SASA 231 Creating Artistic Environments for Stage and Screen
- SASA 232 Costume/Makeup for Stage and Screen
- SASA 233 Light and Sound for Stage and Screen

Choose One – Required

- FILM 301 History of Film
- SASA 337 History of Theatre

**Directed Electives (11 Credit Hours)**

*Must take minimum of two 200 (or higher) level courses:*

- DANC 120 Somatic Practices
- DANC 150 Improvisation for the Performing Arts (2 Cr.)
- SASA 160 Studio Production
- SASA 212 Improvisation and Devising for Stage and Screen (2 Cr.)
- SASA 221 Acting for Stage and Screen II
- SASA 231 Creating Artistic Environments for Stage and Screen
- SASA 232 Costume/Makeup for Stage and Screen II
- SASA 233 Light and Sound for Stage and Screen II
- SASA 234 Production Mgt. and Leadership for Stage and Screen
- SASA 260 Electronic Field Production
- SASA 261 Electric Media Copywriting
- SASA 301 History of Film
- SASA 328 Theatre for Youth
- SASA 303 Documentary Production
- SASA 334 Playwriting
- SASA 337 History of Theatre
- SASA 340 Design for Stage and Screen
- SASA 360 Advanced Electronic Field Production
- SASA 381 Screenwriting
- SASA 435 Directing for Stage and Screen II
Stage and Screen Arts Minor

Total Required Credit Hours: 24-26

All classes are 3 credits unless otherwise specified.

Required Courses (21 Credit Hours):

SASA 112  Introduction to Storytelling
SASA 113  Collaborative Problem Solving for Stage and Screen
SASA 121  Acting for Stage and Screen I
SASA 131  Visual Elements for Stage and Screen
SASA 335  Directing for Stage and Screen I
SASA 490  Entrepreneurship/Senior Capstone for Stage and Screen

Choose One – Required
FILM 301  History of Film
SASA 337  History of Theatre

Directed Electives (3-5)

SASA 160 Studio Production
SASA 212 Improvisation and Devising for Stage and Screen (2 Cr.)
SASA 231 Creating Artistic Environments for Stage and Screen
SASA 232 Costume/Makeup for Stage and Screen
SASA 233 Light and Sound for Stage and Screen
SASA 234 Production Mgt. and Leadership for Stage and Screen
SASA 260 Electronic Field Production
SASA 261 Electric Media Copywriting
FILM 301 History of Film
SASA 328 Theatre for Youth
SASA 334 Playwriting
SASA 337 History of Theatre
SASA 340 Design for Stage and Screen
SASA 360 Advanced Electronic Field Production
ENGL 381 Screenwriting
SASA 435 Directing for Stage and Screen II

Film Minor

Total Required Credit Hours: 24

All classes are 3 credits unless otherwise specified.

Required Courses (6 Credit Hours):

FILM 200 Introduction to Film Studies
FILM 301 History of Film
(Co-listed as ENGL 301, HIST 301, or JOUR 301)

Directed Electives (18 Credit Hours):

FILM 248 Cultures in Conflict
FILM 300 Women in Film
FILM 302 History of Documentary
(=ENGL 300/WGST 300)
FILM 305 News in the Movies
(=JOUR 305)
FILM 306 Postcolonial Film and Literature (g)
(=ENGL 306)
FILM 307 Ethnic Film, Literature and Culture (d)
(=ENGL 307)
FILM 309 Film and Literature of the New Europe (g)
(=ENGL 309)
FILM 310 Sociology Through Film
(=SOCI 310)
FILM 315 German Classic and Modern Film
(=MODL 315)
FILM 316 History of French Film (g)
(=FREN 316)
FILM 317 Modern East Asian Literature and Cinema (g)
(=ENGL 317)
FILM 343 The Novel and Film Adaptations
(=ENGL 343)
FILM 389 Special Topics
(=HIST/JOUR/MUS/SOCI, which offer individual courses)
FILM 402 History in Film
(=HIST 402)
FILM 442 World Cinema (g)
(=ENGL 442)
FILM 495 Independent Study 1-3 cr.
FILM 499 Directed Project in Film

+ Musical Theatre Minor

**Musical Theatre Minor: 24 Total Credits**

**Required Courses: 18 cr. hrs.**
MUS 103 Class Voice 1 cr.
MUS 130 Music Theory and Ear Training I 4 cr.
MUS 131 Music Theory and Ear Training II 4 cr.
MUS 225 Voice for the Actor 1 cr.
SASA 121 Acting I: Basic Techniques 3 cr.
SASA 225 Musical Theatre Performance 3 cr.
SASA 375 Theatre Practicum: Production 2 cr.

**Directed Electives: 2 cr. hrs.**
Select from the following:
DANC 107 Social Dance .5 cr.
DANC 110 Basic Jazz Dance .5 cr.
DANC 120 Fundamentals of Movement through Dance 1 cr.
DANC 150 Dance Improvisation 1 cr.
DANC 224 Ballet I 1 cr.

**Electives: 4 cr. hrs.**
Select from the following:
DANC 107 Social Dance .5 cr.
DANC 110 Basic Jazz Dance .5 cr.
DANC 224 Ballet I 1 cr.
DANC 260 Dance Repertory 1-3 cr.
SASA 131 Design for the Theatre 3 cr.
A maximum of 3 credits from the following 3 courses may be applied toward electives:

SASA 221 Acting for Stage and Screen II 3 cr.
SASA 231 Creating Artistic Environments for Stage and Screen 3 cr.
SASA 232 Costume/Makeup for Stage and Screen 3cr.
SASA 233 Light and Sound for Stage and Screen 3cr.
SASA 337 History of Theatre 3 cr.
MUS 127 Applied Voice (a maximum of 2 may be applied toward electives) 1 cr.
MUS 230 Music Theory and Ear Training III 4 cr.
MUS 340 Opera Techniques 3 cr.

Students majoring in Music or Speech (any emphasis) may not double count any course when completing the Musical Theatre Minor.
Speech Communication and Theatre Arts and Music majors should consult with an adviser and substitute other electives (from the list above) for those required in both their major and minor.

Students whose catalog year pre-dates Fall, 2014 will complete their minors with SASA courses offered in the new curriculum. Your adviser will work with you to keep your DAR current.
Early Childhood Certification

Early Childhood Minor Program
Completion of 23 credits

Required Courses: 23 cr. hrs.
TED 225 Developmental Learning Experiences of Young Children 3 cr.
TED 330 Infant Toddler Programs 3 cr.
TED 332 Preschool Curriculum 3 cr.
TED 335 Kindergarten Curriculum and Materials 3 cr.
TED 345 Parent Education and Family Development 3 cr.
TED 400 Supervision and Management Early Childhood Program 2 cr.
TED 405 Special Needs Child: Early Childhood Classroom 3 cr.
TED 410 Early Childhood Language Arts 3 cr.

Elementary Education Program

UW-River Falls offers a program in Early Childhood through Middle Childhood for students who are elementary majors with an early childhood minor, which meets certification requirements to teach Early Childhood through Middle Childhood - Regular Education. In addition to providing further enrichment in techniques for instruction in the primary grades, this minor and certification increases the range of potential employment for an elementary education major. Those who may seek employment in existing day care centers, nursery schools, child and family education programs, or those intending to start their own private pre-school, should investigate the opportunities opened via an early childhood minor.

Early Childhood Certification
Department of Teacher Education (TED)
257 Walker Wyman Education
www.uwrf.edu/TED/

Geoffrey Scheurman-Chair
Early Childhood Degree Completion

Program Overview

Required Courses
Early childhood major courses typically completed as part of an associate degree (25 credits):
TED 211 Educational Psychology
TED 225 Developmental Learning Experiences of Young Children
TED 330 Infant and Toddler Programs
TED 332 Preschool Curriculum
TED 345 Parent Education and Family Development
TED 400 Supervision and Management of Early Childhood Programs
TED 405 Early Childhood Special Needs
TED 410 Early Childhood Language Arts

Additional UWRF early childhood major courses (31 credits):
CSD 160 Introduction to Communicative Disorders
MUS 275 Music and Art for Early Learners
PED 246 Health and Movement Activities for Children
TED 255 Children’s Literature for Elementary Education
TED 325 Diversity in Early Childhood Settings
TED 326 Place-Based Environmental Science for Early Childhood Educators
TED 329 Exploring Nature Through Inquiry Learning
TED 335 Kindergarten Curriculum and Materials
TED 409 English Language Learners in Early Childhood
TED 411 Leadership and Advocacy for Young Children
TED 451 Integrating Alternative Methodologies of Early Childhood Education

Electives (19 credits)
Students are given flexibility to select courses to meet their unique goals. Many online options are available at UWRF, and transfer credits may be accepted for approved courses from other institutions.

UWRF University and General Education Requirements (45 credits)

Early Childhood Degree and Teaching Certification
Another option in the Early Childhood Degree Completion and certification program allows individuals with an associate’s degree in early childhood education or child development to apply credits and field experience hours earned toward a Bachelor of Science degree and an optional Wisconsin early childhood teaching certification (birth to age 8).

Contact:
Debra Hare
E-mail or 715-425-3557
Early Childhood Degree Completion and Certification

Program Overview

Required Courses

Early childhood major courses typically completed as part of associate degree (25 credits):

- TED 211 Educational Psychology
- TED 225 Developmental Learning Experiences of Young Children
- TED 330 Infant and Toddler Programs
- TED 332 Preschool Curriculum
- TED 345 Parent Education and Family Development
- TED 400 Supervision and Management of Early Childhood Programs
- TED 405 Early Childhood Special Needs
- TED 410 Early Childhood Language Arts

Additional UWRF early childhood major courses (59 credits):

- MUS 275 Music and Art for Early Learners
- PED 246 Health and Movement Activities for Children
- TED 155 Intro to Tech Integration and the Reflective Multimedia
- TED 255 Children’s Literature for Elementary Education
- TED 321 Early Childhood Integrated Reading and Language Arts I
- TED 322 Early Childhood Integrated Reading and Language Arts II
- TED 323 Content and Techniques of K-3 Mathematics I
- TED 324 Content & Techniques of K-3 Mathematics II
- TED 325 Diversity in Early Childhood Settings
- TED 326 Place-Based Environmental Science for Early Childhood Educators
- TED 335 Kindergarten Curriculum and Materials
- TED 350 Pre-K – Early Elementary Learning Challenges
- TED 409 English Language Learners in Early Childhood
- TED 411 Leadership and Advocacy for Young Children
- TED 424 Inquiry Learning: Society and Environment for Early Elementary
- TED 451 Integrating Alternative Methodologies of Early Childhood Education
- TED 480 Early Childhood Student Teaching

UWRF University and General Education Requirements (36 credits)

Early Childhood Degree Only

Another option in the Early Childhood Degree Completion and Certification program allows individuals with an associate degree in early childhood education or child development to apply credits earned toward a Bachelor of Science degree.

Contact:
Debra Hare
Email or 715-425-3557
Earth Science Minor

Earth Science Minor Requirements: 21 Total Credits

**Required Courses 16 cr. hrs.**
- GEOL 102 Introductory Geology Lab 1
- GEOL 150 Historical Geology 4
- GEOL 202 Oceanography 3
- GEOL 269 Environmental Geology (writing intensive) 3
- GEOL 330 Meteorology 2
- PHYS 117 Introductory Astronomy 3

**Electives 5 cr. hrs.**
Select from 200 level or above Geology courses

Department of Plant and Earth Science
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Economics Major

**Major Requirements 42-44 Total Credits**

**OPTION A: College of Business and Economics**

**Required Courses:** 21 cr. hrs.
- ECON 201 Principles of Microeconomics 3 cr.
- ECON 202 Principles of Macroeconomics 3 cr.
- ECON 226 Introduction to Statistics
  or MATH 226 Fundamentals of Statistics 3 cr.
  or equivalent upon Chair's approval
- ECON 301 Intermediate Microeconomics 3 cr.
- ECON 302 Intermediate Macroeconomics 3 cr.
- ECON 326 Statistics for Economics and Business 3 cr.
- ECON 480 Senior Seminar (writing intensive) 3 cr.

**Elective Courses**: 18 cr. hrs.
Choose 18 credits from the following categories with at most nine credits from the disciplines outside the area of Economics:

- Elective courses in the area of Economics: ECON 305, ECON 312, ECON 316, ECON 324, ECON 328, ECON 329, ECON 332, ECON 334, ECON 338, ECON 340, ECON 342, ECON 344, ECON 362, ECON 378, ECON 379, ECON 426, ECON 489, ECON 499
- Elective courses outside the area of Economics: ACCT 232, ACCT 321, ACCT 322, ACCT 356; BLAW 265, BLAW 266; CBE 370 (limited to one 3-credit study tour); CSIS 161, CSIS 162, CSIS 215, CSIS 225; FINC 345, FINC 347, FINC 348, FINC 446; MGT 300, MGT 318, MGT 320, MGT 330, MGT 340, MGT 350, MGT 355, MGT 361, MGT 430; MKTG 310, MKTG 312, MKTG 355, MKTG 365, MKTG 445; AGEC 355, AGEC 450; GEOG 220, GEOG 237; MATH 236, MATH 256, MATH 266, MATH 316, MATH 326, MATH 327, MATH 331, MATH 356, MATH 357, MATH 366, MATH 367, MATH 371, MATH 431, MATH 456; PHIL 304; POLS 212, POLS 230, POLS 245, POLS 369; or PSYC 250, PSYC 265.

*Some elective courses may have prerequisites

**OPTION A - Required Supporting Courses:** 4-5 cr. hrs.
- CBE 100 CBE First Year Seminar 2 cr.
- CBE 300 Professional Development 1 cr.
- ECON 205 Quantitative Analysis
  or MATH 156 or MATH 166 3-4 cr.

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Department of Economics
124 South Hall
715-425-3335
[www.uwrf.edu/CBE/](http://www.uwrf.edu/CBE/)

Hamid Tabesh-Chair, Hossein Eftekhari, Jennifer Hafer, Logan Kelly, Pascal Ngoboka, John Walker

The vision of the College of Business and Economics is to be a community of choice and the regional leader in the acquisition, study, application and sharing of business, economics and information technology knowledge. Consistent with this vision, the college is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International.
Economics Minor

Minor Requirements 24-25 Total Credits

Liberal Arts

Liberal Arts Option

Required Courses: 15-16 cr. hrs.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
ECON 205 Quantitative Analysis
or MATH 156 or MATH 166 3-4 cr.
ECON 301 Intermediate Microeconomics 3 cr.
ECON 302 Intermediate Macroeconomics 3 cr.

Elective Courses*: 9 cr. hrs.
Choose nine credits from the following categories with at most three credits from the disciplines outside the area of Economics:

- Elective courses in the area of Economics: ECON 305, ECON 312, ECON 316, ECON 324, ECON 326, ECON 328, ECON 329, ECON 332, ECON 334, ECON 338, ECON 340, ECON 342, ECON 344, ECON 362, ECON 378, ECON 426, ECON 489, ECON 499
- Elective courses outside the area of Economics: ACCT 232, ACCT 321, ACCT 322, ACCT 356; BLAW 265, BLAW 266, CBE 370 (limited to one 3-credit study tour); CSIS 161, CSIS 162, CSIS 215, CSIS 225; FINC 345, FINC 347, FINC 348, FINC 446; MNGT 300, MNGT 318, MNGT 320, MNGT 330, MNGT 340, MNGT 350, MNGT 355, MNGT 361, MNGT 430; MKTG 310, MKTG 312, MKTG 355, MKTG 365, MKTG 445; AGEC 355, AGEC 450; GEOG 220, GEOG 237; MATH 236, MATH 256, MATH 266, MATH 316, MATH 326, MATH 331, MATH 356, MATH 357, MATH 366, MATH 367, MATH 371, MATH 431, MATH 456; PHIL 304; POLS 212, POLS 230, POLS 245, POLS 369; or PSYC 250, PSYC 265.

*Some elective courses may have prerequisites

Education

Education Option

Required Courses: 6 cr. hrs.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.

Electives in Economics: 18 cr. hrs.
Choose from:
ECON 305 Money and Banking 3 cr.
ECON 312 Political Economy of Discrimination 3 cr.
ECON 316 Managerial Economics 3 cr.
ECON 324 Labor Economics 3 cr.
ECON 328 Domestic Topics in Third World Economic Development 3 cr.
ECON 329 Global Topics in Third World Economic Development 3 cr.
ECON 332 Public Finance 3 cr.
ECON 334 Public Regulation 3 cr.
ECON 340 Contemporary International Trade 3 cr.
ECON 342 International Finance 3 cr.
ECON 344 Comparative Economic Systems 3 cr.
ECON 362 History of Economic Thought 3 cr.
ECON 378 Semester Abroad Research 3 cr.
ECON 379 Internship 2-6 cr.
ECON 389 Special Topics in Economics 1-3 cr.
ECON 426 Forecasting and Econometrics 3 cr.
ECON 450 Introduction to Natural Resources Economics 3 cr.
ECON 489 Special Topics: Economics 1-3 cr.
Elementary Education Major

Elementary Education Major: 46 Total Credits
TED 155 Intro to Tech Integration and the Reflective Multimedia 2 cr.
TED 211 Educational Psychology: Elementary Ed (writing intensive) 5 cr.
TED 420 School and Society (writing intensive) 3 cr.
TED 310 Techniques in Elementary Education: Language Arts 4 cr.
TED 311 Techniques in Elementary Education: Social Studies 4 cr.
TED 312 Techniques in Elementary Education: Science 4 cr.
TED 315 Techniques in Elementary Education: Mathematics 4 cr.
TED 316 Developmental Reading 4 cr.
TED 317 Reading Practicum 4 cr.
TED 472 Student Teaching: - Initial 12 cr.
or
TED 479 K-12 Internship Teaching 12 cr.
or
TED 474 Student Teaching - COST 12 cr.
Required Courses: 25 cr. hrs.
TED 252 Foundations of Multicultural Education 3 cr.
TED 255 Children’s Literature for Elementary Education
or ENGL 250 Literature for Children 3 cr.
ART 250 Child Art 2 cr.
ESM 300 Environmental Education 3 cr.
HEAL 361 Methods and Materials in Health for the Elementary Teacher 3 cr.
MATH 247 Mathematics for Elementary Teachers II 4 cr.
MUS 350 Music for Elementary Teachers 2 cr.
P ED 326 Techniques in Physical Education for the Elementary School Teacher 2 cr.
SPED 330 The Exceptional Child 3 cr.

Minor Areas: Elementary education majors must select a Wisconsin Department of Instruction approved minor:

Recommended Minors include:
Early Childhood
Health Education
Language Arts/Reading Science
General Science
Mathematics
Modern Language - Spanish
Social Studies
Teaching English as a Second Language

Other acceptable minors are:
Biology
Chemistry
Coaching/Athletics
Communicative Disorders
Economics
English
Geography
History
Journalism
Physics
Political Science
Psychology

Department of Teacher Education
257 Walker Wyman Education
715-425-3230
www.uwrf.edu/TED/

Geoffrey Scheurman-Chair, Susan Ahrendt, Molly Gerrish, Angela Kaiser, Florence Monsour, Hilary Pollack, Mary Wright

Admission to the Educator Preparation Program (EPP) is required the semester prior to enrolling in the Block courses. See the Degree Requirements by College for a complete list of requirements for admission.

The techniques blocks give students the opportunity to spend approximately 300 contact hours, three days per week, for two semesters in public schools with this innovative instructional program. The Blocks consist of the following courses:
Block I: TED 312 (science), TED 315 (math), TED 317 (reading) 12 cr. hrs.
Block II: TED 310 (language arts), TED 311 (social studies), TED 316 (reading) 12 cr. hrs.

The four-year curriculum is designed to prepare a student for a bachelor’s degree in Elementary Education. The program consists of a minimum of 132 semester hours that give students a broad general education, professional preparation for effective teaching at the elementary education level, and special preparation in an academic minor. Upon completion of these requirements, the elementary education major is licensable in Wisconsin to teach Middle Childhood - Early Adolescence, Regular Education. The addition of the Early Childhood minor meets requirements for an Early Childhood through Middle Childhood, Regular Education license in the state of Wisconsin.
English Major

Choose one of the following emphases:

Literature

Literature Emphasis - Liberal Arts: 36 Total Credits

Required Courses: 27 cr. hrs.
ENGL 251 Advanced Composition 3 cr.
ENGL 253 Introduction to Literary Studies 3 cr.
ENGL 321 English Language: History and Culture 3 cr.
ENGL 324 Survey of American Lit. I, Origins to 1900 (writing intensive) 3 cr.
ENGL 325 Survey of American Lit. II, 1900-1980 (writing intensive) 3 cr.
ENGL 331 Survey of English Lit. I, to 1800 (writing intensive) 3 cr.
ENGL 332 Survey of English Lit. II, 1800-Present (writing intensive) 3 cr.
ENGL 335 Shakespeare 3 cr.
ENGL 444 Major Authors 3 cr.
A second period course in British literature may replace one of the British survey courses, or a second period course in American literature may replace one of the American survey courses. At least three survey courses must be taken.

Directed Electives: 9 cr. hrs.
Select one genre, sub-genre, or diversity literature course: 3 cr. hrs.
ENGL 202 Literature of Science Fiction 3 cr.
ENGL 203 Literature of the African-American Experience 3 cr.
ENGL 207 Literature of the Asian-American Experience 3 cr.
ENGL 212 The Native American in Literature 3 cr.
ENGL 214 Women in Literature 3 cr.
ENGL 222 Literature of Fantasy 3 cr.
ENGL 226 Detective Fiction 3 cr.
ENGL 230 International Short Fiction (g)
ENGL 231 The Short Story 3 cr.
ENGL 232 Contemporary Drama 3 cr.
ENGL 233 Introduction to Poetry 3 cr.
ENGL 234 Modern Novels 3 cr.
ENGL 235 American Autobiography 3 cr.
ENGL 300 Women and Film 3 cr.
ENGL 307, Ethnic Film, Literature, and Culture 3 cr.
ENGL 343 The Novel and Film Adaptations 3 cr.
ENGL 443 American Ethnic Women Writers 3 cr.

Select one period course, English, American or International 3 cr. hrs.
ENGL 341 European Literature (19th Century) 3 cr.
ENGL 422 Elizabethan & Jacobean Drama
ENGL 423 17th Century Prose & Poetry
ENGL 426 Victorian Literature 3 cr.
ENGL 427 Modern British Literature: 1890-1940 3 cr.
ENGL 428 Modern British Literature: 1940-Present 3 cr.
ENGL 429 American Renaissance 3 cr.
ENGL 430 American Realism 3 cr.
ENGL 431 Modern American Fiction 3 cr.
ENGL 432 Contemporary American Literature 3 cr.
ENGL 441 Twentieth-Century International Literature 3 cr.
Select one English course at the 300/400 level 3 cr. hrs.

Free Elective: 3 cr. hrs.

Creative Writing
**English Major**  
**Creative Writing Emphasis-Liberal Arts: 36 Total Credits**  

**Required Courses: 18 cr. hrs.**
- **Writing Component 9 cr. hrs.**  
  - ENGL 262 Creative Writing 3 cr.
  - ENGL 382* Writing Workshop in Prose and Poetry 3 cr.
  - ENGL 482 Writing Seminar in Fiction and Poetry 1-3 cr.
  - ENGL 368* Writing Poetry 3 cr.
  - ENGL 369 Writing Fiction 1-3 cr.

**Directed Electives in Writing 9 cr. hrs.**  
(At least 6 of the credits must be from ENGL 368, ENGL 369, or ENGL 370)  
- ENGL 370 Writing Nonfiction 3 cr.
- ENGL 381 Screenwriting 3 cr.

**Coursework Outside Creative Writing: 18 cr. hrs.**  
**Required Courses: 12 cr. hrs.**  
- ENGL 251 Advanced Composition 3 cr.
- ENGL 253 Introduction to Literary Studies 3 cr.
- ENGL 321 English Language: History and Culture 3 cr.
- ENGL 331 Survey of English Literature I: to 1800 3 cr.

**Directed Electives in Literature 6 cr. hrs.**  
**Choose one course from Modern/Contemporary Period 3 cr. hrs.**  
- ENGL 325 Survey of American Literature II 3 cr.
- ENGL 332 Survey of English Literature II 3 cr.
- ENGL 432 Contemporary American Literature 3 cr.
- ENGL 444 Major Authors 3 cr.

**Genre Courses (preferably in area of specialization) 3 cr. hrs.**  
- ENGL 202 Literature of Science Fiction 3 cr.
- ENGL 222 Literature of Fantasy 3 cr.
- ENGL 230 International Short Fiction (g)
- ENGL 231 The Short Story 3 cr.
- ENGL 232 Contemporary Drama 3 cr.
- ENGL 233 Introduction to Poetry 3 cr.
- ENGL 234 Modern Novels 3 cr.
- ENGL 235 American Autobiography 3 cr.

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**Professional Writing**  
**English Major**  
**Professional Writing Emphasis-Liberal Arts: 36 Total Credits**  

**Required Courses 24 credits**  
- ENGL 251 Advanced Composition 3 cr.
- ENGL 266 Business Writing 3 cr. or ENGL 367 Technical Writing 3 cr.
- ENGL 270 Visual Rhetoric; Document Design and Graphics 3 cr.
- ENGL 362 Introduction to Rhetorical Studies 3 cr.
- ENGL 371 Proposal Writing 3 cr.
- ENGL 374 Cyberliteracy and Writing on the Web 3 cr.
- ENGL 387 Technical and Professional Editing 3 cr.
- ENGL 494 Senior Seminar in Professional Writing 3 cr.

**Directed Electives in Writing: 9 credits, choose three**  
- ENGL 253 Intro to Literary Studies 3 cr.
ENGL 262 Creative Writing 3 cr.
ENGL 266 Business Writing 3 cr.
ENGL 367 Technical Writing 3 cr.
ENGL 467 Advanced Technical Writing 3 cr.
ENGL 370 Writing Nonfiction 3 cr.
ENGL 371 Proposal Writing: Change Through Rhetoric 3 cr.
ENGL 372 Practicum: Peer Tutoring and Writing Instruction 3 cr.
ENGL 379 Internship 2-3 cr.
ENGL 389 Topics course in Rhetoric (Environmental Rhetoric, Contemporary Rhetoric) 3 cr.
JOUR 269 Multimedia Storytelling
JOUR 360 Opinion Writing 3 cr.
MARC 370 Public Relations Principles 3 cr.
SPAN 374 Professional Writing in Spanish I 3 cr.

Directed Electives in Language: 3 credits, choose one
MARC 311 Persuasion 3 cr.
ENGL 220 Structure of English 3 cr.
ENGL 321 English Language: History and Culture 3 cr.
ENGL 324 Survey of American Lit. I, Origins to 1900 (writing intensive) 3 cr.
ENGL 325 Survey of American Lit. II, 1900-1980 (writing intensive) 3 cr.
ENGL 331 Survey of English Lit. I, to 1800 (writing intensive) 3 cr.
ENGL 332 Survey of English Lit. II, 1800-Present (writing intensive) 3 cr.

Education
Broad Area English Education Major
Broad Area English Education Major: 63 Total Credits
(6 credits can be double-counted in General Education)

1. Required Courses: 36 cr. hrs.
ENGL 251 Advanced Composition 3 cr.
ENGL 253 Introduction to Literary Studies 3 cr.
ENGL 262 Creative Writing 3 cr.
ENGL 220 Structure of English 3 cr.
*ENGL 324 Survey of American Lit. I, Origins to 1900 3 cr.
*ENGL 325 Survey of American Lit. II, 1900-1980 3 cr.
*ENGL 331 Survey of English Lit. I, to 1800 3 cr.
*ENGL 332 Survey of English Lit. II, 1800-Present 3 cr.
ENGL 355 Literature for Adolescents 3 cr.
ENGL 361 Composition Theory 3 cr.
ENGL 362 Introduction to Rhetorical Studies 3 cr.
ENGL 441 Twentieth-Century International Literature 3 cr.
*Three of the four survey courses must be taken. However, a student may choose a period course to replace one of the survey courses that covers the same time period as the American survey course, or an English period course that covers the same time period to replace one of the English survey courses. ENGL 444 Major Authors may also substitute for an appropriate period course (the author's era consistent with the survey course to be replaced).

In place of English 324, students may take one of these courses:
ENGL 429 American Renaissance 3 cr.
ENGL 430 American Realism 3 cr.

In place of English 325, students may take one of these courses:
ENGL 431 Modern American Fiction 3 cr.
ENGL 432 Contemporary American Literature 3 cr.

In place of English 331, students may take this course:
ENGL 422 Elizabethan and Jacobean Drama 3 cr.

In place of English 332, students may take one of these courses:
ENGL 426 Victorian Literature 3 cr.
ENGL 427 Modern British Literature: 1890-1940 3 cr.
ENGL 428 Modern British Literature: 1940-Present 3 cr.

2. Directed Elective: 3 cr. hrs.
Take one of the period courses listed below:
ENGL 422 Elizabethan and Jacobean Drama 3 cr.
ENGL 423 17th Century Prose & Poetry
ENGL 426 Victorian Literature 3 cr.
ENGL 427 Modern British Literature: 1890-1940 3 cr.
ENGL 428 Modern British Literature: 1940-Present 3 cr.
ENGL 429 American Renaissance 3 cr.
ENGL 430 American Realism 3 cr.
ENGL 431 Modern American Fiction 3 cr.
ENGL 432 Contemporary American Literature 3 cr.

3. Select two supporting courses: 6 cr. hrs.
ENGL 266 Business Writing 3 cr.
ENGL 211 Introduction to TESOL: Reading and Writing. 3 cr.
ENGL 321 English Language: History and Culture 3 cr.
ENGL 360 Theory and Methodology of TESOL 3 cr.
ENGL 372 Practicum: Peer Tutoring and Writing Instruction
or ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.

4. Select two Journalism/Marketing Communications/Professional Writing courses: 6 cr. hrs.
Only one 100-level course can be taken in this category.

ENGL 270 Visual Rhetoric 3 cr.
ENGL 367 Technical Writing 3 cr.
ENGL 368 Writing Poetry 3 cr.
ENGL 369 Writing Fiction 3 cr.
ENGL 370 Writing Non-Fiction 3 cr.
ENGL 371 Proposal Writing 3 cr.
ENGL 374 Cyberliteracy and Writing for the Web 3 cr. (EC)
ENGL 387 Technical and Professional Editing 3 cr.
ENGL 467 Advanced Technical Writing 3 cr.
JOUR 101 Introduction to Mass Communication 3 cr.
JOUR 110 Principles and Ethics of Journalism 6 cr.
JOUR 221 Radio News Production 2 cr.
JOUR 222 Intro to Video Storytelling 3 cr.
JOUR 201 Intro to Audio Storytelling 3 cr.
JOUR 202 Print News Writing 3 cr.
JOUR 203 Broadcast News Writing 3 cr.
MARC 100 Writing for Mass Media 3 cr.

5. Select two Speech or Theatre Arts courses: 6 cr.
COMS 106 Interpersonal Communication 3 cr.
COMS 207 / MARC 207 Listening Skills 3 cr.
COMS 211 Public Speaking 3 cr.
COMS 213 Intercultural Communication 3 cr.
COMS 308 Small Group Communication 3 cr.
COMS 312 Argumentation and Decision Making 3 cr.
COMS 314 Introduction to Criticism 3 cr.
COMS 319 Freedom to Speak 3 cr.
MARC 311 Persuasion 3 cr.
SASA 121 Acting for Stage and Screens 3 cr.
SASA 131 Visual Elements for State and Screen 3 cr.
SASA 230 Playwrights of Color 3 cr. (ACD)
SASA 231 Creating Artistic Environments for State and Screen 3 cr.
SASA 234 Production Management 3 cr.
SASA 334 Playwriting 3 cr.
SASA 310 Media Literacy 3 cr.
SASA 337 History of Theatre and Dramatic Literature 3 cr.

6. Select one Film Studies Course: 3 cr.
ENGL 301 / SASA 301 / FILM 301 History of Film 3 cr.
ENGL 306 / FILM 306 Postcolonial Film and Literature 3 cr. (MD, GP)
ENGL 307 / FILM 307 Ethnic Film, Literature, and Culture 3 cr. (ACD, MD)
ENGL 309 / FILM 309 Film and Literature of the New Europe 3 cr. (g)
ENGL 317 / FILM 317 Modern East Asian Literature and Cinema 3 cr. (g)
ENGL 389 Topics in English: Shakespeare and Film 3 cr.
ENGL 442 / FILM 442 / INTS 442 World Cinema 3 cr. (GP)
JOUR 302 / FILM 302 History of the Documentary 3 cr.
SASA 200 / FILM 200 Introduction to Film Studies 3 cr.
SASA 248 / FILM 248 Cultures in Conflict 3 cr.

7. Choose one Multicultural/International courses: 3 cr. hrs.
Many of these courses can be double-counted as General Education or University requirements.
ENGL 203 Literature of African Americans 3 cr. (ACD)
ENGL 208 Literature of Native Americans 3 cr. (ACD)
ENGL 212 Native American in Literature 3 cr. (ACD)
ENGL 214 Women in Literature 3 cr.
ENGL 228 Literature of Environmental Justice 3 cr. (EC)
ENGL 230 International Short Story 3 cr. (GP, Non-Western)
ENGL 234 Modern Novels 3 cr. (GP, Non-Western)
ENGL 235 American Autobiography 3 cr. (ACD)
ENGL 300 Women and Film 3 cr. (MD)
ENGL 306 Postcolonial Film and Literature 3 cr. (MD, GP, Non-Western)
ENGL 307 Ethnic Film, Literature, and Culture 3 cr. (ACD, MD)
ENGL 309 / FILM 309 Film and Literature of the New Europe 3 cr. (g)
ENGL 317 / ENGL 442 / FILM 442 / INTS 442 World Cinema 3 cr. (GP)
ENGL 443 American Ethnic Women Writers 3 cr. (ACD)

Note: English Education majors must take TED 432, Techniques of English Education, in addition to the above courses for English licensure.
English Minor

**English Minor Liberal Arts: 24 cr. hrs.**

This minor has a Literature Emphasis.

Required courses: 18 cr. hrs.

- ENGL 251 Advanced Composition 3 cr.
- ENGL 253 Introduction to Literary Studies 3 cr.
- ENGL 321 The English Language: History and Culture 3 cr.
- ENGL 335 Shakespeare 3 cr.

Select one American survey course*

- ENGL 324 Survey of American Literature I, Origins-1900 3 cr.
- OR
- ENGL 325 Survey of American Literature II, 1900-1980 3 cr.

Select one British survey course*

- ENGL 331 Survey of English Literature I, 650-1800 3 cr.
- OR
- ENGL 332 Survey of English Literature II, 1800-Present 3 cr.

*One survey course must cover the period before 1800.

Directed Electives: 6 cr. hrs.

Select one genre course: 3 cr. hrs.

- ENGL 230 International Short Fiction 3 cr.
- ENGL 231 The Short Story 3 cr.
- ENGL 232 Contemporary Drama 3 cr.
- ENGL 233 Introduction to Poetry 3 cr.
- ENGL 234 Modern Novels 3 cr.
- ENGL 343 The Novel and Film Adaptations 3 cr.
- ENGL 344 Major Authors 3 cr.

Select one period course, English, American or International: 3 cr. hrs.

