

Criterion: C- Number of Credits 3

Course Listing

CHMY 360 Applied Physical Chemistry 3
CHMY 373 Phys Chem-Kntcs & Thrmdynmcs 4

Subcategory Name: Inorganic Chemistry

Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 401 Advanced Inorganic Chemistry 3

Subcategory Name: Biochemistry Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

BCH 480 Advanced Biochemistry I 3

Subcategory Name: Statistics

Rule: Complete the following courses

Criterion: C- Number of Credits 4

Course Listing

STAT 451 Statistical Methods I 3
STAT 457 Computer Data Analysis I 1

Subcategory Name: Geology

Rule: Any GEO course 300 level or above

Criterion: C- Number of Credits 3-4

Course Listing Commentary:

Commentary: Major Electives

Category Name: Advanced Electives

Rule: Choose at least 8 credits from the listed courses.

Criterion: C- Number of Credits 8

Course Listing

BIOB 490 Adv Undergrad Research 1 To 10
BIOB 492 Independent Study 1 To 10
BIOE 370 General Ecology 3
BIOL 453 Ecology of Small & Large Lakes 3
BIOL 454 Stream Ecology 3
BIOM 360 Gen Microbiolgy (equiv to 260) 3
CHMY 373 Phys Chem-Kntcs & Thrmdynmcs 4
CHMY 391 Special Topics/Expmntl Crse 1 To 9
CHMY 402 Advanced Inorganic Chem Lab 2
CHMY 403 Descriptive Inorganic Chem 3
CHMY 442 Aquatic Chemistry 3

CHMY 445 Indstrl Chm & Its Impct on Soc 3
CHMY 465 Organic Spectroscopy 3
CHMY 466 FT-NMR Optn for Undrgrd Rsrch 1
CHMY 491 Special Topics/Expmntl Crse 1 To 9
CHMY 492 Independent Study 1 To 9
GEO 320 Global Water 4
GEO 420 Hydrogeology 4
GEO 492 Independent Study 1 To 6
STAT 452 Statistical Methods II 3

Commentary: 3 credits maximum of CHMY 492. 3 credits maximum of BIOB 492.

3 credits maximum of GEO 492.

A maximum of 5 credits of Modern Foreign Language may be applied to meet the Advanced Electives requirement.

Degree Specific Ethical & Human Values Category Name: Ethics

Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 302E Chem Lit and Science Writing 3

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Bachelor of Science Level: Major Subject: Chemistry Option: **Forensic Chemistry**

Total Credits: 100 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Core Courses

Rule: All courses in all subcategories listed are required

Criterion: Number of Credits

Course Listing Commentary:

Subcategory Name: General Chemistry Rule:

Criterion: C- Number of Credits 10

Course Listing

CHMY 141N College Chemistry I 5

CHMY 143N College Chemistry II 5

Subcategory Name: Organic Chemistry Rule:

Criterion: C- Number of Credits 10

Course Listing

CHMY 221 Organic Chem I 3

CHMY 222 Org Chm I Lab 2

CHMY 223 Organic Chm II 3

CHMY 224 Org Chm II Lab2

Subcategory Name: Biochemistry and Biology Rule:

Criterion: C- Number of Credits 8

Course Listing

BCH 110 Intro Biology for Biochemists 3

BCH 111 Intro Biol for Biochemists Lab 1

BIOB 260 Cellular and Molecular Biology 4

Subcategory Name: Physics Rule:

Criterion: C- Number of Credits 10

Course Listing

PHSX 215N Fund of Physics w/Calc I 4

PHSX 216N Physics Laboratory I w/Calc 1

PHSX 217N Fund of Physics w/Calc II 4

PHSX 218N Physics Laboratory II w/Calc 1

Commentary:

Subcategory Name: Mathematics Rule:

Criterion: C- Number of Credits 8

Course Listing

M 171 Calculus I 4

M 172 Calculus II 4

Commentary:

Subcategory Name: Forensic Science and Criminal Justice Rule:

Criterion: C- Number of Credits 6

Course Listing

CJUS 125N Fund of Forensic Science 3

SOCI 221 Criminal Justice System 3

Commentary: Upper Division Core

Category Name: Upper Core Courses Rule: All subcategories must be completed

Criterion: Number of Credits

Course Listing Commentary:

Subcategory Name: Analytical Chemistry Rule: Complete all of the following courses

Criterion: C- Number of Credits 8

Course Listing

CHMY 311 Analytical Chem-Quant Analysis 4

CHMY 421 Advanced Instrument Analysis 4

Commentary:

Subcategory Name: Physical Chemistry Rule: Choose 1 of the listed courses

Criterion: C- Number of Credits 3

Course Listing

CHMY 360 Applied Physical Chemistry 3

CHMY 373 Phys Chem-Kntcs & Thrmdynmcs 4

Commentary:

Subcategory Name: Inorganic Chemistry Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 401 Advanced Inorganic Chemistry 3

Subcategory Name: Biochemistry Rule: Complete the following courses

Criterion: C- Number of Credits 6

Course Listing

BCH 480 Advanced Biochemistry I 3

BCH 482 Advanced Biochemistry II 3

Commentary:

Subcategory Name: Experiential Learning

Rule: Choose 1 of the listed courses for 3 credits

Criterion: C- Number of Credits 3

Course Listing

CHMY 488 Forensic Research 3

CHMY 498 Internship/Cooperative Educ 1 To 6

Commentary:

Subcategory Name: Seminar

Rule: Complete the following course

Criterion: C- Number of Credits 1

Course Listing

CHMY 489 Forensic Research Seminar 1

Commentary:

Subcategory Name: Statistics

Rule: Complete the following courses

Criterion: C- Number of Credits 4

Course Listing

STAT 451 Statistical Methods I 3

STAT 457 Computer Data Analysis I 1

Commentary: Major Electives

Category Name: Advanced Electives

Rule: Choose 11 credits from the listed courses. 8 of the credits must be numbered 300 or above Criterion: C-

