College of Arts and Sciences

Adviser’s Manual Part II

Program Highlights for Early Registration Guidance.

The following pages offer a summary of early registration guidance for most of the degree programs in Arts and Sciences. In all cases, check the guidance in these summaries against Lehigh’s Course Catalog, available at:

http://www4.lehigh.edu/academics/catalog

Discrepancies between the catalog and these pages are possible due to various editing timetables. In such cases, the Course Catalog will represent the correct and accurate information.
Africana Studies (BA)

**Freshman Year - Fall**
- Engl 1
- AAS 3 (core course)
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- AAS 0xx (major distribution requirement (HU or SS))*
- AAS 0xx (major distribution requirement (HU or SS))*
- Dist. Req.(s)/Electives

**Sophomore Year**
- AAS 1xx (major distribution requirement (HU or SS))*
- AAS 1xx (major distribution requirement (HU or SS))*
- Dist. Req.(s)/Electives

**Selected Course Title**
- AAS 3  Introduction to Africana Studies

*See University Catalog for listing of AAS 0xx, AAS 1xx, AAS 2xx, and AAS 3xx and other applicable AAS courses.

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Program: Africana Studies (Interdisciplinary)
Director: Prof. James B. Peterson
Contact: Program Director, 83310

CAS Adviser's Manual – Part II – August 5, 2014
## Anthropology (BA)

### Freshman Year - Fall
- Engl 1
- Anth 1
- College Seminar
- Dist. Req(s)/Electives

### Freshman Year - Spring
- Engl 2
- Math 12
- Dist. Req(s)/Electives

### Sophomore Year
- SR 111 (fall)
- Anth 111 (fall) or 140 (spring)
- Anth 145 (fall) or 112 (spring)
- Req(s)/Electives

### Selected Course Titles
- Anth 1 Introduction to Anthropology
- Math 12 Basic Statistics
- SR 111 Research Methods and Statistics Dist.
- Anth 111. Comparative Cultures
- Anth 112 Doing Archaeology
- Anth 140 Introduction to Linguistics
- Anth 145 Human Evolution

Students must take one general course in statistics: Math 12, Eco 145, Psyc 110, or equivalent. (Note: Math 12 fulfills the College of Arts & Sciences math requirement.)

Department: Sociology and Anthropology, 83810  
Chair: Prof. Nikki Tannembaum
Architecture (BA)

**Freshman Year – Fall**
- Des 3 or Des 4
- Art 1 or Arch 1
- Math 51

**Freshman Year – Spring**
- Des 3 or Des 4
- Arch 2 (or subsequent spring)
- Math 52

**Sophomore Year**
- Physics 11 and Physics 12
- Arch 43

**Selected Course Titles**

- Arch 1: Architectural History I, fall, alternate years
- Arch 2: Architectural History I, spring
- Arch 43 Architectural Design I
- Art 143: Architectural Design II
- Arch 210: 20th-Century Architecture, spring
- Art 1: Art History: Ancient and Medieval, fall, alternate years
- Art 2: Art History: Renaissance to Present, spring
- Art 3: Design Foundations I
- Art 4: Design Foundations II

Most Art, Architecture and Design studios are limited to 15 students and require departmental permission. Those interested in majoring in art, architecture, or design should contact the department chair or representative so that these courses can be rostered at an appropriate time.

*Department: Art, Architecture and Design, 84995  
Interim Department Chair: Berrisford Boothe  
Contact: Professor Berrisford Boothe, bwb0@lehigh.edu*
Art (BA)

**Freshman Year – Fall**
Art 1 or Arch 1  
Des 3 or Des 4

**Freshman Year – Spring**
Art 2  
Des 3 or Des 4

**Sophomore Year**
Art 11  
Art 220 or Art 221

**Selected Course Titles**
Arch 1: Architectural History I, fall, alternate years  
Arch 2: Architectural History, spring  
Art 1: Art History: Ancient and Medieval, Distribution Requirement(s)/fall, alternate years  
Art 2: Art History: Renaissance to Present, spring  
Art 3: Design Foundations I  
Art 4: Design Foundations II  
Art 13: Sculpture I  
Art 15: Figure I, spring  
Art 120: 20th-Century Art, fall, alternate years

Most Art, Architecture and Design studios are limited to 15 students and require departmental permission. Those interested in majoring in art, architecture, or design should contact the department chair or representative so that these courses can be rostered at an appropriate time.

*Department: Art, Architecture and Design, 84995  
Interim Department Chair: Berrisford Boothe  
Contact: Professor Berrisford Boothe, bwb0@lehigh.edu*
Art History (BA)

**Freshman Year – Fall**
Art 1 or Arch 1  
Des 3 or Des 4

**Freshman Year – Spring**
Art 2 or Arch 2  
Des 3 or Des 4

**Sophomore Year**
Art 175 Intro to Museum Studies  
Art 174 Greek Archeology or Art 176 Roman Archeology

**Selected Course Titles**
Art 1: Art History: Ancient and Medieval, fall, alternate years  
Arch 1: Architectural History I, fall, alternate years  
Art 2: Art History: Renaissance to Present, spring  
Art 3: Design Foundations I  
Art 4: Design Foundations II  
Art 175: Introduction to Museum Work  
Art 120: 20th Century Art, fall, alternate years

Most Art, Architecture and Design studios are limited to 15 students and require departmental permission. Those interested in majoring in art, architecture, or design should contact the department chair or representative so that these courses can be rostered at an appropriate time.

*Department: Art, Architecture and Design, 84995  
Interim Department Chair: Berrisford Boothe  
Contact: Professor Berrisford Boothe, bwb0@lehigh.edu*
Asian Studies (BA)

**Freshman Year - Fall**

Engl 1
Asia 0xx*
Asian Language Course**
College Seminar
Dist. Req.(s)/Electives

**Freshman Year - Spring**

Engl 2
Asia 0xx *
Asian Language Course**
Dist. Req.(s)/Electives

**Sophomore Year**

Asian Language Courses**
Asia 1xx *

**Selected Course Titles**

Asia 0xx, 1xx, 2xx, 3xx*

*See university catalog for selections of Asia 0xx, Asia 1xx, 2xx, 3xx and other appropriate courses, as well as credit for the study of other Asian languages. Study abroad is required but if difficult academically or financially, other arrangements could be made upon major advisor’s approval.

** Intermediate II level in an Asian language is required for major. Students without required proficiency should start taking appropriate language courses as soon as possible.

Program: Asian Studies (Interdisciplinary)
Director: Prof. Kiri Lee
Contact: Program Director, Prof. Kiri Lee, 84490, kjl2
**Astronomy (BA)**

**Freshman Year - Fall**
- Engl 1
- EES 21
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Phy 11/12*
- Math 22
- Astr 7/8

**Sophomore Year**
- Phy 21/22* - fall
- Math 23 - fall
- Phy 31 - spr
- Astr 105 - spr
- Math 205
- Astr 110 - spr
- Chm 30 - spr

**Selected Course Titles**
- Astr 7/8  Intro to Astronomy with lab
- Phy 11/12, 21/22  Intro Physics I, II with Labs
- Chm 30  Intro Chem Principles (with lab)
- Math 21, 22, 23  Calculus I, II, III
- Phy 31  Intro to Quantum Mechanics
- Astr 105  Planetary Astronomy
- Math 205  Linear Methods
- Astr 110  Methods of Observational Astronomy

*Phy 10 may be used in place of Phy 11, and Phy 13 may be used in place of Phy 21.

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

![Diagram showing course prerequisites and corequisites]

**Department:** Physics, 83930  
**Chair:** Prof. Volkmar Deirolf  
**Contact:** Prog. Dir., Prof. George McCluskey, 83721, cmg0
Astrophysics (BS)

**Freshman Year - Fall**
- Engl 1
- Phy 11/12
- Math 21
- College Seminar
  or Astr 7

**Freshman Year - Spring**
- Engl 2
- EES 21
- Math 22

**Sophomore Year**
- Phy 21/22 - fall
- Math 23 - fall
- Astr 105 - fall
- Phy 31 - spr
- Phy 190 - spr
- Math 205 - spr

**Selected Course Titles**
- Phys 11/12, 21/22  Intro Physics I, II with Labs
- Chm 30  Intro Chem Principles (with lab)
- Math 21, 22, 23  Calculus I, II, III
- Phy 31  Intro to Quantum Mechanics
- Astr 105  Planetary Astronomy
- Math 205  Linear Methods

- Astr 110  Methods of Observational Astronomy
- Chm 30- spr

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

*Department: Physics, 83930*
*Chair: Prof. Volkmar Deirolf*
*Contact: Prog. Dir., Prof. George McCluskey, 83721, cmg0*
Behavioral Neuroscience (BA)

**Freshman Year – Fall**
- ENGL 1
- College Seminar
- CHM 30 or CHM 40
- MATH 51 or MATH 21

**Selected Course Titles**
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- BIOS/MATH 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 40: Concepts, Models and Experiments I
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, II

**Freshman Year – Spring**
- ENGL 2
- BIOS 41/42*
- MATH 52 or MATH 22
- PSYC 1
- Dist. Req.(s)/Electives

**Sophomore Year**
- BIOS 115/116
- BIOS 120
- BIOS 130
- CHM 110/111
- CHM 112/113
- Dist. Req.(s)

**Major Courses (Arrows Denote Prerequisites or Co requisites):**

- **Freshman Fall**
  - BIOS 41/42

- **Freshman Spring**
  - BIOS 115/116
  - CHM 30 or 40

- **Sophomore Fall**
  - BIOS 115/116
  - MATH 51 or 21
  - CHM 110/111
  - BIOS 120

- **Sophomore Spring**
  - BIOS 120
  - MATH 52 or 22
  - CHM 112/113
  - PSYC 1
  - CHM 30: Intro Chemical Principles
  - CHM 40: Concepts, Models and Experiments I
  - CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
  - MATH 51, 52: Survey of Calculus I, II
  - MATH 21, 22: Calculus I, II

*Bios 41 has a firm chemistry prerequisite. Premedical students should also take CHM 31 or 41 to fulfill premedical requirements.

**Program:** Behavioral Neuroscience  
**Chair:** Prof. Murray Itzkowitz, 83680, mi00  
**Contact:** Program Director, Prof. Mike Kuchka, 3687, mrk5
Behavioral Neuroscience (BS)

**Freshman Year - Fall**
- ENGL 1
- CHM 30 or CHM 40
- MATH 51 or MATH 21
- College Seminar

**Freshman Year – Spring**
- BIOS 41/42*
- CHM 31 or CHM 41
- ENGL 2
- MATH 52 or MATH 22
- PSYC 1

**Sophomore Year**
- BIOS 115/116
- BIOS 120
- BIOS 130
- CHM 110/111
- CHM 112/113
- Dist. Req.(s)

**Selected Course Titles**
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- BIOS/MATH 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 31: Chemical Equilibrium in Aqueous Solutions
- CHM 40/41: Concepts, Models and Experiments
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, II

**Major Courses (Arrows Denote Prerequisites or Co requisites):**

*BIOS 41 has a firm chemistry prerequisite.*

*Program: Behavioral Neuroscience*
*Chair: Prof. Murray Itzkowitz, 83680, mi00*
*Contact: Program Director, Prof. Mike Kuchka, 3687, mrk5*
Biochemistry (BS)

**Freshman Year - Fall**
- ENGL 1
- CHM 30 or CHM 40
- MATH 51 or MATH 21
- College Seminar

**Freshman Year – Spring**
- BIOS 41/42*
- CHM 31 or CHM 41
- ENGL 2
- MATH 52 or MATH 22
- PHY 11/12 or Dist. Req.(s)

**Sophomore Year**
- BIOS 115/116
- BIOS 130
- CHM 110/111
- CHM 112/113
- PHY 10/12 or 11/12 or elective
- PHY 13/22 or 21/22 or elective
- MATH 43 or 23
- Dist. Req.(s)

**Selected Course Titles**
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS/MATH 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 31: Chemical Equilibrium in Aqueous Solutions
- CHM 40/41: Concepts, Models and Experiments
- CHM 110/111, 112/113: Organic Chemistry I, II with Labs
- CHM 194: Physical Chemistry for Biological Sciences
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, II
- MATH 23: Calculus III
- MATH 43: Survey of Linear Algebra
- PHY 10/12, 13/22: General Physics I, II with labs

**Major Courses (Arrows Denote Prerequisites or Co requisites):**

- BIOS 41/42
- CHM 30 or 40
- MATH 51 or 21

- BIOS 115/116
- CHM 110/111
- MATH 52 or 22

- BIOS/MATH
- CHM 112/113

*BIOS 41 has a firm chemistry prerequisite.