- ENGL 341 European Literature (19th Century) 3 cr.
- ENGL 422 Renaissance Drama 3 cr.
- ENGL 423 17th Century Prose and Poetry 3 cr.
- ENGL 426 Victorian Literature 3 cr.
- ENGL 427 Modern British Literature: 1890-1940 3 cr.
- ENGL 428 Modern British Literature: 1940-Present 3 cr.
- ENGL 429 American Renaissance 3 cr.
- ENGL 430 American Realism 3 cr.
- ENGL 431 Modern American Fiction 3 cr.
- ENGL 432 Contemporary American Literature 3 cr.
- ENGL 441 Twentieth-Century International Literature 3 cr.

**English Minor- Education**

You cannot have an English education minor with a liberal arts major—you must have a major in education.

Minor Requirements: English-Education 27 cr. hrs.

Required Courses: 18 cr. hrs.

- ENGL 251 Advanced Composition 3 cr.
- ENGL 253 Introduction to Literary Studies 3 cr.
- ENGL 220 Structure of English 3 cr.
- ENGL 321 English Language: History and Culture 3 cr.
- ENGL 335 Shakespeare 3 cr.
- ENGL 361 Composition Theory 3 cr.

Directed Electives: 12 cr. hrs.

A. Select ENGL 324 Survey of American Lit. I, Origins to 1900 3cr.

and one of the following for 6 cr. hrs:

- ENGL 331 Survey of English Lit. I, to 1800 3 cr.
ENGL 332 Survey of English Lit. II, 1800-Present 3 cr.
ENGL 422 Renaissance Drama 3 cr.
ENGL 423 17th Century Prose and Poetry 3 cr.
ENGL 426 Victorian Literature 3 cr.
ENGL 427 Modern British Literature: 1890-1940 3 cr.
ENGL 428 Modern British Literature: 1940-Present 3 cr.

OR

B. Select ENGL 331 Survey of English Lit. I, to 1800 3 cr.
and one of the following for 6 cr. hrs:
ENGL 324 Survey of American Lit. I, Origins to 1900 3 cr.
ENGL 325 Survey of American Lit. II, 1900-1980 3 cr.

Supporting Course: 3 cr. hrs.
ENGL 355 Literature-Based Reading Methods for Adolescents 3 cr.
English Language Arts Minor

Minor Requirements 24 Total Credits

Area 1: Writing (choose one of the following) 3 cr. hrs.
ENGL 251 Advanced Composition 3 cr.
ENGL 262 Creative Writing 3 cr.

Area 2: Reading and Interpretation 12 cr. hrs.
ENGL 106 Introduction to Literature: Fiction, Poetry, Drama 3 cr.
ENGL 233 Introduction to Poetry 3 cr.
ENGL 331 Survey of English Literature I 3 cr.
ENGL 355 Literature-Based Reading Methods for Adolescents 3 cr.

Area 3: Language and Composition 9 cr. hrs.
ENGL 220 Structure of English 3 cr.
ENGL 322 Acquisition of Language 3 cr.
ENGL 361 Composition Theory 3 cr.

Required Supporting Courses:
ENGL 250 Children's Literature 3 cr.
TED 310 Techniques in Elementary Education: Language Arts 4 cr.
TED 316 Developmental Reading 4 cr.
TED 317 Reading Practicum 4 cr.

This minor must be done with an education major.
Environmental Planning Minor

ESM 151 introduction to Land Use Theory and Practice 3 cr.
ESM 251 Community Decision-Making 3 cr.
ESM 351 Planning for Sustainable Communities 3 cr.
ESM 411 Site Planning and Development 4 cr.
ESM 435 Advanced Land Use Planning and Design 4 cr.

Choose two of the following:

ESM 220 Environmental Sustainability: Theory, Issues and Mngt 3 cr.
ESM 303 Environmental Policies and Administration 3 cr.
ESM 360 Applied Hydrology and Water Quality 4 cr.
AGEC 445 / ESM 445 Land Use and Sustainable Agriculture 3 cr.
SOIL 120 Introduction to Soil Science
GEOL 269 Environmental Geology 3 cr.
Environmental Science Major

Environmental Science Core 28 cr. hrs.
ENGL 367 Technical Writing 3 cr.
ESM 220 Environmental Sustainability: Theory, Issues, and Management 3 cr.
ESM 305 Environmental Impact Assessment 2 cr.
ESM 360 Applied Hydrology and Water Quality 4 cr.
ESM 412 Chemical Fate and Transport in the Environment 3 cr.
ESM 413 Environmental Analysis 4 cr.
ESM 485 Seminar in Resource Management 1 cr.
GEOL 102 Introductory Geology Lab 1 cr.
Choose one of the following:
ESM 303 Environmental Policies and Administration 3 cr.
BIOL 355 Environmental Law 3 cr.
POLS 355 Environmental Law 3 cr.
Choose one of the following:
MATH 226 Fundamentals of Statistics 3 cr.
MATH 326 Applied Statistics 3 cr.
ANSC 341 Biometrics 3 cr.
GEOG 365 Quantitative Techniques for Geographers 3 cr.
Required Supporting Courses: 34-36 cr. hrs.
MATH 166 Calculus 4 cr.
CHEM 120 Introduction to General Chemistry 6 cr.
or CHEM 121 General Chemistry I 5 cr.
CHEM 122 General Chemistry II 5 cr.
Choose one of the following two chemistry lecture/lab series:
A. CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
B. CHEM 250 Analytical Chemistry 4 cr.
Choose one of the following two physics series A. or B.:
A. PHYS 121 Algebra-Based Physics 5 cr.
B. PHYS 131 Calculus-Based Physics 5 cr.
Choose one of the following two courses:
BIOL 210 General Botany 3 cr.
BIOL 230 General Zoology 3 cr.
Choose one of the following two courses:
BIOL 240 Cell and Molecular Biology 3 cr.
BIOL 324 Microbiology 3 cr.
Directed Electives: 18 cr. hrs.
A minimum of 6 credits in 400 level or greater. Courses taken as part of the supporting requirement cannot be double counted as directed electives.
SOIL 311, SOIL 325, SOIL 350, SOIL 440, SOIL 460 3-4 cr.
BIOL 210, BIOL 230, BIOL 240, BIOL 310, BIOL 324, BIOL 330, BIOL 344, BIOL 354, BIOL 360, BIOL 434, BIOL 444 3-4 cr.
GEOG 212, GEOG 250, GEOG 255, GEOG 316, GEOG 360, GEOG 368, GEOG 379, GEOG 412, GEOG 455, GEOG 460 3-12 cr.
PHYS 122 Algebra-Based Physics II, PHYS 132 Calculus-Based Physics II
CHEM 231 and CHEM 236, CHEM 232 and CHEM 237, CHEM 250, CHEM 356 1-3 cr.
AET 325, AGEN 365, AET 425,
GENG 450 3-4 cr.
GEOL 269, GEOL 327, GEOL 330, GEOL 417, GEOL 445 2-4 cr.
ESM 270, ESM 333, ESM 363, ESM 370, ESM 377 2-4 cr.
AGEC 450 3 cr.

Department of Plant and Earth Science
324 Agricultural Science
715-425-3345
www.uwrf.edu/PES/

Donavon Taylor-Chair, Jill Coleman Wasik, Holly Dolliver, Allison Gale, Todd Johnson, Veronica Justen, Kerry Keen, Natasha Macnack, Yoana Newman, Eric Sanden, Brian Smith, Dan Waletzko, Ian Williams, David Zlesak, Steven DeBroux, Kevyn Juneau

The environmental science major is designed to prepare students to face challenges in environmental quality management and sustainable development. Environmental science majors are prepared to monitor, model and manage environmental systems in the areas of environmental quality and risk evaluation, sampling and analysis, remediation and regulatory compliance. Graduates pursue careers in environmental consulting firms, local, state and federal environmental agencies or corporations. Students with environmental research interests are also prepared to pursue advanced degrees.

The major is interdisciplinary within the College of Agriculture, Food and Environmental Sciences and the College of Arts and Sciences, and is administered by the department of plant and earth science. Departments contributing to the major include agricultural engineering technology, biology, chemistry, geography, physics, and plant and earth science. Required foundation courses are in the College of Agriculture, Food and Environmental Sciences or in the College of Arts and Sciences.

General Education Requirements
College of Agriculture, Food and Environmental Science:
As listed with the following exceptions:
Ethical Citizenship: ESM 105 required.
Sciences: GEOL 101 and BIOL 150 required.
College of Arts and Sciences: As listed.

Foundation Courses in Agriculture 9 cr. hrs.
SOIL 120 Introduction to Soil Science 3 cr.
ESM 151 Introduction to Land Use Theory and
Practice 3 cr.

Select 1 from:
AET 150 Agricultural and Environmental Engineering Technology 3 cr.
or AGEC 230 Agricultural Economics I 3 cr.
CROP 161 Introduction to Plant Science 3 cr.
or HORT 161 Introduction to Plant Science

OR College of Arts and Sciences
Requirements: 9 cr. hrs.
SOCI 245 Environmental Sociology 3 cr.
PHIL 303 Environmental Ethics 3 cr.
ESM 307 Multicultural Perspectives on the Environment 3 cr.
Exercise and Sport Science Major

**Program Requirements**

51.5 Total Credits

Minor required

**Required courses 35.5 cr. Hrs.**

- EXSS 161 Intro to Health and Human Performance 3 cr.
- EXSS 266 Aerobic Leadership 2 cr.
- EXSS 366 Exercise Physiology 3 cr.
- EXSS 450 Sport, Fitness and Recreation Management 3 cr.
- EXSS 465 Scientific Principles of Conditioning 3 cr.
- EXSS 466 Exercise Assessment, Prescription and Leadership 3 cr.
- HEAL 263 Human Anatomy 3 cr.
- HEAL 315 Nutrition 3 cr.
- P ED 243 Motor Learning & Development 3 cr.
- P ED 354 Biomechanics 3 cr.
- P ED 375 Physical Activity Behavior 3 cr.
- SFED 200 First Aid and Basic Life Support .5 cr.

**Professional courses 8-16 cr. hrs.**

- EXSS 271 Practicum I 1 crs.
- EXSS 467 Exercise for Special Populations 3 cr.
- EXSS 471 PE Practicum II 4-12 cr.

**Directed Electives: (Select 8 or more credits)**

- BIOL 240 Cell & Molecular Biology 3 cr.
- BIOL 324 Microbiology 4 cr.
- BIOL 345 Immunology 3 cr.
- BIOL 453 Virology 3 cr.
- HEAL 269 Wellness 3 cr.
- MARC 340 Sports Marketing Communication 3 cr.
- P ED 109 Recreational Climbing 1 cr.
- P ED 201 Outdoor Ed. Concepts: Summer 3 cr.
- P ED 213 Care and Prevention of Athletic Injury 2 cr.
- P ED 301 Foundations of Outdoor Leadership 3 cr.
- P ED 351 Coaching Young Athletes 2 cr.
- P ED 363 Psychology of Coaching 3 cr.
- PSYC 225 Psychology Gender 3 cr.
- PSYC 260 Behavior Modification 3 cr.
- PSYC 305 Learning & Motivation 3 cr.
- PSYC 355 Physiological Psychology 3 cr.
- SOCI 220 Sociology of Diversity 3 cr.
- SOCI 322 Race & Ethnicity 3 cr.
- SOCI 341 Sociology of Later Life 3 cr.
- SOCI 343 Sociology of Sport and Leisure 3 cr.
Farm Management Minor

Requirements, 24 Total Credits

Required courses:
AGEC 230 Agricultural Economics I 3 cr.
AGEC 240 Cooperatives 2 cr.
AGEC 305 Agricultural Business Accounting 3 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 360 Farm Management 3 cr.
AGEC 365 Agricultural Finance 3 cr.
AGEC 440 Agricultural Policy I (writing intensive) 3 cr.
AGEC 455 Commodity Marketing 3 cr.

Department of Agricultural Economics
131 Agricultural Science
715-425-3298
www.uwrf.edu/AGEC/

Brenda Boelet-Chair, Albert Boaitey, Sierra Howry,
Simon Jette-Nantel, Amber Remble, David
Trechter, Jim White
Film Studies Minor

Total Required Credit Hours: 24
All classes are 3 credits unless otherwise specified.

Required Courses (6 Credit Hours):
FILM 200 Introduction to Film Studies
FILM 301 History of Film
(Co-listed as ENGL 301, HIST 301, or JOUR 301)

Directed Electives (18 Credit Hours):
FILM 248 Cultures in Conflict
FILM 300 Women in Film
(Co-listed as ENGL 300/WGST 300)
FILM 302 History of Documentary
(Co-listed as JOUR 302)
FILM 305 News in the Movies
(Co-listed as JOUR 305)
FILM 306 Postcolonial Film and Literature (g)
(Co-listed as ENGL 306)
FILM 307 Ethnic Film, Literature and Culture (d)
(Co-listed as ENGL 307)
FILM 309 Film and Literature of the New Europe (g)
(Co-listed as ENGL 309)
FILM 310 Sociology Through Film
(Co-listed as SOCI 310)
FILM 315 German Classic and Modern Film
(Co-listed as MODL 315)
FILM 316 History of French Film (g)
(co-listed as FREN 316)
FILM 317 Modern East Asian Literature and Cinema (g)
(Co-listed as ENGL 317)
FILM 343 The Novel and Film Adaptations
(Co-listed as ENGL 343)
FILM 389 Special Topics
(Co-listed HiST/JOUR/MUS/SOCI, which offer individual courses)
FILM 402 History in Film
(Co-listed as HiST 402)
FILM 442 World Cinema (g)
(Co-listed as ENGL 442)
FILM 495 Independent Study 1-3 cr.
FILM 499 Directed Project in Film

Interdisciplinary
Stage And Screen Arts
B24 Kleinpell Fine Arts
715-425-3971

Film Studies is an interdisciplinary minor offered by the Department of Stage And Screen Arts. Film Studies examines film as an art form, as an industry, and as the most popular and most influential communication medium of the twentieth century. Film Studies provides an interdisciplinary approach to visual literacy as it introduces students to film history, theory, criticism, and production.
Finance

Business Administration Major-Finance

Lower Division 21 cr. hrs.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
ACCT 231 Principles of Accounting I 3 cr.
ACCT 232 Principles of Accounting II 3 cr.
CSIS 215 Information Systems for Business Management 3 cr.
ECON 226 Introduction to Statistics 3 cr.
or MATH 226 Fundamentals of Statistics
BLAW 265 Business Law I 3 cr.

Upper Division 18 cr. hrs.
MNGT 300 Management and Organizational Behavior 3 cr.
MKTG 310 Principles of Marketing 3 cr.
FINC 345 Managerial Finance 3 cr.
ECON 326 Statistical Methods for Economics and Business 3 cr.
MNGT 361 Operations Management 3 cr.
MNGT 485 Strategic Management 3 cr.

Required Finance Courses 12 cr. hrs.
FINC 347 Financial Institutions 3 cr.
FINC 348 Investments 3 cr.
FINC 446 Intermediate Managerial Finance 3 cr.
FINC 450 Case Studies in Finance 3 cr.

Finance Electives: 9 cr. hrs.
Choose from:
FINC 314 Risk Management and Insurance 3 cr.
FINC 350 Real Estate 3 cr.
FINC 355 Multinational Financial Management 3 cr.
FINC 360 Financial Derivatives 3 cr.
FINC 379 Internship-Finance 3 cr.
FINC 389 Special Topics in Finance 3 cr.
FINC 448 Portfolio Management 3 cr.

Support Electives: 9 cr. hrs.
Choose 9 credits from any of following courses:
Accounting: ACCT 321, ACCT 322, ACCT 360, ACCT 356, ACCT 357, ACCT 461
Agricultural Economics: AGEC 355, AGEC 455
Communication Studies and Theatre Arts: COMS 213, COMS 318
Economics: ECON 305, ECON 340
English: ENGL 266, ENGL 367
Mathematics (Actuary): MATH 166, MATH 167, MATH 356, MATH 371
Management: MNGT 320, MNGT 330, MNGT 355, MNGT 430
Marketing: MKTG 312, MKTG 325, MKTG 365
Philosophy: PHIL 304
Psychology: PSYC 265, PHYC 320

Required Supporting Courses: 7 - 8 cr. hrs.
A. CBE 100 CBE First Year Seminar 2 cr.
CBE 300 Professional Development 1 cr.
B. COMS 101 Fundamentals of Oral Communication 3 cr.
   (waived if taken as Gen Ed)
or ENGL 266 Business Writing 3 cr.
or MATH 146 College Algebra

Department of Accounting and Finance
124 South Hall
715-425-3335
www.uwrf.edu/CBE

Charles Corcoran-Chair, David Breger, Dawn Hukai, Michael Jacobson, June Li, Reza Rahgozar, Megan Sun, Mary Tichich.

The vision of the College of Business and Economics is to be a community of choice and the regional leader in the acquisition, study, application and sharing of business, economics and information technology knowledge. Consistent with this vision, the college is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International.

The finance curriculum is designed to prepare students for successful careers in corporate finance, financial institutions and services, and for graduate study. For example, finance graduates secure jobs in banking, insurance, real estate, the investment industry, financial planning, and risk management.
General Education Requirements 38 cr. hrs.

General Electives to reach 120 credits (minimum to graduate)

Undergraduate Business Administration students may not transfer more than six credits of 300/400 level courses from non-AACSB accredited programs and institutions into the major.
Food Processing Technology Minor

Food Processing Technology Minor 22-24 cr. hrs.

Required Courses
FDSC 110 The Science of Food 3 cr.
FDSC 113 Introduction to Food Science Laboratory 1 cr.
FDSC 235 Agricultural Microbiology 3 cr.
FDSC 320 Food Quality Assurance 3 cr.
FDSC 361 Food Ingredients and Analysis 3 cr.

Directed Electives 6 cr. hrs.
FDSC 202 Dairy Manufacturing I and
FDSC 302 Dairy Manufacturing II
or
FDSC 238 Meat and Meat Products and
FDSC 240 Meat Product Processing
or
AGEN 352 Food and Process Engineering and
AGEN 455 Advanced Food and Process Engineering

Electives 3-5 cr. hrs.
Any additional courses from Directed Electives not already taken
AGBI 251 Agricultural Biochemistry 3 cr. and AGBI 252 Agricultural Biochemistry Lab 1 cr.
BIOL 324 Microbiology 4 cr.
CHEM 360 Foundation of Biochemistry 4 cr.
FDSC 270 or FDSC 370 Internship 2-4 cr.
FDSC 422 Product Development and Sensory Evaluation of Food 4 cr.
FDSC 490 Independent Study

Department of Animal and Food Science
247 Agricultural Science
715-425-3704
www.uwrf.edu/ANFS/

Gary Onan-Chair, Casie Bass, Larry Baumann,
Dennis Cooper, Michelle Famer, Young Dal Jang,
Sylvia Kehoe, Steve Kelm, Justin Luther, Melkaye Melka,
Nathan O'Connor, Amy Radunz, Beth Rausch,
Peter Rayne, Kurt Vogel, Bonnie Walters,
Steve Watters
Food Science Technology Major

Food Science and Technology Major: 43-47 Total Credits

Required Courses: 29 cr. hrs.
FDSC 113 Intro Food Science Lab 1 cr.

Choose one of the following three courses:
FDSC 202 Dairy Manufacturing I-required for Dairy Tech Option
or FDSC 238 Meat and Meat Products 3 cr.
or FDSC 259 Cereal Technology

FDSC 285 Seminar in Food Science 1 cr.
FDSC 312 Food Processing 4 cr.
FDSC 313 Food Processing Lab 1 cr.
FDSC 320 Food Quality Assurance 2 cr.
FDSC 335 Food Microbiology 4 cr.
FDSC 360 Food Chemistry 3 cr.
FDSC 385 Seminar in Food Science 1 cr.
FDSC 422 Product Development and Sensory Evaluation 4 cr.
FDSC 461 Food Analysis 4 cr.
FDSC 485 Seminar in Food Science 1 cr.

Required Supporting Courses: 19 cr. hrs.
CHEM 122 General Chemistry II 5 cr.
CHEM 230 General Organic Chemistry 3 cr.
or CHEM 231 Organic Chemistry I
AGBI 251 Agricultural Biochemistry 3 cr.
or CHEM 361 Biochemistry
AGBI 252 Agricultural Biochemistry Laboratory Techniques 1 cr.
BIOL 324 Microbiology 4 cr.
ANSC 341 Biometrics 3 cr.
FDSC 270 Internship 2-4 cr.

Select Industry, Dairy Technology, or Science Option below:

Industry Option 14-16 cr. hrs
ACCT 231 Principles in Accounting I 3 cr.
Select two from:
FINC 345 Managerial Finance 3 cr.
or AGEC 365 Agricultural Finance
MNGT 300 Principles of Management 3 cr.
or AGEC 460 Agribusiness Firm Management
MKTG 310 Principles of Marketing 3 cr.
or AGEC 355 Agricultural Markets and Prices

Electives (choose any Food Science courses) 5-7 cr. hrs.

Dairy Technology Option 14-18 cr. hrs.
FDSC 302 Dairy Manufacturing II 3 cr.
FDSC 469 Dairy Plant Management 2 cr.
FDSC 470 Dairy Plant Management Lab 1 cr.
AGEC 355 Agricultural Markets and Prices 3 cr.
AGEC 460 Agribusiness Firm Management 3 cr.
Electives (choose any Food Science courses) 2-4 cr. hr.

Science Option - IFT Approved Curriculum 14-16 cr. hrs.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 236 Organic Chemistry Lab I 1 cr.
CHEM 237 Organic Chemistry Lab II 1 cr.
MATH 167 Calculus II 4 cr.

Electives (choose any Food Science Courses) 5-7 cr. hrs.
General Science Minor

General Science Minor For Elementary Education 24 Total Credits

Life Science & Environmental Science
BIOL 150 General Biology 3 cr.
BIOL 103 Fundamentals of Biological Evolution, 3 cr.
ESM 300 Environmental Education, 3 cr.

Physical Science
PHYS 114 Concepts in Physics, 3 cr.
CHEM 115 Concepts in General Chemistry, 4 cr.
CHEM 215 Chemistry Laboratory Concepts and Techniques, 1 cr.

Earth and Space Science
GEOL 101 Introductory Geology 3 cr.
GEOL 102 Introductory Geology Lab 1 cr.
PHYS 117 Introductory Astronomy 3 cr.

Science, General elementary / middle teacher licensing
Teacher Education Department
257 Wyman Education Bldg
715-425-3230

General Science Minor for Elementary Science Teachers
Courses may be used in the General Education goal three scientific inquiry program. This minor is designed to qualify elementary education majors for licensure.
Program Overview
Degree Requirements
To graduate, students will have completed 120 credits with at least 48 credits earned at a four-year institution. At least 30 credits must be from UWRF, including the final 15 credits, and all general education requirements must be met. See requirements.

In addition to the general education requirements, UW-River Falls students must complete two, university-required courses in American cultural diversity and global perspectives. See list of approved courses.

Transferring Credit
Credit will be awarded for college-level course work completed at accredited institutions. While general education credits are generally accepted from two-year colleges, this new program makes it possible for students to receive university credit for technical and work specific courses as well. For more information on how your college credits will transfer to UW-River Falls, visit the Transfer Credit Policy web page or contact the Admissions transfer officer.

Required Courses:
GEOG 250 Introduction to Cartography and GIS, 3 credits
GEOG 351 Map Design, 3 credits
GEOG 360 GIS: Theory and Methods, 3 credits
GEOG 365 Quantitative Techniques for Geographers, 3 credits
GEOG 401 Senior Colloquium in Geography, 3 credits

Intermediate Directed Electives: 3-6 credits

Advanced Directed Electives: 3-6 credits

Electives: 3-9 credits
GIS/Cartography Minor: 21 Total Credits

Required Core Courses: 9 cr. hrs.
- GEOG 250 Introduction to Geographic Information Science (GiSci) 3 cr.
- GEOG 351 Map Design 3 cr.
- GEOG 360 Geographic Information Systems: Theory and Methods 3 cr.

Directed Electives: 9 cr. hrs.
- Techniques Courses - choose 3-6 credits from the following:
  - GEOG 366 Field Methods and Global Positioning System (GPS) 3 cr.
  - GEOG 368 Digital Image Processing 3 cr.

Advanced Course - choose 3-6 cr. hrs.
- GEOG 455 Advanced Map Design 3 cr.
- GEOG 460 Geographic Information Systems: Analysis and Modeling 3 cr.

Electives: 0-6 cr. hrs.
- GEOG 365 Quantitative Techniques in Geography & Cartography 3 cr. (If Geography Major, these credits count towards the major, not the GIS minor)
- GEOG 379 Geography Internship 3-12 cr.
- ESM 333 Remote Sensing of Natural Resources 3 cr.
- ESM 363 GIS Applications in Resource Management 3 cr.
- ART 225 Advertising Design I 3 cr.
- CSIS 151 Introduction to Programming 3 cr.
- CSIS 161 Programming I 3 cr.
- CSIS 225 Web Development I 3 cr.
GISci Certificate

Program Overview

Certificate Requirements
Students complete three required courses and two elective courses that focus on your chosen area of specialization in GISci. In addition to finishing the coursework, students submit a final professional portfolio, complete an exit interview, and have a cumulative GPA of at least 2.5 upon completion of the program.

Core Courses: 9 credits
GEOG 250 Introduction to Geographic Information Science (GISci) - 3 cr.
GEOG 360 GIS: Theory and Methods - 3 cr.
GEOG 460 GIS: Modeling and Analysis - 3 cr.

Elective Courses: 6 credits
Choose any two courses from the following
GEOG 351 Map Design - 3 cr.
GEOG 365 Quantitative Techniques for Geographers - 3 cr.
GEOG 366 Field Methods and GPS - 3 cr.
GEOG 368 Digital Image Processing - 3 cr.
GEOG 455 Advanced Map Design - 3 cr.

For More Information
Geography and Geographic Information Science
Department
College of Arts and Sciences
E-mail
715-425-3264
Geography Major

Geography Major - Liberal Arts (without a GIS/Cartography Minor)

Major Requirements 36 Total Credits

Required Core Courses: 18 cr. hrs.

GEOG 110 Physical Environment: Patterns and Systems 3 cr.
GEOG 120 Human Geography 3 cr.
GEOG 240 United States 3 cr.
GEOG 250 Introduction to Geographic Information Science (GISci) 3 cr.
GEOG 365 Quantitative Techniques for Geographers 3 cr.
GEOG 401 Senior Colloquium in Geography 3 cr.

Directed Electives 6 cr. hrs.

Regional Course - Choose 3 credits from the following:
- GEOG 340 Europe 3 cr.
- GEOG 342 Latin America 3 cr.
- GEOG 343 Africa 3 cr.
- GEOG 344 Asia and Oceania 3 cr.

Systematic Course - Choose 3 credits from the following:
- GEOG 212 Weather and Climate 3 cr.
- GEOG 214 World Patterns of Plants and Animals 3 cr.
- GEOG 220 Economic Geography 3 cr.
- GEOG 237 Poverty in the United States 3 cr.
- GEOG 318 Global Water Resources 3 cr.
- GEOG 322 Urban Geography 3 cr.
- GEOG 324 Historical Geography of the United States 3 cr.
- GEOG 351 Map Design 3 cr.
- GEOG 360 Geographic Information Systems: Theory and Methods 3 cr.
- GEOG 366 Field Methods & GPS 3 cr.
- GEOG 368 Digital Image Processing 3 cr.
- GEOG 378 Semester Abroad 3-6 cr.
- GEOG 379 Geography Internship 3-12 cr.
- GEOG 389 Topics in Geography .5-3 cr.
- GEOG 412 Advanced Climatology 3 cr.
- GEOG 428 Political Geography 3 cr.
- GEOG 455 Advanced Map Design 3 cr.
- GEOG 460 Geographic Information Systems: Analysis and Modeling 3 cr.
- GEOG 490 Readings in Geography 1-3 cr.
- GEOG 499 Independent Study 1-2 cr.

Electives: 12 cr. hrs.

Must be numbered 200 and above with at least one numbered 400 or above, see courses listed in Directed Electives above.

Geography Major - Liberal Arts with a GIS/Cartography Minor

Major Requirements 36 Total Credits

Required Core Courses: 15 cr. hrs.

GEOG 110 Physical Environment: Patterns and Systems 3 cr.
GEOG 120 Human Geography 3 cr.
GEOG 240 United States 3 cr.
GEOG 365 Quantitative Techniques in Geography & Cartography 3 cr.
GEOG 401 Senior Colloquium in Geography 3 cr.

Directed Electives: 6 cr. hrs.

Regional Course - Choose 3 credits from the following:
- GEOG 340 Europe 3 cr.
- GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
GEOG 344 Asia and Oceania 3 cr.

Systematic Course - Choose 3 credits from the following:
GEOG 212 Weather and Climate 3 cr.
GEOG 214 World Patterns of Plants and Animals 3 cr.
GEOG 220 Economic Geography 3 cr.
GEOG 237 Poverty in the United States 3 cr.
GEOG 265 Mapping and Spatial Justice 3 cr.
GEOG 318 Global Water Resources 3 cr.
GEOG 324 Historical Geography of the United States 3 cr.

GEOG 378 Semester Abroad 3-6 cr.
GEOG 379 Geography Internship 3-12 cr.
GEOG 389 Topics in Geography .5-3 cr.
GEOG 412 Advanced Climatology 3 cr.
GEOG 428 Political Geography 3 cr.
GEOG 490 Readings in Geography 1-3 cr.
GEOG 499 Independent Study 1-2 cr.

Electives: 15 cr. hrs.

Must be numbered 200 and above with at least one numbered 400 or above, see courses listed in Directed Electives above.
Geography Minor

Geography Minor - Liberal Arts: 21 Total Credits

Required Core Courses: 12 cr. hrs.
- GEOG 110 Physical Environment: Patterns and Systems 3 cr.
- GEOG 120 Human Geography 3 cr.
- GEOG 240 United States 3 cr.
- GEOG 250 Introduction to Geographic Information Science (GiSci) 3 cr.

Electives: 9 cr. hrs.
(Courses numbered 200 and above)
Geology Major

Required Geology Courses: 42 cr.
GEO 101 Introduction to Geology 3 cr.
GEO 102 Introductory to Geology Lab 1 cr.
GEO 150 Global Change 3 cr.
GEO 230 Mineralogy 4 cr.
GEO 231 Petrology 4 cr.
GEO 285 Sophomore Seminar in Geology (writing intensive) 1 cr.
GEO 326 Structural Geology 4 cr.
GEO 327 Geomorphology and Glacial Geology (writing intensive) 4 cr.
GEO 282 Geochemistry 3 cr.
GEO 362 Stratigraphy and Sedimentation 4 cr.
GEO 441 Geophysics 4 cr.
GEO 445 Hydrogeology 3 cr.
GEO 450 Paleontology (writing intensive) 4 cr.

Regional Field Trip 1 cr.
Choose one of the following:
GEO 371 Regional Geology Field Trip 1 cr.
GEO 372 SW Region 1 cr.
GEO 373 NW Region 1 cr.
GEO 374 Lake Superior Region 1 cr.
GEO 375 Appalachian Region 1 cr.
GEO 376 SE Region 1 cr.
GEO 377 NE Region 1 cr.

Capstone Experience 4 cr.
GEO 485 Senior Research Experience (writing intensive) 1 cr.
Choose one of the following:
GEO 378 Semester Abroad 3 cr.
GEO 270 GEO 370 Internship 3 cr.
GEO 489 Field Camp 3 cr.
GEO 490 Research 3 cr.

Required Supportive Courses 10 cr.
SOIL 120 cr. 3
MATH 166 Calculus cr. 4
GEOG 250 cr. 3

Directed Electives: 15 cr.
(consult with your adviser for these or other selections)
ART 306 Scientific Illustration 3 cr.
ART 307 Computer Graphics 3 cr.
BIOL 150 or higher
CHEM 122 or higher
CSIS 105 or higher
ENGL 367 Technical Writing 3 cr.
ESM 151 or higher
GENG 120 or higher
GEOG 318 Global Water 3 cr.
GEOG 350 Map Design and Ppr 3 cr.
GEOG 351 Map Design 3 cr.
GEOG 360 GIS Theory and Met 3 cr.
GEOG 365 Quant Tech 3 cr.
GEOG 366 Field Methodology and GPS 3 cr.
GEOG 368 Digital Image Processing 3 cr.
GEOG 455 Advanced Map Design 3 cr.
GEOG 460 GIS Analysis
GEOL 269 Environmental Geology 3 cr.
GEOL 270 Internship I 2-4 cr.
GEOL 271 International Internship 2-4 cr.
GEOL 305 Geology of the Planets 3 cr.
GEOL 330 Meteorology 3 cr.
GEOL 350 Geological Destinies of Nations 3 cr.
GEOL 370 Internship II 2-4 cr.
GEOL 378 Semester Abroad 3-6 cr.
GEOL 490 Independent Study Geology 1-3 cr.
MATH 167 or higher
PHYS 122 Algebra-Based Physics II
PHYS 132 Calculus-Based Physics II
SOIL 250 Soil Profile 2 cr.
SOIL 289 / SOIL 389 / SOIL 489 Soils Judging 1 cr.
SOIL 325 Hydric Soils and Wetland Environments 3 cr.
SOIL 350 Soil Development 2 cr.
SOIL 440 Soil and Water Conservation 4 cr.
SOIL 460 Soil Physics 3 cr.

**Emphases**

An emphasis is not a minor but is a suggested series of courses taken as directed electives that fit together well, fit well with the geology major and that would help a career in the designated area. Consult with geology faculty for more information.

**Environmental/Engineering:** GENG 235, GENG 236, GENG 265, SOIL 460, MATH 167

**Environmental/Hydrogeology:** See Hydrogeology Minor

**Graduate School:** MATH 167, ENGL 367, CSIS 105, Summer Field Camp, GEOL 490

**Mineral Exploration:** ESM 333, GEOG 250, GEOG 360, CHEM 251, CHEM 256, Summer Field Camp, GEOL 490

**Ocean Sciences:** CSIS 105, BIOL 230, BIOL 434, MATH 167, CHEM 251, CHEM 256, PHYS 311, GEOL 202

**Paleontology:** MATH 167, CSIS 105, Summer Field Camp, BIOL 230, GEOL 490, additional courses in Biology

**Petroleum Geology:** GEOL 445, Summer Field Camp, BIOL 324, BIOL 355, CHEM 231, CHEM 232, GENG 236, GENG 368, GEOL 490
Geology Minor

Geology Minor: 21 Total Credits

Required Courses 13 cr. hrs.
GEOL 102 Introductory Geology Lab 1 cr.
GEOL 150 Historical Geology 4 cr.
GEOL 230 Mineralogy 4 cr.
GEOL 231 Petrology 4 cr.
Electives in Geology 8 cr. hrs.
Select from 300 or 400 level Geology courses except GEOL 330

Department of Plant and Earth Science
324 Agricultural Science
715-425-3345
www.uwrf.edu/PES/

Donavon Taylor-Chair, Jill Coleman Wasik, Holly Dolliver, Allison Gale, Todd Johnson, Veronica Justen, Kerry Keen, Natasha Macnack, Yoana Newman, Eric Sanden, Brian Smith, Dan Waletzko, Ian Williams, David Zlesak, Steven DeBroux, Kevyn Juneau
Art Minors

Art
Art Minor (24 credits)
All classes are 3 credits unless otherwise specified.

Foundation Courses (9 credits)
Select at least 9 credits from the following:
ART 121 2D Design Foundation
ART 131 Drawing I
ART 211 Western Art to 1500
ART 212 Renaissance to Early Modern Art History

Introductory Courses (6 credits)
Select at least 6 credits from the following:
* Indicates a repeatable course used to accumulate credits.
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 238 Introduction to Painting
ART 241 Graphic Design I
* ART 289 Special Topics (1-3 cr.)