Number of Credits 11

Course Listing

BIOB 440 Biological Electron Microscopy 2

CHMY 465 Organic Spectroscopy 3

CHMY 466 FT-NMR Optn for Undrgrd Rsrch 1

CJUS 488 Foren Sci: Beyond Crime Lab 3

PHAR 110N Use & Abuse of Drugs 3

Commentary:

Degree Specific Expressive Arts

Category Name: Expressive Art - Public Speaking Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

COMX 111A Intro to Public Speaking 3

Commentary:

Degree Specific Social Sciences

Category Name: Social Science - Criminology Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

SOCI 211S Introduction to Criminology 3

Degree Specific Ethical & Human Values Category Name: Ethics

Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 302E Chem Lit and Science Writing 3

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Bachelor of Science Level: Major Subject: **Chemistry** Option: **Pharmacology**

Total Credits: 88 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Core Courses Rule: All subcategories must be completed

Criterion: Number of Credits

Course Listing Commentary:

Subcategory Name: General Chemistry Rule: Complete both courses

Criterion: C- Number of Credits 10

Course Listing

CHMY 141N College Chemistry I 5

CHMY 143N College Chemistry II 5

Subcategory Name: Organic Chemistry Rule: Complete all courses listed

Criterion: C- Number of Credits 10

Course Listing

CHMY 221 Organic Chem I 3

CHMY 222 Org Chm I Lab 2

CHMY 223 Organic Chm II 3

CHMY 224 Org Chm II Lab2

Subcategory Name: Biochemistry and Biology Rule: Complete both courses

Criterion: C- Number of Credits 8

Course Listing

BCH 111 Intro Biol for Biochemists Lab 1

BIOB 260 Cellular and Molecular Biology 4

Commentary:

Subcategory Name: Physics

Rule: Complete either PHSX 205N-206N and 207N-208N or PHSX 215N-216N and 217N-218N

Criterion: C-

Course Listing Number of Credits 10

PHSX 205N College Physics I 4

PHSX 206N College Physics I Laboratory 1

PHSX 207N College Physics II 4

PHSX 208N College Physics II Laboratory 1

PHSX 215N Fund of Physics w/Calc I 4

PHSX 216N Physics Laboratory I w/Calc 1

PHSX 217N Fund of Physics w/Calc II 4

PHSX 218N Physics Laboratory II w/Calc 1

Subcategory Name: Mathematics

Rule: Complete either M162 and M274 or M171 and M172

Criterion: C- Number of Credits 7

Course Listing

M 162 Applied Calculus 4

M 171 Calculus I 4

M 172 Calculus II 4

M 274 Intro to Differential Equation 3

Commentary:

Upper Division Core

Category Name: Upper Core Courses Rule: All subcategories must be completed

Criterion: Number of Credits

Course Listing Commentary:

Subcategory Name: Analytical Chemistry Rule: Complete all of the following courses

Criterion: C- Number of Credits 8

CHMY 311 Analytical Chem-Quant Analysis 4

CHMY 421 Advanced Instrument Analysis 4

Subcategory Name: Physical Chemistry Rule: Choose 1 of the listed courses

Criterion: C- Number of Credits 3

Course Listing

CHMY 360 Applied Physical Chemistry 3

CHMY 373 Phys Chem-Kntcs & Thrmdynmcs 4

Subcategory Name: Inorganic Chemistry Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 401 Advanced Inorganic Chemistry 3

Subcategory Name: Biochemistry Rule: Complete the following courses

Criterion: C- Number of Credits 6

Course Listing

BCH 480 Advanced Biochemistry I 3

BCH 482 Advanced Biochemistry II 3

Subcategory Name: Pharmacology Rule: Complete the following courses

Criterion: C- Number of Credits 14

Course Listing

PHAR 421 Medicinal Chem I 3

PHAR 422 Medicinal Chem II 3

PHAR 443 Pharmacol & Toxicol I 4

PHAR 444 Pharmacology & Toxicol II 4

Commentary:

Subcategory Name: Biology

Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

Commentary: Major Electives

Category Name: Advanced Electives

Rule: Choose 3 credits from the listed courses

Criterion: C- Number of Credits 3

Course Listing

BIOB 490 Adv Undergrad Research 1 To 10

CHMY 373 Phys Chem-Kntcs & Thrmodynms 4

CHMY 402 Advanced Inorganic Chem Lab 2

CHMY 403 Descriptive Inorganic Chem 3

CHMY 442 Aquatic Chemistry 3

CHMY 445 Indstrl Chm & Its Impct on Soc 3

CHMY 465 Organic Spectroscopy 3

CHMY 466 FT-NMR Optn for Undrgrd Rsrch 1

CHMY 492 Independent Study 1 To 9

Commentary: 3 credits maximum of CHMY 492 may be applied toward degree requirements. 3 credits maximum of BIOB 490 may be applied toward degree requirements.

Degree Specific Ethical & Human Values Category Name: Ethics

Rule: Complete the following course

Criterion: C- Number of Credits 3

Course Listing

CHMY 302E Chem Lit and Science Writing 3

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Minor Level: **Minor** Subject: **Chemistry (Minor)**

Total Credits: 31 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Core Courses Rule: Must complete all of the following:

Criterion: C- Number of Credits 18

Course Listing

CHMY 141N College Chemistry I 5

CHMY 143N College Chemistry II 5

CHMY 221 Organic Chem I 3

CHMY 222 Org Chm I Lab 2

CHMY 223 Organic Chm II 3

Commentary: Upper Division Core

Rule: Must complete the following:

Criterion: C- Number of Credits 4

Course Listing

CHMY 311 Analytical Chem-Quant Analysis 4

Subcategory Name: Physical Chemistry Requirement Rule: Must complete one of the following:

Criterion: C- Number of Credits 3

Course Listing

CHMY 360 Applied Physical Chemistry 3

CHMY 373 Phys Chem-Kntcs & Thrmdynmcs 4

Commentary: Major Electives

Category Name: Upper Division Electives Rule: Must complete two of the following:

Criterion: C- Number of Credits 6

Course Listing

BCH 380 Biochemistry 4

BCH 480 Advanced Biochemistry I 3

BCH 482 Advanced Biochemistry II 3

CHMY 371 Phys Chem-Qntm Chm & Spctrscopy 4

CHMY 401 Advanced Inorganic Chemistry 3

CHMY 403 Descriptive Inorganic Chem 3

CHMY 442 Aquatic Chemistry 3

CHMY 445 Indstrl Chm & Its Impct on Soc 3

CHMY 465 Organic Spectroscopy 3

Commentary: If the student's major requires biochemistry, BCH 380 or BCH 480 and BCH 482 may not be used to satisfy this requirement.

Department Faculty

Professor

- Bruce Bowler, Professor and Director, Biochemistry Program
- Mark Cracolice, Professor
- Michael DeGrandpre, Professor of Chemistry and Biochemistry
- Daniel Dwyer, Dr.
- Christopher Palmer, Professor/Chair
- Nigel Priestley, Professor of Chemistry
- Edward Rosenberg, Professor
- J.B. Alexander (Sandy) Ross, Dean of the Graduate School and Professor of Chemistry and Biochemistry
- Kent Sugden, Professor of Chemistry and Biochemistry

Associate Professors

- Orion Berryman, Assistant Professor
- Klara Briknarova, Associate Professor
- Xi Chu, Associate Professor
- Aaron Thomas, Associate Professor, Director of Native American Research Laboratory

Adjunct Instructor

- Gerald Olbu

Lecturer

- Earle Adams, assistant research professor
- Holly Thompson, Lecturer

Emeritus Professor

- Richard Field, Professor Emeritus
- Donald Kiely
- Garon Smith, Professor of Chemistry
- Edward Waali, Professor Emeritus

Course Descriptions

Chemistry

CHMY 101N - Chemistry for the Consumer

Credits: 3. Offered intermittently. An introduction to chemistry that emphasizes the influence of chemistry on one's everyday life. Common household products, such as soap, aspirin, toothpaste, face cream and fertilizers are prepared in the lab. Course Attributes: Natural Science Lab Course

CHMY 104 - Preparation for Chemistry

Credits: 3. Offered autumn. Prereq. ALEKS Level 3 or M 090 Introductory Algebra w/ C- or better. An introduction to chemistry for those who believe they have an inadequate background to enroll in CHMY 121N or 141N. Not appropriate toward chemistry requirement in any major.

CHMY 121N - Introduction to General Chemistry

Credits: 3. Offered autumn and spring. First semester of an introduction to general, inorganic, organic and biological chemistry. Course Attributes: Practical Nursing Prog Rqrmnt Registered Nursing Prog Rqrmnt Natural Science Course

CHMY 122 - Introduction to General Chemistry Lab

Credits: 1. Offered autumn and spring. Prereq., Enrolled in the College of Technology ASRN program. Prereq. or coreq., CHMY 121N or equivalent. A laboratory course emphasizing inorganic chemistry, quantitative relations and synthesis of inorganic and organic compounds. Course Attributes: Practical Nursing Prog Rqrmnt Registered Nursing Prog Rqrmnt

CHMY 123 - Introduction to Organic and Biochemistry

Credits: 3. Offered autumn and spring. Prereq., "C-" or equiv. in CHMY 121N or consent of instr. Second semester of an introduction to general, inorganic, organic and biological chemistry.

CHMY 124 - Introduction to Organic and Biochemistry Lab

Credits: 2. Offered autumn and spring. Prereq. or coreq., CHMY 123. Laboratory to accompany CHMY 123.

CHMY 141N - College Chemistry I

Credits: 5. Offered autumn and spring. Prereq., ALEKS Placement Level 4 or M 095 Intermediate Algebra w/ C- or better. For science majors and other students intending to take more than one year of chemistry. Properties of elements, inorganic compounds, liquid solutions, chemical equilibria and chemical kinetics. Includes laboratory. Course Attributes: Natural Science Lab Course

CHMY 143N - College Chemistry II

Credits: 5. Offered spring and summer. Prereq., "C-" or better in CHMY 141N or consent of instr. A continuation of CHMY 141N. Includes Laboratory. Course Attributes: Natural Science Lab Course

CHMY 191 - Special Topics/Expmntl Crse

Credits: 1 TO 6. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

CHMY 221 - Organic Chemistry I

Credits: 3. Offered autumn. Prereq., CHMY 123N or 143N. The chemical and physical properties of organic compounds.

CHMY 222 - Organic Chemistry I Lab

Credits: 2. Offered autumn. Coreq., CHMY 221; prereq., one semester of 100-level laboratory. Microscale techniques are emphasized.

CHMY 223 - Organic Chemistry II

Credits: 3. Offered spring. Prereq., CHMY 221. Continuation of 221.

CHMY 224 - Organic Chemistry II Lab

Credits: 2. Offered spring. Prereq., CHMY 222; prereq. or coreq., CHMY 223.

CHMY 290 - Undergraduate Research

Credits: 1 TO 6. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Course Attributes: Research & Creative Schlrshp

CHMY 291 - Special Topics/Expmntl Crse

Credits: 1 TO 6. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

CHMY 292 - Independent Study

Credits: 1 TO 10. (R-10) Offered autumn and spring. Prereq., one semester of chemistry and consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

CHMY 294 - Seminar/Workshop

Credits: 1 TO 3. (R-6) Offered intermittently. Topic varies.