**Program:** Biochemistry (Interdisciplinary)

**Director:** Prof. Linda Lowe-Krentz

**Contact:** Program Director, Prof. Linda Lowe-Krentz, 85084, ljlk0
**Biology (BA)**

### Freshman Year – Fall
- ENGL 1
- College Seminar
- CHM 30 or CHM 40
- MATH 51 of MATH 21

### Freshman Year – Spring
- BIOS 41/42*
- ENGL 2
- MATH 52 or MATH 22
- Dist. Req. (s)/Electives

### Sophomore Year
- BIOS 115/116
- BIOS 120
- BIOS 130 or MATH 12
- CHM 110/111
- CHM 112/113
- Dist. Req. (s)

### Selected Course Titles
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- BIOS 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 40: Concepts, Models and Experiments I
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 12: Basic Statistics
- MATH 21, 22: Calculus I, II
- MATH 51, 52: Survey of Calculus I, II

### Major Courses (Arrows Denote Prerequisites or Co requisites):

- Freshman Fall
  - BIOS 41/42

- Freshman Spring
  - CHM 30 or 40

- Sophomore Fall
  - BIOS 115/116

- Sophomore Spring
  - BIOS 120

- MATH 51 or 21

- MATH 52 or 22

- CHM 110/111

- CHM 112/113

*BIOS 41 has a firm chemistry prerequisite.
Premedical students should also take CHM 31 or 41 to fulfill premedical requirements.

**Department:** Biological Sciences, 83681  
**Chair:** Prof. Murray Itzkowitz, 83680, mi00  
**Contact:** Program Director, Prof. Mike Kuchka, 3687, mrk5

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**CAS Adviser’s Manual – Part II – August 5, 2014**
Biology (BS)

**Freshman Year - Fall**
- ENGL 1
- CHM 30 or CHM 40
- MATH 51 or MATH 21
- College Seminar

**Freshman Year - Spring**
- BIOS 41/42*
- CHM 31 or CHM 41
- ENGL 2
- MATH 52 or MATH 22
- Dist. Req. (s)

**Sophomore Year**
- BIOS 115/116
- BIOS 120
- BIOS 130
- CHM 110/111
- CHM 110/113
- Dist. Req. (s)

**Selected Course Titles**
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- BIOS/MATH 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 31: Chemical Equilibrium in Aqueous Solutions
- CHM 40/41: Concepts, Models and Experiments
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, II

**Major Courses (Arrows Denote Prerequisites or Co requisites):**

- **Freshman Fall**
  - BIOS 41/42
  - CHM 30 or 40
  - MATH 51 or 21

- **Freshman Spring**
  - BIOS 41/42
  - CHM 31 or 41
  - MATH 52 or 22

- **Sophomore Fall**
  - BIOS 115/116
  - CHM 110/111

- **Sophomore Spring**
  - BIOS 120
  - CHM 112/113

*BIOS 41 has a firm chemistry prerequisite.

Department: Biological Sciences, 83681
Chair: Prof. Murray Itzkowitz, 83680, mi00
Contact: Program Director, Prof. Mike Kuchka, 3687, mrk5
Biology: Molecular Biology (BA)

**Freshman Year – Fall**
- ENGL 1
- College Seminar
- CHM 30 or CHM 40
- MATH 51 or MATH 21

**Selected Course Titles**
- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- CHM 30: Intro Chemical Principles
- CHM 31: Chemical Equilibria in Aqueous Systems
- CHM 40: Concepts, Models and Experiments I
- CHM 41: Concepts, Models and Experiments II
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, II

**Freshman Year – Spring**
- BIOS 41/42*
- CHM 31 or CHM 41
- ENGL 2
- MATH 52 or MATH 22
- Dist. Req. (s)/Electives

**Sophomore Year**
- BIOS 115/116
- BIOS 120
- CHM 110/111
- CHM 112/113
- Dist. Req. (s)

**Major Courses (Arrows Denote Prerequisites or Co requisites):**

*BIOS 41 has a firm chemistry prerequisite.*

*Department: Biological Sciences, 83681  
Chair: Prof. Murray Itzkowitz, 83680, mi00  
Contact: Program Director, Prof. Mike Kuchka, 3687, mrk5*
Biology: Molecular Biology (BS)

Selected Course Titles

- BIOS 41/42: Biology Core I: Cellular and Molecular with Lab
- BIOS 115/116: Biology Core II: Genetics with Lab
- BIOS 120: Biology Core III: Integrative and Comparative
- BIOS/MATH 130: Biostatistics
- CHM 30: Intro Chemical Principles
- CHM 31: Chemical Equilibrium in Aqueous Solutions
- CHM 40/41: Concepts, Models and Experiments I, II
- CHM 110/111, 112/113: Organic Chemistry I, II, with Labs
- MATH 51, 52: Survey of Calculus I, II
- MATH 21, 22: Calculus I, I

Major Courses (Arrows Denote Prerequisites or Co requisites):

- **Freshman Year - Fall**
  - ENGL 1
  - CHM 30 or CHM 40
  - MATH 51 or MATH 21
  - College Seminar

- **Freshman Year - Spring**
  - BIOS 41/42*
  - CHM 31 or CHM 41
  - ENGL 2
  - MATH 52 or MATH 22
  - Dist. Req. (s)

- **Sophomore Year**
  - BIOS 115/116
  - BIOS 120
  - BIOS 130
  - CHM 110/111
  - CHM 112/113
  - Dist. Req. (s)

*BIOS 41 has a firm chemistry prerequisite.

Department: Biological Sciences, 83681

Chair: Prof. Murray Itzkowitz, 83680, mi00

Contact: Program Director, Prof. Mike Kuchka, 3687, mrk5
Chemistry (BA)
(Path A followed)

**Freshman Year - Fall**
- Eng 1
- Chm 40
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 41
- Math 22
- Phy 11/12

**Sophomore Year**
- Chm 110/111 - fall
- Phy 21/22 - fall
- Math 23 - fall
- Dist. Req.(s)/Electives
- Chm 112/113 - spring
- Math 205 – spring
- CSE 2 or CSE 12 or Engr 1 – spring
- Dist. Req.(s)/Electives

**Selected Course Titles**
- Chm 40 Concepts, Models and Experiments I
- Chm 41 Concepts, Models and Experiments II
- Chm 110/111 Organic Chemistry I with Lab
- Chm 112/113 Organic Chemistry II with Lab
- Phy 11/12, 21/22 Intro Physics I, II with labs
- Math 21, 22, 23 Survey of Calculus I, II, III
- Math 205 Linear Methods
- CSE 2 or CSE 12 or Engr 1 Computer Programming Course

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

- **Freshman Fall**
  - Chm 40
- **Freshman Spring**
  - Chm 41
- **Sophomore Fall**
  - Chm 110/111
- **Sophomore Spring**
  - Chm 112/113
- **Math 21**
  - Math 22
  - Phy 11/12
  - **Math 205**
  - Phy 21/22
  - CSE 2 or CSE 12 or Engr 10

The sequence Chm 30 (4) (Introduction to Chemical Principles) and Chm 31 (4) (Chemical Equilibria in Aqueous Systems) can be used in place of Chm 40,41. If Chm 31 is not taken during the freshman year, it should be taken in the first-semester sophomore year concurrent with Chm 110/111. The Department of Chemistry requires the completion of a foreign language or six credits of science electives (see catalog).

**Department:** Chemistry, 83470
**Chair:** Prof. Robert A. Flowers, 83470, rof2
**Contact:** Prof. James Roberts, 84841, jer1
Chemistry (BA)
(Path B followed)

**Freshman Year - Fall**
- Eng 1
- Chm 40
- Math 51
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 41
- Math 52
- Phy 10/12

**Sophomore Year**
- Chm 110/111 - fall
- Phy 13/22 - fall
- Dist. Req(s)/Electives
- Chm 112/113 - spr
- CSE 2 or CSE 12 or Engr 1 - spring
- Math 43 fall
- Dist. Req(s) Electives

**Selected Course Titles**
- Chm 40 Concepts, Models and Experiments I
- Chm 41 Concepts, Models and Experiments II
- Chm 110/111 Organic Chemistry I with Lab
- Chm 112/113 Organic Chemistry II with Lab
- Phy 10/12, 13/22 General Physics I, II with Labs
- Math 51, 52 Survey of Calculus I, II
- Math 43 Survey of Linear Algebra

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

The sequence Chm 30 (4) (Introduction to Chemical Principles) and Chm 31 (4) (Chemical Equilibria in Aqueous Systems) can be used in place of Chm 40,41. If Chm 31 is not taken during the freshman year, it should be taken in the first-semester sophomore year concurrent with Chm 110/111. The Department of Chemistry requires the completion of a foreign language or six credits of science electives (see catalog).

*Department: Chemistry, 83470*
*Chair: Prof. Robert A. Flowers, 83470, rof2*
*Contact: Prof. James Roberts, 84841, jer1*
Chemistry (BS)

**Freshman Year - Fall**
- Eng 1
- Chm 40
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 41
- Math 22
- Phy 11/12

**Sophomore Year**
- Chm 110/111 - fall
- Phy 21/22 - fall
- Math 23 - fall
- Dist. Req.(s)/Electives
- Chm 112/113 - spring
- Math 205 – spring
- CSE 2 or CSE 12 or Engr 1 – spring
- Dist. Req.(s)/Electives

**Selected Course Titles**
- Chm 40 Concepts, Models and Experiments I
- Chm 41 Concepts, Models and Experiments II
- Chm 110/111 Organic Chemistry I with Lab
- Chm 112/113 Organic Chemistry II with Lab
- Phy 11/12, 21/22 Intro Physics I, II with labs
- Math 21, 22, 23 Survey of Calculus I, II, III
- Math 205 Linear Methods
- CSE 2 or CSE 12 or Engr 1 Computer Programming

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

The sequence Chm 30 (4) (Introduction to Chemical Principles) and Chm 31 (4) (Chemical Equilibria in Aqueous Systems) can be used in place of Chm 40,41. If Chm 31 is not taken during the freshman year, it should be taken in the first-semester sophomore year concurrent with Chm 110/111. The Department of Chemistry requires the completion of a foreign language or six credits of science electives (see catalog).