Upper Division Courses (9 credits)
Select at least 9 credits from the following:
* Indicates a repeatable course used to accumulate credits.
* ART 327 Studio-Ceramics
* ART 329 Studio-Glass
* ART 335 Studio-Photography
* ART 336 Studio-Printmaking
* ART 338 Studio-Painting
* ART 389 Special Topics (1-3 cr.)

Art History
Art History Minor: 24 Credits
Required Core Courses: 9 Credits
ART 211 West Art to 1500 3 cr.
ART 212 West Art Since 1500 3 cr.
ART 213 Art since 1945: Modern and Contemporary Art History 3 cr.

Directed Art History Electives: 9 Credits
Choose 6 Credits from Modern and Contemporary Art History Electives
ART 308 History of Design 3 cr.
PHIL 310 Philosophy and History of Visual Art 3 cr.
ART 321 Gender and Art 3 cr.

Choose 3 Credits from Global Art History Electives
ART 291 Asian Art History (GP)* 3 cr.
ART 392 Pre-Columbian Art History (MD) 3 cr.

Directed Studio Art Electives: 6 Credits
Choose 3 Credits from 2-D Studio Electives
ART 131 Drawing I 3 cr.
ART 235 Introduction to Photography 3 cr.
ART 236 Introduction to Printmaking 3 cr.
ART 238 Introduction to Painting 3 cr.
ART 241 Graphic Design I 3 cr.

Choose 3 Credits from 3-D Studio Electives
ART 227 Introduction to Ceramics 3 cr.
ART 229 Introduction to Glass 3 cr.
ART 230 Cold Glass

Required Supporting Course
ART 100 Introduction to Art (3 Credits count in General Education)

* indicates prerequisite: junior standing or higher

Graphic Design
Graphic Design Minor (24 credits)
All classes are 3 credits unless otherwise specified.

Required Supporting Course (3 credits)
University general requirement. Credits not included in minor credit count.
ART 100 Introduction to Visual Art (Section 6)

Core Requirements (12 credits)
ART 121 Design Foundation
ART 131 Drawing I
ART 132 Drawing II
ART 308 History of Design

Required Graphic Design Courses (9 credits)
ART 241 Graphic Design I
ART 242 Design Studio I
ART 243 Typography I

Elective (3 credits)
Select from the following:
ART 227 Introduction to Ceramics
ART 229 Introduction to Glass
ART 230 Cold Glass
ART 235 Introduction to Photography
ART 236 Introduction to Printmaking
ART 238 Introduction to Painting
Health and Physical Education Major

General Education Requirements - 38 Credits
As listed with the following exceptions:
M, all but TED 323
SL, BIOL 150
S, PHYS 114
MD, TED 422
EC, ESM 105
HW, HEAL 269; one activity course must be PE 131

Major Requirements - 105 Credits

Required Courses: 21 Credits
P ED 161 Intro. to Health and Human Performance 3 cr.
P ED 172 Instructional Strategies I 1 cr.
P ED 243 Motor Learning and Development 3 cr.
P ED 300 Adapted Physical Education 3 cr.
P ED 305 Developmental and Adapted Physical Education 3 cr.
P ED 354 Biomechanics 3 cr.
P ED 372 Instructional Strategies II 2 cr.
P ED 455 Organization and Administration of Physical Education 3 cr.

Activity Courses: 20 Credits
P ED 230 Rhythms and Educational Gymnastics 3 cr.
P ED 265 Physical Activities I 3 cr.
P ED 266 Physical Activities II 3 cr.
P ED 275 Leadership in School-Based Adventure Education 3 cr.
P ED 395 Water Safety Instructor 3 cr.
EXSS 266 Aerobic Exercise Leadership 2 cr.
EXSS 465 Scientific Principles of Strength and Conditioning 3 cr.

Health: 25 Credits
SFED 212 First Aid/CPR Instructor 1 cr.
HEAL 262 Applied Anatomy and Exercise Physiology 3 cr.
HEAL 269 Wellness 3 cr.
HEAL 315 Nutrition 3 cr.
HEAL 330 Safe and Emotionally Healthy Schools and Communities 3 cr.
HEAL 350 Community Health 3 cr.
HEAL 460 Teaching of Family Life and Sexuality Education 3 cr.
HEAL 467 Measurement, Evaluation, Assessment 3 cr.
ESM 105 Environmental Studies
or ESM 300 Environmental Education 3 cr.

Education
Professional Education: 38 Credits
TED 212 Educational Psychology 5 cr.
TED 252 Multicultural Education 3 cr.
TED 420 School and Society 3 cr.
TED 422 Content Area Literacy in Middle/Secondary School 3 cr.
TED 425 Techniques of Elementary Education Physical Education 3 cr.
TED 429 Techniques of Health Education 3 cr.
TED 435 Techniques of Middle/Secondary Education: Physical Ed. 3 cr.
SPED 330 Introduction to Special Education 3 cr.
TED 472 Student Teaching: - Initial 12 cr.
or
TED 479 K-12 Internship Teaching 12 cr.
or
TED 474 Student Teaching - COST 12 cr.
Degree Requirements, 63 Total Credits

The Bachelor of Science in Health and Wellness Management consists of 20 required courses; there are no electives in the program. To see course descriptions and schedule, select the course number.

- HWM 300 Introduction to Human Health
- HWM 305 The Wellness Profession
- HWM 310 Changes Across the Life Span
- HWM 315 Resource Management for Wellness Managers
- HWM 320 Health and Medical Terminology
- HWM 325 Health Literacy
- HWM 335 Worksite Health Environment
- HWM 345 Physical Activity and Nutrition for Wellness Managers
- HWM 350 Research and Statistics for Wellness Managers
- HWM 360 Stress and Dependencies and Addictions
- HWM 370 Understanding and Effecting Health Behavior Change
- HWM 385 Marketing and Communication for Wellness Managers
- HWM 405 Survey of Information Technology in Wellness
- HWM 430 Population Health for Wellness Managers
- HWM 460 Leadership and Change Management in Health
- HWM 470 Assessment and Evaluation for Wellness Managers
- HWM 475 Employee Health and Well Being
- HWM 480 Employee Benefits for Wellness Managers
- HWM 485 Health Coaching for Wellness Managers
- HWM 496 Health and Wellness Capstone

Prerequisites

Some of the courses above require the following prerequisites.

- Introduction to Psychology (UWRF PSYC 101 or equivalent)
- Introduction to Biology (UWRF BIOL 100 or 150 or equivalent)
- Introduction to Public Speaking (UWRF COMS 101 or CSTA 101 or equivalent)
- Composition II (UWRF ENGL 200 or equivalent)

General Education and University Requirements

Students wishing to enter this program should have completed the prerequisites listed above and earned an Associates of Arts degree or have completed close to 60 college-level semester credits with a 2.0 or better grade point average (GPA).

To meet all graduation requirements, students must:

- complete all UW-River Falls general education and university requirements;
- successfully complete all Health and Wellness Management courses with a grade of C or better; and
- earn a minimum of a 2.250 GPA in their Health and Wellness Management courses.
Health Education Minor

Teacher Certification

The Health Education minor requires a major in another teacher licensing discipline.

- Elementary Education majors will be licensed Middle Childhood - Early Adolescence, Health Education
- Secondary Education majors will be licensed Early Adolescence - Adolescence, Health Education

The Praxis II Health Content Knowledge exam is required for teacher licensing.

25 Total credits

SFED 212 Teaching First Aid and Basic Life Support 1 cr.
HEAL 262 Applied Human Anatomy and Exercise Physiology 3 cr.
HEAL 269 Wellness 3 cr.
HEAL 315 Nutrition 3 cr.
HEAL 330 Safe, Healthy and Drug Free Schools 3 cr.
HEAL 350 Community Health 3 cr.
HEAL 460 Teaching of Family Life and Sexuality Education 3 cr.
TED 429 Techniques of Secondary Education: Health Education 3 cr.
ESM 300 Environmental Education

Liberal Arts

21.5 - 22 credits

SFED 200 First Aid & Basic Life Support .5 cr.

or

SFED 212 First Aid/CPR/AED for the Instructor 1 cr.

HEAL 262 Applied Anatomy and Exercise Physiology 3 cr.
HEAL 269 Wellness 3 cr.
HEAL 315 Nutrition 3 cr.
HEAL 350 Community Health 3 cr.
HEAL 460 Teaching Family Life and Sex. 3 cr.
HEAL 465 Health ed. Promotion and Plan. 3 cr.

ESM 105 Introduction to Environmental Studies 3 cr.

or

ESM 300 Environmental Education 3 cr.
History Major

Major in History-Liberal Arts 36 Total Credits

Introductory Requirements 9 cr. hrs.
HIST 101* Origins of Civilization (supporting course)*, 3 cr.
HIST 102 History of the Modern World, 1500-Present, 3 cr.
HIST 215 U.S. History to 1865, 3 cr.
HIST 216 U.S. History from 1865, 3 cr.

*History majors are required to take HIST 101 to meet Social and Behavioral Sciences Requirement in General Education Goal Two, so the course and its 3 credits will not be counted as history major credits.

Intermediate Requirements 6 cr. hrs.
Choose one of the following non-U.S. history courses 3 cr. hrs.
HIST 201 Introduction to Asian Civilization, 3 cr.
HIST 202 Introduction to Latin American Civilizations, 3 cr.
HIST 203 The Mediterranean: A Survey, 3 cr.
HIST 209 Introduction to African History, 3 cr.

Choose one of the following U.S. history courses 3 cr. hrs.
HIST 206 Native Americans and the United States, 3 cr.
HIST 207 African American History, 3 cr.

Advanced Study of U.S. and non-U.S. History 18 cr. hrs.
Choose two of the following U.S. history courses 6 cr. hrs.
HIST 351 United States Colonial History
HIST 353 United States History: 1790-1850
HIST 354 United States History: Age of Growth
HIST 358 United States History 1890-1945
HIST 359 United States History from 1945
HIST 364 History of the Upper Midwest
HIST 365 American Environmental History
HIST 367 History of United States Foreign Policy
HIST 369 American Intellectual History

Choose two of the following non-U.S. history courses 6 cr. hrs.
HIST 303 Women's History: Europe
HIST 315 The World of Napoleon
HIST 316 The British Empire
HIST 317 Social Movements in Modern Britain
HIST 318 Twentieth Century Europe
HIST 320 Ancient Rome
HIST 321 Early Middle Ages
HIST 322 The Renaissance
HIST 323 The Reformation
HIST 324 Early Modern Europe
HIST 325 Late Middle Ages
HIST 327 WW II to WWII
HIST 328 WWII to Cold War
HIST 332 The Islamic Middle East to 1500
HIST 333 Making of Global Exchange System to 1700
HIST 334 Modern China, 1800 to Present
HIST 335 Modern Japan, 1600 to Present

Department of History and Philosophy
307 Kleinpell Fine Arts
715-425-3164
www.uwrf.edu/HIST/

History: Zhiguo Yang-Chair, Ryan Fischer, Doug Hjersjo, Victoria Houseman and Kiril Petkov

Philosophy: Imtiaz Moosa and Walter Wietzke

The Department of History and Philosophy offers courses and degrees for those who wish to learn how to read, think and write effectively. A degree in history is excellent preparation for careers in business, advertising, government, foreign service, international relations, publications, journalism and human services. It also is indicated for those who wish to pursue a career specifically in the field of history including teaching at the elementary, secondary, or college level, or working in museums, archives and libraries. Students take courses in a variety of periods, areas and topics.

Majors are encouraged to participate in an internship program for practical preparation for a career. Various options are also offered for study abroad in other countries of the world as part of the degree.

Majors are strongly urged to take a course in Women's Studies to enhance their understanding of the human past.

The Broad Field Social Studies Major is recommended for those wishing to teach secondary social studies in Wisconsin and Minnesota.

General Education Requirements
BA and BS Liberal Arts majors as listed for CAS.
BS Education majors as listed for CEPS.
HIST 336 Traditional East Asia, Prehistory-1800
HIST 360 The Long Nineteenth Century: Europe

**Concentrated Study of the History Topics of Your Choice 6 cr. hrs.**
Choose two advanced courses (numbered 300 or higher), that you have not yet taken, from the list above

**Research and Historiography 3 cr. hrs.**
HIST 485 History Seminar

Remember to periodically review your Degree Audit Report (DAR) in eSIS!

**History Major - Philosophy Emphasis**

**Major in History-Philosophy Emphasis 36 (+3) Total Credits**

**History Major Core 18 (+3) cr. hrs.**

*Two 100 level history courses, 6 cr.*
HIST 100 Defining Themes in US History, 3 cr.
HIST 102 History of the Modern World, 1500-Present (+3) credit hours
(One would be taken as a required supporting course within the General Education requirements.)

HIST 485 History Seminar, 3 cr.

**Directed Electives, 12 cr.**
Four history courses at the 300 and/or 400 level (At least one course from each of the following areas:
U.S., European and World)

**Philosophy Emphasis Core 18 (+3) cr. hrs.**
Phil 151 Living Issues in Philosophy (A required supporting course taken within General Education), 3 cr.

**Directed Electives - Four of the following, 12 cr.**
Phil 201 Ethics, Human Nature and the Natural World, 3 cr.
Phil 221 Ancient Philosophy, 3 cr.
Phil 222 Hellenistic and Medieval Philosophy, 3 cr.
Phil 224 Existentialism and Late Modern Philosophy, 3 cr.
Phil 245 Islam and Oriental Religions in the USA, 3 cr.
Phil 310 History and Philosophy of Visual Arts, 3 cr.

**General Electives 6 cr.**
Two philosophy courses at the 300 or 400 level

*This major may NOT be combined with a minor in History or Philosophy.*
History Minor

History Minor Requirements (24 credits)

Required supporting course - take one of the following General Education courses (3 credits)
HIST 101 Origins of Civilization, 3
HIST 102 History of the Modern World, 1500-present, 3

World history courses - take two of the following courses (6 credits)
HIST 201 Introduction to Asian Civilization, 3
HIST 202 Introduction to Latin American Civilizations, 3
HIST 203 The Mediterranean: A Survey, 3
HIST 209 Introduction to African History, 3

U.S. history courses - take two of the following courses; one must be HIST 215 or 216 (6 credits)
HIST 204 Global Migration in U.S. History, 3
HIST 205 Women’s History: United States, 3
HIST 206 Native Americans and the United States, 3
HIST 207 African American History, 3
HIST 215 United States History to 1865, 3
HIST 216 United States History from 1865, 3

Advanced study of history - take four of the following courses (12 credits)

U.S. History
HIST 351 United States Colonial History I, 3
HIST 352 United States Colonial History II, 3
HIST 353 United States History: 1790-1850, 3
HIST 354 United States History: Age of Growth, 3
HIST 358 United States History 1890-1945, 3
HIST 359 United States History from 1945, 3
HIST 364 History of the Upper Midwest: Furs, Logs and Farms, 3
HIST 365 American Environmental History, 3
HIST 367 History of United States Foreign Policy, 3
HIST 368 Social Movements in United States’ History, 3
HIST 369 American Intellectual History, 3
HIST 402 History in Film, 3
HIST 481 Material & Popular Culture, 3

World History
HIST 315 The World of Napoleon, 3
HIST 316 The British Empire, 3
HIST 317 Social Movements in Modern Britain: 1879-1936, 3
HIST 318 Twentieth Century Europe, 3
HIST 320 Ancient Rome, 3
HIST 321 Early Middle Ages, 3
HIST 322 The Renaissance, 3
HIST 323 The Reformation, 3
HIST 324 Early Modern Europe, 3
HIST 325 Late Middle Ages, 3
HIST 327 WWI to WWII, 3
HIST 328 WWII to Cold War, 3
HIST 332 The Islamic Middle East to 1500, 3
HIST 333 Silk, Spices, and Silver: The Making of the Global Exchange System to 1700, 3
HIST 334 Modern China, 1800 to Present, 3
HIST 335 Modern Japan, 1600 to Present, 3
HIST 336 Traditional East Asia, Prehistory-1800, 3
HIST 360 The Long Nineteenth Century: Europe 1789-1914, 3
HIST 436 History of Colonial & Imperialism, 3
**Honors Program**

**Honors Admission Requirements**
Are you an incoming freshman that has been accepted to the UW-River Falls and interested in the Honors Program?

Eligibility for first term, incoming freshman students:
- Composite ACT score of 27 or higher and/or
- Graduated in the top 10% of high school class (a 3.75 for high schools that do not rank)

Are you a current student or are you a transferring to UW-River Falls and interested in joining the Honors Program?

Eligibility for current and transfer students:
- Cumulative GPA of 3.3 or higher with time to complete the Honors Program requirements.

**Honors Program Requirements**
In order to complete the Honors Program at UW-River Falls, students who have been accepted into the program will take two Honors-specific classes and demonstrate knowledge in five core competencies:

**HON 190: Honors Seminar**
All Honors students enroll in HON 190 early in their UWRF career, preferably the first semester in the program. Taught by instructors from several departments, this one-credit seminar is the foundational class that explores why each of the five Honors competencies is important and then helps students create a personalized Honors Program plan. We want students to earn as many of their Honors credits as possible as they take classes required for graduation, so nearly all of the Honors credits will count toward degree completion.

**Global Engagement/Awareness**
All UWRF students must complete a "Global Perspectives" (GP) class in order to graduate, so this class will count in this competency. The rest of this requirement may be earned in a variety of ways: by completing a second GP class, taking a 200-level or above Modern Language class (i.e. Spanish, French, German, Chinese, or Japanese), participating in a credit-bearing study abroad experience, or by completing a "portfolio project."

**Communication/Rhetorical Skills**
All Honors students must have strong reading, writing, and thinking skills; therefore, Honors students will take an Honors- or discipline-specific section of ENGL 200 (a General Education requirement) or will take a class that introduces students to their discipline’s language (i.e. BIOL 160: General Biology-Freshman Research Focus, CSD 160: Introduction to Communication Sciences and Disorders, ENGL 253: Introduction to Literary Studies, PSYC 216: Research Methods, etc.). Students will be provided with a detailed list of the Communication/Rhetoric classes when they craft their Honors Program plan in HON 190.

**Community Engagement**
Being active in the community—whether that is the campus community, your home community, the national community, or the global community—offers a variety of benefits to students; therefore, if students plan on graduating from the Honors Program, they must complete at least 135 volunteer hours prior to graduation. These 135 hours may be split across all four years or done in a shorter amount of time and may be done throughout the year, including over the summer, Spring Break, or J-Term.

**Sustainability**
Sustainability is the study of three key areas: economic, social, and environmental justice. Since part of our mission at UWRF is to prepare ethical and engaged students, all Honors students will take courses that explore two of the three "pillars of Sustainability" named above. Students will work with
their instructor for HON 190 to choose classes in this requirement that also count in their major/minor and/or in their University/General Education requirements—courses from nearly all majors are available to meet this requirement.

Undergraduate Research, Scholarly, and Creative Activity (URSCA)
Another part of our mission at UWRF is to introduce students to the benefits of being involved in research and scholarly activities; therefore, to meet this requirement, students will complete an undergraduate research, scholarly, or creative activity in an upper-level class in their major and/or minor. The class in which the URSCA activity takes place meets this requirement.

HON 497: Honors Capstone Seminar
To complete the Honors Program, all Honors students must take HON 497, a class where Honors students meet once per week for 50 minutes to listen and respond to URSCA presentations by their peers in the Honors Program. This class will be taken near the end of their program or immediately after their URSCA project has been completed.

Please Note...
1) Nearly all of the classes taken in these competencies will also count in students' major/minor, General Education, and/or University requirements. The credits students need to take to complete the Honors Program outside of graduation requirements are kept to a minimum so that students are not taking “extra” classes to complete the program.

2) In order for students to graduate with the Honors Program on their transcript, they must have at least a 3.5 cumulative GPA by graduation.

3) Students may NOT double-count courses between the different Honors Program competencies. For example, ESM 251 cannot count as both Communication/Rhetorical Skills and Sustainability.

4) The Honors Program Office audits students’ progress bi-annually. If students are not making progress toward completing the Honors Program and maintaining a cumulative GPA of 3.3 or higher, they will be removed from the program. As noted in #2 above, students must have at least a 3.5 cumulative GPA by graduation as a program requirement.
Horticulture Major

Foundation Courses in CAFES 12 cr. hrs.
PLSC 161 Intro to Plant Science 3 cr.
AET 150 Intro to Ag and Environmental Engineering Technology 3 cr.
SOIL 120 Intro to Soil Science 3 cr.
AGEC 230 Intro to Agricultural Economics 3 cr.

Horticulture Major: 64-68 Total Credits
Required Core HORT Courses: 16 cr. hrs.
HORT 169 Introduction to Horticulture 3 cr.
HORT 200 Plant Propagation 3 cr.
HORT 255 Turfgrass Science and Management 3 cr.
HORT 310 Greenhouse Management 3 cr.
HORT 352 Woody Landscape Plants 3 cr.
HORT 485 Senior Seminar in Horticulture 1 cr.

Required Related Courses: 20 cr. hrs.
CHEM 230 General Organic Chemistry 3 cr.
CROP 257 Genetics 3 cr.
or ANSC 257 Genetics 3 cr.
SOIL 311 Soil Fertility 4 cr.
BIOL 314 Plant Pathology 3 cr.
AGEC 361 Horticultural Business Management 3 cr.
or AGBI 251 Agricultural Biochemistry 3 cr.
CROP 435 Crop Physiology 4 cr.

Horticulture Options (Choose one)
Choose one of three options in horticulture to focus your major in Professional Horticulture, Landscape Design and Management, or Fruit and Vegetable Sustainable Systems.

Professional
Professional Horticulture Option 28-30 cr. hrs.
HORT 270 / HORT 370 Horticulture Internship 4 cr.
BIOL 333 Entomology 3 cr.
HORT 327 Vegetable Science and Production 4 cr.
HORT 347 Fruit Science and Production 4 cr.
HORT 420 Floriculture 4 cr.

Design-related course. Select ONE of the following:
HORT 245 Interior Plantscapes 3 cr.
HORT 250 Sustainable Landscape Design 4 cr.
HORT 268 Herbaceous Perennials 3 cr.

Plan production-related course. Select ONE of the following:
HORT 369 Plant Tissue Culture 3 cr.
HORT 452 Arboriculture/Nursery Management 3 cr.

Business-related course. Select ONE of the following:
AFES 310 Human Resource Management 3 cr.
AGEC 410 Professional Selling 3 cr.

Unrestricted electives: as needed to reach 120 cr. total

Landscape
Landscape Design and Management Option 31-33 cr. hrs.
Select two of the following:
HORT 201 Hardscape Design: Paver, Patios and Retaining Walls 1 cr.
HORT 202 Landscape Irrigation Management 1 cr.
HORT 203 Design and Management of Landscape Lighting and Water Features 1 cr.
or select AET 333 Landscape Construction 3 cr.

ESM 151 Introduction to Land Use Theory and Practice 3 cr.
HORT 250 Sustainable Landscape Design 4 cr.

Select one of the following:
HORT 268 Herbaceous Perennials 3 cr.
HORT 245 Interior Plantscapes 3 cr.

HORT 270 / HORT 370 Horticulture Internship 4 cr.
HORT 452 Arboriculture/Nursery Management 3 cr.

Select one of the following:
AFES 310 Human Resource Management 3 cr.
AGEC 410 Professional Selling 3 cr.

Select one of the following:
ESM 411 Site Planning and Development 3 cr.
GENG 368 CAD Applications 3 cr.

Select one of the following:
HORT 327 Vegetable Science and Production 4 cr.
HORT 347 Fruit Science and Production 4 cr.

Select one of the following:
HORT 358 Landscape Design Practicum 2 cr.
SOIL 325 Hydric Soils and Wetland Environments 3 cr.

**Fruit and Vegetable**

Fruit and Vegetable Sustainable Systems Option 27-28 cr. hrs.
HORT 270 / HORT 370 Horticulture Internship 4 cr.
HORT 327 Vegetable Science 4 cr.
HORT 347 Fruit Science 4 cr.

Select one of the following:
CROP 368 Sustainable Agriculture 3 cr.
ESM 220 Environmental Sustainability: Theory, Issues, and Management 3 cr.

Select one of the following:
AFES 310 Human Resource Management 3 cr.
SOCI 245 Environmental Sociology 3 cr.

AGEC 445 / ESM 445 Land Use and Sustainable Agricultural Law 3 cr.

Directed electives. Select two of the following:
AGEC 410 Professional Selling 3 cr.
AGEC 450 Natural Resources Economics 3 cr.
BIOL 333 Entomology 3 cr.
CROP 345 Weed Control 3 cr.
CROP 410 Plant Breeding and Crop Improvement 3 cr.
CROP 451 Integrated Pest Management 3 cr.
FDSC 235 Applied Agriculture Microbiology 3 cr.
HORT 420 Floriculture (Greenhouse) Production 4 cr.
MKTG 311 Principles of Marketing for Marketing Communications 3 cr.

Unrestricted electives (as needed to reach 120 credit total)
Business Emphasis 15 cr. hrs.

The Business Emphasis is a suggested series of courses that complement the horticulture major. It is not necessary to take all of the courses. The courses are taken in addition to your chosen option. The emphasis designation is not printed on the transcript. Note: You cannot double count classes between major requirements and business emphasis requirements.

MKTG 311 Principles of Marketing for Marketing Communications 3 cr.

Select one of the following:
- AGEC 361 Horticultural Business Management 3 cr.
- AFES 310 Human Resource Management 3 cr.

Select one of the following:
- CSIS 215 Information Systems for Business Management 3 cr.
- CSIS 333 Database Management Systems 3 cr.

Select two of the following:
- ACCT 231 Accounting 1 or AGEC 305 3 cr.
- AFES 310 Human Resource Management 3 cr.
- AGEC 410 Professional Selling 3 cr.
- BLAW 265 Business Law I or AGEC 345 Agricultural Law 3 cr.
- FINC 210 Personal Finance or AGEC 365
- MNGT 330 Diversity in the Workplace
- PSYC 250 Industrial and Organizational Psychology
Horticulture Minor

Horticulture Minor: 22-23 Total Credits

**Required Courses:** 19 cr. hrs.
- HORT 169 Introduction to Horticulture 3 cr.
- HORT 200 Plant Propagation 3 cr.
- HORT 310 Greenhouse Management 3 cr.
- HORT 352 Ornamental Plants 3 cr.
- BIOL 314 Plant Pathology 3 cr.

**Select one from:**
- HORT 327 Vegetable Science and Production 4 cr.
- HORT 347 Fruit Science and Production 4 cr.

**Directed electives:** 3-4 cr. hrs.
(any HORT course, consult with horticulture faculty)
Hydrogeology Minor

Hydrogeology Minor: 21 Total Credits

**Required Courses 17 cr. hrs.**
- ESM 360 Applied Hydrology and Water Quality 4 cr.
- ESM 412 Fate and Transport of Chemicals on the Environment 3 cr.
- ESM 413 Environmental Analysis 4 cr.
- GEOL 445 Hydrogeology 3 cr.
- SOIL 460 Soil Physics 3 cr.

**Electives-Select from the following: 4 cr. hrs.**
- CHEM 230 General Organic Chemistry 3 cr.
- CHEM 251 Analytical Chemistry 2 cr.
- CHEM 256 Analytical Chemistry Lab 1 cr.
- CHEM 356 Chemical Instrumentation Lab (writing intensive) 1 cr.
- BIOL 324 Microbiology 4 cr.
- GEOL 327 Geomorphology and Glacial Geology (writing intensive) 4 cr.
- GEOL 362 Stratigraphy and Sedimentation 4 cr.
- GEOL 441 Geophysics 4 cr.
- SOIL 325 Hydric Soils and Wetland Environments 3 cr.
International Studies Major

International Studies Major: 36 Total Credits
Required Courses: 21 cr. Hrs
GEOG 120 Human Geography 3 cr. (prerequisite for INTS 200)
INTS 200 Introduction to International Studies 3 cr.
AGEC 250 World Food and Population 3 cr. OR
ECON 150 International Economic Issues 3 cr.
HIST 102 History of the Modern World, 1500-present, 3 cr.
POLS 260 Introduction to International Relations 3 cr.
INTS 300 International Studies Research and Methods (forthcoming), 3 cr.
INTS 480 Senior Seminar 3 cr.

Directed Electives: 15 cr. hrs.
Select 12 credits from one of the categories below (at least 3 credits must be at the 300 level or above), excluding Education Abroad. In addition, students must complete 3 credits from the Education Abroad category, and an additional 3 credits from any category. Credit for INTS 379, INTS 389, INTS 490, or INTS 499 can be applied to a category after consultation with the chair.

1. International Politics and Economy
   ENGL 205 Literature of War: Culture and Ethics 3 cr.
   GEOG 340 Europe 3 cr.
   GEOG 342 Latin America 3 cr.
   GEOG 344 Asia and Oceania 3 cr.
   HIST 327 World War I to World War II 3 cr.
   HIST 328 World War II to the Cold War 3 cr.
   HIST 330 Revolutions in Modern History 3 cr.
   HIST 359 U.S. History from 1945 3 cr.
   HIST 367 History of U.S. Foreign Policy 3 cr.
   POLS 245 Comparative Politics 3 cr.
   POLS 344 Politics of the Developing World 3 cr.
   POLS 346 Politics of Western Europe 3 cr.
   POLS 348 Politics of East Asia 3 cr.
   POLS 364 International War and Peace 3 cr.
   POLS 365 American Foreign Policy 3 cr.
   POLS 369 Politics of the World Economy 3 cr.
   POLS 377 The United Nations (may be taken three times) 1 cr.
   SOCI 231 / ANTH 231 Sociology of Globalization 3 cr.
   SPAN 371 Business and Culture in the Hispanic World 3 cr.
   SPAN 372 Spanish for the Trades and Professions 3 cr.

2. Area Studies and Geography
   ENGL 309 European Literature 3 cr.
   ENGL 317 Modern East Asian Literature and Film
   ENGL 341 European Literature 3 cr.
   ENGL 428 Modern British Literature: 1940-Present 3 cr
   FILM 315/GERM 315 Classic and Modern German Film 3 cr.
   FILM 316 History of French Cinema 3 cr.
   FREN 341 French Civilization 3 cr.
   FREN 342 Modern France and Francophone Cultures 3 cr.
   FREN 351 Survey of French Literature to 1800 3 cr.
   FREN 352 Survey of French Literature 1800 to Present 3 cr.
   FREN 451 French Prose Fiction 3 cr.
   FREN 452 French Poetry
   FREN 453 French Drama
   GEOG 340 Europe 3 cr.
   GEOG 342 Latin America 3 cr.

Interdisciplinary Program
355 KFA
715-425-3318/3798
www.uwrf.edu/INTS

International Studies Program Committee:
Chair-Neil Kraus, Political Science; Rebecca Raham, Modern Language; Charles Corcoran, Accounting and Finance; Charles Rader, Geography and Geographic Information Science; Ogden Rogers, Social Work; David Trechter, Agricultural Economics

The primary mission of the International Studies Program is to create global awareness by providing students with the intellectual skills and substantive knowledge necessary to meet the global challenges of the 21st Century.

Program Learning Outcomes

Substantive Knowledge
By the completion of the International Studies major, graduates will be able to:
1. identify the key agricultural, economic and business, geographic, historical, social/cultural, and political condition and trends at the global level, and the linkages to the domestic and international levels; and
2. demonstrate first-hand experience with at least one other foreign culture and way of life.

Intellectual Skills
By the completion of the International Studies major, graduates will be able to:
3. collect, assess the value of, and apply information to the study of international issues;
4. evaluate critically global issues from an interdisciplinary perspective;
5. communicate effectively in written, oral, and electronic contexts;
6. organize and complete independent inquiry and analysis; and
7. demonstrate an intermediate-level competency in a second language, equivalent to at least two years' of college-level work.
GEOG 344 Asia and Oceania 3 cr.
GERM 275 Business German 3 cr.
GERM 341 German Civilization 3 cr.
GERM 342 Modern German-Speaking Cultures 3 cr.
GERM 351 Survey of German Literature to Classicism (1800) 3 cr.
GERM 352 Survey of German Literature from Classicism (1800) to Present 3 cr.
GERM 451 German Drama and Theater 3 cr.
GERM 452 German Tale, Short Story, and Novella
GERM 453 German Poetry
HIST 201 Introduction to Asian Civilization 3 cr.
HIST 202 Introduction to Latin American Civilizations 3 cr.
HIST 203 Survey of the Mediterranean
HIST 303 Women's History: Europe
HIST 318 Twentieth Century Europe 3 cr.
HIST 334 Modern China, 1800 to the Present 3 cr.
HIST 335 Modern Japan, 1600 to the Present 3 cr.
HUM 312 Arts & Ideas II: The Baroque to the Postmodern 3 cr.
POLS 346 Politics of Western Europe 3 cr.
POLS 348 Politics of East Asia 3 cr.
SPAN 341 Spanish Civilization to 1800 3 cr.
SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 1800 to Present 3 cr.
SPAN 351 Survey of Spanish Literature Siglo De Oro 3 cr.
SPAN 352 Survey of Spanish Literature 1898 to Present 3 cr.
SPAN 355 Survey of Latin American Literature, Conquest to Independence 3 cr.
SPAN 356 Survey of Latin American Literature Independence to Present 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Professions 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.

3. Culture, Society, and Language
ANTH 100 Introduction to Anthroplogy 3 cr.
ART 291 Asian Art History 3 cr.
ENGL 214 Women's Literature 3 cr.
ENGL 230 International Short Fiction 3 cr.
ENGL 232 Contemporary Drama 3 cr.
ENGL 306 Postcolonial Film and Literature 3 cr.
ENGL 309 Film of the New Europe 3 cr.
ENGL 317 Modern East Asian Literature and Cinema 3 cr.
ENGL 341 European Literature 3 cr.
ENGL 428 Modern British Literature:1940-Present 3 cr.
ENGL 441 Twentieth Century International Literature 3 cr.
ENGL 442 / FILM 442 / INTS 442 World Cinema 3 cr.
FILM 316 / FREN 316 History of French Cinema 3 cr.
FREN 341 French Civilization 3 cr.
FREN 342 Modern France and Francophone Cultures 3 cr.
FREN 351 Survey of French Literature to 1800 3 cr.
FREN 352 Survey of French Literature 1800-Present 3 cr.
FREN 451 French Prose Fiction 3 cr.
FREN 452 French Poetry 3 cr.
FREN 453 French Drama 3 cr.
GERM 275 Business German 3 cr.
GERM 341 German Civilization 3 cr.
GERM 342 Modern German-Speaking Cultures 3 cr.
GERM 351 Survey of German Literature to Classicism (1800) 3 cr.
GERM 352 Survey of German Literature Classicism (1800) to Present 3 cr.
GERM 451 German Drama and Theater 3 cr.
GERM 452 German tale, Short Story, and Novella 3 cr.
GERM 453 German Poetry 3 cr.
HIST 102 History of the Modern World, 1500-Present 3 cr.
HIST 303 Women's History: Europe 3 cr.
HIST 305 Women's History: Global Perspectives 3 cr.
HUM 312 Arts & Ideas II: The Baroque to the Postmodern 3 cr.
JOUR 460 International Communication 3 cr.
MNGT 310 Culture and Business 3 cr.
MUS 300 World Music 3 cr.
SOCI 314 / ANTH 314 Faces of Cultures 3 cr.
SOCI 316 / ANTH 316 Social and Cultural Change 3 cr.
SOCI 331 / ANTH 331 Global Perspectives on Women 3 cr.
SPAN 341 Spanish Civilization to 1800 3 cr.
SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 1800 to Present 3 cr.
SPAN 351 Survey of Spanish Literature Siglo De Oro 3 cr.
SPAN 352 Survey of Spanish Literature 1898 to Present 3 cr.
SPAN 355 Survey of Latin American Literature, Conquest to Independence 3 cr.
SPAN 356 Survey of Latin American Literature Independence to Present 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Professions 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.