CHMY 302E - Chemistry Literature and Science Writing

Credits: 3. Offered autumn and spring. Prereq., CHMY 223 and chemistry or biochemistry majors. Presentation and discussion of current literature in chemistry. Use of library and search tools. Workshop for developing and improving skills in scientific writing and evaluation. Use of on-line data bases and the interface of these with PC-based word processing and scientific graphics programs. Course Attributes: Ethical & Human Values Course Writing Course-Advanced

CHMY 311 - Analytical Chem-Quant Analysis

Credits: 4. Offered autumn. Prereq., one year of college chemistry, including laboratory. Classroom and laboratory work in gravimetric, volumetric, colorimetric and electrochemical methods of analysis; theory of errors; ionic equilibria in aqueous solutions.

CHMY 360 - Applied Physical Chemistry

Credits: 3. Offered spring. Prereq., CHMY 123 OR 143 AND M 162. Basic thermodynamics and chemical kinetics with applications in the biological and environmental sciences. Credit not allowed for both 360 and 373.

CHMY 371 - Phys Chem-Qntm Chm & Spctrscopy

Credits: 4. Offered spring. Prereq., CHMY 373. Systematic treatment of the laws and theories relating to chemical phenomena.

CHMY 373 - Phys Chem-Kntcs & Thrmdynmcs

Credits: 4. Offered autumn. Prereq., CHMY 143N, M 273, PHSX 207N or 212N. Systematic treatment of the laws and theories relating to chemical phenomena. Credit not allowed for both CHMY 360 and 373.

CHMY 390 - Undergraduate Research

Credits: 1. Offered every term. Prereq., CHEM 161N-162N with B or better and consent of instr. Methods of peer-led team learning as applied to general chemistry instruction. Review of concepts from general chemistry. Student leaders mentor a team of general chemistry students in working toward constructing chemistry knowledge and developing problem-solving skills. Course Attributes: Research & Creative Schlrshp

CHMY 391 - Special Topics/Expmntl Crse

Credits: 1 TO 9. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

CHMY 392 - Independent Study

Credits: 1 TO 9. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

CHMY 397 - Teaching Chemistry

Credits: 1. Offered every term. Prereq., CHMY 141N-143N with B or better and consent of instr. Methods of peer-led team learning as applied to general chemistry instruction. Review of concepts from general chemistry. Student leaders mentor a team of general chemistry students in working toward constructing chemistry knowledge and developing problem-solving skills.

CHMY 398 - Internship/Cooperative Educ

Credits: 1 TO 6. Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes: Internships/Practicums

CHMY 401 - Advanced Inorganic Chemistry

Credits: 3. Offered autumn. Prereq., CHMY 223 AND 360 OR 373 or consent of instr. Theory and principles of inorganic chemistry and a systematic coverage of descriptive inorganic chemistry in the context of the periodic table.

CHMY 402 - Advanced Inorganic Chem Lab

Credits: 2. Offered spring. Prereq., CHMY 224 AND 360 or 373 and consent of instr. Preparation of inorganic and coordination compounds. Isolation and characterization by ion exchange, column chromatography, IR, UV-VIS, derivatives, MP, and BP.

CHMY 403 - Descriptive Inorganic Chem

Credits: 3. Offered spring. Prereq., CHMY 221-222, 360 or 373-371, and 401. A survey of the chemistry of the elements including transition metal reaction mechanisms, redox chemistry, organometallic chemistry, bioinorganic chemistry.

CHMY 421 - Advanced Instrument Analysis

Credits: 4. Offered spring. Prereq., CHMY 311. Theory and use of instrumental methods in the study of analytical and physical chemistry.

CHMY 442 - Aquatic Chemistry

Credits: 3. Offered autumn odd-numbered years. Prereq., CHMY 311 or consent of instr. Application of chemical equilibria theory for understanding and modeling chemical processes in natural waters with an emphasis on spreadsheet computations. In depth examination of concepts such as pH, alkalinity, buffering, and solubility as they apply to natural waters.

CHMY 445 - Indstrl Chm & Its Impct on Soc

Credits: 3. Offered every other autumn semester. Prereq., CHMY 143 or 123. A course based on local Montana chemical industries involving field trips to chemical plants, visits by company personnel and an overall evaluation of the company=s economic and environmental impact on the community.

CHMY 465 - Organic Spectroscopy

Credits: 3. Offered intermittently. Prereq., CHMY 360 or 373 and one year of organic chemistry or consent of instr. Theory and interpretation of the NMR, IR, UV, and mass spectra of organic compounds with the goal of structure identification.

CHMY 466 - FT-NMR Optn for Undrgrd Rsrch

Credits: 1. Offered intermittently. Prereq., CHMY 221-222; research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy.

CHMY 485 - Laboratory Safety

Credits: 1. Offered autumn. Prereq., one year of college chemistry. Awareness of and methods of control of hazards encountered in laboratory work. Awareness of legal constraints on work with chemicals. Sources of information regarding chemical hazards.

CHMY 488 - Forensic Research

Credits: 3. Offered autumn, spring and summer. Prereq., consent of instr. Laboratory investigations and research on forensic chemistry topics under the direction of a faculty member.

CHMY 489 - Forensic Research Seminar

Credits: 1. Offered autumn. Prereq., CHMY 421 and ANTH 286N. Seminar speakers on forensic science topics in the areas of ethics, law, anthropology and criminology; tours of the Montana State Crime Laboratory.

CHMY 490 - Undergraduate Research

Credits: 1 TO 9. Undergraduate Research Variable cr (R-9). Offered autumn, spring, and summer. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member. Course Attributes: Research & Creative Schlrshp

CHMY 491 - Special Topics/Expmntl Crse

Credits: 1 TO 9. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

CHMY 492 - Independent Study

Credits: 1 TO 9. (R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

CHMY 494 - Seminar/Workshop

Credits: 1 TO 9. (R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

CHMY 498 - Internship/Cooperative Educ

Credits: 1 TO 6. Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes: Internships/Practicums

CHMY 499 - Senior Thesis/capstone

Credits: 3. Offered autumn and spring. Prereq., CHMY 490 or consent of instr. and senior standing. Students complete and report on undergraduate research initiated as CHEM 490 or equivalent research experience. Reports are both oral and written.