Department: Chemistry, 83470
Chair: Prof. Robert A. Flowers, 83470, rof2
Contact: Prof. James Roberts, 84841, jer1
Pharmaceutical Chemistry (BS)
(Path A followed)

**Freshman Year - Fall**
- Eng 1
- Chm 40
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 41
- Math 22
- Phy 11/12

**Sophomore Year**
- Chm 110/111 - fall
- Phy 21/22 - fall
- Math 23 - fall
- Dist. Req.(s)/Electives
- Chm 112/113 - spring
- Math 205 – spring
- CSE 12 or Engr 1 – spring
- Dist. Req.(s)/Electives

**Selected Course Titles**
- Chm 40 Concepts, Models and Experiments I
- Chm 41 Concepts, Models and Experiments II
- Chm 110/111 Organic Chemistry I with Lab
- Chm 112/113 Organic Chemistry II with Lab
- Phy 11/12, 21/22 Intro Physics I, II with labs
- Math 21, 22, 23 Survey of Calculus I, II, III
- Math 205 Linear Methods
- CSE 2 or CSE 12 or Engr 1 Computer Programming Courses

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

The sequence Chm 30 (4) (Introduction to Chemical Principles) and Chm 31 (4) (Chemical Equilibria in Aqueous Systems) can be used in place of Chm 40,41. If Chm 31 is not taken during the freshman year, it should be taken in the first-semester sophomore year concurrent with Chm 110/111. The Department of Chemistry requires the completion of a foreign language or six credits of science electives (see catalog).

*Department: Chemistry, 83470*
*Chair: Prof. Robert A. Flowers, 83470, rof2*
*Contact: Prof. James Roberts, 84841, jer1*
Pharmaceutical Chemistry (BS)
(Path B followed)

**Freshman Year - Fall**
- Eng 1
- Chm 40
- Math 51
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 41
- Math 52
- Phy 10/12

**Sophomore Year**
- Chm 110/111 - fall
- Phy 13/22 - fall
- Math 43 – fall
- Dist. Req.(s)/Electives
- Chm 112/113 - spr
- CSE 12 or Engr 1 – spring
- Dist. Req.(s)/Electives

**Selected Course Titles**
- Chm 40 Concepts, Models and Experiments I
- Chm 41 Concepts, Models and Experiments II
- Chm 110/111 Organic Chemistry I with Lab
- Chm 112/113 Organic Chemistry II with Lab
- Phy 10/12, 22/23 General Physics I, II with Labs
- Math 51, 52 Survey of Calculus I, II
- Math 43 Survey of Linear Algebra

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

![Diagram of course prerequisites and corequisites]

The sequence Chm 30 (4) (Introduction to Chemical Principles) and Chm 31 (4) (Chemical Equilibria in Aqueous Systems) can be used in place of Chm 40,41. If Chm 31 is not taken during the freshman year, it should be taken in the first-semester sophomore year concurrent with Chm 110/111. The Department of Chemistry requires the completion of the second semester of a foreign language or six credits of science electives (see catalog).

*Department: Chemistry, 83470*
*Chair: Prof. Robert A. Flowers, 83470, rof2*
*Contact: Prof. James Roberts, 84841, jer1*
## Chinese (BA)

### Freshman Year - Fall
- Engl 1
- Beginning or intermediate Chinese Language
- College Seminar
- Dist. Req.(s)/Electives

### Freshman Year - Spring
- Engl 2
- Beginning or Intermediate Chinese language
- Dist. Req.(s)/Electives

### Sophomore Year
- Intermediate or Advanced Chinese OR Culture course (8 credits)
- Dist.Req. (s)/Electives

### Selected Course Titles
- Chinese 11-14 Intermediate Language
- Chinese 111-114 Advanced Language
- Chinese 191 Int. Lang. and Cult. Abroad

### Requirements for the Major:
The major in Chinese requires 36 credits: a minimum of 24 credits in courses taught in Chinese, plus 8 credits at the 200 or 300 level of Chinese language and literature (marked CHIN). Courses offered in English in MLL on Chinese literature and history may be included in the major and a maximum of two courses outside of MLL in the Asian Studies Program that are concerned specifically with China, such as those available in International Relations, Political Science, Religion, Sociology, etc., by approval of the major adviser.

### Study Abroad
Majors in Chinese are strongly encouraged to participate in a study Abroad program for the equivalent of one semester or more. Approved study abroad programs in China require prior consultation of adviser, associate dean and registrar, to make sure that courses and credits earned are transferable to Lehigh. Where appropriate, Financial Aid should also be consulted. Program listings and scholarship application forms may be consulted in the MLL office. A maximum of 8 credits for summer, 12 credits for a semester, and 16 credits for a year of study abroad may be transferred toward the major. In order to have credits from foreign institutions count toward their major, students must obtain approval from the Chinese major adviser prior to their departure.

For more information on courses and requirements see course catalog under Modern Languages and Literatures.

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Department: Modern Languages and Literatures, 83090
Chair: Prof. Antonio Prieto, 83090, ap01
Contact: Prof. Constance Cook, 83091, cac8
## Classical Studies

### Classical Civilization Major (BA)

#### Freshman Year - Fall

- Engl 1
- Clss 21, 52, 54, 56, or 58
- or Lat/Grk 1 or 11
- College Seminar
- Elective or Dist. Req.

#### Freshman Year - Spring

- Engl 2
- Clss 22, 52, 54, 56, or 58
- or Lat/Grk 2 or 12
- Elective or Dist. Req.

#### Sophomore Year - Fall

- Clss 21, 52, 54, 56, 58, or 174
- Lat/Grk 1 or 11
- Other Clss courses*
- Elective or Dist. Req.
- *Possibilities include Clss 50, 112, 114, 121, 127, 131, 132, 161, 213, 231

#### Sophomore Year - Spring

- Clss 22, 52, 54, 56, 58, or 176
- Lat/Grk 2 or 12
- Other Clss courses*
- Elective or Dist. Req.

### Selected Course Titles

| Clss 21 | Greek History |
| Clss 22 | Roman History |
| Clss 50 | Mythology |
| Clss 52 | Classical Epic |
| Clss 54 | Greek Tragedy |
| Clss 56 | Topics in Greek & Roman Lit |
| Clss 58 | Greek and Roman Comedy |
| Clss 112 | Doing Archaeology |
| Clss 127 | Early Civilizations |
| Clss 131 | Ancient Philosophy |
| Clss 132 | Hellenistic Philosophy |
| Clss 161 | Roman Law |
| Clss 174 | Greek Archaeology |
| Clss 176 | Roman Archaeology |

| Clss 213 | Ancient Roman Religion |
| Clss 231 | Plato on Socrates’ Death |
| Clss 232 | Figures and Themes in Ancient Phil. |
| Clss 251 | Classical Mythology |
| Grk 1 | Elementary Ancient Greek I |
| Grk 2 | Elementary Ancient Greek II |
| Grk 11 | Intermediate Ancient Greek |
| Grk 12 | Intermediate Ancient Greek |
| Lat 1 | Elementary Latin I |
| Lat 2 | Elementary Latin II |
| Lat 11 | Intermediate Latin |
| Lat 12 | Intermediate Latin |
| Lat 111 | Catullus and Horace |
| Lat 112 | Latin Prose |
| Lat 113 | Vergil |
| Lat 115 | Ovid |

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*Program: Classical Studies (Interdisciplinary)*

*Director: Prof. Barbara Pavlock*

*Contact: Program Director, Prof. Barbara Pavlock, 83309, bp01*
Classics Major (BA)

**Freshman Year - Fall**

- Engl 1
- Lat/Grk 1 or 11
- College Seminar
- Elective or Dist. Req.

**Freshman Year - Spring**

- Engl 2
- Lat/Grk 2 or 12
- Elective or Dist. Req.

**Sophomore Year-Fall**

- Lat/Grk 11 or Lat 111, 112, 113, 114, 115, 116
- Clss 21
- Other Clss courses* 
- Elective or Dist. Req.

**Sophomore Year-Spring**

- Lat/Grk 12 or Lat 111, 112, 113, 114, 115, 116
- Clss 22
- Other Clss courses* 
- Elective or Dist. Req.
*Possibilities include Clss 50, 52, 54, 56, 58, 112, 114, 121, 127, 131, 132, 161, 174, 176, 213, 231, 232, 251

**Selected Course Titles**

- Clss 21 Greek History
- Clss 22 Roman History
- Clss 50 Mythology
- Clss 52 Classical Epic
- Clss 54 Greek Tragedy
- Clss 56 Topics in Greek & Roman Lit
- Clss 58 Greek and Roman Comedy
- Clss 112 Doing Archaeology
- Clss 127 Early Civilizations
- Clss 131 Ancient Philosophy
- Clss 132 Hellenistic Philosophy
- Clss 161 Roman Law
- Clss 174 Greek Archaeology
- Clss 176 Roman Archaeology
- Clss 213 Ancient Roman Religion
- Clss 231 Plato on Socrates’ Death
- Clss 232 Figures and Themes in Ancient Phil.
- Clss 251 Classical Mythology
- Grk 1 Elementary Ancient Greek I
- Grk 2 Elementary Ancient Greek II
- Grk 11 Intermediate Ancient Greek
- Grk 12 Intermediate Ancient Greek
- Lat 1 Elementary Latin I
- Lat 2 Elementary Latin II
- Lat 11 Intermediate Latin
- Lat 12 Intermediate Latin
- Lat 111 Catullus and Horace
- Lat 112 Latin Prose
- Lat 113 Vergil
- Lat 115 Ovid

Lat 2 requires Lat 1 or equivalent preparation, etc. Students may begin the classics major with no advanced preparation in either Latin or Greek. It is also possible to start language study in the sophomore year, but it is preferable to begin in the freshman year.

*Program: Classical Studies (Interdisciplinary)*
*Director: Prof. Barbara Pavlock*
*Contact: Program Director, Prof. Barbara Pavlock, 83309, bp01*
Cognitive Science (BA)

**Freshman Year**

- Engl 1
- CSE 1*
- Math 21 (or 51)*
- College Seminar

**Sophomore Year**

- COGS 117
- COGS 176
- COGS 250
- Dist. Requirements/Electives

**Selected Course Titles**

- COGS 7  Introduction to Cognitive Science
- COGS 117  Cognitive Psychology
- COGS 176  Mind and Brain
- COGS 250 Philosophy of Mind**
- CSE 1  Breadth of Computing
- CSE 2  Fundamentals of Programming
- Math 21  Calculus I
- Math 51  Survey of Calculus I

**Major Courses (Arrows Denote Prerequisites):**

- Freshman Year: CSE 1 & 2 → Math 21 (or 51) → COGS 7 → COGS 117  → COGS 176
- Sophomore Year: Required later if certain major electives are chosen

Students planning to take behavioral neuroscience BIOS electives will need to take CHM 30 or 40 and BIOS 41 and 115 with their associated laboratory courses by the end of their sophomore year. Note that BIOS 41 is offered only in the spring.

*Ideally, both CSE 1 & 2 and the Math (calculus) course should be completed during the first year. Both of these collateral courses are required for some of the upper-level courses that may be selected later in the degree program. Math 21 is preferable to Math 51 for students interested in the computational side of cognitive science.

**A zero level Philosophy course is a prerequisite for COGS/PHIL 250.**

*Program: Cognitive Science (Interdisciplinary)*
*Director: Prof. Pat O’Seaghdha 84526, pgo0*
Computer Science (BA)

**Freshman Year - Fall**
- Engl 1
- CSE 1 (2 credits)
- CSE 2 (2 credits)
- Math 21
- College Seminar
- Dist. Req(s)/Electives

**Freshman Year - Spring**
- Engl 2
- CSE 17
- Math 22
- Dist. Req(s)/Electives

**Sophomore Year**
- Math 23 - fall
- CSE 130 (1 credit) – fall, if offered
- CSE 109 - fall
- CSE 202 - spr
- CSE 262 - spr
- Math 205 - spr
- Technical Elective
- Dist. Req(s)/Electives

**Selected Course Titles**
- CSE 1 Breadth of Computing
- CSE 2 Fundamentals of Programming
- CSE 17 Structured Prog. and Data Structures
- CSE 109 Systems Programming
- CSE 202 Comp. Org. and Architecture
- CSE 262 Programming Languages
- CSE 130 Technical Presentation (alt fall terms)
- Math 21, 22, 23 Calculus I, II, III
- Math 205 Linear Methods

**Major Courses (Arrows)**

**Denote Prerequisites or Corequisites:**
- CSE 1
- CSE 2
- Math 21
- Math 22
- Math 23
- Math 205

CSE 130 is offered at present only in the fall term of odd-numbered years.

