

CLAS C&C  
Chair: Pamela Bedore  
Agenda Part I  
10.27.2020

WebEx Info:  
<https://uconnvtc.webex.com/uconnvtc/j.php?MTID=m9c3023fad87f9a559f83c96b7eddc8fa>

or  
Meeting number (access code): 120 149 7706  
Meeting password: pjRMgdMF223

#### A. Chair Approvals

2020-288 CHEM 3195 Add Special Topic: The Chemistry of Wine  
2020-289 ECON 3495 Add Special Topic: Economics of Global Health  
2020-290 MAST 3995 Add Special Topic: The Modern Atlantic: 1650-1950

#### B. New Business

2020-291 URBN Revise Major (guest: Kenneth Foote)  
2020-292 ARIS/ARTH/HIST 3710 Add Course (guest: Kathryn Moore) (G) (S)  
2020-293 AFRA/SOCI 2461 Add Course (guest: Fumilaya Shower) (G) (S)  
2020-294 SOCI 3311/W Revise Course (guest: Ralph McNeal) (G) (S)  
2020-295 WGSS 3269 Revise Course (guest: Nancy Naples)  
2020-296 WGSS 4994W Revise Course (guest: Nancy Naples) (G) (S)  
2020-297 AMST/ARTH/DMD 3570 Revise Course (G) (S)  
2020-298 ENGL 1701 Revise Course (S)  
2020-299 ENGL 3003W Revise Course (G) (S)  
2020-300 GEOG Revise Major  
2020-301 GIS Revise Major  
2020-302 HDFS 3240W Drop Course (G) (S)  
2020-303 HDFS 3311W Drop Course (G) (S)  
2020-304 HDFS 3540W Drop Course (G) (S)  
2020-305 HDFS Revise Major  
2020-306 MATH 5011 Revise Course  
2020-307 MATH 5031 Revise Course  
2020-308 MATH 5671 Revise Course  
2020-309 WGSS 2250 Revise Course  
2020-310 WGSS Revise Major  
2020-311 STAT 2255 Add Course (guest: Elizabeth Schifano) (S)  
2020-312 STAT 3255 Add Course (guest: Elizabeth Schifano)  
2020-313 STAT 5255 Add Course (guest: Elizabeth Schifano)

#### C. Discussions

1. Feedback for Environmental Literacy Group
2. Implementing the Overlap Recommendations on the CAR
3. The "Revise Minor" Process for Interdisciplinary Minors

**CATALOG COPY:**

**2020-291      URBN                      Revise Major (guest: Kenneth Foote)**

*Current Copy:*

**Urban and Community Studies**

The undergraduate major in Urban and Community Studies is an interdisciplinary program in the College of Liberal Arts and Sciences with a focus on educating citizens on the multiple dimensions of urban and community life and preparing students for careers in public and community service as well as graduate study in social work, public administration, law, planning, public health, or other related areas.

The major has three parts. First, students receive a broad education in the study of cities, suburbs, neighborhoods and communities through core courses in three fields drawn from Economics, Geography, History, Political Science, Public Policy, Sociology, and Urban and Community Studies. Second, students acquire a solid foundation in analytical techniques such as statistical analysis, survey research, geographic information systems, qualitative methods, or archival research. Finally, students take additional electives in order to broaden their academic training or to develop a deeper specialization in selected areas.

**Requirements of the major**

1. URBN 2000, and either URBN 4000 or URBN 4497W or INTD 3594.
2. Three of the following with no more than one per department (cross-listed courses count towards the non-URBN department): ECON 2439, 2456; GEOG/URBN 3200; GEOG 2000, 2400, 4210; HIST/URBN 3541; HIST 3554; HIST/AFRA 3564; HIST 3674/LLAS 3220; POLS 3842 or PP 3031; POLS/URBN 3632/W; PP 4034; SOCI 3901/URBN 3275; SOCI 3425; 3911; URBN 3000.
3. One of the following: CE/GEOG 2500; ECON 2327; GEOG 3500Q; POLS 2072Q; PP/URBN 2100; PP 3010; SOCI 3201; STAT 2215Q; URBN 2301Q, 2302.
4. Two additional courses selected from Group 2, Group 3, or the following list: ANTH 3150; ECON 2328, 2431, 3431; ECON/URBN 3439; EDLR 3547/W; ENGL 3235W; GEOG 4200W; HIST 2810, 3102, 3520; HIST 3530/AAAS 3578; HIST/AFRA/HRTS 3563; HIST/AFRA 3568; HIST/URBN 3650; HDFS 2001, 3110, 3510, 3530, 3540; INTD 3584; LLAS 3270/POLS 3662; POLS/AFRA 3642; POLS/HRTS 3212; POLS 2622, 3406, 3617, 3847; PP 3001, 3020, 4033, PP/AFRA 3033/ POLS 3633; SOCI 3459/HDFS 3240; SOCI 2301, 2907, 3429, 3501, 3521, 3601; SOCI/AFRA/HRTS 3825; SOCI 3903/URBN 3276; URBN 3981/3991 (three credits combined) or INTD 3594; URBN 3993, 3995, 3998, 4497W, 4999. INTD 3594 and URBN 4497W can be counted if not used to fulfill requirement number one above.