CHMY 501 - Teaching University Chemistry

Credits: 1. Offered autumn. Preparation for teaching chemistry at the college level. A survey of teaching fundamentals and educational psychology as applied to chemistry instruction. Level: Graduate

CHMY 541 - Environmental Chemistry

Credits: 3. Offered intermittently. Prereq., CHMY 360 OR 373. Chemical principles and reactions in natural systems: Fate of chemical contaminants in the environment; partitioning of contaminants between phases (air/water/soil); chemistry of atmospheric pollutants; computer modeling of equilibrium and kinetic processes; degradation and transformation of organic contaminants. Level: Graduate

CHMY 542 - Separation Science

Credits: 3. Offered autumn odd-numbered years. Prereq., CHMY 421, CHMY 360 or 373. Theory, method development, and application of analytical separations; solvent extraction; solid phase extraction; various forms of chromatography; electrophoresis. Level: Graduate

CHMY 544 - Applied Spectroscopy

Credits: 3. Offered intermittently. Prereq., CHMY 421 or consent of instr. The function and application of optical (ultraviolet to infrared) chemical instrumentation. Specific topics include optics, light sources, detectors and a wide variety of spectrochemical methods with an emphasis on methods not typically covered in undergraduate instrumental analysis courses. Level: Graduate

CHMY 553 - Inor Chem and Curr Lit

Credits: 4. Offered spring. Prereq., CHMY 401. A survey of the elements including transition metal reaction mechanisms, redox chemistry, organometallic chemistry, bioinorganic chemistry. Oral and written presentations on primary literature. Level: Graduate

CHMY 562 - Org Structure and Mech

Credits: 3. Offered intermittently. Prereq., one year of organic chemistry. Topics may include: stereochemistry, conformational analysis, aromaticity, transition state theory, isotope effects, solvent effects, substitution and elimination reactions, and mechanisms that involve carbocations, carbanions, radicals and carbenes as reactive intermediates. Level: Graduate

CHMY 563 - Organic Synthesis

Credits: 3. Offered intermittently. Prereq., CHMY 221-223. Theoretical treatise of the common methods used in organic synthesis including: oxidation, reduction, organometallics, C-C bond forming reactions, synthetic strategies and total synthesis. Level: Graduate

CHMY 566 - FT-NMR for Graduates

Credits: 1. Offered intermittently. Prereq., CHMY 221-222; research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy. Level: Graduate

CHMY 568 - Organometallic Chemistry

Credits: 3. Offered intermittently in autumn. Prereq., CHMY 221, 223, 401, 403. Survey of the reactivity and structure of main group and transition metal organometallic compounds with an emphasis on applications to organic synthesis and catalysis. Level: Graduate

CHMY 573 - Advanced Physical Chem

Credits: 3. Offered intermittently. Prereq., CHMY 371-373. Fundamental principles of physical chemistry and special applications. Level: Graduate

CHMY 580 - Adv Graduate Res Seminars

Credits: 1. (R-10) Offered every term. Prereq., consent of instr. Formal oral and written presentations of research results and selected literature topics in a designated area. Level: Graduate

CHMY 593 - Professional Project

Credits: 3. Offered autumn and spring. Prereq., consent of instr. Preparation of a professional project appropriate to the needs and objectives of the individual student. Level: Graduate Course Attributes: Faculty-Led Study Abroad

CHMY 595 - Special Topics

Credits: 1 TO 9. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate Course Attributes: Internships/Practicums

CHMY 596 - Independent Study

Credits: 1 TO 9. (R-9) Offered autumn and spring. Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Graduate Course Attributes: Service Learning/Volunteer

CHMY 597 - Research

Credits: 1 TO 10. Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

CHMY 598 - Internship

Credits: 1 TO 8. (R-8) Offered autumn and spring. Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Level: Graduate Course Attributes: Internships/Practicums

CHMY 599 - Thesis

Credits: 1 TO 6. (R-6) Offered autumn and spring. Prereq., consent of instr. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

CHMY 630 - Seminar

Credits: 1. (R-14) Offered autumn and spring. Prereq., graduate standing in chemistry or biochemistry, or consent of instr. Level: Graduate

CHMY 640 - Intro Grad Seminar

Credits: 1. (R-20) Offered autumn. Prereq., graduate standing in chemistry or biochemistry or consent of instr. Seminar to acquaint new graduate students with departmental research. Level: Graduate

CHMY 650 - Graduate Chemistry Seminar

Credits: 1. (R-2) Offered spring. Prereq., graduate standing. A review and discussion of current research. Topics vary. Level: Graduate

CHMY 652 - Original Research Proposal

Credits: 1. Offered autumn. Prereq., CHMY 640 and CHMY 650. Preparation and presentation of original research proposals for third year graduate students. Level: Graduate

CHMY 697 - Research

Credits: 1 TO 10. (R-60) Offered autumn and spring. Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

CHMY 699 - Dissertation

Credits: 1 TO 10. (R-10) Offered autumn and spring. Preparation of extensive thesis or manuscript based on research for presentation and/or publication. Level: Graduate

Communication Studies Department

Steve Schwarze, Chair

Communication Studies engages in both social-scientific and humanistic approaches to the analysis, understanding and improvement of human communication. The discipline traces its roots to ancient Greek and Roman studies of the functions of public discourse in society, but in the twentieth century communication came to embrace the studies of interpersonal and small group interaction, human relations in organizations, media and society, and intercultural interaction. Although interdisciplinary in spirit, the discipline has a core of knowledge, theory, and concepts concentrating on such things as symbols, messages, interactions, networks, audiences, and persuasive campaigns. Uniting the field is the belief that the role of communication in human experience is basic to comprehending complex situations and problems in the modern world. The discipline has roles in both the broad traditions of liberal arts education and in the development and refinement of practical skills.