Program: Computer Science  
Director: Prof. Hank Korth  
Contact: Program Director, Prof. Hank Korth, hfk@lehigh.edu
Computer Science (BS)

**Freshman Year - Fall**
- Engl 1
- CSE 15
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- CSE 17
- Math 22
- Dist. Req.(s)/Electives

**Sophomore Year**
- Math 23 - *fall*
- ECE 33 - *fall*
- CSE 109 - *spr*
- CSE 262 - *spr*
- Math 205 - *spr*
- Technical Elective
- Dist. Req.(s)/Electives

**Selected Course Titles**
- CSE 15  Introduction to Computer Science
- CSE 17  Structured Programming and Data Struct.
- CSE 109  Systems Programming
- CSE 262  Programming Languages
- ECE 33  Principles of Computer Engineering
- Math 21, 22, 23  Calculus I, II, III
- Math 205  Linear Methods

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

Engr 1 may be used as a prerequisite for many courses in place of CSE 15.

Program: Computer Science  
Director: Prof. Hank Korth  
Contact: Program Director, Prof. Hank Korth, hfk@lehigh.edu
Design (BA)

**Freshman Year – Fall**
- Art 1 or Arch 1
- Des 3 or Des 4

**Freshman Year - Spring**
- Art 2 (graphic concentration)
- or Arch 2 (product concentration)
- Des 3 or Des 4

**Sophomore Year**

Art 7 and Des 53 for the graphic concentration
Art 11 and Des 40 for the product concentration

**Selected History/Intellectual Context Courses (9 credits)**
- ARCH 1: Architectural History I (3)
- ART 1: Art History: Ancient and Medieval (3)
- ART 2: Art History: Renaissance to Present (3)
- ART 120: 20th-Century Art (4)
- ART 179: History of Photography (1)
- DES 66: Design History
- DES/THTR 129: History of Fashion and Style (4)
- ENGL 163: Topics in Film Studies (4)
- HUM 126: Professional Ethics (4)
- IR 23: Alternative World Views (4)
- PHIL 123: Aesthetics (4)
- SSP 135: Human Communication (4)

**Selected Design Theory Courses**
- ENGL/THTR 60: Dramatic Action
- ART/DES 68: Color Theory
- DES 164: Ergonomics

**Selected Concentration Courses**
- DES 40, 140: Product Design I, II
- ART/DES 53, 153: Graphic Design I, II
- DES 80, 180: Computer Imaging I, II
- ART/DES 148: Furniture Design I
- ART 177: Digital Photography (Photo II)
- DES 182: Experimental Animation and Video

Most Art, Architecture and Design studios are limited to 15 students and require departmental permission. Those interested in majoring in art, architecture, or design should contact the department chair or representative so that these courses can be rostered at an appropriate time.

*Department: Art, Architecture and Design, 84995*

*Interim Department Chair: Barrisford Boothe*

*Contact: Professor Barrisford Boothe, bwb0*
Earth and Environmental Sciences

Earth and Environmental Sciences (BA)

Freshman Year - Fall

Engl 1
EES 22 and EES Gateway course (<100 level course, but excluding EES 4 and including EES 105)
Math 12 or above or Chem or Phys
College Seminar

Freshman Year – Spring

Engl 2
EES 22 and EES Gateway course (<100 level course, but excluding EES 4 and including EES 105)
Math 12 or above or Chem or Phys
College Seminar/Dist. Req.(s)/Electives

Sophomore Year

100-level EES courses
Dist. Req.(s)/Electives

Selected Titles

EES 22 – Exploring Earth
EES 100 – Earth Systems Science
EES 200 – Earth History

Department: Earth and Environmental Sciences, 83660
Contact: Prof. Frank Pazzaglia, fzp3 or
       Prof. Steve Peters, scp2
Earth and Environmental Sciences (BS)

Freshman Year – Fall
Engl 1
EES 22 and EES Gateway course (<100 level course, but excluding EES 4 and including EES 105)
MCS*
College Seminar

Freshman Year – Spring
Engl 2
EES 22 and EES Gateway course (<100 level course, but excluding EES 4 and including EES 105)
MCS*
College Seminar/Dist. Req.(s)/Electives

Sophomore Year
MCS*
EES 100- and 200-level courses**
Dist. Req.(s)/Electives

Selected Titles
EES 22 – Exploring Earth
EES 100 – Earth Systems Science
EES 200 – Earth History

*MCS = mathematics and collateral sciences:
• mathematics: two courses for at least 7 credits (one must be a course in Calculus)
• chemistry: one specified course and lab (CHM 21/22 or CHM 75) (4 to 5 credits)
• physics: one specified course and lab (PHY 10 or 11 and PHY 12) (4 credits)
• at least two additional courses in Biology (BIOS 41 or above), Chemistry (CHM 31 or above), or Physics (PHY 13 or above)

**required 100- and 200-level core courses:
• EES 100 – Earth Systems Science
• EES 200 – Earth History

Department: Earth and Environmental Sciences, 83660
Contact: Prof. Frank Pazzaglia, fzp3 or Prof. Steve Peters, scp2
Economics (BA)

**Freshman Year - Fall**
- Engl 1
- Eco 1
- Math 51 or Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Math 52 or Math 22
- Electives or Dist. Req.(s)

**Sophomore Year**
- Eco 105 or 146
- Eco 119
- Eco 129
- Eco 145

**Selected Titles**
- Eco 1 Principles of Economics
- Eco 105 Intermediate Microeconomic Analysis
- Eco 146 Applied Microeconomic Analysis
- Eco 119 Intermediate Macroeconomics Analysis
- Eco 129 Money, Banking and Financial Markets
- Eco 145 Statistical Methods

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

![Diagram](image)

*Eco 105 and 146 are substitutes.

Eco 1 is a prerequisite for all other economics courses. Consult the catalog and one of the program directors for details.

Department: Economics, 83420, or 84448, rf03, dro0
Chair: Prof. James Dearden, 85129, jad8
EDUCATION

While there is no undergraduate major in education, the graduate College of Education offers an innovative way for Lehigh students to get their bachelor's plus master's with Pennsylvania certification in elementary or secondary education in just 5 short years. Additionally, students who aren't sure if education is right for them can test the waters by completing the 15-credit education minor.

The 5-Year Bachelor's + Master of Education and Pennsylvania Teacher Certification Program

Our 5-year Bachelor's plus Master of Education and PA Teacher Certification Program begins in the spring semester of the sophomore* year with a 3-credit seminar that examines classroom instructional practices based on students' experiences as they engage in real-world teaching opportunities. During the junior year, 5-year students take an additional 4 education credits (typically in the fall) in classroom management and practice. In the senior year, students complete a year-long core skills course sequence while also taking two teaching methods courses (12 credits total). After graduating with their bachelor's, students continue their master's and certification program with coursework in the summer (12 credits), fall (9 credits), and round out their experience in the spring with student teaching and the student teaching seminar (6 credits). All of our teacher education courses explore best practices in inclusive and technology-based teaching and learning and are carefully designed to integrate real-world classroom experiences. The actual number of credits required may vary depending on undergraduate degree and area of certification pursued by the candidate.

We are accredited by the Pennsylvania Department of Education to certify teachers in the following areas:

- Elementary K-6
- Environmental Education K-12
- Secondary Biology 7-12
- Secondary Chemistry 7-12
- Secondary Citizenship Education 7-12
- Secondary Earth and Space Science 7-12
- Secondary English 7-12
- Secondary General Science 7-12
- Secondary Mathematics 7-12
- Secondary Physics 7-12
- Secondary Social Sciences 7-12
- Secondary Social Studies 7-12

Both the elementary and secondary 5-year programs lead to a Master of Education (M.Ed.) degree with an Instructional I Certificate that qualifies the candidate to teach in the Pennsylvania public schools. Pennsylvania Certification "travels well" and is widely accepted nationwide under reciprocity agreements with many other states.

Applying*

Undergraduate students are initially admitted to the University through the regular application process in the College of Arts and Sciences, the P.C. Rossin College of Engineering and Applied Science, or the College of Business and Economics and begin the normal course of study to complete their bachelor's degree in their intended major. First-year students with a minimum cumulative 2.75 GPA can apply during their second semester for permission to take education classes in the 5-year program. Those accepted will begin education classes during the second semester of their sophomore year. Although any student can apply to the program, the student's area of certification will be heavily influenced by his/her major and minor. Students must maintain a minimum cumulative GPA of at least 2.75 each semester and have attained a minimum cumulative GPA of 3.0 by the end of the fall semester senior year in order to continue on to the fifth year.

By December 1st of the senior year, candidates complete and submit their application for admission to the graduate College of Education in the Elementary or Secondary Education program. Criteria for admission into further graduate study includes a demonstrated commitment to learning and intellectual growth, an interest in teaching as a career, and some previous experience in working with young people.

*Undergraduate students who become interested in teaching later in their undergraduate programs may still apply. However, depending on when they apply it may not be possible to complete the program in only 5 years.

The Education Minor

The Education minor is a fifteen (15) credit hour program offered to Lehigh undergraduates in the College of Arts and Sciences. Education Minor courses count toward your bachelor's degree. Minors must be submitted by the end of the student's FIFTH semester. When the Education Minor courses are completed satisfactorily, a minor field will be recorded on the student's academic record.

For more information, visit http://www.lehigh.edu/education/tlt or contact the TLT Program Coordinator at TLTProgram@lehigh.edu or 610-758-3230.
### English (BA)

#### Freshman Year - Fall
- Engl 1
- College Seminar
- Dist. Req.(s)/Electives

#### Freshman Year - Spring
- Engl 2
- Electives or Dist. Req.(s)

#### Sophomore Year
- Engl 100
- Engl 123 or Engl 125 - *fall* *
- Engl 124 or Engl 126 - *spr* *
- Dist. Req.(s)/Electives

#### Selected Course Titles
- Engl 100  Working with Texts
- Engl 123  American Literature I
- Engl 124  American Literature II
- Engl 125  British Literature I
- Engl 126  British Literature II

*Engl 123, 124, 125, 126 are not explicitly required, but one of these may be used in place of one of the four required 300-level courses identified in the catalog.

Students who have satisfied the two-semester English Composition requirement may enroll in any 100-level English course, even during the freshman year. Engl 100 is for students considering a major in English; it is a required course for majors.

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**Department:** English, 83310  
**Chair:** Prof. Scott Gordon, 83314, spg4  
**Contact:** Assistant to the Chair, Vivien Steele, 83314, vls1
# Environmental Studies (BA)

### Freshman Year - Fall
- Engl 1
- ES 1
- College Seminar
- Dist. Req./Elective

### Freshman Year - Spring
- Engl 2
- Math 12
- ES/EES/GCP 2
- ES/EES 4
- Dist. Req./Elective

### Sophomore Year
- ES 105
- Science courses* (two)
- ES core courses** (two)
- SOAN 111
- Dist. Req.(s)/Electives

### Selected Titles
- ES 1 Introduction to Environmental Studies
- ES (EES) 2 Introduction to Environmental Science
- ES (EES) 4 The Science of Environmental Issues
- ES 105 (POLS 105) Environmental Policy and Planning
- MATH 12 Basic Statistics
- SOAN 111 Research Methods and Data Analysis

*Science courses include: Any EES course except EES 2 and EES 4 and any science course, including EES, with an NS designation.