4. Global Science and Development
AGEC 450 Introduction to Natural Resources Economics 3 cr.
ECON 150 International Economic Issues 3 cr. (course required for major, allowed as an elective in minor)
ECON 328 Domestic Topics in African, Asian, and Latin American Economic Development 3 cr.
ECON 329 Global Topics in African, Asian, and Latin American Economic Development 3 cr.
ECON 340 Contemporary International Trade Issues 3 cr.
ECON 342 International Finance 3 cr.
ECON 344 Comparative Economic Systems 3 cr.
ENGL 306 Postcolonial Film and Literature 3 cr.
ESM 105 Introduction to Environmental Studies 3 cr.
ESM 377 Business Ecology 3 cr.
GEOG 212 Weather and Climate 3 cr.
GEOG 214 World Patterns of Plants and Animals 3 cr.
GEOG 220 Economic Geography 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
GEOG 412 Advanced Climatology 3 cr.
GEOL 202 Oceanography 2 cr.
GEOL 269 Environmental Geology 2 cr.
GEOL 327 Geomorphology & Glacial Geology 3 cr.
GEOL 330 Meteorology 3 cr.
GEOL 441 Introduction to Geophysics 3 cr.
GEOL 445 Hydrogeology 3 cr.
HIST 330 Revolutions in Modern History 3 cr.
HIST 436 History of Colonialism and Imperialism 3 cr.
MNGT 250 Global Business & Society
MNGT 355 International Business 3 cr.
MNGT 380 International Business Seminar 3 cr.
POLS 344 Politics of the Developing World 3 cr.
POLS 348 Politics of East Asia 3 cr.
POLS 369 Politics of the World Economy 3 cr.
POLS 377 The United Nations (may be taken three times) 1 cr.
SOCI 338/ ANTH 338 Global Perspectives on Health and Disease 3 cr.

Education Abroad
The education abroad category includes those courses approved by the INTS program committee. Any exceptions to the education abroad course list will be considered only if they are requested in writing prior to applying for the program.

INTS 365 Contemporary Europe 3 cr.
INTS 370 International Study Tour 1-3 cr.
INTS 371 / POLS 371 German-Speaking Europe 3 cr.
INTS 372 / POLS 372 The Politics of Scotland 3 cr.
INTS 377 Semester Abroad 6 cr.
MODL 376 Mexico: A Cultural Experience 3 cr.
WIS 305 Scotland: Society and Globalization 3 cr.
378 within depts. Semester Abroad Research 3-6 cr.

Supporting Courses:
Students complete two years of a foreign language of their choice with a minimum overall grade point average of no less than 2.0; e.g., complete any two-year language at UWRF, complete test outs equivalent to two years, or complete two years at another accredited university and transfer the credits to UWRF.
International Studies Minor

International Studies Minor: 24 Total Credits

Required Courses: 12 cr. hrs.
- GEOG 120 Human Geography 3 cr. (prerequisite for INTS 200)
- INTS 200 Introduction to International Studies 3 cr.
- HIST 102 History of the Modern World, 1500-present, 3 cr.
- POLS 260 Introduction to International Relations 3 cr.

Directed Electives: 12 cr. hrs.
Select nine credits from one of the categories below, excluding Education Abroad. In addition, students must complete three credits chosen from any category. Credit for INTS 379, INTS 389, INTS 490, or INTS 499 can be applied to a category after consultation with the chair.

Supporting Courses:
Students complete one year of a foreign language of their choice with a minimum overall grade point average of no less than 2.0; e.g., complete any one-year language course at UWRF, complete testouts equivalent to one year, or complete one year at another accredited university and transfer the credits to UWRF.

Area Studies: Asia
- ART 291 Asian Art History 3 cr.
- ENGL 317 Modern East Asian Literature and Film
- GEOG 344 Asia and Oceania 3 cr.
- HIST 201 Introduction to Asian Civilization 3 cr.
- HIST 334 Modern China, 1800 to the Present 3 cr.
- HIST 335 Modern Japan, 1600 to the Present 3 cr.
- POLS 348 Politics of East Asia 3 cr.

Area Studies: Europe
- ENGL 309 European Literature 3 cr.
- ENGL 341 European Literature 3 cr.
- ENGL 428 Modern British Literature: 1940-Present 3 cr.
- FILM 315 / GERM 315 Classic and Modern German Film 3 cr.
- FILM 316 History of French Cinema 3 cr.
- GEOG 340 Europe 3 cr.
- HIST 203 Survey of the Mediterranean
- HIST 303 Women's History: Europe
- HIST 318 Twentieth Century Europe 3 cr.
- HUM 312 Arts & Ideas II: The Baroque to the Postmodern 3 cr.
- POLS 346 Politics of Western Europe 3 cr.
- FREN 341 French Civilization 3 cr.
- FREN 342 Modern France and Francophone Cultures 3 cr.
- FREN 351 Survey of French Literature to 1800 3 cr.
- FREN 352 Survey of French Literature 1800 to Present 3 cr.
- FREN 451 French Prose Fiction 3 cr.
- FREN 452 French Poetry
- FREN 453 French Drama
- GERM 275 Business German 3 cr.
- GERM 341 German Civilization 3 cr.
- GERM 342 Modern German-Speaking Cultures 3 cr.
- GERM 351 Survey of German Literature to Classicism (1800) 3 cr.
- GERM 352 Survey of German Literature from Classicism (1800) to Present 3 cr.
- GERM 451 German Drama and Theater 3 cr.
- GERM 452 German Tale, Short Story, and Novella
- GERM 453 German Poetry
- SPAN 341 Spanish Civilization to 1800 3 cr.
SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 351 Survey of Spanish Literature Siglo De Oro 3 cr.
SPAN 352 Survey of Spanish Literature 1898 to Present 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.

**Area Studies: Latin America**
GEOG 342 Latin America 3 cr.
HIST 202 Introduction to Latin American Civilizations 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 1800 to Present 3 cr.
SPAN 355 Survey of Latin American Literature, Conquest to Independence 3 cr.
SPAN 356 Survey of Latin American Literature Independence to Present 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Professions 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.

**Conflict and Peace**
ENGL 205 Literature of War: Culture and Ethics 3 cr.
HIST 327 World War I to World War II 3 cr.
HIST 328 World War II to the Cold War 3 cr.
HIST 330 Revolutions in Modern History 3 cr.
HIST 359 U.S. History from 1945 3 cr.
HIST 367 History of U.S. Foreign Policy 3 cr.
POLS 364 International War and Peace 3 cr.
POLS 365 American Foreign Policy 3 cr.
POLS 377 The United Nations (may be taken three times) 1 cr.

**Culture**
ANTH 100 Introduction to Anthropology 3 cr.
ART 291 Asian Art History 3 cr.
ENGL 214 Women's Literature 3 cr.
ENGL 230 International Short Fiction 3 cr.
ENGL 232 Contemporary Drama 3 cr.
ENGL 306 Postcolonial Film and Literature 3 cr.
ENGL 309 Film of the New Europe 3 cr.
ENGL 317 Modern East Asian Literature and Cinema
ENGL 341 European Literature 3 cr.
ENGL 426 Modern British Literature: 1940-Present 3 cr.
ENGL 441 Twentieth Century International Literature 3 cr.
ENGL 442 / FILM 442 / INTS 442 World Cinema 3 cr.
FILM 315 / GERM 315 Classic and Modern German Film 3 cr.
FILM 316 / FREN 316 History of French Cinema 3 cr.
FREN 341 French Civilization 3 cr.
FREN 342 Modern France and Francophone Cultures 3 cr.
FREN 351 Survey of French Literature to 1800 3 cr.
FREN 352 Survey of French Literature 1800 to Present 3 cr.
FREN 451 French Prose Fiction 3 cr.
FREN 452 French Poetry
FREN 453 French Drama
GERM 275 Business German 3 cr.
GERM 341 German Civilization 3 cr.
GERM 342 Modern German-Speaking Cultures 3 cr.
GERM 351 Survey of German Literature to Classicism (1800) 3 cr.
GERM 352 Survey of German Literature from Classicism (1800) to Present 3 cr.
GERM 451 German Drama and Theater 3 cr.
GERM 452 German Tale, Short Story, and Novella
GERM 453 German Poetry
HIST 102 History of the Modern World, 1500-Present 3 cr.
HIST 303 Women's History: Europe 3 cr.
HIST 305 Women's History: Global Perspectives 3 cr.
HUM 312 Arts and Ideas II: The Baroque to the Postmodern
JOUR 460 International Communication 3 cr.
MNGT 310 Culture and Business 3 cr.
MUS 300 World Music 3 cr.
SOC 314 / ANTH 314 Faces of Culture 3 cr.
SOC 316 / ANTH 316 Social and Cultural Change 3 cr.
SOC 331 / ANTH 331 Global Perspectives on Women 3 cr.
SPAN 341 Spanish Civilization to 1800 3 cr.
SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 1800 to Present 3 cr.
SPAN 351 Survey of Spanish Literature Siglo De Oro 3 cr.
SPAN 352 Survey of Spanish Literature 1898 to Present 3 cr.
SPAN 355 Survey of Latin American Literature, Conquest to Independence 3 cr.
SPAN 356 Survey of Latin American Literature Independence to Present 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Professions 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.

Development
AGEC 450 Introduction to Natural Resources Economics 3 cr.
ECON 150 International Economic Issues 3 cr. (course required for major, allowed as an elective in minor)
ECON 328 Domestic Topics in African, Asian, and Latin American Economic Development 3 cr.
ECON 329 Global Topics in African, Asian, and Latin American Economic Development 3 cr.
ECON 340 Contemporary International Trade Issues 3 cr.
ECON 342 International Finance 3 cr.
ECON 344 Comparative Economic Systems 3 cr.
ENGL 306 Postcolonial Film and Literature 3 cr.
ESM 377 Business Ecology 3 cr.
GEOG 220 Economic Geography 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
HIST 330 Revolutions in Modern History 3 cr.
HIST 436 History of Colonialism and Imperialism 3 cr.
MKTG 355 International Marketing 3 cr.
MNGT 250 Global Business & Society
MNGT 355 International Business 3 cr.
MNGT 380 International Business Seminar 3 cr.
POLS 344 Politics of the Developing World 3 cr.
POLS 348 Politics of East Asia 3 cr.
POLS 369 Politics of the World Economy 3 cr.
POLS 377 The United Nations (may be taken three times) 1 cr.

Global Science and Environment
AGEC 450 Introduction to Natural Resources Economics 3 cr.
ESM 105 Introduction to Environmental Studies 3 cr.
ESM 377 Business Ecology 3 cr.
GEOG 212 Weather and Climate 3 cr.
GEOG 214 World Patterns of Plants and Animals 3 cr.
GEOG 412 Advanced Climatology 3 cr.
GEOL 202 Oceanography 2 cr.
GEOL 269 Environmental Geology 2 cr.
GEOL 327 Geomorphology & Glacial Geology 3 cr.
GEOL 330 Meteorology 3 cr.
GEOL 441 Introduction to Geophysics 3 cr.
GEOL 445 Hydrogeology 3 cr.
SOCI 338 / ANTH 338 Global Perspectives on Health and Disease 3 cr.

International Relations
GEOG 340 Europe 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 344 Asia and Oceania 3 cr.
HIST 328 World War II to the Cold War 3 cr.
HIST 330 Revolutions in Modern History 3 cr.
HIST 367 History of U.S. Foreign Policy 3 cr.
POLS 245 Comparative Politics 3 cr.
POLS 344 Politics of the Developing World 3 cr.
POLS 346 Politics of Western Europe 3 cr.
POLS 348 Politics of East Asia 3 cr.
POLS 364 International War and Peace 3 cr.
POLS 365 American Foreign Policy 3 cr.
POLS 369 Politics of the World Economy 3 cr.
POLS 377 The United Nations (may be taken three times) 1 cr.
SOCI 231 / ANTH 231 Sociology of Globalization 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Professions 3 cr.

Education Abroad
The education abroad category includes those courses approved by the INTS program committee.
Any exceptions to the education abroad course list will be considered only if they are requested in writing prior to applying for the program.

INTS 365 Contemporary Europe 3 cr.
INTS 370 International Study Tour 1-3 cr.
INTS 371 / POLS 371 German-Speaking Europe 3 cr.
INTS 372 / POLS 372 The Politics of Scotland 3 cr.
INTS 377 Semester Abroad 6 cr.
MODL 376 Mexico: A Cultural Experience 3 cr.
WIS 305 Scotland: Society and Globalization 3 cr.
378 within depts. Semester Abroad Research 3-6 cr.
Journalism Major

Journalism Major 43 cr. hrs.
Core Requirements: 30 cr. hrs.
JOUR 110 Principles of Journalism 6 cr.
JOUR 201 Information Gathering 3 cr.
JOUR 202 Print News Writing
OR JOUR 203 Broadcast News Writing 3 cr.
JOUR 240 Introduction to Visual Communication 3 cr.
JOUR 340 Media Management for News Entrepreneurs 3 cr.
JOUR 404 News Service 3 cr.
JOUR 465 Mass Communication Law 3 cr.

Two of the following production courses: 4 cr.
JOUR 221 Radio News Production 2 cr.
JOUR 222 TV News Photography 2 cr.
JOUR 224 Online Media Production 2 cr.

Directed Electives, selected from the following: 9 cr.
JOUR 250 First Amendment in American Society 3 cr.
JOUR 266 Photojournalism 3 cr.
JOUR 269 Multimedia Storytelling 3 cr.
JOUR 289 Special Topics in Journalism and Mass Communication 1-3 cr.
JOUR 302 History of Documentary
JOUR 303 Documentary Production 3 cr.
JOUR 305 News in the Movies
JOUR 315 Race, Class and News
JOUR 316 Media Ethics
JOUR 319 The Media and American Politics
JOUR 345 History of Mass Communication
JOUR 350 Mass Communication in the Global Age 3 cr.
JOUR 360 Opinion Writing 3 cr.
JOUR 378 Semester Abroad Research 3-6 cr.
JOUR 379 Internship in Journalism 1-3 cr.
JOUR 389 Special Topics in Journalism and Mass Communication 1-3 cr.
JOUR 455 Mass Media and Society
JOUR 489 Special Topics in Journalism and Mass Communication 1-3 cr.
JOUR 490 Readings in Journalism and Mass Communication 1-3 cr.
JOUR 499 Independent Projects in Journalism and Mass Communication 1-3 cr.

Required Supporting Course.
JOUR 101 Introduction to Mass Communication 3 cr.
(Note that the course also fulfills the General Education ethical citizenship requirement.)

Department of Journalism
310 North Hall
715-425-3169
www.uwrf.edu/JOUR/
Sandra Ellis-chair, Patricia Berg, Andris Straumanis.
Adjunct: Richard Burgsteiner

General Education
Journalism courses (other than the required supporting course, JOUR 101) cannot double count in both the journalism major and general education. Students must take courses other than journalism to meet their general education goals.

Journalism and Secondary Education.
Students interested in teaching journalism and/or serving as a newspaper or yearbook advisor at the secondary school level may major or minor in journalism, and must take a second teaching area major such as English or broad area studies. The student should consult with the dean of the College of Education and Professional Studies for specific teaching requirements.

Marketing Communications Major.
Journalism is one of seven academic departments participating in the interdisciplinary major of Marketing Communications.

International Studies Major.
Journalism offers a directed elective (JOUR 460) that may count toward an International Studies major.

Film Studies Minor.
Journalism is one of the departments from which courses may be taken for the Film Studies minor.

Professional Writing Minor.
Journalism is one of the subject fields included in the Department of English Professional Writing minor.
Journalism Studies Minor

Journalism Studies Minor 24 cr.

Core Requirements 15 cr.
JOUR 110 Principles and Ethics of Journalism 6 cr.
JOUR 240 Introduction to Visual Communication 3 cr.
JOUR 340 Media Management for News Entrepreneurs 3 cr.
JOUR 465 Mass Communication Law 3 cr.

Directed Electives: Select three from the following: 9 cr.
JOUR 250 The First Amendment in American Society 3 cr.
JOUR 302 History of Documentary 3 cr.
JOUR 305 News in Popular Culture 3 cr.
JOUR 315 Race, Class and News 3 cr.
JOUR 316 Media Ethics 3 cr.
JOUR 319 The Media and American Politics 3 cr.
JOUR 345 History of Mass Communication 3 cr.
JOUR 350 Mass Communication in the Global Age 3 cr.
JOUR 455 Mass Media and Society 3 cr.

Required supporting course: 3 cr.
JOUR 101 Introduction to Mass Communication 3 cr.

(Note that the course also fulfills the General Education ethical citizenship requirement.)
Criminology Major

Criminology Major - 36 Total Credits

Core Requirements 18 cr. hrs.
CRIM 130 Intro. to Crime, Law, and Society (required supporting – counts Gen. Ed.)
SOCI 200 Sociological Inquiry 3 cr.
CRIM 201 Theories of Crime 3 cr.
CRIM 210 Criminal Behavior 3 cr.
SOCI 250 Social Statistics 3 cr.
SOCI 300 Research Methods 3 cr.
SOCI 480 Senior Seminar 3 cr.

Directed Electives: 18 cr. hrs.
At least 6 credits from Criminal Behavior
SOCI 218 Deviant Behavior 3 cr.
CRIM 311 Juvenile Crime and Justice 3 cr.
CRIM 312 Gangs and Gang Behavior 3 cr.
CRIM 313 White Collar Crime 3 cr.
CRIM 321 Race and Crime 3 cr.
CRIM 389 Special Topics in Crime and Justice 3 cr.
CRIM 490 Readings in Criminology 1-2 cr.
CRIM 499 Independent Study in Criminology 1-2 cr.

At least 6 credits from Crime and Justice
CRIM 241 Victimology 3 cr.
CRIM 341 Restorative Justice 3 cr.
CRIM 351 Women, Crime, and Justice 3 cr.
POLS 359 Criminal Justice Politics and Policy 3 cr.
CRIM 379 Internship in C. and J. 6–12 cr.
CRIM 399 Law Enforcement Cert. 6–12 cr.
CRIM 441 Trends/Issues in Incarceration 3 cr.
CRIM 442 Alternatives to Incarceration 3 cr.
Management

Business Administration Major-Management

Lower Division 21 cr. hrs.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
ACCT 231 Principles of Accounting I 3 cr.
ACCT 232 Principles of Accounting II 3 cr.
CSIS 215 Information Systems for Business Management 3 cr.
ECON 226 Introduction to Statistics 3 cr.
or MATH 226 Fundamentals of Statistics
BLAW 265 Business Law I 3 cr.

Upper Division 18 cr. hrs.
MNGT 300 Management and Organizational Behavior 3 cr.
MKTG 310 Principles of Marketing 3 cr.
FINC 345 Managerial Finance 3 cr.
ECON 326 Statistical Methods for Economics and Business 3 cr.
MNGT 361 Operations Management 3 cr.
MNGT 485 Strategic Management 3 cr.

Required Management Courses: 9 cr. hrs.
MNGT 320 Human Resource Management 3 cr.
MNGT 340 Ethical Leadership 3 cr.
MNGT 355 International Business 3 cr.

Management Electives: 9 cr. hrs.
Choose from:
MNGT 318 Operations Research 3 cr.
MNGT 330 Managing Workplace Diversity 3 cr.
MNGT 341 Logistics 3 cr.
MNGT 350 Decision Making 3 cr.
MNGT 365 Business Process Management 3 cr.
MNGT 378 Study Abroad 3-6 cr.
MNGT 379 Internship 3 cr.
MNGT 380 International Business Seminar 3 cr.
MNGT 389 Special Topics .5-3 cr.
MNGT 430 Small Business Management 3 cr.
MNGT 480 Human Resource Management Seminar 3 cr.
MNGT 499 Independent Study 1-3 cr.
MKTG 315 Retail Management 3 cr.

Support Electives: 6 cr. hrs.
Choose supporting courses appropriate to area of interest with approval of adviser.

Required Supporting Courses: 7 - 8 cr. hrs.
A. CBE 100 CBE First Year Seminar to CBE 2 cr.
CBE 300 Professional Development 1 cr.
B. COMS 101 Fundamentals of Oral Communication 3 cr.
(waived if taken as GenEd)
or ENGL 266 Business Writing 3 cr.
C. ECON 205 Quantitative Analysis 3 cr.
or MATH 156 Calculus for Business and Social Sciences 3 cr.
or MATH 166 Calculus I 4 cr.

General Education Requirements: 38 cr. hrs.
General Electives to reach 120 credits (minimum to graduate)

Undergraduate Business Administration students may not transfer more than six credits of 300/400 level courses from non-AACSB accredited programs and institutions into the major.
Marketing

Business Administration Major—Marketing

Lower Division 21 cr. hrs.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
ACCT 231 Principles of Accounting I 3 cr.
ACCT 232 Principles of Accounting II 3 cr.
CSIS 215 Information Systems for Business Management 3 cr.
ECON 226 Introduction to Statistics 3 cr.
or MATH 226 Fundamentals of Statistics
BLAW 265 Business Law I 3 cr.

Upper Division 18 cr. hrs.
MNGT 300 Management and Organizational Behavior 3 cr.
MKTG 310 Principles of Marketing 3 cr.
FINC 345 Managerial Finance 3 cr.
ECON 326 Statistical Methods for Economics and Business 3 cr.
MNGT 361 Operations Management 3 cr.
MNGT 485 Strategic Management 3 cr.

General Marketing emphasis

Required Marketing Courses 12 cr. hrs.
MKTG 312 Consumer Behavior 3 cr.
MKTG 355 International Marketing 3 cr.
MKTG 365 Marketing Research 3 cr.
MKTG 445 Marketing Strategy 3 cr.

Marketing Electives 9 cr. hrs.
Choose from:
MKTG 315 Retail Management 3 cr.
MKTG 325 Relationship Selling 3 cr.
MKTG 330 Promotional Strategy 3 cr.
MKTG 334 Internet and Direct Marketing 3 cr.
MKTG 342 Services Marketing 3 cr.
MKTG 352 Business to Business Marketing 3 cr.
MKTG 379 Internship in Marketing 3 cr.
MKTG 499 Independent Study 1-3 cr.
MNGT 450 e-Commerce 3 cr.

Support Electives: 6 cr. hrs.
Choose from:
CBE 370 International Study Tour
COMS 213 Intercultural Communications 3 cr.
COMS 306 Nonverbal Communication 3 cr.
COMS 315 Communication and Social Change 3 cr.
CSIS 333 Database Management Systems 3 cr.
ECON 301 Intermediate Micro 3 cr.
ECON 302 Intermediate Macro 3 cr.
ECON 305 Money and Banking 3 cr.
ECON 316 Managerial Economics 3 cr.
ECON 324 Labor Economics 3 cr.
ECON 340 Contemporary International Trade 3 cr.
ECON 342 International Finance 3 cr.
ECON 426 Forecasting and Econometrics 3 cr.

Department of Management and Marketing
124 South Hall
715-425-3335
www.uwrf.edu/CBE/

Darryl Miller-Chair, Joy Benson, Brian Huffman, Claire McCarty, Ozcan Kilic, Marina Onken, Stacy Vollmers, Wei Zheng

The vision of the College of Business and Economics is to be a community of choice and the regional leader in the acquisition, study, application and sharing of business, economics and information technology knowledge. Consistent with this vision, the college is accredited by the Association to Advance Collegiate Schools of Business (AACSB) International.
ESM 377 Business Ecology 3 cr.
FINC 314 Risk Management and Insurance 3 cr.
FINC 350 Real Estate 3 cr.
FINC 355 Multinational Financial Management 3 cr.
GEOG 250 Introduction to Cartography and GIS 3 cr.
MARC 370 Public Relations 3 cr.
MNGT 318 Operations Research 3 cr.
MNGT 330 Managing Workplace Diversity 3 cr.
MNGT 340 Ethical Leadership 3 cr.
MNGT 355 International Business 3 cr.
MNGT 362 Logistical Management 3 cr.
MNGT 430 Small Business Management 3 cr.
PHIL 304 Business Ethics 3 cr.
POLS 256 Public Policymaking 3 cr.
POLS 260 Introduction to International Relations 3 cr.
PSYC 265 Social Psychology 3 cr.
PSYC 320 Psychology of Personality 3 cr.

Professional Sales emphasis

Required Sales Courses 12 cr. hrs.
MKTG 325 Relationship Selling 3 cr.
MKTG 326 Negotiation Techniques 3 cr.
MKTG 327 Sales Analytics 3 cr.
MKTG 425 Advanced Selling Techniques 3 cr.

Sales Electives 6 cr. hrs.
Choose from:
MKTG 329 Sales Force Management 3 cr.
MKTG 379 Internship 3 cr.
MKTG 312 Consumer Behavior 3 cr.
MKTG 352 Business to Business Marketing 3 cr.
MKTG 445 Marketing Strategy 3 cr.
MKTG 315 Retail Management 3 cr.
MKTG 330 Promotional Strategy 3 cr.
MKTG 334 Internet and Direct Marketing 3 cr.
MKTG 342 Services Marketing 3 cr.
MKTG 355 International Marketing 3 cr.
MKTG 499 Independent Study 1-3 cr.
MNGT 450 e-Commerce 3 cr.

Support Electives 9 cr. hrs.
Choose from:
COMS 211 Public Speaking 3 cr.
COMS 213 Intercultural Communication 3 cr.
COMS 306 Nonverbal Communication 3 cr.
COMS 308 Small Group Communication 3 cr.
COMS 312 Argumentation 3 cr.
COMS 318 Communication and Leadership 3 cr.
MARC 311 Persuasion 3 cr.
PHIL 304 Business Ethics 3 cr.
ACCT 356 Managerial Cost Accounting 3 cr.
MNGT 355 International Business 3 cr.
MNGT 330 Managing Workplace Diversity 3 cr.
MNGT 340 Ethical Leadership 3 cr.

Required Supporting Courses: 7 - 8 cr hrs.
A. CBE 100 CBE First Year Seminar 2 cr.
CBE 300 Professional Development 1 cr.

B. COMS 101 Fundamentals of Oral Communication 3 cr.
   (waived if taken as GenEd)
   or ENGL 266 Business Writing 3 cr.

C. ECON 205 Quantitative Analysis 3 cr.
   or MATH 156 Calculus for Business and Social Sciences 3 cr.
   or MATH 166 Calculus I 4 cr.

**General Education Requirements:** 38 cr. hrs.

**General Electives to reach 120 credits (minimum to graduate)**

Undergraduate Business Administration students may not transfer more than six credits of 300/400 level courses from non-AACSB accredited programs and institutions into the major.
Marketing Communications Major

Core Requirements

Core Requirements: 24 cr. hrs.
ART 121 2D Design Foundation 3 cr.
MARC 100 Writing for the Mass Media 3 cr.
MARC 200 Introduction to Marketing Communications 3 cr.
MARC 480 Seminar in Theory and Methods of Marketing Communications 3 cr.
MKTG 311 Principles of Marketing for Marketing Communications Majors 3 cr.
MARC 311 Persuasion 3 cr.

Choose one or more of the following internship courses: 3 cr. hrs.
MARC 379 Internship in Marketing Communications
or MARC 279 Cooperative Education/Directed Work Experience
or any CAFES department 270/370 internship
MARC 279 / MARC 379 may be combined and/or repeated for a total of 4 credit hours.

Electives

Directed Electives: 18 cr. hrs.

Writing Electives—Select one from:
ENGL 266 Business Writing 3 cr.
ENGL 367 Technical Writing 3 cr.
ENGL 371 Proposal Writing: Change Through Rhetoric 3 cr.
ENGL 374 Cyberliteracy and Writing on the Web 3 cr.
ENGL 381 Screenwriting 3 cr.
ENGL 387 Technical and Professional Editing 3 cr.

Visual Electives—Select one from:
ART 235 Intro to Photography 3 cr.
ART 241 Graphic Design 1 3 cr.
ART 242 Design Studio 1 3 cr.
ART 243 Typography 1 3 cr.
JOUR 222 Intro to Video Storytelling 2 cr.
JOUR 240 Introduction to Visual Communication 3 cr.
SASA 112 Intro to Storytelling with Digital Media 3 cr.
SASA 160 TV Studio Production 3 cr.
SASA 260 Electronic Field Production 3 cr.
SASA 360 Advanced Electronic Field Production 3 cr.

Oral Communication Elective—Select one from:
COMS 211 Public Speaking 3 cr.
COMS 216 Communication in the Interview 3 cr.
COMS 312 Argumentation and Decision Making 3 cr.
COMS 416 Training and Development in Organizations
MARC 207 Listening Skills 3 cr.

Marketing/Promotion Electives—Select one from:
AGEC 350 Agricultural Product Marketing 3 cr.
AGEC 368 Professional Selling 3 cr.
MKTG 335 MARC Sales Promotion and Event Planning 3 cr.
MARC 360 Advertising Principles 3 cr.
MARC 370 Principles of Public Relations 3 cr.

Other Electives:
Select from the following courses or consult with department chair or adviser for additional elective
choices to total 42 credits required in the major:

Please check the course descriptions in this catalog for course prerequisites.

AGED 230 Agricultural News Writing 3 cr.
COMS 316 Organizational Communication 3 cr.
JOUR 340 Media Management for News Entrepreneurs 3 cr.
MARC 289 Special Topics in Marketing Communications 3 cr.
MARC 250 MARC Ethics 3 cr.
MARC 320 Evaluating MARC 3 cr.
MARC 330 MARC for Non-profit Organizations 3 cr.
MARC 335 MARC Sales Promotion and Event Planning (if not chosen in Category 6) 3 cr.
MARC 340 MARC Sports Marketing 3 cr.
MARC 230 Intro to Social Media MARC, 3 cr.
MARC 345 MARC Campaigns 3 cr.
MARC 350 MARC Branding 3 cr.
MARC 360 Advertising Principles 3 cr.
MARC 361 Advertising Methods 3 cr.
MARC 370 Introduction to Public Relations 3 cr.
MARC 371 Public Relations Methods 3 cr.
MARC 389 Special Topics in Marketing Communications 3 cr.
MKTG 315 Retail Management 3 cr.
MKTG 325 Sales Effectiveness 3 cr.
MKTG 334 Internet and Direct Marketing 3 cr.
MKTG 342 Services Marketing 3 cr.
MKTG 355 International Marketing 3 cr.
MKTG 365 Marketing Research 3 cr.
PSYC 250 Industrial and Organizational Psychology 3 cr.
PSYC 361 Psychological Foundations of Employee Selection 3 cr.
PSYC 362 Psychological Foundations of Employee Training 3 cr.

Supporting Courses
Required Supporting Courses: 9 credits
MATH 216 Elementary Statistical Concepts
OR MATH 126, Activities in Math
OR ECON 226, Introduction to Statistics
OR MATH 226, Fundamentals of Statistics
OR PSYC 201 Behavioral Statistics
OR AGEC 320, Statistical Methods
OR ANSC 341 Biometrics
JOUR 101 Introduction to Mass Communications
COMS 116 Business and Professional Communication (CAS/CBE);

Other requirements:

Portfolio: Prior to graduation, students must complete and present a professional portfolio for approval to the marketing communications unit.

Internship: An internship or approved directed work experience is required. It is the student's responsibility to originate an internship or directed work experience that meets marketing communications departmental criteria. Internships and directed work experiences must be approved by the Marketing communications internship supervisor before the work is done.

GPA: Students must maintain a 2.50 grade point average in the Marketing Communications Major.
Mathematics Major
Mathematics Major - Liberal Arts

Mathematics Major - Liberal Arts: 37 Total Credits

Required Courses: 19 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 385 Writing in Mathematics 1 cr.
or MATH 495 Undergraduate Research in Mathematics 1 cr.

Directed Electives: 18 cr. hrs.
Select at least six mathematics courses numbered higher than 300, excluding MATH 305 and 436

Required Supporting Courses: 3 cr. hrs.
Select one from:
MATH 205 Mathematical Programming 3 cr.
or
PHYS 211 Scientific Program 3 cr.
or
CSIS 162 Programming II 3 cr.

Mathematics Major - Education
Professional Education Courses 39 cr. hrs.
TED 120 Introduction to Education and Instructional Technology 3 cr.
TED 212 Educational Psychology 5 cr.
TED 252 Foundations of Multicultural Education (d) 3 cr.
TED 420 School and Society 3 cr.
TED 438 Techniques in Middle/Sec. Education: Mathematics 3 cr.
TED 464 Content Area Literacy in Middle & Secondary School Mathematics 3 cr.
TED 467 Management Strategies for the Secondary Mathematics Classroom 3 cr.
SPED 330 Exceptional Child 3 cr.
TED 472 Student Teaching - Initial 12 cr.
or
TED 479 K-12 Internship Teaching 12 cr.
or
TED 474 Student Teaching - COST 12 cr.

TED 414 Development of the Transescent 4 cr.

Major Requirements 36 Total Credits
Required Courses: 30 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 351 Abstract Algebra 3 cr.
MATH 356 Probability 3 cr.
MATH 411 Geometry 3 cr.
MATH 316 Mathematical Modeling 3 cr.
or
MATH 326 Applied Statistics 3 cr.
or
MATH 357 Mathematical Statistics 3 cr.

Directed Electives: 6 cr. hrs.
Select at least two mathematics courses numbered higher than 300, excluding MATH 305, 371, 379 and 436

Required Supporting Courses: 5 cr. hrs.
MATH 436 History of Mathematics (writing intensive) 2 cr.
MATH 305 Integrating Technology in Teaching Secondary Mathematics 3 cr
Mathematics Minor

Mathematics Minor - Liberal Arts
Mathematics Minor - Liberal Arts: 24 Total Credits

Required Courses: 18 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.

Directed Electives: 6 cr. hrs.
Select at least two mathematics courses numbered 300 or higher excluding MATH 305 and 436

Required Supporting Courses: 3 cr. hrs.
Select one from
MATH 205 Mathematical Programming 3 cr.
or PHYS 211 Scientific Program 3 cr.
or CSIS 162 Programming II 3cr.

Mathematics Minor - Education
Early Adolescence - Adolescence
Mathematics Minor - Education: 24 Total Credits

Required Courses: 21 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 326 Applied Statistics 3 cr.
MATH 411 Geometry 3 cr.

Directed Electives: 3 cr. hrs.
Select one mathematics course numbered 266 or higher excluding MATH 279, 305, 371, 379 and 436

Required Supporting Courses: 5 cr. hrs.
MATH 305 Integrating Technology in Teaching Mathematics 3 cr.
MATH 436 History of Mathematics 2 cr.

Professional Courses (in addition to the major) 6 cr. hrs.
TED 438 Techniques in Middle/Sec. Education: Mathematics 3 cr.
TED 414 Development of the Transescent 3 cr.

Mathematics Minor - Middle Childhood - Early Adolescence
For Elementary Education Majors
Minor Requirements 22-23 Total Credits

Required Courses: 16 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 216 Elementary Statistical Concepts 3 cr.
MATH 236 Discrete Mathematics 4 cr.
MATH 248 Elementary Mathematics from an Advanced Standpoint 3 cr.
MATH 436 History of Mathematics 2 cr.

