

- 211 Introduction to Gender and Environmental Issues**  
Spring. 3(3-0) Interdepartmental with Fisheries and Wildlife; Forestry; Environmental Economics and Policy; Resource Development. Administered by Department of Fisheries and Wildlife. R: Not open to freshmen. SA: PRM 211  
The concept of gender. Overview of environment and habitat. Historical gender roles in environmental management. Gender-based theoretical perspectives. Case studies on developing and developed countries. Environmental management with emphasis on fisheries, wildlife and wetlands. Women environmental professionals.
- 225 Women and Language**  
Fall. 3(3-0) Interdepartmental with Linguistics. Administered by Department of Linguistics and Germanic, Slavic, Asian and African Languages.  
Women and language in societies around the world. Issues such as status and verbal politeness, importance of names, gender differences in language use, women's multilingualism, sexist language, gendered language development in children.
- 301 Sexual Violence Against Women and Children: Theory and Response**  
Spring. 3(3-0) RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen.  
Sexual violence against women and children from theoretical and applied perspectives. Rape, battering, incest and sexual harassment. Intersection of race, class, gender and violence. Individual and collective strategies to prevent or deter assault, race, class, gender and violence.
- 302 Jewish Women's Experiences and Writings**  
Fall of even years. 3(3-0) RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen.  
Diverse experiences of Jewish women from a multidisciplinary perspective. Gender construction of Jewish and majority women and men. Generations of immigrant Jewish women. Anti-Semitism. Jewish feminism. Political and economic issues.
- 321 Lesbian Cultures and Identities**  
Fall of even years. 3(3-0) RB: (WS 201 and WS 202)  
Lesbian history, lesbian cultures/communities, and the construction of lesbian identity.
- 400 Senior Seminar: Women in Ancient Greece and Rome (W)**  
Spring of odd years. 3(3-0) Interdepartmental with Classical Studies. P:M: Completion of Tier I writing requirement. R: Not open to freshmen or sophomores.  
Image, role, and status of women in Greek society as seen through literary sources.
- 401 Feminist Theory**  
Spring. 4(4-0) P:M: (WS 201 and WS 202) R: Not open to freshmen or sophomores.  
Integrative and multidisciplinary approaches to theory in women's studies. Conceptualization of sex and gender and the subordination of women. Feminist critique of theories of knowledge. Comparison of evolving feminist theories.
- 403 Women and Change in Developing Countries**  
Spring. 3(3-0) RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen or sophomores.  
Effects of economic, political, and social change on women in developing countries. Interrelationships of gender, class, race, and nationality.
- 404 Women and the Law in the United States**  
Fall of odd years. Spring of odd years. 3(3-0) Interdepartmental with Fisheries and Wildlife. RB: (WS 201 or WS 202 or WS 203) R: Not open to freshmen or sophomores.  
Law in the United States as a vehicle for structuring and maintaining women's social roles, and for social change.
- 413 Families in Historical Perspective**  
Fall. 3(3-0) Interdepartmental with History. Administered by Department of History. R: Not open to freshmen.  
Family forms and socio-economic change in Europe and the United States. Gender, childhood, courtship, sexual relations, marriage, divorce, childbearing, and old age in peasant, industrial, and postindustrial society. War, welfare state, and the family. The marginalized: vagrants, foundlings, immigrants, and single mothers.
- 420 History of Sexuality since the 18th Century**  
Fall, Spring. 3(3-0) Interdepartmental with History. Administered by Department of History. R: Not open to freshmen  
Changing gender roles, sex in the Victorian era, prostitution, pornography, birth control, emergence of homo- and heterosexuality, sex under fascism, the sexual revolution, contemporary conflicts.
- 425 Women and Criminal Justice**  
Spring of even years. 3(3-0) Interdepartmental with Criminal Justice. Administered by School of Criminal Justice. RB: (CJ 220 Or WS 201) R: Open only to juniors or seniors.  
Theories on women's victimization and criminality. Women's experiences as victims, offenders, and criminal justice employees. Laws and their effects on the rights of women in the criminal justice system.
- 453 Women and Work: Issues and Policy Analysis**  
Spring. 3(3-0) Interdepartmental with Environmental Economics and Policy; Economics. Administered by Department of Agricultural Economics. RB: (EC 201 or EC 202 or EEP 201 or concurrently) R: Not open to freshmen or sophomores.  
Current and past quantity and quality of women's participation in the labor force. Gender differentials in earnings and occupations. Employment discrimination. Laws, especially affirmative action laws. Social policy effects. International issues.
- 482 Theory and Practice of Feminist Literary Criticism**  
Spring. 3(3-0) Interdepartmental with English. Administered by Department of English. P:M: (ENG 353 or ENG 379 or WS 202) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of English or Women's Studies Program or English disciplinary minor.  
Feminist literary critical theory and its implications for reading and studying literature.
- 490 Independent Study**  
Fall, Spring. 1 to 3 credits. A student may earn a maximum of 8 credits in all enrollments for this course. RB: (WS 201 or WS 202 or WS 203) R: Open only to juniors or seniors; approval of program.  
Individual reading and research on women and gender.
- 491 Special Topics**  
Fall, Spring. 3 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. RB: (WS 201 Or WS 202 Or WS 203) R: Not open to freshmen or sophomores.  
In-depth study of special topic emphasizing women and gender.
- 492 Women's Studies Senior Seminar (W)**  
Spring. 4(4-0) P:M: (WS 201 and WS 203) and completion of Tier I writing requirement. R: Not open to freshmen or sophomores.  
Synthesis and elaboration of ideas and perspectives central to women's studies. Current areas of interest and research in feminist scholarship.
- 493 Internship**  
Fall, Spring, Summer. 2 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. P:M: (WS 201 or WS 202 or WS 203) R: Not open to freshmen or sophomores. Approval of program.  
Integration of feminist knowledge through work experience related to women's concerns. Experience in legislative, community, or educational settings.
- 890 Individual Reading**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of program.  
Faculty supervised graduate level reading in special topics.