**Core Courses include: ES/POLS 106 – Environmental Values and Ethics, ES/ECO 111 – Introduction to Environmental Economics (prerequisite of Eco. 1), ES 121/ANTH – Environment and Culture, ES/JOUR 125– Environment, the Public and the Mass Media, CEE 272 Environmental Risk Assessment, ES/HIST 315 – American Environmental History.

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*Program: Environmental Studies (Interdisciplinary)*  
*Program Director: Prof Don Morris, 85175, dpm2*  
*Contact: Al Wurth, 83341, ahw1*
## French and Francophone Studies (BA)

<table>
<thead>
<tr>
<th>Freshman Year - Fall</th>
<th>Freshman Year - Spring</th>
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<tbody>
<tr>
<td>Engl 1</td>
<td>Engl 2</td>
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<tr>
<td>French language</td>
<td>French language</td>
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<tr>
<td>College Seminar</td>
<td>Electives or Dist. Req(s)</td>
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<td>Dist. Req.(s)/Electives</td>
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</tbody>
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### Sophomore Year

<table>
<thead>
<tr>
<th>Selected Course Titles</th>
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<td>French 144 Advanced Oral French</td>
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<tr>
<td>French 252 Introduction to Literary Analysis</td>
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<tr>
<td>French 259 Contemporary France</td>
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<tr>
<td>French 255 Introduction to the Francophone World</td>
</tr>
<tr>
<td>French 133 Lehigh in Martinique</td>
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</tbody>
</table>

### Requirements for the Major:

The major in French and Francophone studies requires 32 credits as follows:

1. **Core courses:** 16 credits including
   - French 143 Advanced Written French (4)
   - French 144 Advanced Oral French (4)
   - French 252 Introduction to Literary Analysis (4)
   - One of the following (3-4)
   - French 259 Contemporary France (4)
   - French 255 Introduction to the Francophone World (4)
   - French 133 Lehigh in Martinique: Globalization and Local Identity (3)

2. **Advanced course work:** 16 credits, or four courses (200 or 300 level), with at least three courses at the 300 level. One of these courses may be taken in English when taught by a French faculty member.

### Collateral requirements:

- 6-8 credits from a list of related approved courses taken in other programs and departments. These courses must be approved by the French major adviser.

### Requirements for the Departmental Honors Major:

Forty credits. Requirements as for the Major, plus 8 additional hours of advanced literature (honors thesis of a comprehensive type) and maintenance of a 3.20 average in the major.

### Study Abroad

Majors in French and Francophone Studies are strongly encouraged to participate in a study program in a French-speaking part of the world for the equivalent of one semester or more. Study abroad requires prior consultation of adviser, associate dean and registrar, to make sure that courses and credits earned are transferable to Lehigh. Where appropriate, Financial Aid should also be consulted. Program listings and scholarship application forms may be consulted in the MLL office. A maximum of 16 credits of study abroad (24 for the honors major) may be transferred toward the major, with a maximum of 8 credits for summer, 12 credits for a semester, and 16 credits for a year of study abroad (24 for honors majors). In order to have credits from foreign institutions count toward their major, students must obtain approval from the French major adviser prior to their departure.

For more information on courses and requirements see course catalog under Modern Languages and Literatures.

**Department:** Modern Languages and Literatures, 83090  
**Chair:** Prof. Antonio Prieto, 83090, ap01  
**Contact:** Prof. Marie-Sophie Armstrong, 83086, mc01
German (BA)

**Freshman Year - Fall**
- Engl 1
- German language
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- German language
- Dist. Req.(s)/Electives

**Sophomore Year**
- Intermediate or advanced German
- German culture/intro to literature
- Dist. Req.(s)/Electives

**Selected Course Titles**
- German 163 German Civilization and Culture
- German 167 German Conversation/Composition
- German 240 Contemporary Germany
- German 320 Berlin Metropolis

**Requirements for the Major:**
A minimum of 32 credits beyond German 12 (Intermediate German II), as follows:
1. German 163/240 German Civilization / Contemporary Germany (8)
2. German 167/267 (Advanced) German Conversation/Composition (8)
3. One or two additional courses at the 200 level (4-8)
4. Two or three courses at 300-level (8-12)

**Requirements for the Departmental Honors Major:**
Forty credits. Requirements as for the Major, plus 8 additional hours of advanced research and writing (honors thesis) and maintenance of a 3.20 average in the major.

**Study Abroad**
Majors in German are strongly encouraged to participate in a study program in a German-speaking part of the world for the equivalent of one semester or more. Study abroad requires prior consultation of adviser, associate dean and registrar, to make sure that courses and credits earned are transferable to Lehigh. Where appropriate, Financial Aid should also be consulted. Program listings and MLL travel grant application forms may be consulted in the MLL office. A maximum of 16 credits of study abroad (24 for the honors major) may be transferred toward the major, with a maximum of 8 credits for summer, 12 credits for a semester, and 16 credits for a year of study abroad (24 for the honors major). In order to have credits from foreign institutions count toward their major, students must obtain approval from the German major adviser prior to their departure.

For more information on courses and requirements see course catalog under Modern Languages and Literatures.

*Department: Modern Languages and Literatures, 83090*
*Chair: Prof. Antonio Prieto, 83090, ap01*
*Contact: Prof. Vera Stegmann, 85026, vss2*
## Global Studies (BA)

### Freshman Year – Fall
- ENGL 1
- GS 1
- GS Core Course: GS/POLS 3, or GS/MLL 6, or GS/IR 10
- College Seminar

### Freshman Year – Spring
- ENGL 2
- GS/POLS 3
- GS/IR 10

### Sophomore Year
- GS Core Courses
- Language course

### Selected Course Titles (Core Courses)
- **GS 1**  Introduction to Global Studies
- **GS/POLS 3**  Comparative Politics
- **GS/MLL 6**  Globalization and Cultures
- **GS/IR 10**  Introduction to World Politics
- **GS/HIST 101**  Histories of Globalization
- **GS/ANTH 106**  Cultural Studies and Globalization
- **GS/IR 125**  International Political Economy
- **SSP/GS 126**  Political Economy of Globalization
- **GS/MLL 128**  World Stories Literary Expressions Globalization
- **GS/POLS/PHIL 100**  Introduction to Political Thought

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Program: Global Studies (Interdisciplinary)
Director: Prof. Bruce Whitehouse, 84821, bruce.whitehouse@lehigh.edu
Contact: Prof. Bruce Whitehouse, 84821, bruce.whitehouse@lehigh.edu

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CAS Adviser’s Manual – Part II – August 5, 2014
Health Professions Programs

**Freshman Year – Fall**
- Engl 1
- Chm 30
- Math 51 or Math 21
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Chm 31 or Chm 76
- BioS 41/42
- Math 52 or Math 22
- Dist. Req.(s)/Electives

**Sophomore Year**
- Chm 51/53 or Phy 10/12
- Chm 52/58 or Phy 13/22
- BioS 115/116 (3/1)
- BioS 120
- BioS Electives
- Dist. Reqs.

**Selected Course Titles**
- Chm 75, 76 Concepts, Models and Experiments
- Chm 30 Intro Chemical Principles with Lab
- Chm 31 Chem. Equilibria in Aqueous Solutions
- BioS 41/42 Biology Core I: Cellular & Molecular with Lab
- BioS 115/116 Biology Core II: Genetics with Lab
- BioS 120 Biology Core III: Integrative and Comparative
- Math 51, 52 Survey of Calculus I, II
- Math 21, 22 Calculus I, II
- Chm 51/53 Organic Chemistry I with Lab
- Chm 52/58 Organic Chemistry II with Lab
- Phy 10/12 Introductory Physics I with Lab
- Phy 13/22 General Physics with Lab

**Major Courses (Arrows Denote Prerequisites or Co requisites):**
Students applying to doctoral level health professions programs require one year of Biology (BioS 41/42 and BioS 115/116), Chemistry (Chm 30, 31), Organic Chemistry (Chm 51/53, Chm 52/58), and Physics (Phy 10/12, 13/22), all with corresponding labs. Note that BioS 41/42 has a firm Chemistry prerequisite.

English composition and literature (Engl 1, 2) are also required. Many programs also require or recommend a year of calculus. With the exception of the Dental Admissions Test (DAT), which does not include physics, these basic core science courses should be completed prior to sitting for one of the admission exams (MCAT, DAT, OAT) in the spring of the junior year. In addition, course work in the upper-level biological sciences is very beneficial for such exams. Biochemistry is highly recommended by many medical schools. Non-science courses that enhance reading comprehension, critical thinking, and writing skills are highly encouraged. Students receiving AP credit for EES 31 are encouraged to take additional course work in the biological sciences. Students who will be majoring in the sciences should begin scheduling two science courses in the spring of their freshman year.

Health Professions schools currently encourage students to major in an area of interest to them but expect the student to excel in both science and non-science material. It is also the expectation of these programs that the majority, preferably all, of the core science courses will be taken at Lehigh.

Program: Health Professions  
Director: Mary Ellen Raposa  
Contact: Program Director, Mary Ellen Raposa, 83710, mer2  
          or Biological Sciences 83680
# History (BA)

## Freshman Year - Fall
- Engl 1
- Hist 11
- College Seminar* or Dist. Req.
- Dist. Req.(s)/Electives

## Freshman Year - Spring
- Engl 2
- Hist 12
- College Seminar* or Dist. Req.
- Dist. Req.(s)/Electives

## Sophomore Year
- History courses, 0xx and 1xx
- Dist. Req.(s)/Electives

## Selected Course Titles and Prerequisites
- Hist 11  Survey of Europe to 1648
- Hist 12  Survey of Europe Since 1648
- Hist 16  English History
- Hist 21  Greek History
- Hist 41  United States to 1865
- Hist 42  United States, 1865-1941
- Hist 43  United States since 1939
- Hist 49,50  History of Latin America

*A College Seminar in History (Hist 90) will count toward the History major.

Incoming freshmen may choose any unrestricted 0xx history course. One 1xx course is permitted if history AP credit is received.

*Department: History, 83365
Chair: Prof. John Smith, jks0
Contact: Department Chair, John Smith, shc0*
IDEAS is a four-year honors program, resulting in a Bachelor of Science (BS) Degree, Integrated Degree in Engineering, Arts, & Sciences (IDEAS), jointly administered by the College of Arts & Sciences and the P.C. Rossin College of Engineering & Applied Science.

Interdisciplinary education in the arts and sciences and engineering is of significant value to students who will pursue a wide variety of careers. Indeed, the complex challenges and problems confronting us in the 21st century dramatically underscore the importance of liberally educated and technologically sophisticated individuals whose habits of thought are thoroughly, comfortably interdisciplinary. Moreover, Lehigh is one of a small number of universities possessing the resources necessary to provide such an education. The students in this program will benefit from the integrated, strategic leveraging of strengths across college boundaries within the University.

This new program, now entering its second year, cultivates a new breed of cross-disciplinary innovators, in order to provide an education that produces students well versed in dual focus areas; one in engineering and one in the arts, humanities, social sciences, mathematics or natural sciences. Such an educational environment also cultivates a multitude of thinking styles…it’s Renaissance thinking for the technological era.

Contact: Co-Director, Professor Bruce Thomas (83612, jbt1) - [On leave Fall 2014]

- For Fall 2014, contact Prof. Bill Best (83551, wab205)
International Relations (BA)

**Freshman Year - Fall**
- Engl 1
- IR 10 or Eco 1
- IR elective*
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- IR 10 or Eco 1
- IR elective*
- Dist. Req.(s)/Electives

**Sophomore Year**
- IR 105
- IR 125
- IR electives*
- IR functional core**
- Electives or Dist. Req.(s)

**Selected Course Titles**
- IR 10 Introduction to World Politics
- IR 105 Theories of International Relations
- IR 125 International Political Economy
- Eco 1 Economics

**Major Courses (Arrows Denote Prerequisites):**

- **Freshman Fall**
  - IR 10 or Eco 1

- **Freshman Spring**
  - Eco 1 or IR 10

- **Sophomore Fall**
  - IR 125

*IR electives include all IR courses except IR 19, 90, 300, 388, or 391. Certain non-IR courses may also qualify; see the department for list. 12 hours (normally 3 courses) are required for completion of the major.