The Department of Communication Studies at the University of Montana-Missoula focuses on three broad areas of study: interpersonal interaction and human relationships, organizational communication, and rhetoric and public discourse. The knowledge and skills the student may acquire in each of these areas are important to functioning effectively in one's personal life, at work, and as a citizen of the larger society in a rapidly changing world.

The program in Communication Studies helps to prepare students for such diverse professions as: public relations officer, marketing analyst, human resources or personnel manager, community mediator, political speech writer, health communication trainer, social services director, or student services coordinator. Also, undergraduate and

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Bachelor of Arts Level: Major Subject: **Communication Studies**

Option: **Comm & Human Relationships**

Total Credits: 48 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Division Core Courses Rule: Must complete all of the following courses:

Criterion: C- Number of Credits 12

Course Listing

COMX 111A	Intro to Public Speaking	3
COMX 115S	Intro to Interpersonal Communc	3
COMX 220S	Intro to Organizational Comm	3
COMX 240H	Intro to Rhetorical Theory	3

Commentary: Must complete COMX 111A, 2 other lower division COMX courses, and 16 university credits to move from Pre-Comm to Comm. Pre-comm majors are not eligible to take upper division courses.

Commentary: Upper Division Core

Criterion: Number of Credits 6

Course Listing Commentary:

Subcategory Name: Research

Rule: Must complete the following course

Criterion: C- Number of Credits 3

Course Listing

COMX 460 Research Methods 3

Commentary: Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461, Communication Research Seminar. Those taking COMX 460 in summer are exempt from this requirement.

Subcategory Name: Upper Division Writing Rule: Must complete 1 of the following courses

Criterion: C- Number of Credits 3

Course Listing

COMX 347 Rhetoric Nature & Environmtlsm 3

COMX 413 Comm & Conflict-Writing 3

COMX 414 Comm in Personal Relationships 3

COMX 421 Comm in Non-Profit Organizatns 3

COMX 422 Communication and Technology 3

COMX 424 Risk Crisis & Comm 3

COMX 445 Rhetorical Criticism and Theor 3

COMX 447 Rhetorical Constrctn of Woman 3

COMX 449 Rhetoric of Women's Activism 3

Commentary: One of these courses is required to complete the upper division writing requirement in the major. This counts toward the total credits need for the major.

Commentary: Major Electives

Category Name: Comm & Human Relationships Option Rule: Must complete the following subcategories

Criterion: Number of Credits 30

Course Listing Commentary:

Subcategory Name: Major Courses

Rule: Must complete at least 5 of the following courses

Criterion: C- Number of Credits 15

COMX 311 Family Communication 3

COMX 380 Gender and Communication 3

COMX 412 Communication and Conflict 3

COMX 413 Comm & Conflict-Writing 3

COMX 414 Comm in Personal Relationships 3

COMX 415 Intercultural Communication 3

COMX 485 Communication and Health 3

Commentary:

Subcategory Name: Allied Courses

Rule: Must complete at least 4 of the following courses

Criterion: C- Number of Credits 12

Course Listing

ANTY 227	Human Sexuality	3	
ANTY 427	Anthropology of Gender	3	
COUN 242	Intimate Relationships	3	
COUN 475	Forgiveness & Reconcilia	3	
COUN 485	Counseling Theories	3	
EDEC 310	Child in the Family	3	
PSYX 230	Developmental Psychology	3	
PSYX 233	Fund of Psychology of Aging	3	
PSYX 345	Child & Adolescent Psych Dis	3	
PSYX 348	Psychology of Family Violence	3	
PSYX 360	Social Psychology	3	
PSYX 385	Psychology of Personality	3	
S W 420	Child Abuse/Child Welfare	3	
S W 455	Social Gerontology	3	
SOCI 220S	Race, Gender & Class	3	
SOCI 275S	Gender and Society	3	
SOCI 330	Juvenile Delinquency	3	
SOCI 332	Sociology of the Family	3	
SOCI 350	The Community	3	
SOCI 382	Soc Psych and Social Structure	3	3
WILD 460	Internat Wildlife Cons Issues	2	

Criterion: C- Number of Credits 0-6

Course Listing Commentary:

Commentary: Cognates

Category Name: Statistics

Rule: Must complete 1 of the following courses

Criterion: C- Number of Credits 3

Course Listing

EDU 421	Statistical Procedures in Educ	3	
PSYX 222	Psychological Statistics	3	
SOCI 202	Social Statistics	3	
STAT 216	Introduction to Statistics	4	

Degree Commentary: To graduate with a degree in Communication Studies, the student must complete 36 COMX (COMM) credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course. For the Human Relationships option, students must complete an additional 12 credits in Allied courses to reach 48 total degree credits. A maximum of 6 credits in COMX 312 (COMM 360) and a maximum of 6 credits in COMX 398 (COMM 398) may count toward a major in communication studies.

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Bachelor of Arts Level: Major Subject: **Communication Studies**

Option: **Organizational Communication**

Total Credits: 45 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Division Core Courses Rule: Must complete all of the following courses:

Criterion: C- Number of Credits 12

Course Listing

COMX 111A	Intro to Public Speaking	3
COMX 115S	Intro to Interpersonal Communc	3
COMX 220S	Intro to Organizational Comm	3
COMX 240H	Intro to Rhetorical Theory	3

Commentary: Must complete COMX 111A, 2 other lower division COMX courses, and 16 university credits to move from Pre-Comm to Comm. Pre-comm majors are not eligible to take upper division courses.

Upper Division Core

Category Name: Upper Division Core Courses Rule: Must complete the following subcategories

Criterion: C- Number of Credits 6

Course Listing Commentary:

Subcategory Name: Research

Rule: Must complete the following course

Criterion: C- Number of Credits 3

Course Listing

COMX 460	Research Methods	3
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Commentary: Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461, Communication Research Seminar. Those taking COMX 460 in summer are exempt from this requirement.