In order to assure a breadth of experience, students are encouraged to take courses that include content in each of the following areas: change over time, structural and spatial dimensions, diversity, power and decision-making, and political and social processes. One unique option for students is to enroll in the 15 credit Urban Semester Program, which provides major credit for two courses INTD 3584 and 3594.

Students interested in pursuing a program in Urban and Community Studies are advised to complete 1000-level courses in the social sciences, which may be prerequisites for courses in Urban and Community Studies. These include, but are not limited to, GEOG/URBN 1200;

ECON 1201; POLS 1602; PP 1001; SOCI 1001, 1251; STAT 1000Q/1100Q; and URBN 1300W. They should also plan on enrolling in URBN 2000 as soon as possible.

The writing in the major requirement can be met by taking any of the following courses: ECON 2328W; GEOG 4200W; HIST/URBN 3541W; POLS/URBN 3632W; PP 3020W; SOCI 3429W; SOCI 3459W/HDFS 3240W; SOCI 3521W, 3601W; SOCI 3901W/URBN 3275W; SOCI 3903W/URBN 3276W; SOCI 2907W; URBN 2000W or any 2000-level or above W course approved for this major. Students should be aware, however, that availability of specific W courses varies by campus. The information literacy requirements are met by successfully completing URBN 2000.

A minor in Urban and Community Studies is described in the “Minors” section.

*Proposed Copy:*

The undergraduate major in Urban and Community Studies is an interdisciplinary program in the College of Liberal Arts and Sciences with a focus on educating citizens on the multiple dimensions of urban and community life and preparing students for careers in public and community service as well as graduate study in social work, public administration, law, planning, public health, or other related areas.

The major has three parts. First, students receive a broad education in the study of cities, suburbs, neighborhoods and communities through core courses in three fields drawn from Economics, Geography, History, Political Science, Public Policy, Sociology, and Urban and Community Studies. Second, students acquire a solid foundation in analytical techniques such as statistical analysis, survey research, geographic information systems, qualitative methods, or archival research. Finally, students take additional electives in order to broaden their academic training or to develop a deeper specialization in selected areas.

Requirements of the major

1. URBN 2000/W, and either URBN 4000 or URBN 4497W or INTD 3594.
2. Three of the following with no more than one per department (cross-listed courses count towards the non-URBN department): ECON 2439, 2456; GEOG/URBN 3200/W; GEOG 2000, 2400, 4210; HIST/URBN 3541/W; HIST 3554; HIST/AFRA 3564; HIST 3674/LLAS 3220; POLS 3842 or PP 3031; POLS/URBN 3632/W; PP 4034; SOCI 3901/W/URBN 3275/W; SOCI 3425;.
3. One of the following: CE/GEOG 2500; ECON 2327; GEOG 2410, 2510, 3500Q; POLS 2072Q; PP/URBN 2100; SOCI 3201; STAT 2215Q; URBN 2301Q, 2302.
4. Two additional courses selected from Group 2, Group 3, or the following list: ANTH 3150; ECON 2328/W, 2431, 3431; ECON/URBN 3439; EDLR 3547/W; ENGL 3235W; GEOG 3000, 4200W; HIST 2810, 3102, 3520; HIST 3530/AAAS 3578; HIST/AFRA/HRTS 3563; HIST/AFRA 3568; HIST/URBN 3650; HDFS 2001, 3110, 3510, 3530, 3540; INTD 3584; NRE 3265; POLS 3662/LLAS 3270/; POLS/AFRA 3642; POLS/HRTS 3212; POLS 2622, 3406, 3617, 3847; PP 3020/W, PP/AFRA 3033/POLS 3633; SOCI 3459/W/HDFS 3240/W; SOCI 2301, 2651/W, 2705, 2709/W, 2907/W, 3429/W, 3501, 3521/W, 3601/W; SOCI/AFRA/HRTS 3825; SOCI 3903W/URBN 3276W; SOCI/WGSS 3621/W; URBN 3981/3991 (three credits combined) or INTD 3594; URBN 3993, 3995, 3998, 4497W, 4999. INTD 3594 and URBN 4497W can be counted if not used to fulfill requirement number one above.