**One course each in International Security and in International Organization or Law; see the course catalogue or the Department. These courses should be completed by the end of the Junior year.

*Department: International Relations, 83390*
*Chair: Prof. Henri Barkey*
*Contact: Department Chair, Prof. Henri Barkey, 83384, hjb2*
Joint International Relations/Modern Languages and Literatures Major (BA)

Program directors. Chair of IR Department, Henri Barkey, Ph.D. (Pennsylvania), Bernard and Bertha F. Cohen Professor of International Relations; Chair of MLL Department, Antonio Prieto, Ph.D. (Princeton), Professor of Spanish.

The multidisciplinary Joint IR/MLL Major is offered jointly by the Department of International Relations (IR) and the Department of Modern Languages and Literatures (MLL). The program, which offers a Bachelor of Arts, incorporates courses from both IR and MLL, as well as electives from a broad cross-section of other departments, for a challenging program.

The program requires a total of 16 courses for 60-64 credits. At least one semester of study abroad in an approved Lehigh program is required, as is undergraduate research that uses sources in at least one language other than English. Each student will have two major advisors, one each from IR and MLL.

Required courses (50-52 credits), as follows:

- 6 courses in International Relations (24 credits), as follows:
  - IR 10
  - IR 105
  - IR 125
  - Two IR advanced courses numbered 301-387 or 393.
  - Eco 1
- 6 courses in Modern Languages and Literatures (22-24 credits), as follows:
  - Four courses (16 credits) in one language, either Arabic, Chinese, Hebrew, Japanese, Russian, French (above the level of French 2), German (above the level of German 2), or Spanish (above the level of Spanish 2).
  - Two culture courses (6-8 credits) from an approved list or in consultation with the MLL advisor.
- 1 independent study (4 credits). The course will include original research in at least one foreign language.
- Study abroad. 1 semester or more in an approved Lehigh program.
- Electives (10-12 credits), as follows:
  - 3 electives from an approved list, including courses from the departments of Sociology and Anthropology, Economics, English, International Relations, Journalism, Modern Languages and Literatures, Political Science, History, Religion, and/or programs in Africana Studies, Asian Studies, Global Citizenship, Latin American Studies, Sociology and Social Psychology, Science, Technology and Society, Women's Studies, or other courses as approved by IR and MLL advisors. (Courses must be chosen from at least two departments.)
# Journalism (BA)

## News Concentration

**Freshman Year - Fall**
- Engl 1
- Jour 1
- Jour 21* or Jour 123 next year
- College Seminar
- Comm 30
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Jour 23*
- Jour 24* (or sophomore year)
- Comm 30
- Dist. Req.(s)/Electives

**Sophomore Year**
- Jour 2 - fall
- Jour 122 - spr
- Jour Choice Courses
- Jour 123 if Jour 11 not taken
- Electives or Dist. Req.(s)
- Comm 30

**Selected Course Titles**
- Jour 1, 2 Brown and White (newspaper)
- Jour 21 Writing for the Media
- Jour 23 Editing and Critical Thinking
- Jour 24 Visual Communication
- Jour 122 Media Ethics and law
- Jour 123 Basic Science and Technical Writing
- Comm 30 Media and Society

*Jour 11 and Jour 13 require department permission because the courses have limited enrollments. Students should contact the department to see if space is available.*

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*Department: Journalism and Communication*  
*Chair: Prof. Jack Lule, jl0d@lehigh.edu*
Journalism: Science Writing (BA)

<table>
<thead>
<tr>
<th>Freshman Year - Fall</th>
<th>Freshman Year - Spring</th>
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<tbody>
<tr>
<td>Engl 1</td>
<td>Engl 2</td>
</tr>
<tr>
<td>Jour 1</td>
<td>Dist. Req.(s)/Electives</td>
</tr>
<tr>
<td>College Seminar</td>
<td>Jour 11 or 123* (either semester)</td>
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<tr>
<td>Dist. Req.(s)/Electives</td>
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<tr>
<td>Math 12 (preferred) or a calculus course (either semester)</td>
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<tr>
<th>Sophomore Year</th>
<th>Selected Course Titles</th>
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</thead>
<tbody>
<tr>
<td>Jour 13** – either semester</td>
<td>Jour 1  Brown and White (student newspaper)</td>
</tr>
<tr>
<td>Jour 14 – either semester</td>
<td>Jour 13  Editing</td>
</tr>
<tr>
<td>Jour 124 - fall</td>
<td>Jour 14 Publication Design</td>
</tr>
<tr>
<td>Jour 125 - spr</td>
<td>Jour 123  Basic Science and Technical Writing</td>
</tr>
<tr>
<td>Dist. Req.(s)/Electives</td>
<td>Jour 124  Politics of Science</td>
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<td>Jour 125  Environment, the Public, and the Mass Media</td>
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<td>Math 12 Basic Statistics</td>
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</table>

* Students can petition to take 100-level courses in their freshman year, or they can begin the concentration in the sophomore year.

** Almost all Journalism courses, except Jour 1–10 (Brown and White) require department permission because of limited enrollments. Students should contact the department to see if space is available.

Program: Science Writing
Director: Prof. Sharon Friedman
Contact: Program Director, Prof. Sharon Friedman, 84179, smf6
Mathematics: Statistics (BS)

**Freshman Year - Fall**
- Engl 1
- Math 12
- Math 21
- College Seminar
- Dist. Req(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Math 22
- Dist. Req(s)/Electives

**Sophomore Year**
- Math 23 - fall
- CSE 1 – fall
- CSE 2 - fall
- Math 205 - spr
- Math 231 - spr
- CSE 17 - spr
- Dist. Req(s)/Electives

**Selected Course Titles**
- Math 21, 22, 23 Calculus I, II, and III
- CSE 1 Breadth of Computing
- CSE 2 Fundamentals of Programming
- Math 205 Linear Methods
- Math 231 Probability and Statistics
- CSE 17 Structured Programming & Data Structures
- Math 12 Basic Statistics

**Major Courses (Arrows Denote Prerequisites):**

A student may take Math 12 or Math 231 or both. A freshman with exceptional ability in mathematics may replace Math 21, 22, 23 with Honors Calculus, Math 31, 32, 33. Serious mathematics students may replace Math 205 with Math 242 and 320. Students with advanced placement credit may take Math 242 and/or 243 during their sophomore year.

Math 309 and 312 are usually the next courses taken by most statistics majors.

For information on preparation for taking examinations of professional actuarial societies, please consult Professor Eisenberg (83736) be01.

*Department: Mathematics, 83731*
*Chair: Prof. Wei-Min Huang, 83730, wh02*
*Contact: Department Chair, Wei-Min Huang, 83730, wh02*
Modern Languages and Literatures (BA)

Because of the wide-ranging application of language skills, double majors including a language are increasingly popular. Students majoring in international careers, international relations, and political science nearly always select a second major or minor in a modern language. Indeed, students majoring in engineering and business subjects who add a language to their programs are preferred candidates for positions in international business, banking, and industry. Language and culture may also be studied in the context of interdisciplinary programs such as Asian Studies, Latin American Studies, and Jewish studies. High-school or college language is required for election to Phi Beta Kappa and is recommended for those who will enter graduate school.

Lehigh offers an unusually wide range of language instruction including Arabic, Mandarin Chinese, French, German, Hebrew, Japanese, Russian, and Spanish. Courses include writing and speaking, reading and listening, literature, film, culture, and instruction in professional areas including business and health. Some culture and civilization courses are conducted in English and have no language prerequisite; all others stress the use of the target language.

Major Concentrations

BA degrees are offered in Chinese, French, German, Spanish, and joint International Relations/Modern Languages and Literatures (see detailed descriptions under the headings of Chinese, French, German, Spanish, and joint IR/MLL). The candidate for the major is expected to demonstrate adequate written and oral command of the language, as well as knowledge of literature and culture. See the catalog for details.
Music (BA)
Concentrations: Performance; Music History; Jazz; Conducting; Theory and Composition
36 credits each

Freshman Year - Fall
Engl 1
College Seminar
Ensemble(s)
Dist. Req.(s)/Electives
Ensemble(s)/Lesson(s)

Freshman Year - Spring
Engl 2
Mus 2
Mus 11
Dist. Req.(s)/Electives
Ensemble(s)/Lesson(s)

Sophomore Year
Mus 3 - fall
Mus 7 - fall
Mus 82 - fall
Mus 4 - spr
Mus 8 - spr
Mus 83 - spr
Dist. Req.(s)/Electives
Ensemble(s)/Lesson(s)

Selected Course Title
Mus 2  Keyboard Skills I
Mus 3  Keyboard Skills II
Mus 4  Keyboard Skills III
Mus 7  Aural Skills I
Mus 8  Aural Skills II
Mus 11  Basic Musicianship
Mus 82  Harmony I
Mus 83  Harmony II

Major Courses (Arrows Denote Prerequisites or Corequisites):

The Music Department will hold an information meeting during freshman orientation for all students interested in music. Faculty will describe the ensembles they direct and the audition procedures as well as the private lesson program and academic courses.

Diagnostic exams will be given during Orientation or the first Mus 82 class (check the Orientation schedule), which may allow students to test out of selected courses.

Students are encouraged to take lessons and participate in performance ensembles beginning with the freshman year. There will be auditions for the large ensembles (choir, orchestra, jazz ensemble, etc.); students are encouraged to wait until after the audition to sign up for these courses (Mus 22-62).
All students registering for private lessons will receive a message through Course Site directing them to download and submit their schedule to the relevant Course Site. Lessons begin in the second or third week of the semester and consist of ten 45-minute lessons. All students taking lessons must play a jury exam at the end of the semester.

Students are discouraged from signing up for Chamber Music (Mus 48) in the first semester.

Students need department permission to sign up for Chamber Music in the first semester.

Where possible, students should take at least one music history course in the sophomore year (MUS 233, 234, 235, 236). Those with a strong background may get permission to take music history in the freshmen year.

All students considering a major in music should consult music faculty early about their plans. Students planning a concentration in Theory and Composition or Conducting will have to pass a piano proficiency exam and should consider taking piano lessons if they do not have keyboard experience.

Department: Music, 83835
Chair: Prof. Nadine Sine, njs0, 83832
Contact: Department Coordinator, 83835 (private lessons)
    Prof. Nadine Sine, njs0, 83832 (major and minor advising)
    Prof. Paul Salerni, 83834, pfs0 (theory and composition)
The **Bachelor of Arts in Music Composition** is designed for students committed to pursuing music composition beyond the undergraduate level. It is an intensive composition program with a 54-credit minimum. Twenty-five credits in music theory: MUS 82, 3, 7, 83, 4, 8, 139, 243, 245, 331. Nine credits in music history: MUS 336 plus two from MUS 129, 233, 234, 235, 236. Fourteen credits in composition: MUS 253, 254, two semesters of MUS 353. A minimum of two semesters of MUS 51: LUVME (1 credit each), one semester of conducting, MUS 321 (2 credits) and two credits of music electives. Students will have to pass a piano proficiency exam by the end of the sophomore year. Students will compile a composition portfolio by the end of the senior year.

It is assumed most entering students intending this major will be able to test out of Mus 11 (Basic musicianship) and Mus 2 (Keyboard Skills I). They might also be able to test out of Mus 3 and 4.