Directed Electives: 6-7 cr. hrs.
select two of the following
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 260 LOGO for Teachers 3 cr.
MATH 306 Number Theory 3 cr.
MATH 336 Combinatorics and Graph Theory 3 cr.
MATH 351 Abstract Algebra 3 cr.
MATH 356 Probability 3 cr.
MATH 361 Symbolic Logic 3 cr.
MATH 411 Geometry 3 cr.

**Mathematics Minor - Business or Social Science**

**Mathematics Minor - Business or Social Science: 24 Total Credits**

**Required Courses: 18 cr. hrs.**
- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- MATH 236 Discrete Mathematics 4 cr.
- MATH 256 Linear Algebra 3 cr.
- MATH 226 Fundamental of Statistics 3 cr.
  or MATH 326 Applied Statistics

**Directed Electives: 6 cr. hrs.**
Select two mathematics courses numbered 300 or higher, excluding MATH 305, MATH 326 and MATH 436
Military Science and Leadership Minor

Military Science and Leadership Minor: 23-27 Credits

Military Science Area of Emphasis - 8-10 cr. hrs.
MSL 101 Leadership and Personal Development 2 cr.
MSL 102 Introduction to Tactical Leadership 2 cr.
MSL 201 Innovative Team Leadership 3 cr.
MSL 202 Foundations of Tactical Leadership 3 cr.

For students who have completed Basic Military Training or the Leaders Training Course
MSL 301 Adaptive Team Leadership 4 cr.
MSL 302 Leadership Under Fire 4 cr.

Communication Area of Emphasis - 3 cr. hrs.
Select one course
CSTA 101 Fundamentals of Oral Communication 3 cr.
CSTA 116 Business and Professional Communication 3 cr.

History Area of Emphasis - 3 cr. hrs.
Select one course
HIST 327 WWI to WWII 3 cr.
HIST 328 WWII to Cold War 3 cr.
HIST 332 The Islamic Middle East to 1500 3 cr.
HIST 358 United States History 1890-1945 3 cr.
HIST 359 United States History From 1945 3 cr.

Human Society Area of Emphasis - 6-8 cr. hrs.
Select two courses
ANTH 100 Introduction to Anthropology 3 cr.
CHIN 102 Beginning Chinese II 4 cr.
ETHN 200 Ethnic Studies 3 cr.
FREN 102 Beginning French II 4 cr.
GEOG 120 Human Geography 3 cr.
GERM 102 Beginning German II 4 cr.
INTS 200 Introduction to International Studies 3 cr.
JAPN 102 Beginning Japanese II 4 cr.
PHIL 240 Social Ethics 3 cr.
PHIL 245 Eastern Religions and Islam 3 cr.
POLS 256 Public Policy Making 3 cr.
POLS 260 Introduction to International Relations 3 cr.
POLS 364 International War and Peace 3 cr.
POLS 365 American Foreign Policy 3 cr.
POLS 367 History of United States Foreign Policy 3 cr.
SOCI 208 Sociology of Diversity 3 cr.
SPAN 102 Beginning Spanish II 4 cr.

Leadership and Management Area of Emphasis - 3 cr. hrs.
Select one course
MNGT 300 Management and Org Behavior 3 cr.
MNGT 330 Managing Workplace Diversity 3 cr.
MNGT 340 Ethical Leadership 3 cr.
PHIL 230 Logical Reasoning 3 cr.
POLS 225 Public Administration 3 cr.
Modern Language Major

Spanish

Modern Language Major - Liberal Arts: 34 Total Credits

Spanish Option-Liberal Arts

Required Courses: 19 cr. hrs.

- SPAN 102 Beginning Spanish II 4
- SPAN 201 Intermediate Spanish I 3
- SPAN 202 Intermediate Spanish II 3
- SPAN 301 Conversation and Composition I 3
- SPAN 302 Conversation and Composition II 3
- SPAN 401 Advanced Spanish Communication 3

Directed Electives: 15 cr. hrs

Select 6 credits from:

- SPAN 341 Spanish Civilization to 1800 3
- SPAN 342 Spanish Civilization 1800 to Present 3
- SPAN 345 Latin American Civilization to 1800 3
- SPAN 346 Latin American Civilization 1800 to Present 3
- MODL 376 Mexico: A Culture Experience 3
OR
- MODL 379 Internship in Modern Language 2-3

Note: Majors may take either

MODL 379 or MODL 376, but not both

Select 6 credits from either Category A or B:

Category A:

- SPAN 351 Survey of Spanish Literature -Siglo de Oro 3
- SPAN 352 Survey of Spanish Literature-Generation of 1898 to Present 3
- SPAN 355 Survey of Latin American Literature- Conquest to Independence 3
- SPAN 356 Survey of Latin American Literature- Independence to Present 3

Category B:

- SPAN 371 Business and Culture in the Hispanic World 3
- SPAN 372 Spanish for the trades and Professions 3
- SPAN 373 Spanish Translation for the Professions 3
- SPAN 374 Spanish Professional Writing 3

Select 3 credits from:

- SPAN 452 Advanced Spanish Literature 3
- SPAN 455 Advanced Latin American Literature 3

Spanish Option-Education

Complete Spanish Major Liberal Arts Option program above

Required Supporting courses not part of major: 7 cr. hrs.

- SPAN 350 Spanish Phonetics 3
- TED 437 Techniques of Middle/Secondary Education: Modern Language 2
- TED 448 Techniques of Elementary Education: Modern Language 2

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Department of Modern Language
284 Kleinpell Fine Arts
715-425-3121
www.uwrf.edu/MODL/

- Marshall Toman, Chair
- Cecilia Bustamante
- Juan Carlos Chaves
- Rebecca Raham
- Magara Maeda
- Kaishan Kong
- Julie Kovacic
- Gretchen Toman
- Daniela Goldfine

Emeriti:
- Kristine Butler
- Peter Johanssen
- Terence Mannetter
- Sandra Soares

The Modern Language Department offers a major in Modern Language-Spanish. This program leads to a B.A. or B.S. degree in liberal arts or a B.S. degree in secondary education. Additional options include: minors in Spanish and Asian Studies (interdisciplinary) as well as two years of Chinese and Japanese coursework.

Students who have studied a modern language in high school should take the Wisconsin Modern Language Placement Test, offered in spring Regional Testing and during all registration periods. Students may test out of up to fourteen credits. Test-out credits are not granted until the student completes the next level course with the grade of B- or better.

General Education Requirements

BA and BS Liberal Arts majors as listed for CAS;
BS Education majors as listed for CEPS.
Bachelor of Arts or Bachelor of Science - Liberal Arts Music

**Music Major - Liberal Arts (minor required):** 46 Total Credits

**Requirements:** 35 cr. hrs.
- MUS 130 Music Theory and Ear Training I 4 cr.
- MUS 131 Music Theory and Ear Training II 4 cr.
- MUS 230 Music Theory and Ear Training III 4 cr.
- MUS 231 Music Theory and Ear Training IV 4 cr.
- MUS 234 Music History and Literature I 4 cr.
- MUS 235 Music History and Literature II 4 cr.
- MUS 333 20th Century Music 3 cr.
- MUSA 100 level Applied Music-credits must be in the same area. 4 cr.
- MUSE Music Ensembles 4 cr.

**Directed Electives:** 11 cr. hrs.
- MUSA or MUSE Performance credits (Applied Music or Ensembles) 4 - 6 cr.
- Music Pedagogy, Techniques Course(s) or Academic Music course 200 level and above 4 - 6 cr.

**Bachelor of Music Education**

**Music Education Major 69 Total Credits**

**Requirements:** 36 cr. hrs.
- MUS 130 Music Theory and Ear Training I 4 cr.
- MUS 131 Music Theory and Ear Training II 4 cr.
- MUS 230 Music Theory and Ear Training III 4 cr.
- MUS 231 Music Theory and Ear Training IV 4 cr.
- MUS 234 Music History and Literature I 4 cr.
- MUS 235 Music History and Literature II 4 cr.
- MUS 240 Piano Proficiency - Examination: MUS 140 0 cr.
  (Class Piano) must be taken until 240 is passed; 140 and 240 credits are not counted toward music major.
- MUS 333 20th Century Music 3 cr.
- MUS 351 Music Education I 3 cr.
- MUS 352 Music Education II 3 cr.
- MUS 491 Senior Recital 0 cr.
- MUS 200+ Any Music Course 200 and above 3 cr.
  Pianists must take MUS 440: Piano Pedagogy

**Required Courses for Choral/General Certification:** 33 cr. hrs.
- MUSA 127 Applied Voice-Pianists may substitute 3 cr. of Applied Piano MUSA 125 (2 per semester) 8 cr.
- MUSA 327 Applied Voice (upper level)-Pianists may substitute 3 cr. of Applied Piano MUSA 325 (2 per semester) 6 cr.
- MUSE 108 Concert Choir (required each semester)
- MUS 102 Class Guitar 1 cr.
- MUS 247 Diction I: IPA and Italian 1 cr.
- MUS 248 Diction II: German and French 1 cr.
- MUS 341 Vocal and Choral Pedagogy 3 cr.
- MUS 342 Conducting 2 cr.
- MUS 344 Choral Conducting 2 cr.
- MUS 331 Choral Composition and Arranging 3 cr.
- MUS 340 Opera Techniques 3 cr.
- MUS 433 Choral Literature 3 cr.

**Required Courses for Instrumental/General Certification:** 27 cr. hrs.
- MUSA 100 level Applied-credits must be in the same area (2 per semester) 8 cr.
- MUSA 300 level Applied-upper level-credits must be in the same area (2 per semester) 6 cr.
- MUSE 111 University-Community Orchestra
  or MUSE 113 Wind Ensemble (large ensemble required each semester)

The University of Wisconsin-River Falls Music Department offers high-quality undergraduate programs in music leading to the degrees Bachelor of Music Education, Bachelor of Arts in Music, Bachelor of Science in Music, as well as Minors in Music and Musical Theater. The University of Wisconsin-River Falls is an accredited institutional member of the National Association of Schools of Music (NASM).

The Bachelor or Arts (B.A.) and Bachelor of Science (B.S.) degrees are designed for students seeking admittance to a professional graduate school, or pursuing a music related career. The B.A. degree does not require a minor, however it does require a selection of courses Language Competency and International Components. The B.S. degree requires a minor or double major. The B.A. and B.S. degrees do not provide teacher certification.

The Bachelor of Music Education (B.M.E.) degree is designed to train and certify public school music teachers. In the B.M.E. degree program, students may elect either a Choral/General Music (K-12) emphasis (includes a piano-vocal option), or an Instrumental/General Music (K-12) emphasis. The B.M.E. degree does not require a minor.

The department also offers a Music Minor (non-teaching) and a Musical Theatre Minor. All applicants for admission to degree programs in music must satisfactorily complete a performance audition. Audition requirements for all performance areas are available from the Music Department. In addition to the performance audition, all transfer applicants must take a music theory and history placement exam. The results of the exam will
MUS 102 Class Guitar 1 cr.
MUS 103 Class Voice 1 cr.
MUS 141 String Techniques 1 cr.
MUS 241 Woodwind Techniques I 1 cr.
MUS 243 Brass Techniques I 1 cr.
MUS 245 Percussion Techniques I 1 cr.
MUS 342 Conducting 2 cr.
MUS 343 Instrumental Conducting 2 cr.
MUS 330 Orchestration 3 cr.
MUS 431 Instrumental Literature 3 cr.

Required for Teacher Certification: 32 cr. hrs.
(not counted in major total)

Choral/General or Instrumental/General (courses to be taken in the College of Education)
TED 120 Introduction to Education and Instructional Technology 3 cr.
TED 211 or TED 212 Educational Psychology: Middle and Secondary Education 5 cr.
TED 252 Multicultural Education 3 cr.
TED 420 School and Society 3 cr.
TED 422 Content Area Literacy 3 cr.
SPED 330 The Exceptional Child 3 cr.
TED 472 Student Teaching - Initial 12 cr.
or
TED 479 K-12 Internship Teaching 12 cr.
or
TED 474 Student Teaching - COST 12 cr...

determine the appropriate course levels. Music students should consult the department handbook, which clarifies course requirements and provides additional pertinent information.

The University of Wisconsin-River Falls is an accredited institutional member of the National Association of Schools of Music.

General Education Requirements
BA and BS Liberal Arts majors as listed for CAS.
BS Education majors as listed for CEPS.
Music Minor

Music Minor: 24 Total Credits

Required Courses: 16 cr. hrs.
MUS 130 Music Theory and Ear Training I 4 cr.
MUS 131 Music Theory and Ear Training II 4 cr.
MUS 234 Music History and Literature I (writing intensive) (can be double counted in Gen. Ed.) 4 cr.
MUS 235 Music History and Literature II (writing intensive) 4 cr.

Directed Electives: 8 cr. hrs.
MUS Choose from the areas of music history, music theory, jazz, composition, piano pedagogy, or applied.

Department of Music
B46 Kleinpell Fine Arts
715-425-3183
www.uwrf.edu/MUS/

Kristin Tjornehoj - Chair
Mike Alexander, Joy Killough Amel, Charles Asch,
Thomas Barnett, Peter Benson, Alexandra Berndt,
Gary Bird, Paul Budde, Patti Cudd, Laura Edman,
Deborah Fristad, Rick Gaynor, Eric Graham,
Joseph Hagedorn, Craig Hara, Layton ‘Skip’
James, Tina James, Ivan Konev, Alicia McQuerrey,
David Mline, Natalia Moiseeva, Patrick O'Keefe,
J.W. Park, J. Michael Roy, Jack Stamp, Jan Stein.
Musical Theatre Minor

Musical Theatre Minor: 24 Total Credits

Required Courses: 18 cr. hrs.
MUS 103 Class Voice 1 cr.
MUS 130 Music Theory and Ear Training I 4 cr.
MUS 131 Music Theory and Ear Training II 4 cr.
MUS 225 Voice for the Actor 1 cr.
SASA 121 Acting I: Basic Techniques 3 cr.
SASA 225 Musical Theatre Performance 3 cr.
SASA 375 Theatre Practicum: Production 2 cr.

Directed Electives: 2 cr. hrs.
Select from the following:
DANC 107 Social Dance .5 cr.
DANC 110 Basic Jazz Dance .5 cr.
DANC 120 Fundamentals of Movement through Dance 1 cr.
DANC 150 Dance Improvisation 1 cr.
DANC 224 Ballet I 1 cr.

Electives: 4 cr. hrs.
Select from the following:
DANC 107 Social Dance .5 cr.
DANC 110 Basic Jazz Dance .5 cr.
DANC 224 Ballet I 1 cr.
DANC 260 Dance Repertory 1-3 cr.
SASA 131 Design for the Theatre 3 cr.

A maximum of 3 credits from the following 3 courses may be applied toward electives:
SASA 221 Acting for Stage and Screen II 3 cr.
SASA 231 Creating Artistic Environments for Stage and Screen 3 cr.
SASA 232 Costume/Makeup for Stage and Screen 3 cr.
SASA 233 Light and Sound for Stage and Screen 3 cr.
SASA 337 History of Theatre 3 cr.
MUS 127 Applied Voice (a maximum of 2 may be applied toward electives) 1 cr.
MUS 230 Music Theory and Ear Training III 4 cr.
MUS 340 Opera Techniques 3 cr.

Students majoring in Music or Speech (any emphasis) may not double count any course when completing the Musical Theatre Minor.
Speech Communication and Theatre Arts and Music majors should consult with an adviser and substitute other electives (from the list above) for those required in both their major and minor.

Interdisciplinary
The minor in Musical Theatre, offered as a collaborative effort between the departments of communication studies and theatre arts and music, is designed to provide students an opportunity to gain formal training. It includes courses in music theory and performance, dance styles, and stage movement, as well as additional courses in theatrical performance, production and design, with special consideration to their application in creation of and performance in musical production. This minor is available to all students, including music and theatre majors and minors.
Neuroscience Major

Neuroscience Major: 69-71 Total Credits
Core Courses - 49-51 Credits

**Introductory Courses**
- NSCI 111 Introduction to Neuroscience 4 cr.
- PHIL 220 Bioethics 3 cr.

**Quantitative Courses**
- MATH 147 College Algebra & Trigonometry 3 cr. or MATH 149 Precalculus 4 cr. or MATH 166 Calculus I 4 cr.
- PSYC 201 Behavioral Statistics 3 cr. or MATH 231 Biostatistics 3 cr.

**Biology Courses**
- BIOL 101 Biology Concepts 3 cr.
- BIOL 240 Cellular and Molecular Biology 3 cr.
- BIOL 342 Anatomy and Physiology II 4 cr.
- BIOL 351 Epigenetics 3 cr.
- BIOL 356 Neurobiology

**Chemistry Courses**
- CHEM 120 Introduction to General Chemistry 6 cr. or CHEM 121 General Chemistry I 5 cr. or CHEM 130 Introduction to Organic Chemistry 5 cr.

**Psychology Courses**
- PSYC 101 General Psychology 3 cr.
- PSYC 216 Research Methods 3 cr.
- PSYC 310 Memory and Thinking 3 cr.
- PSYC 350 Sensation and Perception 3 cr.
- PSYC 355 Physiological Psychology 3 cr.

**Electives - 20 Credits**

**Psychology Courses**
- PSYC 269 Health Psychology 3 cr.
- PSYC 280 Drugs and the Nervous System 3 cr.
- PSYC 305 Learning and Motivation 3 cr.
- PSYC 315 Psychological Measurement and Evaluation 3 cr.
- PSYC 316 Advanced Research Methods 3 cr.
- PSYC 325 Abnormal Psychology 3 cr.
- PSYC 335 Developmental Psychology: Childhood and Adolescence
- PSYC 336 Developmental Psychology: Adulthood and Aging
- PSYC 340 Animal Behavior
- PSYC 375 Psychology of Human Sexuality

**Biology Courses**
- BIOL 195 Freshman Research Experience
- BIOL 295 Lab Research Experience
- BIOL 305 Applications in Molecular Biology
- BIOL 324 Microbiology
- BIOL 341 Anatomy and Physiology I
- BIOL 345 Immunology
BIOL 350 Genetics and Evolution
BIOL 353 Histology
BIOL 364 Developmental Biology
BIOL 451 Molecular Biology
BIOL 453 Virology
BIOL 463 Animal Cell Culture
BIOL 464 Stem Cells and Regenerative Medicine

**Chemistry Courses**

CHEM 122 General Chemistry II
CHEM 231 Organic Chemistry I
CHEM 232 Organic Chemistry II
CHEM 233 Foundations of Organic Chemistry
CHEM 236 Organic Chemistry Lab I
CHEM 237 Organic Chemistry Lab II
CHEM 240 Principles of General Chemistry
CHEM 250 Foundations of Analytical Chemistry
CHEM 355 Separation Science Lab
CHEM 360 Foundations of Biochemistry or CHEM 361 and CHEM 362 Biochemistry I & II
CHEM 366 Biochemistry Lab
CHEM 461 Pharmacology

**Computer Science Courses**

CSIS 239 Introduction to Data Science*
CSIS 334 Data Visualization*
CSIS 373 Intro to Bioinformatics
CSIS 452 Applied Machine Learning*

*note: Computer Science courses require prerequisite course(s) that are not included within the program

**Physics Courses**

PHYS 121 Algebra-Based Physics I
PHYS 122 Algebra-Based Physics II
PHYS 131 Calculus-Based Physics I
PHYS 132 Calculus-Based Physics II
Outdoor Education Minor

Program Requirements
24 Total Credits

Required Courses: 14-17 cr. hrs.

P ED 201 Outdoor Education Summer Concepts and Skills (Sp) 3 cr.
P ED 202 Outdoor Education Winter Concepts and Skills (Sp) 3 cr.
P ED 275 Leadership in School-Based Adventure Education (F) 3 cr.
P ED 301 Foundation of Outdoor Leadership (F) (Pre-req P ED 201 & 202) 3 cr.
P ED 371 Recreation Field Study (F/Sp/Utter/Summer) 1-4 cr.
SFED 200 First Aid and Basic Life Support (F/Sp) (SFED 212 Sp also accepted) .5 cr.

Electives 7-10 cr. hrs.
BIOL 210 General Botany (F/Sp) (Pre-req BIOL 150) 3 cr.
ESM 151 Introduction to Land use Theory & Practice (F/Sp) 3 cr.
ESM 300 Environmental Education (F/Sp) 3 cr.
ESM 307 Cultural Perspectives on the Environment 3 cr.
EXSS 450 Sport, Fitness and Recreation Management (F) 3 cr.
GEOG 110 Physical Environment: Patterns & Systems (F/Sp) 3 cr.
GEOG 212 Weather & Climate (F, alternate years) 3 cr.
GEOG 250 Introduction to Geographic Information Science (F/Sp) 3 cr.
GEOL 101 Introduction to Geology (F/Sp) 3 cr.
GEOL 102 Introduction to Geology Laboratory (F/Sp) 1 cr.
GEOL 269 Environmental Geology (F) 3 cr.
P E 118 Scuba (F/Sp) .5 cr.
P ED 105 Back Packing/Wilderness Awareness (Summer w/P ED 106 & 255) 1 cr.
P ED 106 Canoeing (Summer w/P ED 105 & 255 1 cr.
P ED 109 Recreational Climbing (F/Sp) 1 cr.
P ED 147 Water Safety Instructor (Sp) 2 cr.
P ED 255 Techniques in Sport Fishing (Summer w/P ED 105 & 106) 1 cr.
P ED 300 Adapted Physical Education (F) (Pre-req P ED 245) 3 cr.
POLS 355 Environmental Law (Pre-req POLS 114 & BIOL 100 or 150) 3 cr.
SOCI 343 Sociology of Sport and Leisure (F) (Pre-req SOCI 100) 3 cr.
Philosophy Minor

Philosophy Requirements, 24 Total Credits

Select one PHIL course at the 300 level or higher

- PHIL 301 Environmental Ethics, Liberalism and Capitalism
- PHIL 303 Environmental Ethics
- PHIL 304 Business Ethics
- PHIL 307 Western Political Thought: Greece to the Middle Ages
- PHIL 308 Renaissance to Marx
- PHIL 309 Western Political Thought: Nietzsche to the Present
- PHIL 310 Philosophy and History of Visual Art
- PHIL 311 Philosophy of Law
- PHIL 315 Media Ethics
- PHIL 318 Religion and Politics
- PHIL 323 Science & the Philosophers of the Age of Enlightenment
- PHIL 345 God, Religion & Sciences
- PHIL 369 American Intellectual History
- PHIL 389 Special Topics in Philosophy
- PHIL 415 Philosophy of History
- PHIL 489 Special Topics in Philosophy
- PHIL 499 Independent Study

DIRECTED ELECTIVES: 21 cr. hrs.

Select 7 additional PHIL courses

Department of History and Philosophy
307 Kleinpell Fine Arts
715-425-3164
www.uwrf.edu/HIST/

History: Zhiguo Yang-Chair, Ryan Fischer, Doug Hjersjo, Victoria Houseman and Kiril Petkov

Philosophy: Imtiaz Moosa and Walter Wietzke

Philosophical inquiry aims at uncovering, analyzing, and evaluating the fundamental values and assumptions implicit in various human activities and practices such as science, the arts, religion, morality, and social and political institutions. Its ultimate goal is to develop a coherent view of the world and our place in it. Philosophy focuses on sharpening the ability to analyze, reason, and write effectively.
Physical Science Major

Physical Science: 58-60 cr. hrs.
(Physics and Chemistry)
For Secondary Education Students
MATH 167 Calculus II 4 cr.

PHYS 121 Algebra-Based Physics I 5 cr.
PHYS 122 Algebra-Based Physics II 5 cr.
or PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.

PHYS 264 Modern Physics 4 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

CHEM 121 General Chemistry I 5 cr.
or CHEM 120 Introduction to General Chemistry 6 cr.
CHEM 122 General Chemistry II 5 cr.

CHEM 231 Organic Chemistry I 3 cr.
CHEM 236 Organic Chemistry I Lab 1 cr.
CHEM 232 Organic Chemistry II 3 cr.
CHEM 237 Organic Chemistry II Lab 1 cr.

CHEM 250 Foundations of Analytical Chemistry 4 cr.
CHEM 261 Laboratory Safety 2 cr.

Choose 6 credits from the following electives:
PHYS 204 Intermediate Physics Lab 1 cr.
PHYS 220 Science of Light 3 cr.
PHYS 250 Statics 3 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 331 Curriculum Physics 3 cr.

Choose one of the following electives:
CHEM 311 Polymer Chemistry 3 cr.
CHEM 322 Inorganic Chemistry 4 cr.
CHEM 340 Physical Chemistry of Biological Systems 3 cr.
CHEM 341 Chemical Thermodynamics and Kinetics 3 cr.
CHEM 342 Molecular Structure and Spectroscopy 3 cr.
CHEM 361 Biochemistry I 3 cr. (requires BIOL 150 as prerequisite)
CHEM 461 Pharmacology 3 cr.

Earth and Space Science Licensing:
An Earth and Space Science license will be earned upon completion of the coursework listed below.
This additional concentration is based on 16-19 total credits of earth and space science coursework.
Overlap with required and elective coursework in the major will allow for this add-on license to be completed with an additional 5-11 credits.

GEOL 269 Environmental Geology 3 cr. (completed in major)
GEOL 102 Introductory Geology Lab 1 cr. (completed in major)
ESM 302 Environmental Education Lab 1 cr. (completed in major)
PHYS 117 Astronomy 3 cr. (completed in major)
GEOL 330 Meteorology 3 cr.

Choose 2 of the following courses:
GEOL 150 Historical Geology 4 cr.
PHYS 318 Astrophysics 3 cr. (possible elective in major)
GEOL 305 Geology of the Planets 2 cr.
GEOL 441 Introduction to Geophysics 4 cr.

Recommended Supplemental Coursework:
GEOL 202 Oceanography 3 cr.
ESM 360 Hydrology and Water Quality 4 cr.
Physics Major
Liberal Arts

Physics Major-Liberal Arts

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Supporting Courses: 20 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
or CSIS 162 Programming II
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Option I 50 Total Credits
Recommended as preparation for graduate studies in physics or for industrial research.
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 24 cr. hrs.
Choose from courses below:

Option II 36 Total Credits
Recommended for students wanting maximum flexibility for study in other areas
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 10 cr. hrs.
Choose from courses below:

Directed Electives in Physics
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits
or PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 379 Cooperative Education and Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.

Applied Option 50 Total Credits
Recommended as preparation for a career in an industrial or government laboratory, or for graduate study in Applied Physics, Electronics, Engineering Physics, and Geophysics.
Core Requirements 26 cr. hrs.

Required Courses in Physics 24 cr. hrs.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Education

Physics Major–Secondary Education

Major Requirements 36 Total Credits

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Course: 3 cr. hrs.
PHYS 331 Curriculum Physics 3 cr.

Directed Electives in Physics 7 cr. hrs.
As listed for Liberal Arts excluding PHYS 279 and PHYS 379 Internship course

Physical Science Major

Broadfield Science Licensure

Dual Degree

Physics/Engineering Dual Degree
Dual Degree students earn a Bachelor of Science in Physics (APIE option) from UW-River Falls and an ABET accredited Bachelor of Science degree in engineering from a partner school. This two-degree program typically takes five years. Students must meet GPA requirements for admission to the engineering partner school.

Required Courses in Physics at UW-River Falls: 14 cr. hrs.
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 264 Modern Physics 4 cr.

Required Supporting Courses: 25 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III or PHYS 361 Mathematics of Physics and Engineering I 3 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
Directed Electives: at least 21 cr. hrs. from the following courses

PHYS 204 Intermediate Lab 1 cr.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 301 Advanced Physics Laboratory I 3 cr.
PHYS 302 Advanced Physics Laboratory II 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.
PHYS 379 Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.
MATH 326 Applied Statistics 3 cr.
CSIS 162 Programming II 3 cr.
CHEM 122 General Chemistry II 5 cr.

Pre-Engineer

Pre-Engineering 68 Total Credits

Required Courses: 55 cr. hrs.

PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
CHEM 122 General Chemistry II 5 cr.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 331 Differential Equations 3 cr.
ENGL 100 Academic Reading and Writing 3 cr.
ENGL 200 Investigating Ideas: Reading, Writing and the Disciplines 3 cr.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
CSTA 101 Fundamentals of Oral Communication 3 cr.

Electives depending on final engineering major: 13 cr. hrs.
Select from MATH, PHYS, CSIS, CHEM, GENG, BIOL, GEOL

APIE
Applied Physics for Industry and Engineering

Applied Physics for Industry and Engineering provides more flexibility for students to tailor their program to fit future careers. The new version maintains the physics core, reduces the required
courses to 17 from 26 credit hours, and adds a requirement to complete a certificate option in at least one of four areas. A second semester of Capstone Design Course is added to provide an extensive design experience. The number of required supporting courses increases in lieu of requiring a mathematics minor.

**Applied Physics for Industry and Engineering Option: 45-59 Total Credits**
Prepares highly-competitive graduates for industry, graduate school, or starting a new business.
Provides a firm physics foundation with written and oral professional communication proficiency, and focused skills in at least one of four selected certificate areas—Opto-Electronics, Biology, Entrepreneurship, Mechanics.

**Core Requirements 26 cr. hrs.**

**Required Courses 17 cr. hrs.**

- PHYS 211 Scientific Programming or CSIS 162 Programming II 3 cr.
- PHYS 279 Introduction to Internships 1 cr.
- PHYS 361 Mathematics of Physics and Engineering I 3 cr.
- PHYS 362 Mathematics of Physics and Engineering II 3 cr.
- PHYS 485 Capstone Design Course * (Second Semester) 1 cr.

**Directed Electives ** 6 cr.

* Taken twice with a mid-project presentation at the end of the first semester
** These electives broaden experience by exploring an additional area of interest or deepen knowledge in one area. Completion of a second certificate is also an option.

**Choose one of the following certificate options 12-16 cr. hrs.**

**Opto-Electronics (16)**
- PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
- PHYS 313 Digital Electronics 4 cr.
- PHYS 420 Optics 4 cr.
- PHYS 442 Electricity & Magnetism 4 cr.

**Biology (14)**
- BIOL 160 General Biology 4 cr.
- BIOL 240 Cell and Molecular Biology 3 cr.
- BIOL 341 Anatomy and Physiology I 4 cr.
- BIOL 464 Stem Cells & Regenerative Medicine 3 cr.

**Entrepreneurship (15)**
- CSIS 215 Info Systems for Business Management 3 cr.
- MARC 200 Intro to Marketing Communications 3 cr.
- ACCT 231 Accounting 3 cr.
- PSYC 250 Industrial & Organizational Psychology 3 cr.
- COMS 318 Communication & Leadership 3 cr.

**Mechanics (12)**
- PHYS 250 Statics 3 cr.
- PHYS 252 Dynamics 3 cr.
- PHYS 254 Mechanics of Materials 3 cr.
- GENG 345 Machine Design 3 cr.

**Required Supporting Courses: 20 cr. hrs**

- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- MATH 266 Calculus III 3 cr.
- MATH 256 Linear Algebra 3 cr.
- MATH 331 Differential Equations 3 cr.
Physics Minor

Minor in Physics–Liberal Arts or Education

Physics Minor Requirements 24 Total Credits

Required Courses 14 cr. hrs.

(PHYS 121 Algebra-Based Physics I 5 cr.
PHYS 122 Algebra-Based Physics II 5 cr.)
or
(PHYS 131 Calculus-Based Physics II 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.)

PHYS 264 Modern Physics 4 cr.

Directed Electives for Both Minors: 10 cr. hrs.

PHYS 204 Intermediate Physics Laboratory (writing intensive) 1 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electric and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.

Additional Choice for Directed Elective for Secondary Education Minor:

PHYS 331 Curriculum Physics 3 cr.

Required Supporting Courses 11 cr. hrs.

(may be taken under Gen Ed or under Major)
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
or MATH 266 Calculus III
Physics Major-Liberal Arts

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Supporting Courses: 20 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
or CSIS 162 Programming II
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Option I 50 Total Credits
Recommended as preparation for graduate studies in physics or for industrial research.
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 24 cr. hrs.
Choose from courses below:

Option II 36 Total Credits
Recommended for students wanting maximum flexibility for study in other areas
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 10 cr. hrs.
Choose from courses below:

Directed Electives in Physics
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits
or PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 379 Cooperative Education and Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.

Applied Option 50 Total Credits
Recommended as preparation for a career in an industrial or government laboratory, or for graduate study in Applied Physics, Electronics, and Geophysics.
Core Requirements 26 cr. hrs.

Required Courses in Physics 24 cr. hrs.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Education

Physics Major–Secondary Education

Major Requirements 36 Total Credits

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Course: 3 cr. hrs.
PHYS 331 Curriculum Physics 3 cr.

Directed Electives in Physics 7 cr. hrs.
As listed for Liberal Arts excluding PHYS 279 and PHYS 379 Internship course

Physical Science Major

Broadfield Science Licensure

Dual Degree

Physics/Engineering Dual Degree
Dual Degree students earn a Bachelor of Science in Physics (APIE option) from UW-River Falls and an ABET accredited Bachelor of Science degree in engineering from a partner school. This two-degree program typically takes five years. Students must meet GPA requirements for admission to the engineering partner school.

Required Courses in Physics at UW-River Falls: 14 cr. hrs.
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 264 Modern Physics 4 cr.

Required Supporting Courses: 25 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III or PHYS 361 Mathematics of Physics and Engineering I 3 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
Directed Electives: at least 21 cr. hrs. from the following courses
PHYS 204 Intermediate Lab 1 cr.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 301 Advanced Physics Laboratory I 3 cr.
PHYS 302 Advanced Physics Laboratory II 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.
PHYS 379 Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.
MATH 326 Applied Statistics 3 cr.
CSIS 162 Programming II 3 cr.
CHEM 122 General Chemistry II 5 cr.

Pre-Engineer

Pre-Engineering 68 Total Credits
Required Courses: 55 cr. hrs.
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
CHEM 122 General Chemistry II 5 cr.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 331 Differential Equations 3 cr.
ENGL 100 Academic Reading and Writing 3 cr.
ENGL 200 Investigating Ideas: Reading, Writing and the Disciplines 3 cr.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
CSTA 101 Fundamentals of Oral Communication 3 cr.
Electives depending on final engineering major: 13 cr. hrs.
Select from MATH, PHYS, CSIS, CHEM, GENG, BIOL, GEOL

APIE
Applied Physics for Industry and Engineering

Applied Physics for Industry and Engineering provides more flexibility for students to tailor their program to fit future careers. The new version maintains the physics core, reduces the required
courses to 17 from 26 credit hours, and adds a requirement to complete a certificate option in at least one of four areas. A second semester of Capstone Design Course is added to provide an extensive design experience. The number of required supporting courses increases in lieu of requiring a mathematics minor.

**Applied Physics for Industry and Engineering Option: 45-59 Total Credits**

Prepares highly-competitive graduates for industry, graduate school, or starting a new business. Provides a firm physics foundation with written and oral professional communication proficiency, and focused skills in at least one of four selected certificate areas—Opto-Electronics, Biology, Entrepreneurship, Mechanics.

**Core Requirements 26 cr. hrs.**

**Required Courses 17 cr. hrs.**

- PHYS 211 Scientific Programming or CSIS 162 Programming II 3 cr.
- PHYS 279 Introduction to Internships 1 cr.
- PHYS 361 Mathematics of Physics and Engineering I 3 cr.
- PHYS 362 Mathematics of Physics and Engineering II 3 cr.
- PHYS 485 Capstone Design Course * (Second Semester) 1 cr.

  * Taken twice with a mid-project presentation at the end of the first semester

**Directed Electives ** 6 cr.

  ** These electives broaden experience by exploring an additional area of interest or deepen knowledge in one area. Completion of a second certificate is also an option.