## WRITING, RHETORIC WRA AND AMERICAN CULTURES

### Department of Writing, Rhetoric and American Cultures College of Arts and Letters

- 0102 Preparation for College Writing**  
Fall, Spring. 0(0-2) P:M: Designated score on English placement test. SA: ATL 0102 C: WRA 1004 concurrently.  
Practice in applying the principles of English grammar, syntax, and word usage to writing
- 1004 Preparation for College Writing**  
Fall, Spring. 3(3-0) P:M: Designated score on English placement test. SA: ATL 1004 C: WRA 0102 concurrently.  
Composing, revising, and editing. Active reading and pre-writing strategies. Style, mechanics, and usage. Organization and proofreading.

## Writing, Rhetoric and American Cultures—WRA

- 110 Writing: Science and Technology (I)**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 110 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on American science and technology to develop skills in narration, persuasion, analysis, and documentation.
- 115 Writing: Law and Justice in the United States**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 115 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on American law and justice to develop skills in narration, persuasion, analysis and documentation.
- 120 Writing: American Philosophy, Literature, and the Arts**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 120 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on American philosophy, literature, and the arts to develop skills in narration, persuasion, analysis, and documentation.
- 125 Writing: The American Ethnic and Racial Experience**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 125 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on the experience of American ethnic and racial groups to develop skills in narration, persuasion, analysis, and documentation.
- 130 Writing: American Radical Thought**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 130 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 135 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on American radical thought to develop skills in narration, persuasion, analysis, and documentation.
- 135 Writing: Public Life in America**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 135 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 140 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on American civic tradition and community service-learning experiences to develop skills in narration, persuasion, analysis, and documentation.
- 140 Writing: Women in America**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 140 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 145 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on women in America to develop skills in narration, persuasion, analysis, and documentation.
- 145 Writing: Men in America**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 145 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 150 or WRA 195H.  
Drafting, revising, and editing compositions derived from readings on men in America to develop skills in narration, persuasion, analysis, and documentation.
- 150 Writing: The Evolution of American Thought**  
Fall, Spring. 4(4-0) P:M: (WRA 1004) or designated score on English placement test. SA: ATL 150 Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 195H.  
Drafting, revising, and editing compositions derived from American historical, social, and cultural texts to develop skills in narration, persuasion, analysis, and documentation.
- 195H Writing: Major Topics in American Thought**  
Fall, Spring. 4(4-0) RB: Designated score on English placement test. SA: ATL 195H Not open to students with credit in MC 111 or MC 112 or LBS 133 or AL 192 or AL 192H or WRA 110 or WRA 115 or WRA 120 or WRA 125 or WRA 130 or WRA 135 or WRA 140 or WRA 145 or WRA 150.  
Drafting, revising, and editing compositions derived from readings on major topics in American thought to develop advanced skills in narration, persuasion, analysis, and documentation.
- 202 Introduction to Professional Writing**  
Fall. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 202  
Basic principles of rhetoric and composition applied to professional writing. Page design, field definition, research tools and practices, genres and conventions, and professional style.
- 210 Introduction to Web Authoring**  
Fall, Spring. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 210  
Analyzing, evaluating, and authoring Web sites. Principles of design rhetoric. Practices of Web accessibility.
- 260 Rhetorical Analysis of American Cultures for Professional Writing**  
Fall, Spring. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 260  
Rhetorical analysis of consumer, corporate, organizational, and popular cultures appropriate to professional settings.
- 290 Independent Study**  
Fall, Spring, Summer. 1 to 4 credits. R: Open only to freshmen or sophomores. Approval of department. SA: ATL 290  
Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.
- 308 Invention in Writing**  
Spring. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 308  
Theory and practice of invention in writing. Strategies and theories of generating and exploring thought in civic and professional writing contexts.
- 320 Technical Writing**  
Fall, Spring. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 320  
Principles and practices of effective writing in the workplace. Technical, scientific, and electronic-mediated writing. Includes audience and organizational needs, visual rhetoric, information design, electronic publication, ethics, technical style, usability testing, and team writing.
- 331 Writing in the Public Interest**  
Spring of odd years. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 331  
Various forms of public writing and rhetoric and their roles in democracy and public culture. Practice in modes of public and civic discourse, including deliberative strategies and a range of public literacies.
- 341 Writing Nature and the Nature of Writing**  
Fall. 3(3-0) Interdepartmental with Fisheries and Wildlife. P:M: Completion of Tier I writing requirement. SA: AL 341  
Writing- and reading-intensive course focusing on the language of scientists, poets, essayists, naturalists, environmentalists, and biologists, and on their various responses to and representations of the natural environment.
- 355 Writing for Publication Workshop**  
Fall. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 355  
Workshop for students developing writing for a variety of print and online publications.
- 360 Visual Rhetoric**  
Spring. 4(4-0) P:M: Completion of Tier I writing requirement. SA: AL 360  
Visual literacy, design, and rhetoric. Effects of visual elements in print and online documents. Intensive writing and design.
- 361 Rhetoric, Persuasion, and Argument**  
Fall of odd years. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 361  
Traditional and contemporary approaches to rhetoric, persuasion, and argument both in written and visual texts. Includes feminist, digital, political, and postmodern approaches.