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The writing in the major requirement can be met by taking any 2000-level or above W course approved for this major. Students should be aware, however, that availability of specific W courses varies by campus. The information literacy requirements are met by successfully completing URBN 2000.

A minor in Urban and Community Studies is described in the “Minors” section.

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**2020-292 ARIS/ARTH/HIST 3710 Add Course (guest: Kathryn Moore) (G) (S)**

*Proposed Copy:*

ARTH 3710. Islamic Art  
(also offered as ARIS 3710 and HIST 3710)

Three credits.

Prerequisites: Open to juniors or higher.

Grading Basis: Graded

A survey of the arts associated with the religion of Islam from the life of Muhammad in the seventh century through the early modern period, with an emphasis upon the Middle East, North Africa, and the Iberian Peninsula. CA 1 and CA 4-INT.

ARTH 3710W. Islamic Art  
(also offered as ARIS 3710W and HIST 3710W)

Three credits.

Prerequisites: ENGL 1007 or 1010 or 1011 or 2011. Open to juniors or higher.

Grading Basis: Graded

**2020-293 AFRA/SOCI 2461 Add Course (guest: Fumilaya Shower) (G) (S)**

*Proposed Copy:*

AFRA 2461. Race, Gender, and U.S. Healthcare  
(also offered as SOCI 2461)

Three credits

Prerequisites: None

Recommended Preparation: AFRA/SOCI 1001

Grading Basis: Graded

Race and gender at work in U.S health care. African Americans and Black immigrants as care recipients and care providers in health care institutions.

**2020-294      SOCI 3311/W      Revise Course (guest: Ralph McNeal) (G) (S)**

*Current Copy:*

SOCI 3311. Deviant Behavior

3.00 credits

Prerequisites: Open only to juniors or higher.

Grading Basis: Graded

Behaviors labeled by society as deviant, such as crime, prostitution, suicide, alcoholism, drug abuse, and mental illness.

SOCI 3311W. Deviant Behavior

3.00 credits

Prerequisites: ENGL 1007 or 1010 or 1011 or 2011.

Grading Basis: Graded

*Proposed Copy:*

SOCI 2305. Deviant Behavior

3.00 credits

Prerequisites: None

Grading Basis: Graded

How does society define a behavior as deviant? How do members of society react to those who act this way? Why do people engage in deviant behavior? What are their experiences as deviants? How do they manage the stigma? Explores these questions within a sociological framework; may include topics such as extreme body modification, drug abuse, extreme deviance, mental illness, prostitution, suicide, and unconventional beliefs.

SOCI 2305W. Deviant Behavior

3.00 credits

Prerequisites: ENGL 1007 or 1010 or 1011 or 2011.

Grading Basis: Graded

**2020-295      WGSS 3269      Revise Course (guest: Nancy Naples)**

*Current Copy:*

WGSS 3269. Women's Movements

3.00 credits

Prerequisites: Open to juniors or higher; others by instructor consent. Recommended preparation: Any 1000-level WGSS course.

Grading Basis: Graded

Examination of women's movements as related to intersections of gender, race, class, nationality, and sexuality, and to topics such as democracy, economic justice, the environment, health, and sexual freedom.

*Proposed Copy:*

WGSS 3269 Gender, Sexuality and Social Movements

Three credits.

Prerequisite: None.

Recommended preparation: Any 1000- or 2000- level WGSS course.

Examination of social movements as related to intersections of gender, race, sexuality, disability, class, nationality, ethnicity, and to topics such as capitalism, democracy, globalization, economic justice, the environment, health, sexual freedom.

**2020-296      WGSS 4994W                      Revise Course (guest: Nancy Naples) (G) (S)**

*Current Copy:*

WGSS 4994W. Senior Seminar

Prerequisites: ENGL 1007 or 1010 or 1011 or 2011; open to Women's, Gender, and Sexuality Studies majors only.