Subcategory Name: Upper Division Writing Rule: Must complete 1 of the following courses

Criterion: C- Number of Credits 3

Course Listing

COMX 347	Rhetoric Nature & Environmtlsm	3
COMX 413	Comm & Conflict-Writing	3
COMX 414	Comm in Personal Relationships	3
COMX 421	Comm in Non-Profit Organizatns	3
COMX 422	Communication and Technology	3

COMX 424	Risk Crisis & Comm	3
COMX 445	Rhetorical Criticism and Theor	3
COMX 447	Rhetorical Constrctn of Woman	3
COMX 449	Rhetoric of Women's Activism	3

Commentary: One of these courses is required to complete the upper division writing requirement in the major. This counts toward the total credits need for the major.

Commentary: Major Electives

Category Name: Organizational Communication Option Rule: Must complete the following subcategories

Criterion: Number of Credits 27

Course Listing Commentary:

Rule: Must complete at least 5 of the following courses

Criterion: C- Number of Credits 15

Course Listing

COMX 210	Communication in Small Groups	3
COMX 351	Principles of Public Relations	3
COMX 352	Public Relations Portfolio	3
COMX 412	Communication and Conflict	3
COMX 413	Comm & Conflict-Writing	3
COMX 415	Intercultural Communication	3
COMX 421	Comm in Non-Profit Organizatns	3
COMX 422	Communication and Technology	3
COMX 423	Org Comm Consult	3
COMX 424	Risk Crisis & Comm	3
COMX 425	Comm in Health Organizations	3

Subcategory Name: Allied Courses

Rule: Must complete at least 3 of the following courses

Criterion: C- Number of Credits 9

Course Listing

BMGT 340	Mgmt & Organization Behavior	3
BMGT 444	Management Communications	3
BMGT 480	Cross-Cultural Mgmt	3
BMKT 325	Principles of Marketing	3
BMKT 343	Integrated Marketing Comm	3
BMKT 412	Non Profit Marketing	3
CHTH 355	Theory Pract Comm Hlth Ed	3
CHTH 445	Prgm Plan in Comm Health	3
HTH 465	Leading Hlth, Hmn Perform Orgs	3
PSCI 361	Public Administration	3
PSCI 462	Human Resource Management	3

PSCI 466	Nonprofit Adm & Pub Svc	3
PSCI 467	Adv Nonprofit Adm	3
SOCI 306	Sociology of Work	3
SOCI 345	Sociology of Organizations	3
SOCI 371	Gender and Global Development	3

Subcategory Name: Additional Major Electives

Rule: May take any COMX courses to achieve 36 degree credits

Criterion: C- Number of Credits 0-6

Course Listing Commentary:

Commentary: Cognates

Category Name: Statistics

Rule: Must complete 1 of the following courses

Criterion: C- Number of Credits 3

Course Listing

EDU 421	Statistical Procedures in Educ	3
PSYX 222	Psychological Statistics	3
SOCI 202	Social Statistics	3
STAT 216	Introduction to Statistics	4

Commentary: Degree Commentary

To graduate with a degree in Communication Studies, the student must complete 36 COMX (COMM) credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course. In the Organizational Communication option, students must complete an additional 9 credits in Allied courses to reach 45 degree credits. A maximum of 6 credits in COMX 312 (COMM 360) and a maximum of 6 credits in COMX 398 (COMM 398) may count toward a major in communication studies.

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Bachelor of Arts Level: **Major** Subject: **Communication Studies** Option: **Rhetoric and Public**

Discourse Total Credits: 48 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Division Core Courses Rule: Must complete all of the following courses:

Criterion: C- Number of Credits 12

Course Listing

COMX 111A	Intro to Public Speaking	3
COMX 115S	Intro to Interpersonal Communc	3
COMX 220S	Intro to Organizational Comm	3
COMX 240H	Intro to Rhetorical Theory	3

not eligible to take upper division courses.

Commentary: Upper Division Core

Category Name: Upper Division Core Courses Rule: Must complete the following subcategories

Criterion: Number of Credits 6

Course Listing Commentary:

Subcategory Name: Research

Rule: Must complete the following course

Criterion: C- Number of Credits 3

Course Listing

COMX 460 Research Methods 3

Commentary: Students taking COMX 460 in the fall or spring semester will also be required to take COMX 461, Communication Research Seminar. Those taking COMX 460 in summer are exempt from this requirement.

Subcategory Name: Upper Division Writing Rule: Must complete 1 of the following courses

Criterion: C- Number of Credits 3

Course Listing

COMX 347 Rhetoric Nature & Environmtlsm 3

COMX 413 Comm & Conflict-Writing 3

COMX 414 Comm in Personal Relationships 3

COMX 421 Comm in Non-Profit Organizatns 3

COMX 422 Communication and Technology 3

COMX 424 Risk Crisis & Comm 3

COMX 445 Rhetorical Criticism and Theor 3

COMX 447 Rhetorical Constrctn of Woman 3

COMX 449 Rhetoric of Women's Activism 3

Commentary: One of these courses is required to complete the upper division writing requirement in the major. This counts towards the total credits needed for the major.