- 370 Editing and Style in Professional Writing**  
Spring. 3(3-0) P:M: (WRA 202) and completion of Tier I writing requirement. SA: AL 370  
Theories, practice, and processes of editing in professional writing contexts. Rhetoric and style.
- 410 Advanced Web Authoring**  
Spring. 3(3-0) P:M: (WRA 210) and completion of Tier I writing requirement. SA: AL 410  
Developing and maintaining large-scale, interactive Web sites. Visual design, usability, audio and video integration, ongoing site management, and web accessibility.
- 415 Digital Rhetoric**  
Fall. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 415  
Rhetorical, social, political, economic, and ethical dimensions of electronic writing and publishing. Rhetorical dynamics of computer-mediated writing spaces such as the Internet, World Wide Web, e-mail, and synchronous chat.
- 417 Multimedia Writing**  
Fall. 4(4-0) P:M: (WRA 210) and completion of Tier I writing requirement. RB: Prior experience with graphical computer applications. SA: AL 417  
Visual rhetoric and design theories applied to digital short subjects. Write, direct, critique, and produce motion-based digital compositions that include multiple media.
- 420 Advanced Technical Writing**  
Spring. 3(3-0) P:M: (WRA 320) and completion of Tier I writing requirement. SA: AL 420  
Applied theory and specialized practices. User-centered design, project and document management, information and interface design. Issues in digital writing, technical editing, and writing for scientific and technical journals.
- 444 Writing In American Cultures**  
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (WRA 260) and completion of Tier I writing requirement. SA: AL 444  
Analysis of rhetorical practices in selected academic and professional disciplines, communities, and public cultures.
- 445 Writing in American Cultures: Rhetoric and Music**  
Spring of even years. 3(3-0) P:M: (IAH 201 or IAH 202 or IAH 203 or IAH 204 or IAH 206 or IAH 207 or IAH 208) and completion of Tier I writing requirement. RB: (AL 260) R: Open only to juniors and seniors. SA: AL 445  
Exploration of forms of writing about music. Links between music and oral cultures. Practice in modes of writing about and evaluating critiques of music.
- 446 American Indian Rhetorics (N)**  
Spring. 3(3-0) P:M: (WRA 260) Completion of Tier I writing requirement. RB: 3 credits in other ethnic studies coursework. SA: AL 446  
Theoretical approaches to Native rhetorics. Historical and contemporary debates about the production and reception of visual and written Native texts.
- 451 Managing Large-Scale Publication Projects**  
Spring of even years. 3(3-0) P:M: (WRA 202 or WRA 320) and completion of Tier I writing requirement. SA: AL 451  
Design theory, task management research, collaborative problem-solving approaches, and team processes involved in designing and creating large-scale publications.
- 453 Grant and Proposal Writing**  
Fall. 3(3-0) P:M: (WRA 202) and completion of Tier I writing requirement. SA: AL 453  
Researching and writing grants and proposals for corporations, nonprofit organizations, businesses, and government agencies.
- 455 Portfolio Seminar**  
Fall, Spring. 3(3-0) P:M: Completion of Tier I writing requirement. SA: AL 455  
Workshop for students preparing professional document portfolios in print and digital formats, including application materials for career, graduate study, and professional positions.
- 490 Independent Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement. R: Open only to students in the College of Arts and Letters.  
Special project, directed reading and research.
- 491 Special Topics**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement.  
Writing and reading intensive course on special topics in professional writing. Topics vary.
- 493D Internship in Professional Editing and Publishing**  
Spring of odd years. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement. RB: (WRA 370 and WRA 355) R: Approval of college. SA: AL 493D  