<table>
<thead>
<tr>
<th><strong>Freshman Year - Fall</strong></th>
<th><strong>Freshman Year - Spring</strong></th>
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<tbody>
<tr>
<td>Engl 1</td>
<td>Engl 2</td>
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<tr>
<td>College Seminar</td>
<td>Mus 4</td>
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<tr>
<td>Mus 3</td>
<td>Mus 8</td>
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<td>Mus 7</td>
<td>Mus 83</td>
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<td>Mus 82</td>
<td>Dist. Req.(s)/Electives</td>
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<tr>
<td>Ensemble(s)</td>
<td>Ensemble(s)/Lesson(s)</td>
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<td>Dist. Req.(s)/Electives</td>
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<tr>
<th><strong>Sophomore Year</strong></th>
<th><strong>Selected Course Title</strong></th>
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<tbody>
<tr>
<td>Mus 243 - fall</td>
<td>Mus 2 Keyboard Skills I</td>
</tr>
<tr>
<td>Mus 245 - spr</td>
<td>Mus 3 Keyboard Skills II</td>
</tr>
<tr>
<td>Music history – fall or spr</td>
<td>Mus 4 Keyboard Skills III</td>
</tr>
<tr>
<td>Dist. Req.(s)/Electives</td>
<td>Mus 7 Aural Skills I</td>
</tr>
<tr>
<td>Ensemble(s)/Lesson(s)</td>
<td>Mus 8 Aural Skills II</td>
</tr>
<tr>
<td>Music history – fall or spr</td>
<td>Mus 11 Basic Musicianship</td>
</tr>
<tr>
<td>Dist. Req.(s)/Electives</td>
<td>Mus 82 Harmony I</td>
</tr>
<tr>
<td>Ensemble(s)/Lesson(s)</td>
<td>Mus 83 Harmony II</td>
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<tr>
<td></td>
<td>Mus 243 Counterpoint</td>
</tr>
<tr>
<td></td>
<td>Mus 245 Forms and Chromatic Harmony</td>
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</table>
The Music Department will hold an information meeting during freshman orientation for all students interested in music. Faculty will describe the ensembles they direct and the audition procedures as well as the private lesson program and academic courses.

Diagnostic exams will be given during Orientation or the first Mus 82 class (check the Orientation schedule), which may allow students to test out of selected courses.

Students are encouraged to take lessons and participate in performance ensembles beginning with the freshman year. There will be auditions for the large ensembles (choir, orchestra, jazz ensemble, etc.); students are encouraged to wait until after the audition to sign up for these courses (Mus 22-62).

All students taking private lessons must come to the department as early as possible during the first two weeks of class to fill out schedule forms which allow the teachers to schedule individual lessons. Students may register for lessons online, but they cannot be scheduled for lessons until they come to the department, preferably in the first week of class. Lessons begin in the second or third week of the semester and consist of ten 45-minute lessons. All students taking lessons must play a juried exam at the end of the semester.

Students are discouraged from signing up for Chamber Music (Mus 48) in the first semester.

Where possible, students should take at least one music history course in the sophomore year (Mus 233, 234, 235, 236).

Students planning a BA in Music Composition will have to pass a piano proficiency exam and should consider taking piano lessons if they do not have keyboard experience.

Department: Music, 83835
Chair: Prof. Nadine Sine njs0, 83832
Contact: Prof. Steven Sametz, sps0, (major and minor advising)
   Coordinator, Olga Jacoby, oj00, 83835 (private lessons)
   Prof. Paul Salerni, 83834, pfs0 (theory and composition)
## Philosophy (BA)

### Freshman Year - Fall

- Engl 1
- Any Phil 0xx course*
- College Seminar or Dist. Req
- Dist. Req.(s)/Electives

### Freshman Year - Spring

- Engl 2
- Any Phil 0xx or 1xx course*
- College Seminar or Dist. Req.
- Dist. Req.(s)/Electives

### Sophomore Year

- PHIL course*
- Dist. Req.(s)/Electives

### Selected Course Titles

- Phil 014 Reasoning and Critical Thinking
- Phil 105 Ethics
- Phil 114 Symbolic Logic
- Phil/Rel 116 Bioethics
- Phil 121 Philosophy in Literature
- Phil 128 Philosophy of Science
- Phil 127 Existentialism
- Phil 131 Ancient Philosophy
- Phil 135 Modern Philosophy
- Phil 220 Theory of Knowledge
- Phil 250 Philosophy of Mind
- Phil 260 Philosophy of Language

*It is recommended that first-year students take a Phil 0xx course, whether in the fall or in the spring. Students are welcome, however, to take 100-level philosophy courses in the spring of their freshman year.

The philosophy major consists of a minimum of 40 credits in philosophy, which include Phil 292 Philosophical Methods (2 credits) for junior majors, the senior thesis sequence Phil 390 (2 credits) and Phil 391 (6 credits), and 16 credits of Disciplinary Area courses: 4 credits in Ethics (choosing from Phil 8, 105, 116, 205, 206); 4 credits in Logic (choosing from Phil 114, 115, 303); eight credits (2 courses) in the History of Philosophy (choosing from Phil 131, 132, 133, 135, 137, 139, 231, 232, 233, 235, 237, 239). Twelve credits (not counting the senior thesis) must be at the 200-level or above.

Department: Philosophy, 83775
Chair: Prof. Robin S. Dillon, rsd2
Contact: Department Chair, Prof. Robin S. Dillon, 83776, rsd2
Physics (BA)

**Freshman Year - Fall**

Engl 1  
Chm 25 or Phy 11/12  
Math 21  
College Seminar

**Freshman Year - Spring**

Engl 2  
Phy 11/12 or Chm 25  
Math 22  
Dist. Req.(s)/Electives

**Sophomore Year**

Phy 21/22 - fall  
Math 23 - fall  
Phy 31 - spr  
Phy 190 - spr  
Math 205

**Selected Course Titles**

Phys 11/12, 21/22  Intro Physics I, II with Labs  
Chm 30  Intro Chem Principles (with lab)  
Math 21, 22, 23  Calculus I, II, III  
Phy 31  Intro to Quantum Mechanics  
Phy 190  Electronics  
Math 205  Linear Methods

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

**Department:** Physics, 83930  
**Chair:** Prof. Volkmar Deirolf  
**Contact:** Assoc. Chair, Prof. Gary DeLeo, 83413, lgd0
Physics (BS)

**Freshman Year - Fall**
- Engl 1
- Phy 11/12
- Math 21
- College Seminar

**Freshman Year - Spring**
- Engl 2
- Chm 30
- Math 22
- Engr 1 or equivalent course
  - Dist. Req.(s)/Electives

**Sophomore Year**
- Phy 21/22 - fall
- Math 23 - fall
- Phy 31 - spr
- Phy 190 - spr
- Math 205

**Selected Course Titles**
- Phys 11/12, 21/22  Intro Physics I, II with Labs
- Chm 30  Intro Chem Principles (with lab)
- Math 21, 22, 23  Calculus I, II, III
- Phy 31  Intro to Quantum Mechanics
- Phy 190  Electronics
- Math 205  Linear Methods
- Engr 1  Intro to Engineering Computing

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

- **Freshman Fall**
  - Math
  - Phy 11/12

- **Freshman Spring**
  - Math
  - Chm 30
  - Engr 1

- **Sophomore Fall**
  - Math
  - Phy 21/22

- **Sophomore Spring**
  - Math
  - Phy 31
  - Phy 190

*Department: Physics, 83930*
*Chair: Prof. Volkmar Deirolf*
*Contact: Assoc. Chair, Prof. Gary DeLeo, 83413, lgd0*
### Political Science (BA)

#### Freshman Year - Fall
- Engl 1
- PolS 1 or PolS 3
- College Seminar
- Dist. Req.(s)/Electives

#### Freshman Year - Spring
- Engl 2
- PolS 1 or PolS 3
- Dist. Req.(s)/Electives

#### Sophomore Year
- PolS 100 or 101 or 102
- Dist. Req.(s)/Electives

#### Selected Course Titles and Prerequisites
- PolS 1  American Political Systems
- PolS 3  Comparative Politics
- PolS 100  Introduction to Political Thought
- PolS 101  Ancient Political Heritage
- PolS 102  Modern Political Heritage

Choose major electives from the selection in the catalog. PolS 1 deals with the United States government; PolS 3 covers the political systems of other countries.
Psychology (BA)

**Freshman Year - Fall**
- Engl 1
- Psyc 1*
- College Seminar
- Dist. Req(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Psyc 1xx Courses* (if Psyc 1 completed)
- Dist. Req
- Dist. Req(s)/Electives

**Sophomore Year**
- Psyc 1xx Courses*
- Psyc 110 Statistical Analysis of Behavioral Data
- Dist. Req(s)/Electives

*Four Courses; Spanning at least three of the following four categories*

**Developmental:**
- Psyc 107 Child Psychology
- Psyc 109 Adulthood and Aging

**Social/Personality:**
- Psyc 121 Social Psychology
- Psyc 153 Personality

**Cognitive:**
- Psyc 117 Cognitive Psychology
- Psyc 176 Mind and Brain

**Clinical and Behavioral Health:**
- Psyc 138 Abnormal Psychology

**Major Courses (Arrows Denote Prerequisites or Corequisites):**

*Students arriving with AP Psychology credit may wish to take another 00-level Psychology course before continuing to 100-level courses. These courses do not count toward the major.*

†Denotes course with accompanying recitation section. Must complete a recitation section for at least one 100-level course.

Department: Psychology, 8-3630  
Chair: Prof. Gordon Moskowitz, gbm4  
Contact: Director of Undergraduate Studies, Prof. Kate Arrington, 8-4230, cma205
Psychology (BS)

Freshman Year - Fall
Engl 1
Psyc 1*
College Seminar
Dist. Req. / Collateral Req.**

Freshman Year - Spring
Engl 2
Psyc 1xx Courses (if Psyc 1 completed)
Dist. Req.
Dist. Req. / Electives / Collateral Req.**

Sophomore Year
Psyc 1xx Courses
Psyc 110 Statistical Analysis of Behavioral Data
Dist. Req.(s) /Electives
Collateral Requirements**

Four Courses: Select one from each of the first three categories; 4th determined by concentration pursued

Developmental:
Psyc 107  Child Psychology†
Psyc 109  Adulthood and Aging

Social/Personality:
Psyc 121 Social Psychology†
Psyc 153  Personality†

Cognitive:
Psyc 117  Cognitive Psychology†
Psyc 176  Mind and Brain†

Clinical and Behavioral Health:
Psyc 138 Abnormal Psychology

**Collateral Requirements: see lists in Course Catalog

Major Courses (Arrows Denote Prerequisites or Corequisites):

*Students arriving with AP Psychology credit may wish to take another 00-level Psychology course before continuing to 100-level courses. These courses do not count toward the major.
†Denotes course with accompanying recitation section. Must complete a recitation section for at least one 100-level course.

Students should declare as early as possible in their academic career.

Department: Psychology, 8-3630
Chair: Prof. Gordon Maskowitz, gbm4
Contact: Director of Undergraduate Studies, Prof. Kate Arrington, 8-4230, cma205
## Religion Studies (BA)

### Freshman Year - Fall
- Engl 1
- Rel 1, 2, 3, 4, 5, 6, 7, 8 or 9
- College Seminar
- Dist. Req.(s)/Electives

### Freshman Year - Spring
- Engl 2
- Rel 0xx Course
- Dist. Req.(s)/Electives

### Sophomore Year
- Religion Courses (Selection)
- Dist. Req.(s)/Electives

### Selected Course Titles
- Rel 1 Sacred Scriptures in Religious Traditions
- Rel 2 Death in Religious Traditions
- Rel 3 Religion and Ethics in Religious Traditions
- Rel 4 How to Study Religion
- Rel 5 Spiritual Exercises in Religious Traditions
- Rel 6 Religion and the Ecological Crisis
- Rel 7 Jesus, Buddha, Mao, and Elvis
- Rel 8 Prehistoric Religion and Technology
- Rel 9 Spiritual Journeys

See catalog for complete listing of religion studies courses.