Recommended preparation: WGSS 3265 and PHIL 3218.

Grading Basis: Graded

Capstone course integrating and analyzing Women's, Gender, and Sexuality Studies theory and substance through research on a common topic and discussion of advanced texts.

*Proposed Copy:*

WGSS 4994W. Senior Seminar

Prerequisites: ENGL 1007 or 1010 or 1011 or 2011; open to Women's, Gender, and Sexuality Studies majors only.

Recommended preparation: WGSS 2250 and 3265W

Grading Basis: Graded

Examination of the application of feminist, queer, and trans theories and praxis within institutions and organizations. Discussion of the challenges and contradictions of institutionalization and professionalization of feminist, queer, and trans studies inside and outside of academia. Application of coursework and related experiences as well as exploration of professional career opportunities in WGSS.

**2020-297      AMST/ARTH/DMD 3570      Revise Course (G) (S)**

*Current Copy:*

ARTH 3570. History and Theory of Digital Art  
Also offered as: AMST 3570  
3.00 credits  
Prerequisites: Open to sophomores or higher.  
Grading Basis: Graded

Examines the aesthetics and cultural impact of digital art in various modes including performance, online, and object production

*Proposed Copy:*

ARTH 3570. History and Theory of Digital Art  
Also offered as: AMST 3570, DMD 3570  
3.00 credits  
Prerequisites: ENGL 1007 or 1010 or 1011 or 2011. Open to sophomores or higher.  
Grading Basis: Graded

Investigates forms of digital and Internet art and the forgotten histories of the technologies behind them. Forms and themes to be explored include games/gaming, surveillance art, cyberfeminism, data visualization, and crowd sourced art, among others. CA1 (A) and CA4.

**2020-298 ENGL 1701 Revise Course (S)**

*Current Copy:*

ENGL 1701. Creative Writing I  
3.00 credits  
Prerequisites: ENGL 1007 or 1010 or 1011 or 2011. Cannot be taken for credit after passing ENGL 3701, 3703, or 3713.  
Grading Basis: Graded

First course in creative expression. Covers two or more genres (fiction, poetry, creative nonfiction, and drama). Genres vary by section.

*Proposed Copy:*

ENGL 2701. Introduction to Creative Writing  
3.00 credits  
Prerequisites: ENGL 1007 or 1010 or 1011 or 2011. Cannot be taken for credit after passing ENGL 3701, 3703, or 3713.  
Grading Basis: Graded

First course in creative expression. Covers two or more genres (fiction, poetry, creative nonfiction, or drama). Genres vary by section.

**2020-299 ENGL 3003W Revise Course (G) (S)**

*Current Copy:*

ENGL 3003W. Advanced Expository Writing  
3.00 credits  
Prerequisites: ENGL 1007 or 1010 or 1011 or 2011; open to juniors or higher.  
Grading Basis: Graded

Writing on topics related, usually, to students' individual interests and needs.

*Proposed Copy:*

ENGL 3003W. Topics in Writing Studies  
3.00 credits.  
Prerequisites: ENGL 1007 or 1010 or 1011 or 2011. May be repeated with a change in topic.  
Grading Basis: Graded.

Exploration of a genre, method, concept, or subject area in writing. Course content varies by section.

**2020-300 GEOG Revise Major**

*Current Copy:*

Bachelor of Arts

The B.A. degree requires 24 credits in 2000-level or above geography courses and 12 credits of related course work in other departments. B.A. majors must complete a basic core of three courses: [GEOG 2100](#) or [2200](#), [2300](#), and one methods course (choice of [GEOG 2500](#), [2510](#), [3110](#), [3500Q](#), or [3510](#)), and 15 additional credits, including at least one "W" course in geography chosen in consultation with their departmental advisor.

Bachelor of Sciences

The B.S. degree requires 31 credits in 2000-level or above geography courses and 12 credits of closely related course work in other departments. B.S. majors must complete a basic core of three courses: [GEOG 2100](#) or [2200](#), [2300](#), and [2500](#). B.S. majors must take 21 additional credits in Geography, including at least four courses from either "methods" courses (choice of [GEOG 2505](#), [2410](#), [2510](#), [3420](#), [3500Q](#), [3505](#), [3510](#), [3512](#), [3530](#), [4230](#), [4515](#), [4516](#), [4518](#), [4519](#) or [4520](#)), or "physical" courses (choice of [GEOG 2310](#), [3310](#), [3400](#), [3410](#), [3420](#), [3505](#), [4230](#), or [4300](#)), in addition to one "W" course, in consultation with their departmental advisor.