**Choose one of the following certificate options 12-16 cr. hrs.**

**Opto-Electronics (16)**

- PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
- PHYS 313 Digital Electronics 4 cr.
- PHYS 420 Optics 4 cr.
- PHYS 442 Electricity & Magnetism 4 cr.

**Biology (14)**

- BIOL 160 General Biology 4 cr.
- BIOL 240 Cell and Molecular Biology 3 cr.
- BIOL 341 Anatomy and Physiology I 4 cr.
- BIOL 464 Stem Cells & Regenerative Medicine 3 cr.

**Entrepreneurship (15)**

- CSIS 215 Info Systems for Business Management 3 cr.
- MARC 200 Intro to Marketing Communications 3 cr.
- ACCT 231 Accounting 3 cr.
- PSYC 250 Industrial & Organizational Psychology 3 cr.
- COMS 318 Communication & Leadership 3 cr.

**Mechanics (12)**

- PHYS 250 Statics 3 cr.
- PHYS 252 Dynamics 3 cr.
- PHYS 254 Mechanics of Materials 3 cr.
- GEN 345 Machine Design 3 cr.

**Required Supporting Courses: 20 cr. hrs**

- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- MATH 266 Calculus III 3 cr.
- MATH 256 Linear Algebra 3 cr.
- MATH 331 Differential Equations 3 cr.
GENG 121 Engineering Drawing 3 cr.
Physics Major
Liberal Arts

Physics Major-Liberal Arts

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Supporting Courses: 20 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
or CSIS 162 Programming II
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Option I 50 Total Credits
Recommended as preparation for graduate studies in physics or for industrial research.
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 24 cr. hrs.
Choose from courses below:

Option II 36 Total Credits
Recommended for students wanting maximum flexibility for study in other areas
Physics Major Core 26 cr. hrs.
Directed Electives in Physics 10 cr. hrs.
Choose from courses below:

Directed Electives in Physics
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits
or PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 379 Cooperative Education and Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.

Applied Option 50 Total Credits
Recommended as preparation for a career in an industrial or government laboratory, or for graduate study in Applied Physics, Electronics, Engineering Physics, and Geophysics.
Core Requirements 26 cr. hrs.

Required Courses in Physics 24 cr. hrs.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.

Education

Physics Major–Secondary Education

Major Requirements 36 Total Credits

Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

Required Course: 3 cr. hrs.
PHYS 331 Curriculum Physics 3 cr.

Directed Electives in Physics 7 cr. hrs.
As listed for Liberal Arts excluding PHYS 279 and PHYS 379 Internship course

Physical Science Major

Broadfield Science Licensure

Dual Degree

Physics/Engineering Dual Degree
Dual Degree students earn a Bachelor of Science in Physics (APIE option) from UW-River Falls and an ABET accredited Bachelor of Science degree in engineering from a partner school. This two-degree program typically takes five years. Students must meet GPA requirements for admission to the engineering partner school.

Required Courses in Physics at UW-River Falls: 14 cr. hrs.
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 264 Modern Physics 4 cr.

Required Supporting Courses: 25 cr. hrs.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III or PHYS 361 Mathematics of Physics and Engineering I 3 cr.
MATH 331 Differential Equations 3 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
Directed Electives: at least 21 cr. hrs. from the following courses

PHYS 204 Intermediate Lab 1 cr.
PHYS 250 Statics 3 cr.
PHYS 252 Dynamics 3 cr.
PHYS 254 Mechanics of Materials 3 cr.
PHYS 279 Introduction to Internships 1 cr.
PHYS 301 Advanced Physics Laboratory I 3 cr.
PHYS 302 Advanced Physics Laboratory II 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
PHYS 313 Digital Electronics 4 cr.
PHYS 318 Astrophysics 3 cr.
PHYS 324 Acoustics 3 cr.
PHYS 361 Mathematics of Physics and Engineering I 3 cr.
PHYS 362 Mathematics of Physics and Engineering II 3 cr.
PHYS 379 Internship 3 cr.
PHYS 415 Thermodynamics 3 cr.
PHYS 420 Optics 4 cr.
PHYS 426 Nuclear and Particle Physics 4 cr.
PHYS 427 Condensed Matter Physics 4 cr.
PHYS 441 Classical Mechanics 4 cr.
PHYS 442 Electricity and Magnetism 4 cr.
PHYS 465 Quantum Mechanics 3 cr.
MATH 326 Applied Statistics 3 cr.
CSIS 162 Programming II 3 cr.
CHEM 122 General Chemistry II 5 cr.

Pre-Engineer

Pre-Engineering 68 Total Credits

Required Courses: 55 cr. hrs.

PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 211 Scientific Programming 3 cr.
CHEM 121 General Chemistry I 5 cr.
CHEM 122 General Chemistry II 5 cr.
MATH 166 Calculus I 4 cr.
MATH 167 Calculus II 4 cr.
MATH 256 Linear Algebra 3 cr.
MATH 266 Calculus III 3 cr.
MATH 331 Differential Equations 3 cr.
ENGL 100 Academic Reading and Writing 3 cr.
ENGL 200 Investigating Ideas: Reading, Writing and the Disciplines 3 cr.
ECON 201 Principles of Microeconomics 3 cr.
ECON 202 Principles of Macroeconomics 3 cr.
CSTA 101 Fundamentals of Oral Communication 3 cr.

Electives depending on final engineering major: 13 cr. hrs.
Select from MATH, PHYS, CSIS, CHEM, GENG, BIOL, GEOL

APIE

Applied Physics for Industry and Engineering

APIE: Applied Physics for Industry and Engineering provides more flexibility for students to tailor their program to fit future careers. The new version maintains the physics core, reduces the required
courses to 17 from 26 credit hours, and adds a requirement to complete a certificate option in at least one of four areas. A second semester of Capstone Design Course is added to provide an extensive design experience. The number of required supporting courses increases in lieu of requiring a mathematics minor.

Applied Physics for Industry and Engineering Option: 45-59 Total Credits
Prepares highly-competitive graduates for industry, graduate school, or starting a new business. Provides a firm physics foundation with written and oral professional communication proficiency, and focused skills in at least one of four selected certificate areas—Opto-Electronics, Biology, Entrepreneurship, Mechanics.

Core Requirements 26 cr. hrs.
Required Courses 17 cr. hrs.

- PHYS 211 Scientific Programming or CSIS 162 Programming II 3 cr.
- PHYS 279 Introduction to Internships 1 cr.
- PHYS 361 Mathematics of Physics and Engineering I 3 cr.
- PHYS 362 Mathematics of Physics and Engineering II 3 cr.
- PHYS 485 Capstone Design Course * (Second Semester) 1 cr.
  * Taken twice with a mid-project presentation at the end of the first semester

Directed Electives ** 6 cr.
** These electives broaden experience by exploring an additional area of interest or deepen knowledge in one area. Completion of a second certificate is also an option.

Choose one of the following certificate options 12-16 cr. hrs.

**Opto-Electronics (16)**
- PHYS 312 Electronics: Linear Integrated Circuits 4 cr.
- PHYS 313 Digital Electronics 4 cr.
- PHYS 420 Optics 4 cr.
- PHYS 442 Electricity & Magnetism 4 cr.

**Biology (14)**
- BIOL 160 General Biology 4 cr.
- BIOL 240 Cell and Molecular Biology 3 cr.
- BIOL 341 Anatomy and Physiology I 4 cr.
- BIOL 464 Stem Cells & Regenerative Medicine 3 cr.

**Entrepreneurship (15)**
- CSIS 215 Info Systems for Business Management 3 cr.
- MARC 200 Intro to Marketing Communications 3 cr.
- ACCT 231 Accounting 3 cr.
- PSYC 250 Industrial & Organizational Psychology 3 cr.
- COMS 318 Communication & Leadership 3 cr.

**Mechanics (12)**
- PHYS 250 Statics 3 cr.
- PHYS 252 Dynamics 3 cr.
- PHYS 254 Mechanics of Materials 3 cr.
- GENG 345 Machine Design 3 cr.

**Required Supporting Courses: 20 cr. hrs**

- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- MATH 266 Calculus III 3 cr.
- MATH 256 Linear Algebra 3 cr.
- MATH 331 Differential Equations 3 cr.
Political Science Major: 36 Total Credits

Required Courses: 21 cr. hrs.

- POLS 114 American National, State and Local Government 3 cr.
- POLS 200 Political Analysis 3 cr.
- POLS 220 Introduction to Public Opinion and Political Behavior 3 cr.
- POLS 230 Contemporary Political Ideologies 3 cr.
- POLS 245 Introduction to Comparative Politics 3 cr.
- POLS 260 Introduction to International Relations 3 cr.
- POLS 480 Seminar in Political Science 3 cr.

Electives: 15 cr. hrs.

Any POLS course, excluding courses taken as required supporting courses. Restrictions: Students may apply a maximum of 6 political science internship credits toward the elective section of the major. Students majoring in Political Science must take a minimum of 12 out of the total 36 credits for the major in courses numbered at the 300 level or above, excluding credits taken for political science internships.

Required Supporting Course:

Political Science Majors must take ONE of the following courses:

- PSYC 201 Behavioral Statistics
- SOCI 250 Introduction to Social Statistics
- ECON 226 Introduction to Statistics
- MATH 216 Elementary Statistical Concepts
- MATH 226 Fundamentals of Statistics.

Students must take the following course:

- POLS 110 Controversies in Politics
Political Science Minor

Political Science Minor 24 Total Credits

Required Courses: 15 cr. hrs.
POLS 114 American National, State and Local Government 3
POLS 220 Introduction to Public Opinion and Political Behavior 3
POLS 230 Contemporary Political Ideologies 3
POLS 245 Introduction to Comparative Politics 3
POLS 260 Introduction to International Relations 3

Electives: 9 cr. hrs.

Any POLS course, excluding courses taken as required supporting courses.

Restrictions: Students may apply a maximum of 3 political science internship credits toward the elective section of the minor. Students completing a minor in Political Science must take a minimum of 6 out of the total 36 credits for the major in courses numbered at the 300 level or above, excluding credits taken for political science internships.

Required Supporting Course

Students must take the following course:
POLS 110 Controversies in Politics 3
Professional and Organizational Communication Minor

24 Total Credits

Required Courses: 15 Credits

COMS 207 Listening 3 cr.
COMS 208 Problem Solving in Small Group Communication 3 cr.
COMS 216 Communication in the Interview 3 cr.
COMS 316 Organizational Communication 3 cr.
COMS 379 Internship 3-4 cr.
and/or
COMS 499 Independent Study 1-3 cr.

Directed Electives: 9 Credits

COMS 106 Interpersonal Communication 3 cr.
COMS 111 Argumentation and Decision Making 3 cr.
COMS 306 Nonverbal Communication 3 cr.
COMS 311 Persuasion 3 cr.
COMS 313 Intercultural Communication 3 cr.
COMS 318 Communication and Leadership 3 cr.
COMS 360 Corporate Electronic Communication 3 cr.
COMS 416 Communication Training and Development in Organizations 3 cr.
COMS 440 Gender Communication 3 cr.

A research/writing course experience is required in the major or another field; COMS 284 Sophomore Seminar or another course approved by the department chair, will satisfy this requirement. A senior portfolio experience is required in the major or another field; COMS 484, Senior Portfolio Seminar or another course approved by the department chair, will satisfy this requirement.
Professional Writing Minor

Professional Writing Minor - 23-24 credits

Required Courses 15 credits
*ENGL 271 Proposal Writing
ENGL 374 Cyberliteracy and Writing on the Web
ENGL 266 Business Writing
ENGL 270 Visual Rhetoric: Document Design and Graphics
ENGL 367 Technical Writing
ENGL 387 Technical and Professional Editing

Directed Electives: select three 8-9 credits

COMS 316 Organizational Communication
ENGL 220 Structure of English
ENGL 372 Practicum: Peer Tutoring and Writing Instruction
ENGL 379 Internship
ENGL 251 Advanced Composition
(ENGL 266 Business Writing or ENGL 367 Technical Writing)
ENGL 362 Intro to Rhetorical Studies
ENGL 370 Nonfiction Writing
ENGL 494 Senior Seminar in Professional Writing.
ENGL 389 Topics course in Rhetoric (Environmental Rhetoric, Contemporary Rhetoric).
JOUR 269 Multimedia Storytelling
JOUR 320 Journalism and Public Opinion
MARC 370 Public Relations Principles
MARC 360 Advertising
Psychology Major

Psychology Major: 45 Total Credits
Required Courses: 15 cr. hrs.
PSYC 101 General Psychology 3 cr.
PSYC 110 Careers in Psychology 1 cr.
PSYC 201 Behavioral Statistics 3 cr.
PSYC 216 Research Methods 3 cr.
PSYC 315 Psychological Measurement and Evaluation 3 cr.
PSYC 450 Senior Seminar in Psychology 2 cr.

Psychology
Psychological Foundations - 18 cr. hrs.
Experimental
Choose 3 from the following:
PSYC 305 Learning and Motivation 3 cr.
PSYC 310 Memory and Thinking 3 cr.
PSYC 340 Animal Behavior 3 cr.
PSYC 350 Sensation and Perception 3 cr.
PSYC 355 Physiological Psychology 3 cr.

Social
Choose 3 from the following:
PSYC 320 Psychology of Personality 3 cr.
PSYC 325 Abnormal Psychology 3 cr.
PSYC 335 Developmental Psychology: Childhood and Adolescence 3 cr.
PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
PSYC 360 Social Psychology 3 cr.

Elective Psychology Courses: 12 cr. hrs.
In addition to completing the course area requirements, the student must take additional psychology courses to achieve the required 45 credits for the major. These courses may be selected from any of the areas listed including courses below (PSYC 220 and PSYC 245 may not count towards elective credits in the major).

Psychology Option Electives
PSYC 225 Psychology of Gender 3 cr.
PSYC 250 Industrial and Organizational Psychology 3 cr.
PSYC 260 Behavior Modification 3 cr.
PSYC 269 Health Psychology 3 cr.
PSYC 270 Sport Psychology 3 cr.
PSYC 280 Drugs and the Nervous System 3 cr.
PSYC 289 Special Topics in Psychology 3 cr.
PSYC 316 Advanced Research Methods 3 cr.
PSYC 361 Psychological Foundations of Employee Selection 3 cr.
PSYC 362 Psychological Foundations of Employee Training 3 cr.
PSYC 375 The Psychology of Sexuality 3 cr.
PSYC 378 Psychology Semester Abroad 3 cr.
PSYC 379 Internship in Psychology 1 to 3 cr.
PSYC 385 The Psychology of Prejudice and Racism (d) 3 cr.
PSYC 425 Introduction to Clinical Psychology 3 cr.
PSYC 490 Independent Study in Psychology 1 to 3 cr.

Health
Health Option Requirements - 15 cr. hrs.
PSYC 269 Health Psychology 3 cr.
PSYC 270 Sport Psychology 3 cr.
PSYC 325 Abnormal Psychology 3 cr.
PSYC 355 Physiological Psychology 3 cr.
PSYC 360 Social Psychology 3 cr.

**Health Option Electives - 15 cr. hrs.**

PSYC 225 Psychology of Gender 3 cr.
PSYC 250 Industrial and Organizational Psychology 3 cr.
PSYC 260 Behavior Modification 3 cr.
PSYC 280 Drugs and the Nervous System 3 cr.
PSYC 305 Learning and Motivation 3 cr.
PSYC 310 Memory and Thinking 3 cr.
PSYC 316 Advanced Research Methods 3 cr.
PSYC 320 Psychology of Personality 3 cr.
PSYC 335 Developmental Psychology: Childhood and Adolescence 3 cr.
PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
PSYC 375 The Psychology of Sexuality 3 cr.
PSYC 378 Psychology Semester Abroad 3 cr.
PSYC 379 Internship in Psychology 1 to 3 cr.
PSYC 385 The Psychology of Prejudice and Racism (d) 3 cr.
PSYC 425 Introduction to Clinical Psychology 3 cr.
PSYC 490 Independent Study in Psychology 1 to 3 cr.

**I/O**

**Industrial and Organizational Psychology Option Requirements - 15 cr. hrs.**

PSYC 250 Industrial and Organizational Psychology 3 cr.
PSYC 305 Learning and Motivation 3 cr. **OR**
PSYC 310 Memory and Thinking 3 cr.
PSYC 360 Social Psychology 3 cr.
PSYC 361 Psychological Foundations of Employee Selection 3 cr. **OR**
PSYC 362 Psychological Foundations of Employee Training 3 cr.

**Industrial and Organization Psychology Option Electives - 15 cr. hrs.**

PSYC 225 Psychology of Gender 3 cr.
PSYC 250 Industrial and Organizational Psychology 3 cr.
PSYC 260 Behavior Modification 3 cr.
PSYC 269 Health Psychology 3 cr.
PSYC 280 Drugs and the Nervous System 3 cr.
PSYC 305 Learning and Motivation 3 cr.
PSYC 310 Memory and Thinking 3 cr.
PSYC 316 Advanced Research Methods 3 cr.
PSYC 350 Sensation and Perception 3 cr.
PSYC 361 Psychological Foundations of Employee Selection 3 cr.
PSYC 362 Psychological Foundations of Employee Training 3 cr.
PSYC 379 Internship in Psychology 1 to 3 cr.
PSYC 385 The Psychology of Prejudice and Racism (d) 3 cr.
PSYC 490 Independent Study in Psychology 1 to 3 cr.

**Mental Health**

**Mental Health Option Requirements - 15 cr. hrs**

PSYC 260 Behavior Modification 3 cr.
PSYC 269 Health Psychology 3 cr.
PSYC 320 Psychology of Personality 3 cr.
PSYC 325 Abnormal Psychology 3 cr.
PSYC 425 Introduction to Clinical Psychology 3 cr.

**Mental Health Option Electives - 15 cr. hrs.**

PSYC 280 Drugs and the Nervous System 3 cr.
PSYC 305 Learning and Motivation 3 cr.
PSYC 310 Memory and Thinking 3 cr.
PSYC 316 Advanced Research Methods 3 cr.
PSYC 335 Developmental Psychology: Childhood and Adolescence 3 cr. OR
PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
PSYC 360 Social Psychology
PSYC 379 Internship in Psychology 1 to 3 cr.
PSYC 385 The Psychology of Prejudice and Racism (d) 3 cr.
PSYC 490 Independent Study in Psychology 1 to 3 cr.

Social Justice
Social Justice Option Requirements - 15 cr. hrs.
PSYC 225 Psychology of Gender 3 cr.
PSYC 280 Drugs and the Nervous System 3 cr.
PSYC 325 Abnormal Psychology 3 cr.
PSYC 360 Social Psychology 3 cr.
PSYC 385 The Psychology of Prejudice and Racism (d) 3 cr.

Social Justice Option Electives - 15 cr. hrs
PSYC 269 Health Psychology 3 cr.
PSYC 316 Advanced Research Methods 3 cr.
PSYC 320 Psychology of Personality 3 cr.
PSYC 335 Developmental Psychology: Childhood and Adolescence 3 cr. OR
PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
PSYC 355 Physiological Psychology 3 cr.
PSYC 375 The Psychology of Human Sexuality 3 cr.
PSYC 379 Internship in Psychology 1 to 3 cr.
PSYC 490 Independent Study in Psychology 1 to 3 cr.
Psychology Minor
Psychology Minor: 24 Total Credits

Required Courses: 9 cr. hrs.
PSYC 101 General Psychology 3 cr.
(credits can be counted in general education)
PSYC 201 Behavioral Statistics 3 cr.
(credits can be counted in general education)
PSYC 216 Research Methods (writing intensive) 3 cr.

Electives: 15 cr. hrs.
Additional courses in Psychology

Sociology majors with a minor in psychology who have taken SOCI 300 Research Methods may substitute another psychology course for the PSYC 216 requirement.
Secondary Education Degree

University and DPI General Education Requirements

Academic Specialization: 54-58 Total Credits

Option A - Departmental major and one minor
Option B - Two departmental majors

Approved Secondary Education Majors and Minors

Early Adolescence - Adolescence Programs, teaching ages 11-21 years.

Comprehensive Majors:
- Broadfield Science Licensure: Biology, Chemistry, Physics
- Physical Science
- Broad Field Social Studies
- Broad Area English

Majors:
- Chemistry
- Communicative Disorders - does not lead to licensing at the undergraduate level
- Geology-Earth Science Certification
- English
- Mathematics
- Physics

Minors:
- Anthropology-1
- Biology
- Coaching
- Dance Education
- Earth Science-2
- Economics-1
- English
- Geography-1
- German - with an EA-A major
- Health Education
- History-1
- Mathematics
- Physics
- Political Science-1
- Spanish - with an EA-A major
- Sociology-1
- Teaching English to Speakers of Other Languages - with an EA-A major

Early Childhood - Adolescence Programs, teaching a variety of ages in school settings

Comprehensive Majors
- Art
- Music (choral or Instrumental options)
- Health and Human Performance
- Agricultural Education

Majors
- Teaching English to Speakers of Other Languages (TESOL)
- Modern Language (French, German, and Spanish options)
- Health Education

Department of Teacher Education
257 Walker Wyman Education
www.uwrf.edu/TED/

Florence Monsour-Chair, Joel Donna, Amy Frederick, Molly Gerrish, Beth Janey, Rachelle Haroldson, Angela Kaiser, Michael Miller, Melina Papadimitriou, Hilary Pollack, Geoff Scheurman, Manu Sharma, Ben Seipel, Satomi Shinde, Hiawatha Smith, Mary Wright

The degree curricula designed to prepare teachers for the secondary school, in either Early Adolescence - Adolescence (formerly grades 6-12) or Early Childhood - Adolescence (formerly K-12). The program consists of a minimum of 120 semester hours that give the student a broad general education, specialized preparation in one or more academic fields and professional preparation needed for effective teaching. Specific course requirements are listed for each academic department preceding the departmental course descriptions.

General Education Requirements
As listed for CEPS.
Coursework included in the professional sequence, major, minor or concentration may not be included in the general education component.
Minors

Teaching English to Speakers of Other Languages (TESOL) only with an EC-A Modern Language major.

German - only with an EC-A Modern Language or TESOL major.

Spanish - only with an EC-A Modern Language or TESOL major.

Coaching - only with a Physical Education Major

Adapted Physical Education - requires a major in Health and Human Performance (K-12) education.

1-Cooperatives. Wisconsin law requires that teachers of Economics, social studies and agriculture complete adequate instruction in consumers' cooperatives and cooperative marketing. Students in agriculture can satisfy this requirement by successful completion of AGEC 240 or 355. Students in Economics and social sciences can satisfy this requirement by successful completion of TED 433 or AGEC 240 or 355.

2-If you are interested in teaching economics, geography, history, political science, psychology or sociology, please see Social Science, Broad Field.
Social Science Minor
Social Science Minor 30 cr. hrs.
For Elementary Education Majors only
BFSS 200 3 cr.
HIST 102 3 cr.
HIST U.S. (at or above 200 level) 6 cr.
GEOG 110 3 cr.
GEOG 120 (at or above 200 level) 3 cr.
POLS (at or above 200 level) 3 cr.
PSYC (at or above 200 level) 3 cr.
ECON (at or above 200 level) 3 cr.
SOCI/ANTH (at or above 200 level) 3 cr.

Social Science Interdisciplinary
304 Fine Arts
715-425-3164
Kurt Leichtle–Coordinator

The minor in Social Science, available for majors in elementary and middle school (6-9) education is a program of study comprised of several social science disciplines: economics, geography, history, political science and sociology.
Social Work Major

Social Work Major Requirements 121 Total Credits

Required Courses: 54 cr. hrs.
- SOWK 150 Introduction to Social Work Services 3 cr.
- SOWK 205 Introduction to Social Work and Social Welfare 3 cr.
- SOWK 215 Human Behavior and Social Environment 3 cr.
- SOWK 250 Use, Abuse, and Addiction 3 cr.
- SOWK 300 Research Methods 3 cr.
- SOWK 324 Theory and Practice of Social Work I 3 cr.
- SOWK 325 Theory and Practice of Social Work II 3 cr.
- SOWK 350 Social Welfare Policy 3 cr.
- SOWK 389 Special Topics in Social Work (2) 6 cr.
- SOWK 424 Advanced Interviewing and Crisis Intervention 3 cr.
- SOWK 426 Theory and Practice Of Social Work III 3 cr.
- SOWK 472 Social Work Field Instruction (2) 12 cr.
- SOWK 480 Senior Integrative Seminar 3 cr.
- SOWK 481 Integrating Practice and Research 3 cr.

Required Supporting Courses: 6 cr. hrs.
- SOCI 100 Introduction to Sociology 3 cr.
- SOWK 260 Practice with Diverse Populations 3 cr.

Directed Electives: 3 cr. hrs.
- SOCI 218 Deviant Behavior 3 cr.
- SOCI 221 Global Perspectives on Women 3 cr.
- SOCI 323 Sociology of the Family 3 cr.
- SOCI 338 Global Perspectives on Health and Disease 3 cr.
- SOCI 341 Sociology of Later Life
- SOCI 435 Social and Cultural Change 3 cr.
- SOCI 445 Power and Inequality 3 cr.
- CJ 202 Introduction to Criminal Justice 3 cr.
- CJ 320 Juvenile Delinquency 3 cr.
- CJ 322 Criminology 3 cr.
- CJ 430 Trends and Issues in Incarceration 3 cr.
- COMS 206 Family Communication 3 cr.
- COMS 207 Listening Skills 3 cr.
- COMS 208 Problem Solving in Small Group Communication 3 cr.
- COMS 318 Communication and Leadership 3 cr.
- PSYC 236 Developmental Psychology: childhood and Adolescence 3 cr.
- SPED 330 The Exceptional Child 3 cr.
- PSYC 336 Developmental Psychology: Adulthood and Aging 3 cr.
- PSYC 365 Individual and Group Processes 3 cr.
- SPED 421 Developmental Disabilities 3 cr.
- POLS 225 Introduction to Public Administration 3 cr.
- POLS 253 State and Local Politics 3 cr.
- POLS 256 Public Policymaking 3 cr.
- HIST 310 History of American Political Thought 3 cr.
- WGST 200 Introduction to Women's Studies 3 cr.
- INTS 200 Introduction to International Studies 3 cr.

General Education Requirements

As listed with the following exceptions:

Social and Behavioral Science: 8-9 cr. hrs.
- ECON 100, POLS 114, PSYC 101 required as supporting courses.

Sciences: 8-9 cr. hrs.
- BIOL 100(L), BIOL 150(L) or BIOL 101 required as supporting course.

Mathematics: 3 cr. hrs.
- PSYC 201 or MATH 226 required as supporting course.

Liberal Arts, follow BS Liberal Arts Degree:
- 10-12 cr. hrs.
- BIOL 253 required as a supporting course.

Social Work
203 Walker Wyman Education
715-425-3655
www.uwrf.edu/SOWK/

Ogden Rogers–Program Director; Jennifer Gervais, Director of Field Instruction
Sociology Major

Sociology Major—39 Total Credits

Core Requirements 15 cr. hrs.

SOCI 100 Introduction to Sociology
(supporting course - counts 3 cr. in Gen. Ed.)
SOCI 200 Sociological Inquiry 3 cr.
SOCI 201 Theories of Sociology 3 cr.
SOCI 250 Social Statistics 3 cr.
SOCI 300 Research Methods 3 cr.
SOCI 480 Senior Seminar 3 cr.

Content Areas
Take a minimum of one course out of each of the following content areas.

Culture and Community - Choose one course
ANTH 100 Cultural Anthropology 3 cr.
SOCI 210 Social Problems 3 cr.
SOCI 218 Deviant Behavior 3 cr.
SOCI 310 / FILM 310 Sociology Through Film 3 cr.
SOCI 314 / ANTH 314 Faces of Culture 3 cr.
SOCI 316 / ANTH 316 Social and Cultural Change 3 cr.

Diversity and Inequality - Choose one course
SOCI 220 Sociology of Diversity: Race, Class and Gender 3 cr.
SOCI 321 Power and Inequality 3 cr.
SOCI 322 / ANTH 322 Race and Ethnicity 3 cr.
SOCI 326 / WGST 326 Sociology of Gender Roles 3 cr.
SOCI 328 Perspectives on Race Relations 3 cr.

Globalization - Choose one course
SOCI 231 Sociology of Globalization 3 cr.
SOCI 331 / ANTH 331 / WGST 331 Global Perspectives on Women 3 cr.
SOCI 332 Environmental Sociology 3 cr.
SOCI 333 / ANTH 333 Human and Cultural Origins 3 cr.
SOCI 338 / ANTH 338 Global Perspectives on Health and Disease 3cr.
SOCI 395 / ANTH 395 Belize Study Tour 3 cr.

Life Course - Choose one course
SOCI 241 Social Psychology 3 cr.
SOCI 341 Sociology of Later Life 3 cr.
SOCI 342 / WGST 342 Sociology of the Family 3 cr.
SOCI 343 Sociology of Sport and Leisure 3 cr.

Seminars - Choose one course
SOCI 411 Seminar in Culture and Community 3 cr.
SOCI 421 Seminar in Diversity and Inequality 3 cr.
SOCI 431 Seminar in Globalization 3 cr.
SOCI 441 Seminar in Life Course 3 cr.

Other Electives
Choose 9 credits from courses not taken in Content Areas above and/or the following. All must be numbered 300 or higher.

SOCI 378 Semester Abroad Research 3-8 cr.
SOCI 379 Internship in Sociology 6-12 cr.
SOCI 389 Special Topics in Sociology 3 cr.
SOCI 490 Readings 1-2 cr.
SOCI 499 Independent Study 1-2 cr.
Sociology Minor

Sociology Minor - Liberal Arts or Education - 24 Total Credits

**Required Courses 6 cr. hrs.**
- SOCI 100 Introduction to Sociology
  (supporting course-counts 3 cr. in Gen. Ed.)
- SOCI 200 Sociological Inquiry 3 cr.
- SOCI 201 Theories of Sociology 3 cr.

**General Electives in Sociology/Anthropology 18 cr. hrs.**
(at least 9 credits must be at 300/400 level)
Soil Science Minor

Minor Requirements 21 Total Credits

Required Courses: 3 cr.
SOIL 120 Introduction to Soil Science 3 cr.

Select 18 credits from:
SOIL 250 Soil Profile Descriptions 2 cr.
SOIL 270 or SOIL 370 Internship 2-4 cr.
SOIL 311 Soil Fertility 4 cr.
SOIL 325 Hydric Soils and Wetland Environments 3 cr.
SOIL 350 Soil Development 2 cr.
SOIL 440 Soil and Water Conservation 4 cr.
SOIL 460 Soil Physics 3 cr.
GEOL 102 Introductory Geology Lab 1 cr.
GEOL 327 Geomorph and Glacial Geo (writing intensive) 4 cr.
Spanish Minor

Spanish Minor-Liberal Arts

Spanish Minor: 22 Total Credits

Required Courses: 16 cr. hrs.
- SPAN 102 Beginning Spanish II 4
- SPAN 201 Intermediate Spanish I 3
- SPAN 202 Intermediate Spanish II 3
- SPAN 301 Conversation and Composition I 3
- SPAN 302 Conversation and Composition II 3

Directed Electives: 6 cr. hrs.
Select 6 credits from:
- SPAN 341 Spanish Civilization to 1800 3
- SPAN 342 Spanish Civilization 1800 to Present 3
- SPAN 345 Latin American Civilization to 1800 3
- SPAN 346 Latin American Civilization 1800 to Present 3
- SPAN 351 Survey of Spanish Literature-Siglo de Oro 3
- SPAN 352 Survey of Spanish Literature-Generation of 1898 to Present 3
- SPAN 355 Survey of Latin American Literature-Conquest to independence 3
- SPAN 356 Survey of Latin American Literature-Independence to Present 3
- SPAN 401 Advanced Spanish Communication 3
- SPAN 371 Bus/Cult. Hispanic World 3
- SPAN 372 Spanish for Trades and Professions 3
- SPAN 401 Advanced Spanish Communication 3
- MODL 376 Mexico: A Cultural Experience 3

Spanish Minor-Education

Complete Spanish Minor Liberal Arts program
(must include 401 and 341, 342, 345, 346 or 376)

Required supporting courses not part of minor: 6 cr. hrs.
- SPAN 350 Spanish Phonetics 3
- TED 437 Techniques of Middle/Secondary Education: Modern Language 2
- TED 448 Techniques of Elementary Education: Modern Language 2

Department of Modern Language
284 Kleinpell Fine Arts
715-425-3121
www.uwrf.edu/MODL/

- Marshall Toman, Chair
- Cecilia Bustamante
- Juan Carlos Chaves
- Rebecca Raham
- Magara Maeda
- Kaishan Kong
- Julie Kovacic
- Gretchen Toman
- Daniela Goldfine

Emeriti:
- Kristine Butler
- Peter Johanssen
- Terrence Mannetter
- Sandra Soares
Stage and Screen Arts Major

Total Required Credit Hours: 41
All classes are 3 credits unless otherwise specified.

Required Courses (30 Credit Hours):

SASA 112 Introduction to Storytelling
SASA 113 Collaborative Problem Solving for Stage and Screen
SASA 121 Acting for Stage and Screen I
SASA 131 Visual Elements for Stage and Screen
SASA 294 Creative and Scholarly Research
SASA 335 Directing for Stage and Screen I
SASA 379 Internship
SASA 490 Entrepreneurship/Senior Capstone for Stage and Screen

Choose One – Required

SASA 231 Creating Artistic Environments for Stage and Screen
SASA 232 Costume/Makeup for Stage and Screen
SASA 233 Light and Sound for Stage and Screen

Choose One – Required

FILM 301 History of Film
SASA 337 History of Theatre

Directed Electives (11 Credit Hours)

Must take minimum of two 200 (or higher) level courses:

DANC 120 Somatic Practices
DANC 150 Improvisation for the Performing Arts (2 Cr.)
SASA 160 Studio Production
SASA 212 Improvisation and Devising for Stage and Screen (2 Cr.)
SASA 221 Acting for Stage and Screen II
SASA 231 Creating Artistic Environments for Stage and Screen
SASA 232 Costume/Makeup for Stage and Screen II
SASA 233 Light and Sound for Stage and Screen II
SASA 234 Production Mgt. and Leadership for Stage and Screen
SASA 260 Electronic Field Production
SASA 261 Electronic Media Copywriting
SASA 301 History of Film
SASA 328 Theatre for Youth
SASA 303 Documentary Production
SASA 334 Playwriting
SASA 337 History of Theatre
SASA 340 Design for Stage and Screen
SASA 360 Advanced Electronic Field Production
SASA 381 Screenwriting
SASA 435 Directing for Stage and Screen II
Stage And Screen Arts Minor

Total Required Credit Hours: 24-26

All classes are 3 credits unless otherwise specified.