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*Department: Religion Studies, 83353
Chair: Prof. Michael Raposa, mrl0@lehigh.edu*
Science, Technology, and Society (BA)

Freshman Year-Fall
- Engl 1
- STS 11
- College Seminar
- Dist. Req.(s)/Electives

Freshman Year-Spring
- Engl 2
- STS 11 and/or Hist 7 or Hist 8
- Dist. Req.(s)/Electives

Sophomore Year
- STS/Jour 124 or Pols 115
- Phil 128
- Dist. Req.(s)/Electives

Selected Course Titles
- STS 11 Technology & Human Values
- Hist 7 Technology in America’s Industrial Age
- Hist 8 Technology in Modern America
- STS/Jour 124 Politics of Science
- Phil 128 Philosophy of Science
- PolS 115 Technology as Politics

In the sophomore year, students should begin taking courses in their collateral disciplinary concentration. (consult program director).

Program: Science, Technology, and Society (Interdisciplinary)
Director: Prof. Stephen Cutcliffe
Contact: Program Director, Prof. Stephen Cutcliffe, 83349, shc0
Sociology and Anthropology (BA)

**Freshman Year - Fall**
- Engl 1
- Anth 1 or SSP 1
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Anth 1 or SSP 1
- Math 12
- Dist. Req.(s)/Electives

**Sophomore Year**
- SR 111 – (fall)
- Major electives
- Dist. Req.(s)/Electives

**Selected Course Titles**
- Anth 1 Introduction to Anthropology
- SSP 1 Introduction to Sociology and Social Psychology
- SR 111 Research Methods and Statistics
- Math 12 Basic Statistics

Students must take one general course in statistics (Math 12, Eco 145, Psyc 110 or equivalent).
(Note: Math 12 fulfills the College of Arts & Sciences math requirement.)

*Department: Sociology and Anthropology, 83810
Chair: Prof. Nikki Tannenbaum*
**Sociology/Social Psychology (BA)**

**Freshman Year - Fall**
- Engl 1
- SSP 1
- College Seminar
- Dist. Req.(s)/Electives

**Freshman Year - Spring**
- Engl 2
- Math 12
- Dist. Req.(s)/Electives

**Sophomore Year**
- SR 111 – (fall)
- Major electives
- Dist. Req.(s)/Electives

**Selected Course Titles**
- SSP 1 Introduction to Sociology and Social Psychology
- Math 12 Basic Statistics
- SR 111 Research Methods and Statistics

Students must take one general course in statistics (Math 12, Eco 145, Psyc 110 or equivalent). (Note: Math 12 fulfills the College of Arts & Sciences math requirement.)

*Department: Sociology and Anthropology, 83810*

*Chair: Prof. Nikki Tannenbaum*
South Mountain College

SMC’s approach to the liberal arts combines the recognized success of a traditional major and elective courses with an inquiry-driven curriculum and a living-learning community. There are three main elements of the program: a unique curriculum, a residential community, and an intellectual community. The intellectual community is built through an emphasis on student-faculty interaction outside of the classroom and participation in a range of intellectual, creative, and social activities.

A program within the College of Arts and Sciences (CAS), SMC students choose from one of the many majors available in the CAS and complete all major requirements. South Mountain College students and faculty represent all academic divisions from the College of Arts and Sciences and these diverse perspectives, along with the student-driven nature of the classes, help create a dynamic range of topics to explore.

About the SMC Curriculum
There are two SMC courses: a two-credit Seminar taken each semester and a year-long course titled Investigations. Evaluations that become part of student’s academic record are given instead of grades, allowing students to be self-directed, take intellectual risks, and pursue a range of interests. Normal CAS distribution and writing requirements are waived due to the interdisciplinary nature of SMC courses and a programmatic emphasis on writing. The typical SMC student earns about one-third of his or her credits in SMC, while the remaining study is devoted to a major and to exploring free electives or other programs. SMC students can pursue a minor or other program, study abroad, or even fit in a double major.

Courses
The SMC Seminar is a multidisciplinary, critical analysis of significant ideas. Each offering is organized around the discussion of books, compositions, performances, films, and artworks selected by the students in consultation with their faculty mentor.

The SMC Investigations involves work around a theme that is selected by students and faculty at the annual retreat. Investigation themes require contributions from diverse disciplines. The academic year ends with an event that involves review by interested and informed parties, whether they are stakeholders or external experts.

SMC is a good fit for students who...
• Are curious, imaginative, and love learning,
• Challenge us as much as we challenge you,
• Make intelligent and interesting mistakes, and
• Are self-directed and have lots of interests.

Although South Mountain College is designed as a four-year program, we do welcome students to join during or after the first year, stay on for a fifth year, or (if there is space) take a course just for the experience. Students can contact the director or program coordinator at insmc@lehigh.edu for more information or visit the program website (www.lehigh.edu/smc) to apply.

Program: South Mountain College
Director: Prof. Joan Ramage-Macdonald, 86410, jmr204
Contact: Program Coordinator: Susan Ellis, 82553, susanellis@lehigh.edu
## Spanish and Hispanic Studies (BA)

### Freshman Year - Fall
- Engl 1
- Spanish language
- College Seminar
- Dist. Req.(s)/Electives

### Freshman Year - Spring
- Engl 2
- Spanish language
- Dist. Req.(s)/Electives

### Sophomore Year
- Intermediate Spanish OR
- Spanish 141 Advanced Grammar OR
- Culture course
- Dist. Req. (s)/Electives

### Selected Course Titles
- Spanish 141 Advanced Grammar
- Spanish 151 Cultural Evolution of Spain OR
- Spanish 152 Cultural Evolution of Latin America
- Spanish 213 Introduction to Hispanic Literature and Film
- Spanish 275 Introduction to Hispanic Women Writers

### Requirements for the Major:
The major in Spanish and Hispanic Studies requires 32 credits as follows:

1. **Core courses:** 12 credits
   - Span 141. Advanced Spanish Grammar (4 credits)
   - Span 151. The Cultural Evolution of Spain (4 credits)
   - Span 152. The Cultural Evolution of Latin America (4 credits)

2. **Advanced course work:** 12 credits, or three courses at the 300 level.

3. **Electives:** 8 credits at the 100 or 200 level.

### Collateral requirements: 6-8 credits from a list of related approved courses taken in other programs and departments. These courses must be approved by the Spanish major adviser.

### Requirements for the Departmental Honors Major:
Forty credits. Requirements as for the Major, plus 8 additional hours of advanced literature (honors thesis of a comprehensive type) and maintenance of a 3.20 average in the major.

### Study Abroad
Majors in Spanish and Hispanic Studies are strongly encouraged to participate in a study program in a Spanish-speaking part of the world for the equivalent of one semester or more. Study abroad requires prior consultation of adviser, associate dean and registrar, to make sure that courses and credits earned are transferable to Lehigh. Where appropriate, Financial Aid should also be consulted. Program listings and MLL travel grant application forms may be consulted in the MLL office. A maximum of 16 credits of study abroad (24 for the honors major) may be transferred toward the major, with a maximum of 8 credits for summer, 12 credits for a semester, and 16 credits for a year of study abroad (24 for the honors major). In order to have credits from foreign institutions count toward their major, students must obtain approval from the Spanish major adviser prior to their departure.
For more information on courses and requirements see course catalog under Modern Languages and Literatures.

Department: Modern Languages and Literatures, 83090
Chair: Prof. Antonio Prieto, 83090, ap01
Contact: Prof. Antonio Prieto, 83088, ap01
THEATRE (BA)

While the BA in theatre constitutes a vital arts concentration in the College of Arts and Sciences, Lehigh students from all walks of academic life participate in theatre courses and production activity. The major in theatre provides a comprehensive understanding of the theory and practice, literature and history of the theatre, preparing the most serious students to gain acceptance to reputable graduate programs or entry-level professional employment. Because the commerce of theatre requires a host of ancillary skills not commonly included in a BA theatre major curriculum and because some theatre majors will earn their living in areas outside of theatre after college, the theatre major is constructed so as to allow students to add a second major. Minor programs in theatre satisfy the interests of students in curricula too rigid to allow a second major in theatre.

There are numerous points of entry for those wishing to study theatre.

**Excellent First Year Courses:**

Theatre 1, Introduction to Theatre (4)  
Theatre 11, Introduction to Acting (4) (limited enrollment)  
Theatre 60, Dramatic Action (4) (fall)  
Theatre 87, Scenography I (4) (spring)  
Any 2-credit Production Course, including  
  • Theatre 20, 21; Stage Technology & Production I, II  
  • Theatre 22 Stage Properties & Decoration  
  • Theatre 23, Basic Scene Painting  
  • Theatre 25, 26; Costume Technology & Production I, II  
  • Theatre 27, 28; Lighting Technology & Production I, II  
  • Theatre 30, 31; Sound Technology & Production I, II  
  • Theatre 35, Performance (by audition and casting in department production)  
  • Theatre 45, Stage Management

Many of the 2-credit courses listed above carry department permission that usually requires the student to interact with the professor. Inquiries should be directed to the department coordinator, Deborah Laub in the Theatre Office, 301 Zoellner (83640, or dal5@lehigh.edu).

Students registering for the possibility of a major in theatre or who wish to learn more about auditioning should contact the chairperson for the most complete and timely advice.

Pam Pepper, Chairperson, Department of Theatre, 305 Zoellner Arts Center  
610-758-5338  
pp03@lehigh.edu
Women, Gender, and Sexuality Studies (BA)

The Women, Gender, and Sexuality Studies (WGSS) Program has several major goals: to expand students’ understanding of women’s present status and rich history; to stimulate a critical examination of sex/gender and sexuality systems with regard to social institutions and individual lives; to develop in students an integrative analysis in which gender is multifaceted, diverse, and embedded in a matrix of power relations including (but not limited to) race, class, sexuality, and nationality. Women, Gender and Sexuality Studies draws on multi- and interdisciplinary perspectives including: history, literatures, cultural studies, the arts, the social sciences, and science. In the best tradition of a liberal arts education, WGSS encourages women and men to think critically and constructively, to redesign knowledge, and to gain a better understanding of themselves and their world. Women, Gender and Sexuality Studies offers an undergraduate minor, undergraduate major, and a graduate certificate.

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<td>College Seminar</td>
<td>WGSS 1 Women and Men in Society</td>
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<th>Sophomore Year</th>
<th>Selected Course Titles</th>
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<td>WGSS/ Hist 124 Women in America</td>
<td>WGSS/HIST 124 Women in America</td>
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<td>Global/Diversity requirement</td>
<td>WGSS 350 Seminar in Feminist Theory</td>
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<td>Major Concentration (Humanities or Social Sciences)</td>
<td>WGSS/SSP 331 Gendered Experience in Globalization</td>
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<td>Major Electives</td>
<td>WGSS/PSYC/HMS 334 The Psychology of Body Image and Eating Disorders</td>
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<td>WGSS/SSP 341 Women and Health</td>
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<td>WGSS/SSP 128 Race, Gender and work</td>
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<td>WGSS/HIST 325 History of Sexuality and the Family in the U.S.</td>
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<td>WGSS/ASIA 73 Film, Fiction, and Gender in Modern China</td>
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<td>WGSS/SSP 331 Gendered Experience of Globalization</td>
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<td>WGSS/PHIL 226 Feminism and Philosophy</td>
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Program: Women, Gender, and Sexuality Studies Program  
Director: Prof. Monica Miller, mrm 213, 83364  
Contact: Prof. Monica Miller, mrm213, 83364