### *Writing Requirement*

The writing in the major requirement for Geography can be met by passing any of the following geography courses: [GEOG 3320W](#), [3330W](#), [4000W](#), [4001W](#), [4110W](#), or [4200W](#).

### *Information Literacy*

Information Literacy requirement in the Geography major can be met by passing any of the following geography courses [GEOG 3320W](#), [3330W](#), [4000W](#), [4001W](#), [4110W](#), or [4200W](#).

A minor in Geographic Information Science is described in the [Minors](#) section.

### *Proposed Copy:*

#### Bachelor of Arts

The B.A. degree requires 24 credits in 2000-level or above geography courses and 12 credits of related course work in other departments. B.A. majors must complete a basic core of three courses: [GEOG 2100](#) or [2200](#), [2300](#), and one methods course (choice of [GEOG 2500](#), [2510](#), [3110](#), [3500Q](#), or [3510](#)), and 15 additional credits, including at least one “W” course in geography chosen in consultation with their departmental advisor. **No more than 6 credits of internship and/or independent study (GEOG 4090, 4091, and 4099) may be counted toward the additional credits requirements of the Geography major.**

#### Bachelor of Sciences

The B.S. degree requires 31 credits in 2000-level or above geography courses and 12 credits of closely related course work in other departments. B.S. majors must complete a basic core of three courses: [GEOG 2100](#) or [2200](#), [2300](#), and [2500](#). B.S. majors must take 21 additional credits in Geography, including at least four courses from either “methods” courses (choice of [GEOG 2505](#), [2410](#), [2510](#), [3420](#), [3500Q](#), [3505](#), [3510](#), [3512](#), [3530](#), [4230](#), [4515](#), [4516](#), [4518](#), [4519](#) or [4520](#)), or “physical” courses (choice of [GEOG 2310](#), [3310](#), [3400](#), [3410](#), [3420](#), [3505](#), [4230](#), or [4300](#)), in addition to one “W” course, in consultation with their departmental advisor. **No more than 6 credits of internship and/or independent study (GEOG 4090, 4091, and 4099) may be counted toward the additional credits requirements of the Geography major.**

### *Writing Requirement*

The writing in the major requirement for Geography can be met by passing any of the following geography courses: [GEOG 3320W](#), [3330W](#), [4000W](#), [4001W](#), [4110W](#), or [4200W](#).

### *Information Literacy*

Information Literacy requirement in the Geography major can be met by passing any of the following geography courses [GEOG 3320W](#), [3330W](#), [4000W](#), [4001W](#), [4110W](#), or [4200W](#).

A minor in Geographic Information Science is described in the [Minors](#) section.

**2020-301      GIS                      Revise Major**

*Current Copy:*

Geographic Information Science (GIScience) is the scientific discipline that conducts spatial analysis to examine economic, environmental, physical, and social phenomena. The study of spatial data structures and computational techniques to capture, represent, process, and analyze geographic information are essential to GIScience. GIScience overlaps with and draws from many research fields such as computer science, statistics, mathematics, and psychology, and contributes to progress in those fields. GIScience also supports research in many academic disciplines such as natural resource management, environmental science and engineering, geosciences, agriculture, marine sciences, sociology, history, public health, business, and anthropology.

Courses in GIScience enable students to develop capability in spatial thinking and gather in-depth knowledge in geospatial technology. Geospatial technology is a term used to describe the range of modern tools contributing to the geographic mapping and analysis of the Earth and human societies, e.g. geographic information systems (GISystems), remote sensing, the global positioning system (GPS), spatial statistics, web mapping and navigation technologies.

According to the U.S. Department of Labor, graduates with skills in geospatial technology are in extremely high demand and are one of the highest growth areas in the federal government. Students have employment opportunities in many corporate and government entities. Students with an undergraduate degree in GIScience are also prepared to move on to graduate school to pursue M.A., M.S., and Ph.D. degrees in many fields that enable them to pursue academic jobs or to secure higher ranking positions in the public and private sectors.

**Bachelor of Science or Bachelor of Arts**

Students can obtain a B.S. or B.A. degree. The GIScience B.A. degree does not require students to take biology, chemistry, physics, or calculus, and focuses on classes related to spatial analysis of social issues. The GIScience B.S. degree requires students to take biology, chemistry, physics and calculus and is intended as preparation for students pursuing a career in natural science or engineering with geospatial technology.