Required Courses (21 Credit Hours):

- SASA 112  Introduction to Storytelling
- SASA 113  Collaborative Problem Solving for Stage and Screen
- SASA 121  Acting for Stage and Screen I
- SASA 131  Visual Elements for Stage and Screen
- SASA 335  Directing for Stage and Screen I
- SASA 490  Entrepreneurship/Senior Capstone for Stage and Screen

Choose One – Required

- FILM 301  History of Film
- SASA 337  History of Theatre

Directed Electives (3-5)

- SASA 160  Studio Production
- SASA 212  Improvisation and Devising for Stage and Screen (2 Cr.)
- SASA 231  Creating Artistic Environments for Stage and Screen
- SASA 232  Costume/Makeup for Stage and Screen
- SASA 233  Light and Sound for Stage and Screen
- SASA 234  Production Mgt. and Leadership for Stage and Screen
- SASA 260  Electronic Field Production
- SASA 261  Electric Media Copywriting
- FILM 301  History of Film
- SASA 328  Theatre for Youth
- SASA 334  Playwriting
- SASA 337  History of Theatre
- SASA 340  Design for Stage and Screen
- SASA 360  Advanced Electronic Field Production
- ENGL 381  Screenwriting
- SASA 435  Directing for Stage and Screen II
Sustainability Studies Minor

Sustainability Studies Minor: 24 Total Credit hour
(ESM 105 is a prerequisite)

Required Courses: 18 Credit Hours
ESM 220 Environmental Sustainability: Theories, Issues, and Management 3 cr.
ESM 251 Community Decision-Making OR ESM 351 Planning for Sustainable Communities OR
SOCI 245 Environmental Sociology 3 cr.
SM 377 Business Ecology OR ESM 351 Planning for Sustainable Communities 3 cr.
(Students who choose ESM 351 to meet requirement (2) must take ESM 377 to meet this
requirement)
CROP 368 Sustainable Agriculture 3 cr.
GEOL 350 Geological Destinies of Nations 3 cr.
AGEC 450 Introduction to Natural Resource Economics 3 cr.

Directed Electives: 6 Credit Hours
ESM 109, ESM 251*, ESM 300, ESM 303, ESM 305, ESM 343, ESM 351*, ESM 377* 2-3 cr.
GEOG 366 3 cr.
GEOL 202, GEOL 269, GEOL 330 3 cr.
SOIL 325 3 cr.
AGEN 325 3 cr.
ENGL 228 3 cr.
CHEM 200 3 cr.
SOCI 245* 3 cr.
(*This course counts as EITHER a requirement OR a directed elective.)

Interdisciplinary Minor
Plant and Earth Science Department
324 Agricultural Science
715-425-3345

Contact
Jill Coleman-Wasik, assistant professor of
environmental science
jill.colemanwasik@uwrf.edu

Program Goals

1. Provide students with a multi-disciplinary
   foundation for thinking about sustainability.
2. Discuss the concept of sustainability from a
   biogeochemical perspective.
3. Address the social and economic facets of
   sustainability.
4. Discuss the challenges that face humanity in
   becoming sustainable.

Learning Outcomes

Students will be able to:

1. Create a personal definition of sustainability.
2. Analyze human impacts on natural systems
   and processes that affect the ability of
   humanity to live sustainably.
3. Interpret sustainability issues in the context of
   element cycles.
4. Compare and contrast the role of public and
   private entities in creating sustainable
   societies.
5. Identify facets of social/economic/industrial
   structures that could be changed to make
   society more sustainable.
Sustainable Agriculture Minor

Minor Requirements: 24-25 credits
Required courses: 12 cr. hrs.
CROP 368 Sustainable Agriculture 3 cr.
ESM 220 Environmental Sustainability: Theories, Issues and Management 3 cr. Prereq: ESM 105
AGEC 450 Introduction to Natural Resources Economics 3 cr. Prereq: AGEC 230
SOCI 332 Environmental Sociology 3 cr. Prereq: SOCI 100 or consent of instructor

Directed electives: 12 cr. hrs.
Select two from the following:
ANSC 389 Special Topics: Sustainable Animal Production 3 cr.
ANSC 365 Poultry Production 3 cr. Prereq: ANSC 232, ANSC 257
ANSC 366 Swine Production 3 cr. Prereq: ANSC 232, ANSC 231, ANSC 257, and one of the following: BIOL 150, ANSC 111 or PLSC 161
ANSC 367 Bee Production 3 cr. Prereq: ANSC 232, ANSC 231, ANSC 257, and one of the following: BIOL 150, ANSC 111 or PLSC 161
ANSC 368 Sheep Production 3 cr. Prereq: ANSC 232, ANSC 231, ANSC 257, and one of the following: BIOL 150, ANSC 111 or PLSC 161
CROP 263 Forage Crop Production 3 cr. Prereq: PLSC 161
CROP 363 Pasture Production 3 cr. Prereq: PLSC 161
CROP 468 Organic Production Systems 3 cr. Prereq: Foundation of Agriculture courses completion
DASC 306 Dairy Production 3 cr. Prereq: ANSC 232 and ANSC 257
ESM 343 Woodlot Management 3 cr. Prereq: ESM 109 or consent
HORT 327 Vegetable Science and Production 3 cr. Prereq: PLSC 161 and HORT 169
HORT 347 Fruit Science and Production 3 cr. Prereq: PLSC 161 and HORT 169

Select one from the following:
AFES 310 Agricultural Human Resource Management 3 cr. Prereq: Junior standing
AGEC 360 Farm Management 3 cr. Prereq: AGEC 230
AGEC 361 Horticultural Business Management 3 cr. Prereq: AGEC 230
AGEC 445 Land Use and Sustainable Agriculture Law 3 cr. Prereq: AGEC 230 or ESM 303, and MATH 146 or higher
AGEC 495 Special Problems in Ag Economics: Direct Marketing 3 cr.

Select one from the following:
AET 325 Alternative Energy Systems 3 cr. Prereq: CHEM 121 or equiv.
CROP 451 Integrated Pest Management 3 cr. Prereq: PLSC 161
ESM 305 Environmental Impact Assess 3 cr. Prereq: ESM 105, CHEM 121, BIOL 100 or 150, and GEOL 101.
SOIL 440 Soil and Water Conservation 4 cr. Prereq: SOIL 120, MATH 146, and computer proficiency
Sustainable Management Certificate

Program Overview

Program Curriculum for Certificates

Sustainable Management Science Certificate, 12 credits
- SMGT 310 Ecology for Sustainable Management, 3 cr.
- SMGT 315 Global Environmental Chemistry, 3 cr.
- SMGT 320 Energy for Sustainable Management, 3 cr.
- SMGT 325 Natural Resource Management, 3 cr.

Sustainable Enterprise Management Certificate, 15 credits
- SMGT 230 Triple Bottom Line Accounting for Managers, 3 cr.
- SMGT 235 Economics in Society and Sustainability, 3 cr.
- SMGT 331 Sustainable Organizational Finance, 3 cr.
- SMGT 430 International Management for a Sustainable World, 3 cr.

Select one from:
- SMGT 335 Management & Environmental Information Systems, 3 cr.
- SMGT 350 Operations Management and Sustainability, 3 cr.
Sustainable Management

Overview of Program

Degree Requirements: 63 total credits

The Bachelor of Science in Sustainable Management consists of 21 courses. Each student is required to successfully complete all 21 courses to graduate. There are no electives in the program. The Capstone course is usually taken in the last semester. Each course is worth three credits.

SMGT 115 Environmental Science and Sustainability
SMGT 220 Systems Thinking
SMGT 230 Triple Bottom Line Accounting for Managers
SMGT 235 Economics in Society and Sustainability
SMGT 240 Technical Writing for Sustainable Management
SMGT 310 Ecology for Sustainable Management
SMGT 315 Global Environmental Chemistry
SMGT 320 Energy for Sustainable Management
SMGT 325 Natural Resource Management
SMGT 330 Marketing for a Sustainable World
SMGT 331 Sustainable Organizational Finance
SMGT 332 Economics of Environmental Sustainability
SMGT 335 Management and Environmental Information Systems
SMGT 340 Organizational Behavior and Sustainability
SMGT 350 Operations Management and Sustainability
SMGT 360 Environmental and Sustainability Policy
SMGT 370 Logistics, Supply Chain Management, and Sustainability
SMGT 430 International Management for a Sustainable World
SMGT 435 International Development and Sustainability
SMGT 460 Environment and Society
SMGT 495 Sustainable Management Capstone

Prerequisites

- College Algebra (MATH 146 or equivalent)
- Statistics (MATH 216, MATH 226, ECON 226 or equivalent)
- Chemistry (any UWRF Chemistry course or equivalent)
- Biology (any UWRF Biology course or equivalent)
- Introductory Communications (COMS 101, COMS 116 or equivalent)

General Education and University Requirements

All students enter this program with at least 60 college-level semester credits of transferable coursework with a 2.0 or better grade point average (GPA). In addition to the general education requirements, UW-River Falls students must complete two, university-required courses in American cultural diversity and global perspectives. See list of approved courses.
Teaching English to Speakers of Other Languages Major

TESOL Liberal Arts

TESOL Major - Liberal Arts: 36-38 Total Credits

Foreign Language Requirement:
Candidates must have demonstrated proficiency in language study of a single foreign language, which can occur through two years of high school study, four semesters of university study, or other equivalent means of demonstrating proficiency in foreign language study. This foundation requirement is not included in the number of credit hours needed for the major proper: the foundation requirement of two years of foreign language study is separate from the Directed Electives.

Required Courses: 24 cr. hrs.
ENGL 211 Intro to TESOL: Reading and Writing. 3 cr.
ENGL 220 Structure of English 3 cr.
ENGL 322 Acquisition of Language 3 cr.
ENGL 360 Theory and Methodology of TESOL 3 cr.
ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
ENGL 420 Pedagogical Grammar 3 cr.
ENGL 451 Phonetics and Phonology 3 cr.
ENGL 475 Assessment and Testing in TESOL 3 cr.

Directed Electives 12-14 cr. hrs.
This requirement can be fulfilled through a combination of language study, study abroad, and courses listed in section 5 below or through courses selected from section 5 alone. Appropriate study abroad programs would include those with whom UWRF has associations, such as The Abbey in France, The Hessen Exchange in Germany, Wisconsin in Scotland, Wisconsin in China, and University of Guadalajara in Mexico. TESOL/MODL (French, German, Spanish, for examples) double majors may fulfill the directed electives with 12 credits chosen from the MODL courses listed in section 5 below.

Select among:
1. Language Option: 0-8 cr. hrs.
   Select 0-8 credits from among 201, 202, 301, 302, and 401 from one of the following languages: Chinese, French, German, Japanese, or Spanish. (Students cannot double-count courses taken to satisfy the foundation language requirement above for this directed electives category.)

2. Semester Abroad Research: 0-6 cr. hrs.
   A TESOL-based ENGL 378 or any department’s 378, that is based in the discipline of TESOL and has an advisor or co-advisor from TESOL may be used to fulfill this requirement with prior approval. Requires department approval and may be added to a student’s DAR by program exception signed by the chair of the Department of English.

3. Semester Abroad: 0-6 cr. hrs.
   INTS 377
   Credits earned in Semester Abroad or the International Traveling Classroom could be used to meet this requirement. Courses other than INTS 377 need to be approved prior to engaging in the experience as appropriate to the TESOL major by the chair of the Department of English and may appear in this category on the DAR by program exception form signed by the chair.

4. Select up to two of the following courses: 0-6 cr. hrs.
   ENGL 379 Cooperative Education and Internship II 3 cr.
   MODL 376 Mexico: A Cultural Experience 3 cr.
   HIST 371 Study Tour Research: China or Italy 3 cr.

5. Select from the following courses to fulfill the Directed Electives component: 0-12 cr. hrs.
   ENGL 230 International Short Fiction 3 cr.

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General Education Requirements-Liberal Arts

B.A. and B.S. Liberal Arts Majors
As listed with the following exceptions:
Social and Behavioral: It is RECOMMENDED that TESOL majors and minors include PSYC 101 among their three social science courses.
Mathematics: It is RECOMMENDED that TESOL majors and minors take PSYC 201, Behavioral Statistics, to fulfill their mathematics requirement.

B.S. Education Majors
As listed.

Department of English
245 Kleinpell Fine Arts
715-425-3537
www.uwrf.edu/ENGL/

Marshall Toman-Chair, Greta Gaard, Annette Klemp, Steven Luebke, Mialisa Moline, Michelle Parkinson, Vladimir Pavlov, Joseph Rein, Catherine Ross-Stroud, Elizabeth Schneider-Rebozo, Douglas Margolis
ENGL 232 Contemporary Drama 3 cr.
ENGL 306 Postcolonial Film and Literature 3 cr.
ENGL 309 Film and Literature of the New Europe 3 cr.
ENGL 317 East Asian Film and Literature 3 cr.
ENGL 441 20th Century International Fiction 3 cr.
ENGL 442 World Cinema 3 cr.
ENGL 450 Non-Native Speakers of the Midwest 3 cr.
ENGL 452 Lexicology 3 cr.
FREN 316 History of French Cinema 3 cr.
FREN 341 French Civilization 3 cr.
FREN 342 France and Francophone 3 cr.
FREN 350 French Phonetics 3 cr.
FREN 351 French Literature to 1800 3 cr.
FREN 352 French Literature from 1800 to Present 3 cr.
FREN 451 French Prose Fiction 3 cr.
FREN 452 French Poetry 3 cr.
FREN 453 French Drama 3 cr.
GERM 315 Classic and Modern German Film 3 cr.
GERM 341 German Civilization to 1648 3 cr.
GERM 342 Modern German-Speaking Cultures 3 cr.
GERM 350 German Phonetics 3 cr.
GERM 351 Survey of German Literature I 3 cr.
GERM 352 Survey of German Literature II 3 cr.
GERM 451 German Drama and Theater 3 cr.
GERM 452 German Tale, Short Story, and Novella 3 cr.
GERM 453 German Poetry 3 cr.
GERM 490 Readings in German 3 cr.
SPAN 341 Spanish Civilization to 1800 3 cr.
SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 3 cr.
SPAN 350 Spanish Phonetics 3 cr.
SPAN 351 Survey of Spanish Literature I 3 cr.
SPAN 352 Survey of Spanish Literature II 3 cr.
SPAN 355 Survey of Latin American Literature I 3 cr.
SPAN 356 Survey of Latin American Literature II 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Profession 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.
SPAN 490 Readings in Spanish
COMD 162 Introduction to American Sign Language 3 cr.
COMS 313 Intercultural Communication 3 cr.
ECON 312 Political Economy of Discrimination 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
GEOG 344 Asian and Oceana 3 cr.
HIST 201 Introduction to Asian Civilization 3 cr.
HIST 202 Introduction to Latin American Civilization 3 cr.
HIST 204 United States Immigration and Ethnic History 3 cr.
HIST 209 Introduction to African History 3 cr.
HIST 332 The Islamic Middle East to 1500 3 cr.
HIST 334 Modern China 1800 to Present 3 cr.
HIST 335 Modern Japan 1600 to Present 3 cr.
HIST 336 Traditional East Asia, Prehistory to 1800 3 cr.
HIST 349 Middle Eastern History and Politics 3 cr.
PHIL 245 Eastern Religions and Islam 3 cr.
SOCI 220 Sociology of Diversity 3 cr.
ANTH 231 / SOCI 231 Sociology of Globalization 3 cr.
ANTH 314 / SOCI 314 Faces of Culture 3 cr.
ANTH 322 / SOC 322 Race and Ethnicity 3 cr.
ANTH 331 / SOCI 331 Global Perspectives on Women 3 cr.
ANTH 338 / SOCI 338 Global Perspectives on Health and Disease 3 cr.
POLS 212 The Politics of Equality and Inequality in the United States 3 cr.
POLS 260 Introduction to International Relations 3 cr.
PSYC 285 Psychology of Prejudice and Racism 3 cr.
TED 461 The Psychology and Pedagogy of Literacy 3 cr.

TESOL Education

TESOL Major-Education 36-38 Total Credits

Foreign Language Requirement:
Candidates must have demonstrated proficiency in language study of a single foreign language, which can occur through two years of high school study, four semesters of university study, or other equivalent means of demonstrating proficiency in foreign language study. This foundation requirement is not included in the number of credit hours needed for the major proper; the foundation requirement of two years of foreign language study is separate from the Directed Electives.

Required courses: 27 cr. hrs.
ENGL 211 Introduction to Language and Linguistics 3 cr.
ENGL 220 Structure of English 3 cr.
ENGL 322 Acquisition of Language 3 cr.
ENGL 360 Theory and Methodology of TESOL 3 cr.
ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
ENGL 420 Pedagogical Grammar 3 cr.
ENGL 450 Non-Native Speakers of the Midwest 3 cr.
ENGL 451 Phonetics and Phonology 3 cr.
ENGL 475 Assessment and Testing in TESOL 3 cr.

Directed Electives: 9-11 cr. hrs.
This requirement can be fulfilled through a combination of language study, study abroad, and courses listed in Section 5 below or through courses selected from Section 5 alone. Appropriate international programs would include those with whom UWRF has associations, such as Shih Hsin University in Taiwan, The Abbey in France, The Hessen Exchange in Germany, Wisconsin in Scotland, Wisconsin in China, and University of Guadalajara in Mexico. TESOL/MODL (French, German, Spanish, for examples) double majors may double count up to 12 credits of MODL language courses in this directed electives section with any combination of credits chosen from section 5 below.

Select among
1. Language Option: 0-8 cr. hrs.
   Select 0-8 credits from among 201, 202, 301, 302, and 401 from one of the following languages: Chinese, French, German, Japanese, or Spanish. (Students cannot double-count courses taken to satisfy the foundation language requirement above for this directed electives category.)

2. Semester Abroad Research: 0-6 cr. hrs.
   A TESOL-based ENGL 378 or any department's 378, that is based in the discipline of TESOL and has an advisor or co-advisor from TESOL may be used to fulfill this requirement with prior approval. Requires department approval and may be added to a student's DAR by program exception signed by the chair of the Department of English.

3. Semester Abroad: 0-6 cr. hrs.
INTS 377

Credits earned in Semester Abroad or the International Traveling Classroom could be used to meet this requirement. Courses other than INTS 377 need to be approved prior to engaging in the experience as appropriate to the TESOL major by the chair of the Department of English and may appear in this category on the DAR by program exception form signed by the chair.

4. Select from the following courses: 0-6 cr. hrs.
   - ENGL 379 Cooperative Education and Internship II 3 cr.
   - MODL 376 Mexico: A Cultural Experience 3 cr.
   - HIST 371 Study Tour Research: China or Italy 3 cr.

5. Select from the following courses to fulfill the Directed Electives component: 0-9 cr. hrs.
   - ENGL 230 International Short Fiction 3 cr.
   - ENGL 232 Contemporary Drama 3 cr.
   - ENGL 306 Postcolonial Film and Literature 3 cr.
   - ENGL 309 Film and Literature of the New Europe 3 cr.
   - ENGL 317 East Asian Film and Literature 3 cr.
   - ENGL 441 20th Century International Fiction 3 cr.
   - ENGL 442 World Cinema 3 cr.
   - ENGL 452 Lexicology 3 cr.
   - FREN 316 History of French Cinema 3 cr.
   - FREN 341 French Civilization 3 cr.
   - FREN 342 France and Francophone 3 cr.
   - FREN 350 French Phonetics 3 cr.
   - FREN 351 French Literature to 1800 3 cr.
   - FREN 352 French Literature from 1800 to Present 3 cr.
   - FREN 451 French Prose Fiction 3 cr.
   - FREN 452 French Poetry 3 cr.
   - FREN 453 French Drama 3 cr.
   - GERM 315 Classic and Modern German Film 3 cr.
   - GERM 341 German Civilization to 1648 3 cr.
   - GERM 342 Modern German-Speaking Cultures 3 cr.
   - GERM 350 German Phonetics 3 cr.
   - GERM 351 Survey of German Literature I 3 cr.
   - GERM 352 Survey of German Literature II 3 cr.
   - GERM 451 German Drama and Theater 3 cr.
   - GERM 452 German Tale, Short Story, and Novella 3 cr.
   - GERM 453 German Poetry 3 cr.
   - GERM 490 Readings in German 3 cr.
   - SPAN 341 Spanish Civilization to 1800 3 cr.
   - SPAN 342 Spanish Civilization 1800 to Present 3 cr.
   - SPAN 345 Latin American Civilization to 1800 3 cr.
   - SPAN 346 Latin American Civilization 3 cr.
   - SPAN 350 Spanish Phonetics 3 cr.
   - SPAN 351 Survey of Spanish Literature I 3 cr.
   - SPAN 352 Survey of Spanish Literature II 3 cr.
   - SPAN 355 Survey of Latin American Literature I 3 cr.
   - SPAN 356 Survey of Latin American Literature II 3 cr.
   - SPAN 371 Business and Culture in the Hispanic World 3 cr.
   - SPAN 372 Spanish for the Trades and Profession 3 cr.
   - SPAN 452 Advanced Spanish Literature 3 cr.
   - SPAN 455 Advanced Latin American Literature 3 cr.
   - SPAN 490 Readings in Spanish
   - COMD 162 Introduction to American Sign Language 3 cr.
   - COMS 313 Intercultural Communication 3 cr.
   - ECON 312 Political Economy of Discrimination 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
GEOG 344 Asian and Oceana 3 cr.
HIST 201 Introduction to Asian Civilization 3 cr.
HIST 202 Introduction to Latin American Civilization 3 cr.
HIST 204 United States Immigration and Ethnic History 3 cr.
HIST 209 Introduction to African History 3 cr.
HIST 332 The Islamic Middle East to 1500 3 cr.
HIST 334 Modern China 1800 to Present 3 cr.
HIST 335 Modern Japan 1600 to Present 3 cr.
HIST 336 Traditional East Asia, Prehistory to 1800 3 cr.
HIST 349 Middle Eastern History and Politics 3 cr.
PHIL 245 Eastern Religions and Islam 3 cr.
SOCI 220 Sociology of Diversity 3 cr.
ANTH 231 / SOCI 231 Sociology of Globalization 3 cr.
ANTH 314 / SOCI 314 Faces of Culture 3 cr.
ANTH 322 / SOC 322 Race and Ethnicity 3 cr.
ANTH 331 / SOCI 331 Global Perspectives on Women 3 cr.
ANTH 338 / SOCI 338 Global Perspectives on Health and Disease 3 cr.
POLS 212 The Politics of Equality and Inequality in the United States 3 cr.
POLS 260 Introduction to International Relations 3 cr.
PSYC 285 Psychology of Prejudice and Racism 3 cr.
TED 461 The Psychology and Pedagogy of Literacy 3 cr.

Professional Education
Required for certification (not counted in major):
TED 428 Techniques of Elementary/Middle/Secondary Education: TESOL 3 cr.
TESOL Liberal Arts Minor

TESOL Minor - Liberal Arts: 24 Total Credits

This minor requires 24 credits of core courses and electives. Candidates must have demonstrated proficiency in language study of a single foreign language, which can occur through two years of high school study, four quarters of university study, or other equivalent means of demonstrating proficiency in foreign language study. This foundation requirement is not included in the number of credit hours needed for the minor proper; the foundation requirement of two years of foreign language study is separate from the Directed Electives.

**Required Courses: 21 cr. hrs.**
- ENGL 220 Structure of English 3 cr.
- ENGL 322 Acquisition of Language 3 cr.
- ENGL 360 Theory and Methodology of TESOL 3 cr.
- ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
- ENGL 420 Pedagogical Grammar 3 cr.
- ENGL 451 Phonetics and Phonology
- ENGL 475 Assessment and Testing in TESOL 3 cr.

**Directed Electives: 3 cr. hrs.**

If you plan to earn 3 credits in an internship or traveling program appropriate to the discipline of TESOL, those credits may be used to meet this requirement. Credits that are approved prior to engaging in the experience as appropriate to the TESOL minor by the chair of the Department of English may appear in the category on the DAR by a program exception form signed by the chair. Otherwise, select one of the following:

- ENGL 230 International Short Fiction 3 cr.
- ENGL 232 Contemporary Drama 3 cr.
- ENGL 306 Postcolonial Film and Literature 3 cr.
- ENGL 309 Film and Literature of the New Europe 3 cr.
- ENGL 317 East Asian Film and Literature 3 cr.
- ENGL 441 20th Century International Fiction 3 cr.
- ENGL 442 World Cinema 3 cr.
- ENGL 450 Non-Native Speakers of the Midwest 3 cr.
- ENGL 452 Lexicology 3 cr.
- FREN 316 History of French Cinema 3 cr.
- FREN 341 French Civilization 3 cr.
- FREN 342 France and Francophone 3 cr.
- FREN 350 French Phonetics 3 cr.
- FREN 351 French Literature to 1800 3 cr.
- FREN 352 French Literature from 1800 to Present 3 cr.
- FREN 451 French Drama and Theater 3 cr.
- FREN 452 French Poetry 3 cr.
- FREN 453 French Drama 3 cr.
- GERM 315 Classic and Modern German Film 3 cr.
- GERM 341 German Civilization to 1648 3 cr.
- GERM 342 Modern German-Speaking Cultures 3 cr.
- GERM 350 German Phonetics 3 cr.
- GERM 351 Survey of German Literature I 3 cr.
- GERM 352 Survey of German Literature II 3 cr.
- GERM 451 German Drama and Theater 3 cr.
- GERM 452 German Tale, Short Story, and Novella 3 cr.
- GERM 453 German Poetry 3 cr.
- GERM 490 Readings in German 3 cr.
- SPAN 341 Spanish Civilization to 1800 3 cr.
- SPAN 342 Spanish Civilization 1800 to Present 3 cr.
SPAN 345 Latin American Civilization to 1800 3 cr.
SPAN 346 Latin American Civilization 3 cr.
SPAN 350 Spanish Phonetics 3 cr.
SPAN 351 Survey of Spanish Literature I 3 cr.
SPAN 352 Survey of Spanish Literature II 3 cr.
SPAN 355 Survey of Latin American Literature I 3 cr.
SPAN 356 Survey of Latin American Literature II 3 cr.
SPAN 371 Business and Culture in the Hispanic World 3 cr.
SPAN 372 Spanish for the Trades and Profession 3 cr.
SPAN 452 Advanced Spanish Literature 3 cr.
SPAN 455 Advanced Latin American Literature 3 cr.
SPAN 490 Readings in Spanish
COMD 162 Introduction to American Sign Language 3 cr.
COMS 313 Intercultural Communication 3 cr.
ECON 312 Political Economy of Discrimination 3 cr.
GEOG 342 Latin America 3 cr.
GEOG 343 Africa 3 cr.
GEOG 344 Asian and Oceana 3 cr.
HIST 201 Introduction to Asian Civilization 3 cr.
HIST 202 Introduction to Latin American Civilization 3 cr.
HIST 204 United States Immigration and Ethnic History 3 cr.
HIST 209 Introduction to African History 3 cr.
HIST 332 The Islamic Middle East to 1500 3 cr.
HIST 334 Modern China 1800 to Present 3 cr.
HIST 335 Modern Japan 1600 to Present 3 cr.
HIST 336 Traditional East Asia, Prehistory to 1800 3 cr.
HIST 349 Middle Eastern History and Politics 3 cr.
PHIL 245 Eastern Religions and Islam 3 cr.
SOC 220 Sociology of Diversity 3 cr.
ANTH 231 / SOCI 231 Sociology of Globalization 3 cr.
ANTH 314/ SOCI 314 Faces of Culture 3 cr.
ANTH 322/ SOC 322 Race and Ethnicity 3 cr.
ANTH 331/ SOCI 331 Global Perspectives on Women 3 cr.
ANTH 338/ SOCI 338 Global Perspectives on Health and Disease 3 cr.
POLS 212 The Politics of Equality and Inequality in the United States 3 cr.
POLS 260 Introduction to International Relations 3 cr.
PSYC 285 Psychology of Prejudice and Racism 3 cr.
TED 461 The Psychology and Pedagogy of Literacy 3 cr.

TESOL Education Minor

TESOL Minor - Liberal Arts: 24 Total Credits

This minor requires 24 credits of core courses and electives. Candidates must have demonstrated proficiency in language study of a single foreign language, which can occur through two years of high school study, four semesters of university study, or other equivalent means of demonstrating proficiency in foreign language study. This foundation requirement is not included in the number of credit hours needed for the minor proper; the foundation requirement of two years of foreign language study is separate from the Directed Electives.

Required Courses 24 credits
ENGL 211 Introduction to TESOL: Reading and Writing 3 cr.
ENGL 220 Structure of English 3 cr.
ENGL 322 Acquisition of Language 3 cr.
ENGL 360 Theory and Methodology of TESOL 3 cr.
ENGL 373 Techniques in Tutoring: TESOL Practicum 3 cr.
ENGL 420 Pedagogical Grammar 3 cr.
ENGL 451 Phonetics and Phonology 3 cr.
ENGL 475 Assessment and Testing in TESOL 3 cr.

Directed Electives (required supporting courses) 6 credits
ENGL 450 Nonnative Speakers in the Midwest 3 cr.
TED 428 Techniques in Elementary/Middle School Education: TESOL 3 cr.

Keep a copy for your records of the Content Standards required for licensure available for all English classes at
https://www.uwrf.edu/CAS/Resources/DPTESOL.cfm
Women's and Gender Studies

Minor in Women's and Gender Studies 24 Total Credits

Required Core Course for all minors 6 credits
WGST 200 (d) Introduction to Women's and Gender Studies.

One of the following (3 credits each):
WGST 379 Internship/Service Learning
WGST 499 Directed Study (if not taken as a core course)

Directed Electives 18 credits
Choose any WGST course (co-listed or stand-alone)
WGST 320 Gender Issues in Science
WGST 350 Introduction to LGBTQ Studies
WGST 379 Internship/Service Learning 3-6 cr.(if not taken as a core course)
WGST 389 Topics in Women's and Gender Studies
WGST 499 Directed Study (if not taken as a core course)

WGST 205 / HIST 205 Women's History: United States
WGST 303 / HIST 303 Women's History: Europe
WGST 305 / HIST 305 Women's History: Global

WGST 314 / POLS 314 Women and Politics
WGST 225 / PSYC 225 Sex Differences, Gender Roles, and Sexual Orientation
WGST 375 / PSYC 375 Psychology of Human Sexuality

WGST 221 / ANTH 221 / SOCI 221 Global Perspectives on Women
WGST 323 / SOCI 323 Sociology of Family
WGST 326 / SOCI 326 Sociology of Gender Roles

WGST 206 / COMS 206 Family Communication
WGST440 / COMS 440 Gender Communication

WGST 214 / ENGL 214 Women in Literature
WGST 215 / ENGL 215 LGBTQ Literature
WGST 235 / ENGL 235 American Autobiography
WGST 300 / ENGL 300 Women, Film, and Society
WGST 443 / ENGL 443 American Ethnic Women Authors

WGST 321 / ART 321 Gender and Art

Women's and Gender Studies Program Web Site

Women's and Gender Studies
Interdisciplinary Program
264 Kleinpell Fine Arts
715-425-4020

Melanie Ayres - Coordinator

A minor in Women's and Gender Studies provides students with the following: a broad historical representation of scholarship on women; a set of methodologies that acknowledge the intrinsic value of the experiences, contributions, and perspectives of both women and men.

The minor consists of core courses and elective courses in many disciplines for a total of 24 minimum credit hours.

Women's and Gender Studies Program Web Site
Agricultural Education, Initial Certification

Overview of Master of Science in Education Degree

This option is designed for students with a non-teaching baccalaureate degree seeking initial teacher licensure as agricultural education instructors.

**Initial Teaching Licensure**

**Degree Requirements**

**Undergraduate Requirements, 15 credits or more**

- TED 440 Techniques in Sec. Ed. - Ag., 3 credits
- TED 475 Student Teaching K-12, 12 credits
- or TED 478 Secondary School Internship, 12 credits

Any CAFES classes needed to meet WI DPI agriculture content standards or general education certification requirements.

**Licensure Requirements, 27 credits**

- AGED 603 Supervision of Work Experience and Youth Organizations, 3 credits
- AGED 662 Curriculum Design in Vocational Education, 3 credits
- AGED 569 Philosophy of Vocational and Cooperative Education, 4 credits
- AGED 701 Advanced Leadership and Group Dynamics, 2 credits
- TED 745 Psychology of Teaching, 6 credits
- ESM 500 Environmental Education, 3 credits
- SPED 530 Exceptional Child, 3 credits
- READ 622 Content Area Literacy in Middle & Secondary Schools, 3 credits

**Research Requirements, 4-6 credits**

- AGED 781, AGED 782, AGED 783 Research Seminar in Ag Ed (1 credit each), 3 credits
- AGED 798 Independent Research, 1-3 credits
- or AGED 799 Thesis, 2-3 credits

Additional certification requirements include a portfolio, Praxis I and II tests and industry work experience.
Overview of Master of Science in Education Degree

Professional Development in Agricultural Education

Degree Requirements

Professional Education, 7 credits
TED 740 Foundations of American Education, 4 credits
TED 750 Advanced Educational Psychology, 3 credits
or TED 760 Methods in Research, 3 credits

Specialization, 20-21 credits
AGED 781, AGED 782, AGED 783 Research Seminar in Ag Ed (1 credit each), 3 credits
AGED 798 Independent Research, 1-3 credits
or AGED 799 Thesis, 2-3 credits
AGED electives, 3-6 credits

Specialization Electives, 9-14 credits
Selected upon consultation with advisor

Non-Specialization, 3 credits
Elective courses from outside the departments and selected for either professional education or specialization.
## MBA Degree Requirements

### Core Courses, 21 credits

- MNGT 700 Organizational Theory and Behavior, 3 credits
- MNGT 702 Strategic Marketing Management, 3 credits
- MNGT 705 Operations Management, 3 credits
- ECON 730 Managerial Statistics, 3 credits
- FINC 732 Financial Management, 3 credits
- ACCT 734 Managerial Accounting, 3 credits
- MNGT 720 Strategy and Organizational Performance, 3 credits (capstone)

### Elective Courses, 12 credits minimum or 4 courses

- MNGT 701 Leadership and Ethics, 3 credits
- MNGT 703 Human Resource Management, 3 credits
- MNGT 704 Fundamentals of Business Law, 3 credits
- ECON 731 Managerial Economics, 3 credits
- MNGT 733 Leading Change, 3 credits
- MNGT 737 Innovation and Design, 3 credits
- MNGT 738 Practicum
- MNGT 739 International Business, 3 credits
- MNGT 742 Team Engagement, 3 credits
Clinical Exercise Physiology, MS

Program Overview

Degree Requirements

Total credits to degree: 34

BIOL 700 Cardiac Anatomy and Physiology, 4 cr.
EXSS 701 Advanced Physiology of Exercise, 3 cr.
EXSS 706 Nutrition in Health & Human Performance, 3 cr.
BIOL 710 Medical Pharmacology, 3 cr.
EXSS 716 Statistics and Research Methods in Health and Human Performance, 3 cr.
EXSS 720 Clinical Patient Behavior Change, 3 cr.
EXSS 745 Physical Activity and Chronic Disease, 3 cr.
EXSS 756 ECG Analysis/Graded Exercise Testing, 3 cr.
EXSS 785 Cardio-Pulmonary Rehabilitation, 3 cr.
EXSS 799 Thesis, 3 cr. and EXSS 774 Clinical Internship, 3-6 cr.

or

Capstone Experience and EXSS 774 Clinical Internship, 6 cr.
Communication Sciences and Disorders, MS

Overview of Program
Master of Science Degree Requirements
Total credits to degree: 54

**Required Specialization Courses, 36 credits:**
- CSD 715 Research Methods in Communicative Disorders, 3 credits
- CSD 716 Anatomy and Physiology of the Central Nervous System, 2 credits
- CSD 717 Cognitive Disorders in Adults, 3 credits
- CSD 720 Voice and Resonance Disorders, 3 credits
- CSD 730 Audiology II, 3 credits
- CSD 737 Auditory Processing and Auditory Processing Disorder, 2 credits
- CSD 750 Dysphagia, 3 credits
- CSD 762 Developmental Language Disorders, 3 credits
- CSD 764 Augmentative/Alternative Communication Systems, 3 credits
- CSD 765 Aphasia, 3 credits
- CSD 767 Communicative Replacements for Challenging Behaviors, 2 credits
- CSD 770 Articulation/Phonology and Fluency Disorders, 2 credits
- CSD 771 Audiology Practicum 1, one credit
- CSD 772 Audiology Practicum 2, one credit
- CSD 787 Counseling and Multicultural Issues in Communicative Disorders, 2 credits

**Elective Courses, 0-8 credits**
- CSD 798 Independent Research, 1-4 credits
- CSD 799 Thesis, 1-4 credits

**Required Clinical Experience, 18 credits:**
- CSD 579 Clinical Experience Internship, 6 credits
- CSD 773 Practicum in the School, 0 or 6 credits
- CSD 774 Practicum in Rehabilitation Facilities, 6 or 12 credits

Students must choose one of the following plan options.