Supervised work in editing and publishing.
- 493E Internship in Professional Writing**  
Spring. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (WRA 202) and completion of Tier I writing requirement. RB: Web-authoring course or experience. R: Approval of college. SA: AL 493E  
Supervised work as writers and editors in a corporate or organizational setting. Required workshop component.
- 141 Introductory Human Genetics**  
Fall, Spring. 3(3-0) R: Not open to students in the Biochemistry and Molecular Biology, Plant Biology, Entomology, Medical Technology, Clinical Laboratory Science, Physiology, Zoology, Microbiology and Molecular Genetics, Biological Science-Interdepartmental, or Human Biology majors. Not open to students in the corresponding Lyman Briggs School coordinate majors or to students in the Lyman Briggs School Biology field of concentration. Not open to students with credit in ZOL 341 or ZOL 344.  
Inheritance of human traits. Impact of genetic technology on society. Ethical and legal issues. Risks and benefits of genetic technology.
- 306 Invertebrate Biology**  
Fall. 4(3-3) P:M: (BS 110 or LBS 144 or LBS 148H)  
Systematics, morphology, and natural history of invertebrate animals. Identification of live and preserved specimens. Recognition of selected groups.
- 310 Psychology and Biology of Human Sexuality**  
Spring of odd years. 3(3-0) Interdepartmental with Psychology. Administered by Department of Psychology. P:M: (PSY 101 or concurrently) and (BS 110 or concurrently or BS 111 or concurrently or LBS 144 or concurrently or LBS 145 or concurrently or LBS 148H or concurrently or LBS 149H or concurrently) Not open to students with credit in FCE 445.  
Sexual behavior from biological, psychological and neuroscience perspectives. Sexual differentiation of the body. Role of hormones in development and reproduction in humans and other animals. Human sexual orientation. Fertility and contraception. Sexual disorders. Sexually transmitted diseases.
- 313 Animal Behavior**  
Fall, Spring. 3(3-0) P:M: (BS 110 or LBS 144 or LBS 148H) R: Not open to freshmen. SA: ZOL 213  
Development, physiological mediation, adaptive significance and evolution of behavior.
- 316 General Parasitology**  
Spring. 3(3-0) P:M: (LBS 144 or LBS 145 or LBS 148H or LBS 149H or BS 110) or (BS 111 and BS 111L)  
Identification, life history, host-parasite relationships, and epidemiology of protozoan, helminth, acanthocephalan, copepod, and arthropod parasites of animals and humans.
- 316L General Parasitology Laboratory**  
Spring. 1(0-2) P:M: (ZOL 316 or concurrently) R: Not Open to freshman  
Laboratory diagnosis of protozoans, helminths, acanthocephalans, copepods, and arthropods that infect humans and animals. Animal necropsy.
- 319 Introduction to Earth System Science**  
Fall. 3(3-0) Interdepartmental with Entomology; Plant Biology; Geological Sciences; Sociology. Administered by Department of Entomology. RB: Completion of one course in biological or physical science.  
Systems approach to Earth as an integration of geochemical, geophysical, biological and social components. Global dynamics at a variety of spatio-temporal scales. Sustainability of the Earth system.

## ZOOLOGY

## ZOL

Department of Zoology  
College of Natural Science

- 101 Preview of Zoology**  
Fall, Spring. 1(1-0) R: Open only to freshmen in the Zoology major.  
Zoology as a discipline. Availability of diverse career options. Integration of human and technical skills in scientific problem solving.
- 111L Cell and Molecular Biology Laboratory**  
Fall, Spring, Summer. 2(1-3) Interdepartmental with Biological Science; Microbiology and Molecular Genetics; Plant Biology. Administered by College of Natural Science. P:M: (BS111 or concurrently) Not open to students with credit in LBS 159H.  
Principles and applications of common techniques used in cell and molecular biology.