**Major Requirements**

The major in GIScience requires at least 31 credits of 2000-level or higher courses in the Department of Geography. GIScience majors complete basic core courses before beginning advanced courses. Recommended preparation for the major: GEOG [1302](#) and [2410](#).

Required Core Courses (at least 16 credits)

GEOG [2500](#), [2505](#), [3510](#) or [3500Q](#), [3512](#) or [3530](#), and any GEOG W course at the 2000 level or above (one or three credits).

Electives (15 credits)

In addition to the required courses above, the plan of study must include **15** credits of electives from courses below. At least nine credits of electives must be selected from the list of GIScience courses. At least six credits of electives must be selected from the list of Human Geography or Physical Geography courses. At least three credits must be 4000-level.

*GIScience Courses:*

GEOG [2510](#), [3110](#), [3500Q\\*](#), [3505](#), [3510\\*](#), [3512](#), [3530\\*](#), [4130](#), [4230](#), [4515](#), [4516](#), [4518](#), [4519](#).

\* *if it's not chosen as a core course*

*Human and Physical Geography Courses:*

[GEOG 2000](#), [2100](#), [2200](#), [2300](#), [2310](#), [2320](#), [2400](#), [3000](#), [3200](#), [3310](#), [3400](#), [3410](#), [3420](#), [4210](#), [4220](#), [4300](#).

Related Courses (12 credits)

12 credits of related coursework taken in other departments. At least three credits of related courses must be selected from the list of Remote Sensing courses. The following is a list of pre-approved related courses that may be relevant to the GIScience major. Other courses can be used with approval of a student's Geography advisor.

*Remote Sensing Courses:*

NRE [3535](#), [4535](#), [4545](#), [4575](#).

*Computer Science and Engineering Courses:*

CSE [2050](#), [2100](#), [2102](#), [2300](#), [2304](#), [2500](#), [3000](#), [3100](#), [3150](#); [3300](#), [3400](#), [3500](#); CE [2251](#), [2310E](#), [2410](#), [2710](#).

*Math and Statistics Courses:*

MATH [2110Q](#), [2130Q](#), [2143](#), [2144](#), [2210Q](#), [2410Q](#), [2420Q](#), [3160](#), [3410](#), [3435](#), [3710](#); STAT [2215Q](#), [3025Q](#), [3115Q](#), [3375Q](#), [3445](#), [3515Q](#).

*Social Science Courses:*

ANTH [2510](#), [3003](#), [3090](#), [3503](#), [3512](#), [3513](#), [3514](#), [3515](#); INTD [3584](#), [3594](#); POLS [2062](#), [2072Q](#); SOCI [3201](#), [3211Q](#); URBN [2000](#), [2100](#), [2301Q](#), [2302](#), [2400](#), [3000](#), [3993](#), [3981/3991](#), [3998](#); COMM [2110](#), [2940](#), [3000Q](#), [3300](#); WGSS [2124](#), [2255](#), [2255W](#), [3255](#), [3255W](#), [3269](#).

*Natural Science Courses:*

GSCI [2500](#), [3230](#), [4050W](#), [4210](#), [4735](#); EEB [4100](#), [4230W](#); MARN [2060](#), [3000E](#), [3014](#), [3030](#), [3812](#).

*Economics Courses:*

ECON [2201](#), [2202](#), [2211Q](#), [2212Q](#), [2301](#), [2311](#), [2312Q](#), [2326](#), [2327](#), [3103](#), [3313](#), [3421](#), [3439](#).

The Information Literacy Competency and Writing in the Major requirements can be satisfied by passing any 2000 or higher level W course in Geography.

*Proposed Copy:*

Geographic Information Science (GIScience) is the scientific discipline that conducts spatial analysis to examine economic, environmental, physical, and social phenomena. The study of spatial data structures and computational techniques to capture, represent, process, and analyze geographic information are essential to GIScience. GIScience overlaps with and draws from many research fields such as computer science, statistics, mathematics, and psychology, and contributes to progress in those fields. GIScience also supports research in many academic disciplines such as natural resource management, environmental science and engineering, geosciences, agriculture, marine sciences, sociology, history, public health, business, and anthropology.

Courses in GIScience enable students to develop capability in spatial thinking and gather in-depth knowledge in geospatial technology. Geospatial technology is a term used to describe the range of modern tools contributing to the geographic mapping and analysis of the Earth and human societies, e.g. geographic information systems (GISystems), remote sensing, the global positioning system (GPS), spatial statistics, web mapping and navigation technologies.