**Plan A**
A minimum of 54 semester credits of graduate work including a master's thesis, for which a student may receive up to four graduate credits for research in area of specialization. Final oral exam.

**Plan B**
A minimum of 54 semester credits of graduate work including a paper/project approved by the program director. Final oral exam.

**Plan C**
A minimum of 54 semester credits of graduate work. A written comprehensive exam and final oral exam.
Degree Requirements

Computer Science required courses - 24 credits
- CSIS 630 Enterprise and Cloud Computing, 3 credits
- CSIS 631 Distributed and Mobile Computing, 3 credits
- CSIS 634 Software Engineering and Design Patterns, 3 credits
- CSIS 732 Information Security, 3 credits
- CSIS 733 Computing for Data Science and Big Data Analysis, 3 credits
- CSIS 735 Machine Learning and Knowledge Discovery, 3 credits
- CSIS 736 Technology Innovation, New Product Development and Sustainability
- CSIS 738 Practicum, 3 credits

Graduate Management elective courses - 6 credits minimum or 2 courses
- MNGT 700 Organizational Theory and Behavior, 3 credits
- MNGT 701 Leadership and Ethics, 3 credits
- MKTG 702 Strategic Marketing Management, 3 credits
- MNGT 703 Human Resources Management, 3 credits
- MNGT 705 Operations and Project Management, 3 credits
- FINC 732 Financial Management, 3 credits

For more information, visit our [website](#).
Overview of Program

Program Curriculum

The Counseling Program meets state standards for certification. It also adheres to the profession's accepted and established practices for training school counselors. Visit the Counseling and School Psychology Department web page for more information.

Required Courses, 48 credits

Core courses, 27 cr.
- COUN 610 Introduction to School Counseling, 3 cr.
- COUN 612 Lifespan Human Development, 3 cr.
- COUN 614 Counseling Practicum, 3 cr.
- COUN 615 Cultural & Ethical Foundations of Counseling, 3 cr.
- COUN 620 Career Counseling, 3 cr.
- SPSY 622 Introduction to Appraisal & Intervention, 3 cr.
- COUN 732 Group Counseling, 3 cr.
- COUN 753 Counseling Theory and Skills, 3 cr.
- COUN 770 Comprehensive School Counseling Programming, 3 cr.

Required classes, 12 cr.
- SPSY 795 Research and Program Evaluation, 3 cr. (Requires additional Independent Study credit)
- COUN 771 Internship: Elementary School Counseling, 3 cr.
- COUN 772 Internship: Middle School Counseling, 3 cr.
- COUN 773 Internship: High School Counseling, 3 cr.

Before finalizing Internship plans, the student must pass a written examination based upon the content of all of the core course.

Directed elective courses, 9 cr.

To be selected in consultation with an advisor

Students will also present a portfolio indicating knowledge and application of Wisconsin Department of Public Instruction Standards for Professional School Counselors. Completion of the internship and of the master's program is dependent upon approval of the portfolio by the program faculty and the practicum supervisors in the field.
Elementary Education, MSE

Overview of Program

Degree Requirements

Initial Licensure Requirements, 32 credits

First Fall Term
TED 701 Psychology of Teaching and Learning, 3 credits
TED 706 Historical, Philosophical and Multicultural Foundations of Education, 3 credits
TED 708 Pre-Kindergarten and Kindergarten Curriculum and Early Childhood Methods, 3 credits

Winter Term
TED 661 Health and Physical Education for Elementary Teachers, 2 credits

Spring Term
TED 711 Literacy Methods: English Language Arts Assessment, Instruction and Intervention, 3 credits
TED 713 Social Studies Methods and Children's Literature, 3 credits
TED 716 Inclusive Education for English Learners and Students with Special Needs, 3 credits

Summer Term
TED 726 Creative Expression: Methods in Arts, Integrated Movement and Wellness, 3 credits

Second Fall Term
TED 731 STEM-infused Math for Elementary Educators, 3 credits
TED 738 Integrated STEM: Methods for Elementary Science Education, 3 credits
TED 741 Assessment Principles for Elementary Educators, 3 credits

Required for Teaching Certification (6 credits)
TED 746 Student Teaching, Grades PreK-6, 6 credits

Prior to student teaching, student must also receive a qualifying minimum score of 157 from Praxis Subject Assessment Exam for Elementary Education (#5018) and a passing score on the Wisconsin Foundations of Reading Test (FORT).

See the Educator Preparation Program for more information.

Master of Science Degree Completion Requirements, 3 credits
TED 748 Capstone Experience Course for Elementary Teachers, 3 credits
Health and Wellness Management, MS

Overview of Program
Program Curriculum, 36 credits
Courses are offered online by faculty from several University of Wisconsin campuses. All applicants will need to demonstrate that they have taken the following prerequisite courses.

Program Prerequisites:
Personal Health or Equivalent
Anatomy and Physiology or Human Biology or Equivalent
Intro to Psychology or Equivalent
Elementary Statistics or Equivalent

Required Courses:
HWM 700 Contemporary Health and Wellness Perspectives, 3 credits
HWM 705 Strategic Management for Wellness Managers, 3 credits
HWM 710 Research Methods for Wellness Programs, 3 credits
HWM 715 Persuasion Skills for Wellness Managers, 3 credits
HWM 720 Exercise and Nutrition in Health and Disease, 3 credits
HWM 730 Biopsychosocial Aspects of Health, 3 credits
HWM 740 Health Systems and Policy for Wellness Managers, 3 credits
HWM 750 Planning and Evaluation for Wellness Managers, 3 credits
HWM 760 Wellness Law, 3 credits
HWM 770 Behavior and Development in Organizations, 3 credits
HWM 780 Best Practices and Emerging Issues in Wellness, 3 credits
HWM 790 Health and Wellness Management Capstone Course, 3 credits

Visit the website for more information.

Contacts
Academic Director: Jodee Schaben
Email
Program Manager: Angela Whitaker
Email

The Health and Wellness Management degree is housed in the College of Education and Professional Studies.

Program Description
The Master of Science in Health and Wellness Management is a collaborative effort with UW-Extension which will equip students with the skills necessary to design, develop, implement, and maintain health and wellness programs in the workplace. This degree program helps students learn more about the seven dimensions of wellness and how they affect our lives and well-being.

Information on our online, undergraduate degree is available at the Bachelor of Science in Health and Wellness Management web page.
Degree Requirements for Master of Science in Education in Mathematics

Students are required to take 24 credits (six courses) in core mathematics (content coursework), a course on integrating emerging technology in the middle and high school classroom, and write an independent curriculum research paper (thesis). The research paper is supported by a required course in research technology.

Area of Specialization - Mathematics, 24 graduate credits
The Mathematics courses are offered in two, consecutive four-week sessions during the summer. Classes are repeated every three years.

MATH 711 Geometry for Educators, 4 credits
MATH 726 Statistics for Educators, 4 credits
MATH 736 Discrete Math for Educators, 4 credits
MATH 751 Modern Algebra for Educators, 4 credits
MATH 756 Probability for Educators, 4 credits
MATH 766 Calculus for Educators, 4 credits

Emerging Technology Course

MATH 705 Integrating Emerging Technologies in the Teaching and Learning of Mathematics, 3 credits

Independent Curriculum Research

TED 760 Methods in Research, 3 credits
Montessori Teacher Education Graduate Program

Program Overview

Program Curriculum

The academic plan will depend on the age level credential and whether or not a master's degree is also sought.

Early Childhood (ages 3-6) Credential, 29 credits

MONT 500 Montessori Philosophy and Pedagogy, 2 cr.
MONT 702 Supporting At-Risk Learners in Early Childhood Classrooms, 1 cr.
MONT 710 Practical Life and Preparation of the Environment, 2 cr.
MONT 712 Child Development and Observation 3 cr.
MONT 722 Language Arts and Literacy Foundations, 3 cr.
MONT 732 Cultural Arts (Social Studies and Science), 3 cr.
MONT 740 Sensorial, 2 cr.
MONT 742 EC Mathematics 2 cr.
MONT 752 Movement and the Arts 2 cr.
MONT 762 Classroom Leadership, 3 cr.
MONT 781 and MONT 782 Practicum A and B, 2 cr. each, total 4 cr.
MONT 791 and MONT 792 Certification Projects A and B, 1 credit each, total 2 cr.

Add On Master of Science in Education, 3 additional credits

Complete the courses required above then complete the following courses:

MONT 785 Research Methods, 3 cr.
MONT 793 Final Research Paper, 2 cr. (replaces MONT 791 and 792 in Credential curriculum)

Elementary I (ages 6-9) Credential, 37-40 credits

MONT 500 Montessori Philosophy and Pedagogy, 2 cr.
MONT 505* Overview of EC Curriculum, 3 cr.
MONT 704 Supporting AT-Risk Learners in Elementary Classrooms, 1 cr.
MONT 705 Great Lessons, 1 cr.
MONT 712 Child Development and Observation, 3 cr.
MONT 724 Reading and Language Arts, 4 cr.
MONT 734 E-I Social Studies (Culture), 3 cr.
MONT 735 E-I Science, 3 cr.
MONT 744 Elementary I Math, 3 cr.
MONT 745 E-I Geometry, 2 cr.
MONT 754 Physical Education and Arts, 4 cr.
MONT 764 Elementary Classroom Leadership, 3 cr.
MONT 783 and MONT 784 Practicum A and B, 3 cr. each, total 6 cr.
MONT 791 and MONT 792 Certification Projects A and B, 1 credit each, total 2 cr.

*Required if student does not have Montessori credential in Early Childhood (ages 3-6).

Add On Master of Science in Education, 3 additional credits

Complete the courses required above then complete the following courses:

MONT 785 Research Methods, 3 cr.
MONT 793 Final Research Paper, 2 cr. (replaces MONT 791 and 792 in Credential curriculum)

Add On Elementary II (ages 6-12) Credential, 15 additional credits

Complete the Elementary 1 courses above unless the applicant is already credentialed to teach ages 6-9 and then complete the following courses:

MONT 726 E-II Language Arts and Literacy, 3 cr.
MONT 736 E-II History and Geography, 3 cr.
MONT 737 E-II Physical Sciences, 2 cr.
MONT 738 E-II Biological Sciences, 2 cr.
MONT 747 E-II Geometry, 2 cr.
MONT 746 E-II Math, 3 cr.

For More Information

Linda Jacobson, Outreach Program Manager
Email
715-425-3190 or 800-228-5607

Melina Papadimitriou, Program Coordinator
Email
715-425-0601
Principal Licensure, MSE

Overview of Program

Degree Requirements

First Summer:
PLP 761 Leadership Development Seminar I, 4 credits

First Fall Semester:
PLP 762 Oral & Written Communication, 1 credit  
PLP 763 The K-12 Principalship, 3 credits

First Spring Semester:
PLP 764 Politics of Education, 1 credit  
PLP 765 School Law, 3 credits

Second Summer:
PLP 766 Leadership Development Seminar II, 4 credits  
TED 760 Methods of Research, 3 credits

Second Fall Semester:
PLP 767 Finance/Budget, 1 credit  
PLP 768 Professional Development and Supervision, 3 credits  
PLP 771 Internship/Seminar/Project I, 3 credits

Second Spring Semester:
PLP 769 Student Services, 1 credit  
PLP 770 Curriculum K-12, 3 credits  
PLP 772 Internship/Seminar/Project II, 3 credits

In the final phase of the program, a portfolio providing evidence of the skills needed to meet National Policy Board and Wisconsin Administrator standards is presented to a review panel of faculty and an area administrator.

Transfer Credits
Students may request that previously completed courses count toward licensure requirements.

Director of Instruction Certification Requirements
Students also have the option to take an additional three-credit course that is offered during the summer term. This course, in combination with the coursework required for the Principal Licensure degree, will qualify graduates to earn the Wisconsin Director of Instruction licensure. If students have previously completed a Wisconsin Principal Licensure certification program, they should contact the program coordinator for details about additional coursework that may be required to receive the certification.

TED 768 Curriculum of the Secondary School, 3 credits

For More Information
Dr. Florence Monsour  
Program Coordinator  
715-425-3182  
E-mail
Reading Specialist, MSE

Overview of Program

Degree Requirements for Master of Science in Education, Reading Specialist

READ 700 Foundations of Literacy, 2 credits
READ 705 Language Arts in the Elementary School, 3 credits
READ 710 Language Acquisition and Disorders for Reading Teachers, 3 credits
READ 722 Secondary School and Content Area Reading, 3 credits
READ 750 Children's Literature in the Reading Program, 3 credits
READ 761 Advanced Elementary Reading Instruction, 3 credits
READ 765 Appraisal and Intervention, 3 credits
READ 766 Supervision and Administration, 2 credits
READ 775 Clinical Practicum in Literacy Instruction, 1-3 credits
READ 779 Field Experience, 2 credits
READ 785 Research in Literacy, 3 credits

Research Paper
Oral Comprehensive Exam

Completion of a certification portfolio for Administrator Standards as specified by the Wisconsin Department of Public Instruction.
School Psychology MSE

Program Overview

Degree Requirements for Master of Science in Education

Required Courses, 35 credits:
- SPSY 620 Introduction to Multi-Tiered Systems of Support, 3 credits
- SPSY 622 School Behavior Assessment & Intervention, 3 credits
- SPSY 651 Diversity, Social and Cultural Issues, 3 credits
- SPSY 701 Introduction to School Psychology, 3 credits
- SPSY 745 Psychoeducational Assessment & Intervention I, 3 credits
- SPSY 746 Psychoeducational Assessment & Intervention II, 3 credits
- SPSY 747 Mental Health Classification, Assessment & Intervention, 3 credits
- SPSY 795 Research & Program Evaluation, 3 credit
- SPED 530 The Exceptional Child, 3 credits
- COUN 612 Lifespan Human Development, 3 credits
- COUN 732 Group Counseling, 3 credits
- COUN 789 Special Topics: counseling Micro Skills, 2 credits

Additional Program Information

Completion of a certification portfolio as specified by the Wisconsin Department of Public Instruction.
School Psychology Ed. S.

Program Overview

Degree Requirements for Educational Specialist

**Required Courses**, 31 credits:

- **SPSY 722** School Crisis Prevention & Intervention, 1 credits
- **SPSY 732** Early childhood and ASD Assessment & Intervention, 2 credits
- **SPSY 740** Legal and Ethical Issues in School Psychology, 3 credits
- **SPSY 742** School-based Advocacy & Public Policy, 1 credits
- **SPSY 752** Advanced School Interventions, 2 credits
- **SPSY 769** Psychoeducational Consultation, 3 credits
- **SPSY 771** Practicum I, 4 credits
- **SPSY 772** Practicum II, 4 credits
- **SPSY 775** Internship in School Psychology I, 5 credits
- **SPSY 776** Internship in School Psychology II, 5 credits
- **SPSY 798** Independent Research, 1 credit

Candidates are eligible for full licensure upon completion of the 35-credit Master of Science in Education (M.S.E.) degree and the 31-credit Educational Specialist (Ed.S.) degree, for a total of 66 graduate credits.

**Additional Program Information**

Wisconsin and Minnesota require that applicants for teacher certification, including school psychology, submit fingerprints with the certification application. In addition, criminal background checks are required.

Completion of a certification portfolio as specified by the [Wisconsin Department of Public Instruction](https://www.widpi.wisconsin.edu).
Program Overview

Program Curriculum

First Semester
SIC 600 Action Research I, 1 credit
SIC 705 Cultural Diversity in Teaching, 3 credits
SIC 760 Introduction to Research, 3 credits

Second Semester
SIC 601 Action Research II, 2 credits
SIC 710 Curriculum Planning in Practice, 3 credits
SIC 715 Integrating Technology in Teaching, 3 credits

Third Semester
SIC 602 Action Research III, 1 credit
SIC 720 Educational Psychology for Teaching, 3 credits
SIC 725 Contemporary Concerns in Education, 3 credits

Fourth Semester
SIC 603 Action Research IV, 2 credits
SIC 756 Path to Teacher Leadership, 3 credits
SIC 765 Independent and Group Research in Education, 3 credits
Program Overview

Program Curriculum

Students will take courses in a cohort fashion beginning in the summer and continuing throughout one academic year, including the January term.

Required Courses (24 credits)

- UTCH 701 STEM: Steps 1 and 2, 3 credits
- UTCH 702 Knowing and Learning in Math and Science, 3 credits
- UTCH 703 Classroom Interactions, 3 credits
- UTCH 704 Project-based Instruction, 3 credits
- UTCH 705 Teaching STEM Reading in Secondary Schools, 3 credits
- UTCH 706 Functions and Modeling, 3 credits
- UTCH 707 Perspectives in Math and Science, 3 credits
- UTCH 708 Apprentice Teaching Seminar, 3 credits

Required for Teaching Certification (6 credits)

- UTCH 709 STEM Apprentice Teaching for Secondary and Middle Grades, 6 credits

Licensure Requirements

The number and type of licenses that may be earned will depend on the candidate’s undergraduate major, graduate electives and scores on general knowledge science exams. Wisconsin licenses available include: Biology (1605); Chemistry (1610); Computer Science (1405); Earth and Space Science (1635); Physics (1625); Broadfield Science (1601); Physical Science (1637); Environmental Studies (1615); Life and Environmental Science (1606); and Mathematics (1400).

Those seeking teaching licenses for Minnesota or other states should confirm the fit of this program’s curriculum with the requirements of their chosen state. For more information on teaching licensing and basic skills and content area exams, see the Education Preparation Program web site.

Master of Science in Education Degree

You may also choose to complete a master of science in education degree in secondary education by completing one of the following options in addition to the courses listed above.

Thesis, 6 additional graduate credits (30 total credits)

- TED 760 Methods of Research, 3 credits
- TED 799 Thesis, 3 credits (or a science, technology, or math 799 class at 3 credits)
- Oral or written comprehensive exam

Research Paper, 6 additional graduate credits (30 total credits)

- TED 760 Methods of Research, 3 credits
- TED 780 Professional Development Practicum, 3 credits (or an approved teacher education (TED) science, technology or math, special topics course, 789 or 793)
- Oral or written comprehensive exam

Capstone Experience, 10 additional graduate credits (34 total credits)

- 10 credits of approved graduate coursework
Master of Arts in TESOL

Overview of all TESOL Graduate Programs

Program Curriculum

This 36-credit master's degree is for those individuals who would like to teach in colleges, private schools, foreign countries or in Adult Basic Education (ABE) positions in Wisconsin and Minnesota. The program also benefits professionals licensed to teach English as a Second Language (ESL) or bilingual education professionals.

Pre-Co-Requisites:
Required knowledge that may be obtained through coursework but credits will not count toward the master's degree in TESOL.

- ENGL 320/520 Structure of English, 3 credits (or equivalent)
- ENGL 355/522 Acquisition of Language, 3 credits (or equivalent)
- Demonstrated proficiency of a single foreign language (two years of high school study, four semesters of university study, or another means)

Required Courses (33 credits)

- ENGL 560 Theory and Methodology of TESOL, 3 credits
- ENGL 620 Pedagogical Grammar, 3 credits (Prerequisite: ENGL 651 Phonetics and Phonology, 3 credits)
- ENGL 675 Assessment and Testing in TESOL, 3 credits
- ENGL 701 Writing, Reading, and Presentation of Research in English as a Second Language, 3 credits
- ENGL 720 Educational Linguistics, 3 credits
- TESL 763 Words, Meaning and Vocabulary Teaching, 3 credits
- TESL 765 Language and Culture, 3 credits
- TESL 767 TESOL Reading, 3 credits
- TESL 789 Topics in TESOL Teaching and Research, 3 credits

Plus, choose one of the following:

- TESL 793 Plan B Master's Paper, 3 credits
- ENGL 799 Thesis (Thesis Plan)

Electives (3 credits):
Choose one from:

- ENGL 521 The English Language: History and Culture, 3 credits
- ENGL 650 Non-Native Speakers of the Midwest, 3 credits
- TESL 779 Internship, 3 credits
- TESL 788 Topics in TESOL Teaching and Research, 3 credits

Note: Up to nine credits at the 500 level may be applied to the degree and no fewer than half of the credits applied to the degree must be at the 700 level.
Overview of Program
We offer two options to earn a master's degree along with a teaching license in TESOL. One option is for those individuals who want to get their initial teaching license along with the Master of Arts degree. The second option is for teachers who already possess a teaching license and want an additional license in TESOL while also earning a Master of Arts degree.

Degree Plus Initial License

Degree Plus Additional License

Program Curriculum for Master's Degree and Initial Teaching License
Students who would like to earn their initial teaching license and then continue with their program of study to earn a master's degree in TESOL would begin by applying for admission to Teacher Education. Assuming all the prerequisites and corequisites have been fulfilled, completing both the teaching license requirements and the MA degree requires 58-64 credits of coursework plus 12 credits of student teaching for a total of 70-76 credits.

Prerequisites or corequisites:
Required knowledge that may be obtained through coursework but credits will not count toward the MA in TESOL.
ENGL 320 or ENGL 520 Structure of English, 3 credits
ENGL 322 or ENGL 522 Acquisition of Language, 3 credits
Demonstrated proficiency of a single foreign language (two years of high school study, four semesters of university study, or another means)

Required TESOL Courses for the Teaching license, 18 credits:
ENGL 511 Intro. to Linguistics (may substitute ENGL 720 Educational Ling.), 3 credits
ENGL 560 Theory and Methodology of TESOL, 3 credits
ENGL 573 Techniques in Tutoring: Practicum (may substitute TESL 779, Internship), 3 credits
ENGL 620 Pedagogical Grammar, 3 credits (Prerequisite: ENGL 520)
ENGL 675 Assessment and Testing in TESOL, 3 credits
TESL 767 Teaching ESOL Reading, 3 credits

Required Teacher Education Courses for the Teaching License, 16 credits:
TED 740* The Historical, Philosophical, & Multicultural Foundations of Ed., 4 credits
TED 745* Educational Psychology, 6 credits
SPED 530 The Exceptional Child, 3 credits
TED 428 Techniques of TESOL, 3 credits

In addition to these graduate-level courses, students will complete 12 credits of student teaching (TED 472 Student Teaching in Elementary Education, TED 473 Student Teaching in Middle School, and TED 475 Student Teaching in Secondary Education) and a licensure portfolio as specified by the Wisconsin Department of Public Instruction. For more information on initial teaching licensure, visit the Teacher Education web page.

*In lieu of these courses, students may take the undergraduate-level courses TED 212, TED 420, and TED 252 or ENGL 252.

Additional TESOL Courses Required for the Master of Arts Degree, 18-21 credits
ENGL 651 Phonetics and Phonology, 3 credits
ENGL 701 Writing, Reading, Presenting Research, 3 credits
ENGL 720 Educational Linguistics, 3 credits (not required if already taken in place of ENGL 511 under teaching license)
TESL 763 Words, Meaning, and Vocabulary Teaching, 3 credits
TESL 765 Language and Culture, 3 credits
TESL 789 Topics in TESOL, 3 credits
TESL 793 Plan B Paper, 3 credits, or TESL 799 Plan A Paper, 3 credits

Electives (0-3 credits)
Chose one if TESL 779 has not been substituted for ENGL 573,
ENGL 521 The English Language: History and Culture, 3 credits, or
ENGL 650 Non-Native Speakers in the Midwest, 3 credits, or
TESL 779 Internship (if not substituted for 573 above), 3 credits, or
ENGL 789 Topics in TESOL (repeatable with different topics), 3 credits

Program Curriculum for Master's Degree and Additional Teaching License

Students who would like to earn an additional teaching license and then continue with their program of study to earn a master's degree in TESOL would begin by applying for admission to Teacher Education. Assuming all the prerequisites and corequisites have been fulfilled, completing both the additional teaching license requirements and the MA degree requires 42-48 credits of coursework plus 0-6 credits of student teaching, depending on the subject of the current license.

Prerequisites or corequisites:
Required knowledge that may be obtained through coursework but credits will not count toward the MA in TESOL.
ENGL 320 or ENGL 520 Structure of English, 3 credits
ENGL 322 or ENGL 522 Acquisition of Language, 3 credits
Demonstrated proficiency of a single foreign language (two years of high school study, four semesters of university study, or another means)

Required TESOL Courses for the Teaching license, 18 credits:
ENGL 511 Intro. to Linguistics (may substitute ENGL 720 Educational Ling.), 3 credits
ENGL 560 Theory and Methodology of TESOL, 3 credits
ENGL 573 Techniques in Tutoring: Practicum (may substitute TESL 779 Internship), 3 credits
ENGL 620 Pedagogical Grammar, 3 credits (Prerequisite: ENGL 520)
ENGL 675 Assessment and Testing in TESOL, 3 credits
TESL 767 Teaching ESOL Reading, 3 credits
TED 428 Techniques of TESOL, 3 credits

In addition to these courses, students will complete 0-6 credits of student teaching (TED 472 Student Teaching in Elementary Education, TED 473 Student Teaching in Middle School, and TED 475 Student Teaching in Secondary Education) and a licensure portfolio as specified by the Wisconsin Department of Public Instruction. For more information on initial teaching licensure, visit the Teacher Education web page.

Additional TESOL Courses Required for the Master of Arts Degree, 18-21 credits
ENGL 651 Phonetics and Phonology, 3 credits
ENGL 701 Writing, Reading, Presenting Research, 3 credits
ENGL 720 Educational Linguistics, 3 credits (not required if already taken in place of ENGL 511 under teaching license)
TESL 763 Words, Meaning, and Vocabulary Teaching, 3 credits
TESL 765 Language and Culture, 3 credits
TESL 789 Topics in TESOL, 3 credits
TESL 793 Plan B Paper, 3 credits, or TESL 799 Plan A Paper, 3 credits

Electives (0-3 credits)
Chose one if TESL 779 has not been substituted for ENGL 573,
ENGL 521 The English Language: History and Culture, 3 credits, or
ENGL 650 Non-Native Speakers in the Midwest, 3 credits, or
TESL 779 Internship (if not substituted for 573 above), 3 credits, or
ENGL 789 Topics in TESOL (repeatable with different topics), 3 credits
Alternative Education

Overview of Program

Program Curriculum

To qualify for Wisconsin certification in alternative education, students will complete four core classes (eight credits) and a certification portfolio as specified by the Wisconsin Department of Public Instruction.

Students will also complete a practicum concurrently with the four core classes. To do so, students need to be working in an alternative education program or arrange to have access to a program so that observations can be made and conversations held with practitioners.

Offered in Summer:

AED 700 History and Philosophy of Alternative Education, 2 credits

Offered in Fall:

AED 701 Alternative Education Students: Who are They?, 2 credits
AED 702 Teaching and Working with Alternative Students, 2 credits

Offered in Spring:

AED 703 Building and Evaluating Alternative Programs, 2 credits

Elective Course

AED 689 Topics in Alternative Education, 2 credits

College of Education and Professional Studies
Graduate Programs
For More Information

Pamela Bowen
Program Manager
Email
715-425-0633
Principal Licensure, MSE

Overview of Program

Degree Requirements

First Summer:
PLP 761 Leadership Development Seminar I, 4 credits

First Fall Semester:
PLP 762 Oral & Written Communication, 1 credit
PLP 763 The K-12 Principalship, 3 credits

First Spring Semester:
PLP 764 Politics of Education, 1 credit
PLP 765 School Law, 3 credits

Second Summer:
PLP 766 Leadership Development Seminar II, 4 credits
TED 760 Methods of Research, 3 credits

Second Fall Semester:
PLP 767 Finance/Budget, 1 credit
PLP 768 Professional Development and Supervision, 3 credits
PLP 771 Internship/Seminar/Project I, 3 credits

Second Spring Semester:
PLP 769 Student Services, 1 credit
PLP 770 Curriculum K-12, 3 credits
PLP 772 Internship/Seminar/Project II, 3 credits

In the final phase of the program, a portfolio providing evidence of the skills needed to meet National Policy Board and Wisconsin Administrator standards is presented to a review panel of faculty and an area administrator.

Transfer Credits
Students may request that previously completed courses count toward licensure requirements.

Director of Instruction Certification Requirements
Students also have the option to take an additional three-credit course that is offered during the summer term. This course, in combination with the coursework required for the Principal Licensure degree, will qualify graduates to earn the Wisconsin Director of Instruction licensure. If students have previously completed a Wisconsin Principal Licensure certification program, they should contact the program coordinator for details about additional coursework that may be required to receive the certification.

TED 768 Curriculum of the Secondary School, 3 credits

For More Information
Dr. Florence Monsour
Program Coordinator
715-425-3182
E-mail
Reading Teacher Certificate

Overview of Program

Certificate Requirements for Reading Teacher Licensure

- READ 700 Foundations of Literacy, 2 credits
- READ 705 Language Arts in the Elementary School, 3 credits
- READ 722 Secondary School and Content Area Reading, 3 credits
- READ 750 Children's Literature in the Reading Program, 3 credits
- READ 761 Advanced Elementary Reading Instruction, 3 credits
- READ 765 Appraisal and Intervention, 3 credits
- READ 775 Clinical Practicum in Literacy Instruction, 1-3 credits
- READ 785 Research in Literacy, 3 credits

Completion of a certification portfolio as specified by the Wisconsin Department of Public Instruction.

Master of Science in Education Degree and Reading Specialist

See Degree Requirements
STEMteach

Program Overview

Program Curriculum

Students will take courses in a cohort fashion beginning in the summer and continuing throughout one academic year, including the January term.

Required Courses (24 credits)

**UTCH 701 STEMteach: Steps 1 and 2, 3 credits**

**UTCH 702 Knowing and Learning in Math and Science, 3 credits**

**UTCH 703 Classroom Interactions, 3 credits**

**UTCH 704 Project-based Instruction, 3 credits**

**UTCH 705 Teaching STEM Reading in Secondary Schools, 3 credits**

**UTCH 706 Functions and Modeling, 3 credits**

**UTCH 707 Perspectives in Math and Science, 3 credits**

**UTCH 708 Apprentice Teaching Seminar, 3 credits**

Required for Teaching Certification (6 credits)

**UTCH 709 STEM Apprentice Teaching for Secondary and Middle Grades, 6 credits**

Licensure Requirements

The number and type of licenses that may be earned will depend on the candidate’s undergraduate major, graduate electives and scores on general knowledge science exams. Wisconsin licenses available include: Biology (1605); Chemistry (1610); Computer Science (1405); Earth and Space Science (1635); Physics (1625); Broadfield Science (1601); Physical Science (1637); Environmental Studies (1615); Life and Environmental Science (1606); and Mathematics (1400).

Those seeking teaching licenses for Minnesota or other states should confirm the fit of this program’s curriculum with the requirements of their chosen state. For more information on teaching licensing and basic skills and content area exams, see the Education Preparation Program website.

Master of Science in Education Degree

You may also choose to complete a master of science in education degree in secondary education by completing one of the following options in addition to the courses listed above.

Thesis, 6 additional graduate credits (30 total credits)

**TED 760 Methods of Research, 3 credits**

**TED 799 Thesis, 3 credits (or a science, technology, or math 799 class at 3 credits)**

Oral or written comprehensive exam

Research Paper, 6 additional graduate credits (30 total credits)

**TED 760 Methods of Research, 3 credits**

**TED 780 Professional Development Practicum, 3 credits (or an approved teacher education (TED) science, technology or math, special topics course, 789 or 793)**

Oral or written comprehensive exam

Capstone Experience, 10 additional graduate credits (34 total credits)

10 credits of approved graduate coursework
TESOL Certificate

Overview of Program

Program Curriculum for Graduate Certificate

The graduate certificate is designed for individuals interested in professional development in TESOL or those wanting to teach adult basic education classes in the U.S. or English as a foreign language in other countries.

Students are issued a graduate certificate upon completion of 12 credits of graduate courses. The following courses are recommended for anyone who is new to TESOL. More advanced students may take alternative courses to complete the 12 credits and should consult with an adviser.

Recommended Courses (12 credits)

- ENGL 511 Introduction to Language and Linguistics, 3 credits
- ENGL 520 Structure of English, 3 credits
- ENGL 522 Acquisition of Language, 3 credits
- ENGL 560 Theory and Methodology of TESOL, 3 credits

If you choose to continue on to earn the master of arts degree in TESOL, please note that only nine of these credits could be applied toward the program requirements.
Teaching License in TESOL

Overview of Program
We offer two options to earn a teaching license in TESOL. One option is for those wishing to earn their initial teaching license and the other option is for those with a teaching license who want to add a license in teaching English as a Second Language (ESL).

Initial Teaching License

Additional Teaching License

Requirements for Initial TESOL License
Individuals wishing to obtain a Wisconsin or Minnesota TESOL teaching license take the following courses for a total of 52 credits (includes 12 credits of student teaching). Those who plan to teach in another state should confirm requirements for licensure with the respective state department.

Prerequisite:
Demonstrated proficiency in a single foreign language (two years of high school study, four semesters of university study, or other equivalent)

Required Courses:
- ENGL 511 Introduction to Language and Linguistics, 3 credits
- ENGL 520 Structure of English, 3 credits
- ENGL 522 Acquisition of Language, 3 credits
- ENGL 560 Theory and Methodology of TESOL, 3 credits
- ENGL 573 TESOL Tutoring: Practicum, 3 credits
- ENGL 620 Pedagogical Grammar, 3 credits (Prerequisite: ENGL 520)
- ENGL 675 Assessment and Testing, 3 credits
- TESL 767 Teaching ESOL Reading, 3 credits
- TED 740 Historical, Philosophical & Multicultural Foundations of Education, 4 credits
- TED 745 Educational Psychology, 6 credits
- SPED 530 Exceptional Child, 3 credits
- TED 428 Techniques of TESOL, 3 credits

Student Teaching (12 credits):
Students are required to complete 12 credits of student teaching experience. For Wisconsin teachers, an approved licensure portfolio is required.

Requirements for Additional ESL License
Teachers who hold a Wisconsin or Minnesota teaching license take the following courses for a total of 24-30 credits and apply for an additional license as an TESOL teacher in Wisconsin. Teachers from other states should confirm requirements for licensure with their respective state department.

Prerequisite or Corequisite:
Demonstrated proficiency of a single foreign language (two years of high school study, four semesters of university study, or another means)

Required Courses, 24 credits:
- ENGL 511 Introduction to Language and Linguistics, 3 credits
- ENGL 520 Structure of English, 3 credits
- ENGL 522 Acquisition of Language, 3 credits
- ENGL 560 Theory and Methodology of TESOL, 3 credits
- ENGL 573 TESOL Tutoring: Practicum, 3 credits
- ENGL 620 Pedagogical Grammar, 3 credits (Prerequisite: ENGL 520)
- ENGL 675 Assessment and Testing, 3 credits
- TESL 767 Teaching ESOL Reading, 3 credits

Student Teaching (0-6 credits):
Depending upon the candidate’s current teaching license and the license area they are seeking, the student may be required to complete additional courses or additional student teaching experience. For Wisconsin teachers, an approved licensure portfolio is required.