Commentary: Major Electives

Category Name: Rhetoric Option

Rule: Must complete the following subcategories

Subcategory Name: Major Courses

Rule: Must complete at least 4 of the following courses

Criterion: C- Number of Credits 12

Course Listing

COMX 241 Persuasive Communication 3

COMX 242 Argumentation 3

COMX 343 Persuasive Speaking and Critic 3

COMX 347 Rhetoric Nature & Environmtlsm 3

COMX 349 Comm Consump & Climate 3

COMX 380 Gender and Communication 3

COMX 445 Rhetorical Criticism and Theor 3

COMX 447 Rhetorical Constrctn of Woman 3

COMX 449 Rhetoric of Women's Activism 3

Subcategory Name: Allied Courses

Rule: Must complete at least 4 of the following courses

Criterion: C- Number of Credits 12

Course Listing

ANTY 122S	Race and Minorities	3	
CCS 103X	Intro Climate Change:Sci & Soc		3
COUN 242	Intimate Relationships	3	
COUN 475	Forgiveness & Reconcilia	3	
ECNS 433	Economics of the Environment	3	
ECNS 445	Int Env Econ & Clim Change	3	
ENST 230H	Nature and Society	3	
ENST 367	Envr Politics & Policies	3	
ENST 420	US Environmental Movement	3	
FILM 103L	Introduction to Film	3	
HSTA 102H	American History II	4	
HSTA 262	Abolitionism	3	
HSTA 321	America in Crisis	3	
HSTA 322	American History: WWII to Pres		3
HSTA 370H	Wmn Amer Colonial to Civil War		3
HSTR 272E	Terrorism:Viol Mod Wrld	3	
HSTR 384	Hist Internat Human Rights	3	
LIT 110L	Intro to Lit	3	
MAR 101L	Intro to Media Arts	3	
NASX 405H	Gndr Iss in Native Amer Studies	3	
NRSM 449E	Climate Change Ethics/Policy	3	
PHL 112E	Intro Ethics and Environment	3	
PHL 235	Intro to Logic: Induction	3	
PHL 422	Environmental Philosophy	3	
PSCI 250E	Intro to Political Theory	3	
PSCI 342	Media, Public Opinion, Polling	3	
PSCI 352	American Political Thought	3	
PSCI 355	Theories of Civil Violence	3	
PSCI 444	Am Political Participation	3	
PSCI 471	American Constitutional Law	3	
PSCI 474	Civil Rights Seminar	3	
S W 323	Women & Soc Action Amer	3	
S W 324	Gender and Welfare	3	
S W 455	Social Gerontology	3	
SOCI 220S	Race, Gender & Class	3	

SOCI 325	Social Stratification	3
SOCI 350	The Community	3
SOCI 470	Environmental Sociology	3
SOCI 485	Political Sociology	3
WGSS 163L	Hist/Lit Persp Women	3
WGSS 263S	Women's and Gender Studies	3

Subcategory Name: Additional Major Electives

Rule: May take additional COMX courses to achieve 36 COMX degree credits. Criterion: C- Number of Credits 0-6

Course Listing Commentary:

Commentary: Cognates

Criterion: C- Number of Credits 3

Course Listing

EDU 421	Statistical Procedures in Educ	3
PSYX 222	Psychological Statistics	3
SOCI 202	Social Statistics	3
STAT 216	Introduction to Statistics	4

Commentary: Degree Commentary

To graduate with a degree in Communication Studies, the student must complete 36 COMX (COMM) credits with 18 of those credits in courses numbered 300 or above. Students must also complete an approved statistics course. For the Rhetoric option, students must complete an additional 12 credits of Allied courses to reach 48 total degree credits. A maximum of 6 credits in COMX 312 (COMM 360) and a maximum of 6 credits in COMX 398 (COMM 398) may count toward a major in communication studies.graduate study can assist the student in pursuing advanced studies for law, the ministry, and higher education.

College Humanities & Sciences Catalog Year: 2015-2016

Degree Type: Minor Level: **Minor** Subject: **Communication Studies (Minor)**

Total Credits: 20 Cumulative GPA Required: 2.0

Lower Division Core

Category Name: Lower Division Core Courses Rule: Must complete all of the following:

Criterion: C- Number of Credits 3

Course Listing

COMX 111A	Intro to Public Speaking	3
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Commentary:

Commentary: Major Electives

Category Name: Electives

Rule: Must complete 17 credits from the following:

Criterion: C- Number of Credits 17

Course Listing

COMX 115S	Intro to Interpersonal Communc	3
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COMX 140L	Intro to Visual Rhetoric	3
COMX 191	Special Topics	1 To 9
COMX 192	Independent Study	1 To 6
COMX 204X	International & Dvlpmnt Comm	3
COMX 210	Communication in Small Groups	3
COMX 212X	Intro to Intercultural Com	3
COMX 217A	Oral Interpretation of Lit	3
COMX 219S	Survey of Children's Comm	3
COMX 220S	Intro to Organizational Comm	3
COMX 222	Professional Communication	3
COMX 240H	Intro to Rhetorical Theory	3
COMX 241	Persuasive Communication	3
COMX 242	Argumentation	3
COMX 250	Intro to Public Relations	3
COMX 291	Special Topics	1 To 6
COMX 292	Independent Study	1 To 6
COMX 311	Family Communication	3
COMX 312	Forensics/Honors	1 To 3
COMX 343	Persuasive Speaking and Critic	3
COMX 347	Rhetoric Nature & Environmtlsm	3
COMX 349	Comm Consump & Climate	3
COMX 351	Principles of Public Relations	3
COMX 352	Public Relations Portfolio	3
COMX 380	Gender and Communication	3
COMX 391	Special Topics	1 To 9
COMX 398	Internship	1 To 6
COMX 412	Communication and Conflict	3
COMX 413	Comm & Conflict-Writing	3
COMX 414	Comm in Personal Relationships	3
COMX 415	Intercultural Communication	3
COMX 421	Comm in Non-Profit Organizatns	3
COMX 422	Communication and Technology	3
COMX 423	Org Comm Consult	3
COMX 424	Risk Crisis & Comm	3
COMX 425	Comm in Health Organizations	3
COMX 445	Rhetorical Criticism and Theor	3
COMX 447	Rhetorical Constrctn of Woman	3
COMX 449	Rhetoric of Women's Activism	3
COMX 461	Communication Research Seminar	1 To 3