According to the U.S. Department of Labor, graduates with skills in geospatial technology are in extremely high demand and are one of the highest growth areas in the federal government. Students have employment opportunities in many corporate and government entities. Students with an undergraduate degree in GIScience are also prepared to move on to graduate school to pursue M.A., M.S., and Ph.D. degrees in many fields that enable them to pursue academic jobs or to secure higher ranking positions in the public and private sectors.

## Bachelor of Science or Bachelor of Arts

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### Major Requirements

The major in GIScience requires at least 31 credits of 2000-level or higher courses in the Department of Geography. GIScience majors complete basic core courses before beginning advanced courses. Recommended preparation for the major: GEOG [1302](#) and [2410](#).

### Required Core Courses (at least 16 credits)

GEOG [2500](#), [2505](#), [3510](#) or [3500Q](#), [3512](#) or [3530](#), and any GEOG W course at the 2000 level or above (one or three credits).

### Electives (15 credits)

In addition to the required courses above, the plan of study must include **15** credits of electives from courses below. At least nine credits of electives must be selected from the list of GIScience courses. At least six credits of electives must be selected from the list of Human Geography or Physical Geography courses. At least three credits must be 4000-level. **No more than 6 credits of internship and/or independent study (GEOG 4090, 4091, and 4099) may be counted toward the additional credits requirements of the Geographic Information Sciences major.**

### *GIScience Courses:*

GEOG [2510](#), [3110](#), [3500Q\\*](#), [3505](#), [3510\\*](#), [3512](#), [3530\\*](#), [4130](#), [4230](#), [4515](#), [4516](#), [4518](#), [4519](#).

*\* if it's not chosen as a core course*

### *Human and Physical Geography Courses:*

[GEOG 2000](#), [2100](#), [2200](#), [2300](#), [2310](#), [2320](#), [2400](#), [3000](#), [3200](#), [3310](#), [3400](#), [3410](#), [3420](#), [4210](#), [4220](#), [4300](#).

### Related Courses (12 credits)

12 credits of related coursework taken in other departments. At least three credits of related courses must be selected from the list of Remote Sensing courses. The following is a list of pre-approved related courses that may be relevant to the GIScience major. Other courses can be used with approval of a student's Geography advisor.

*Remote Sensing Courses:*

NRE [3535](#), [4535](#), [4545](#), [4575](#).

*Computer Science and Engineering Courses:*

CSE [2050](#), [2100](#), [2102](#), [2300](#), [2304](#), [2500](#), [3000](#), [3100](#), [3150](#); [3300](#), [3400](#), [3500](#); CE [2251](#), [2310E](#), [2410](#), [2710](#).

*Math and Statistics Courses:*

MATH [2110Q](#), [2130Q](#), [2143](#), [2144](#), [2210Q](#), [2410Q](#), [2420Q](#), [3160](#), [3410](#), [3435](#), [3710](#); STAT [2215Q](#), [3025Q](#), [3115Q](#), [3375Q](#), [3445](#), [3515Q](#).

*Social Science Courses:*

ANTH [2510](#), [3003](#), [3090](#), [3503](#), [3512](#), [3513](#), [3514](#), [3515](#); INTD [3584](#), [3594](#); POLS [2062](#), [2072Q](#); SOCI [3201](#), [3211Q](#); URBN [2000](#), [2100](#), [2301Q](#), [2302](#), [2400](#), [3000](#), [3993](#), [3981/3991](#), [3998](#); COMM [2110](#), [2940](#), [3000Q](#), [3300](#); WGSS [2124](#), [2255](#), [2255W](#), [3255](#), [3255W](#), [3269](#).

*Natural Science Courses:*

GSCI [2500](#), [3230](#), [4050W](#), [4210](#), [4735](#); EEB [4100](#), [4230W](#); MARN [2060](#), [3000E](#), [3014](#), [3030](#), [3812](#).

*Economics Courses:*

ECON [2201](#), [2202](#), [2211Q](#), [2212Q](#), [2301](#), [2311](#), [2312Q](#), [2326](#), [2327](#), [3103](#), [3313](#), [3421](#), [3439](#).

The Information Literacy Competency and Writing in the Major requirements can be satisfied by passing any 2000 or higher level W course in Geography.

**2020-302 HDFS 3240W Drop Course (G) (S)**

Dropping W section only

**2020-303 HDFS 3311W Drop Course (G) (S)**

Dropping W section only

**2020-304 HDFS 3540W Drop Course (G) (S)**

Dropping W section only

**2020-305 HDFS Revise Major**

*Current Copy:*

Students in the Human Development and Family Sciences major must complete the following requirements: [HDFS 1070](#); [PSYC 1100](#), [1103](#) (or [1101](#)); [SOVI 1001](#) or [HDFS 1060](#); and [STAT 1000Q](#) or [1100Q](#) (Note: These courses may also fulfill University General Education requirements.) Students must meet the information literacy and writing competency requirements through satisfactory completion of [HDFS 2004W](#) and one of the following: [HDFS 3311/W](#), [3540W](#), [4007W](#), [4087W](#), or [4181W](#).

The major in Human Development and Family Sciences requires 43 credits at the 2000 level or above including 31 credits in Human Development and Family Sciences and 12 credits in courses related to but outside the major department. A student completing requirements for a major must have a grade point average of 2.0 or better in the credits that count toward the major in Human Development and Family Sciences. Students are allowed much flexibility in tailoring their major to meet their particular interests and educational goals. Most students choose to focus their work in one or more of the following concentrations: Early Childhood Development and Education, Childhood and Adolescence, Family Relationships: Services and Counseling, Policy, or Adult Development and Aging.

This major must include all of the following required courses: [HDFS 2001](#), [2004W](#), [2100](#), [2200](#), and [2300](#).

This major must include the completion of one of the following courses: [HDFS 3520](#), [3530](#), [3540](#), or [3550](#).

This major must include completion of one of the following courses as a second W: [HDFS 3311W](#), [3540W](#), [4007W](#), [4087W](#), or [4181W](#).

This major also must include at least 12 credits from the following courses: [HDFS 2142E](#), [3042](#), [3083\\*](#), [3092\\*\\*](#), [3095](#), [3098](#), [3101](#), [3102](#), [3103](#), [3110](#), [3120](#), [3122](#), [3123](#), [3125](#), [3127](#), [3141](#), [3240](#), [3249](#), [3250](#), [3251](#), [3252](#), [3261](#), [3268](#), [3277](#), [3310](#), [3311/W](#), [3319](#), [3340](#), [3341](#), [3342](#), [3343](#), [3420](#), [3421](#), [3423](#), [3425](#), [3430](#), [3431](#), [3432](#), [3433](#), [3442](#), [3473](#), [3510](#), [3520](#), [3530](#), [3540/W](#), [3550](#), [4004](#), [4007W](#), and [4255](#).

These 12 credits may include elections from [HDFS 3520](#), [3530](#), [3540/W](#), [3550](#), or [4007W](#) if not applied to satisfaction of the foregoing requirements.

\* No more than six credits can be counted toward the 12 selected credits.

\*\* No more than three credits can be counted toward the 12 selected credits.

*Proposed Copy:*

Students in the Human Development and Family Sciences major must complete the following requirements: [HDFS 1070](#); [PSYC 1100](#), [1103](#) (or [1101](#)); [SOVI 1001](#) or [HDFS 1060](#); and [STAT 1000Q](#) or [1100Q](#) (Note: These courses may also fulfill University General Education requirements.) Students must meet the information literacy and writing competency requirements through satisfactory completion of [HDFS 2004W](#) and one of the following: [HDFS 3311/W](#), [3540W](#); [HDFS 4007W](#), [4087W](#), or [4181W](#).

The major in Human Development and Family Sciences requires 43 credits at the 2000 level or above including 31 credits in Human Development and Family Sciences and 12 credits in courses related to but outside the major department. A student completing requirements for a major must have a grade point average of 2.0 or better in the credits that count toward the major in Human Development and Family Sciences. Students are allowed much flexibility in tailoring their major to meet their particular interests and educational goals. Most students choose to focus their work in one or more of the following concentrations: Early Childhood Development and Education, Childhood and Adolescence, Family Relationships: Services and Counseling, Policy, or Adult Development and Aging.

This major must include all of the following required courses: [HDFS 2001](#), [2004W](#), [2100](#), [2200](#), and [2300](#).

This major must include the completion of one of the following courses: [HDFS 3520](#), [3530](#), [3540](#), or [3550](#).

This major must include completion of one of the following courses as a second W: [HDFS 3311W](#), [3540W](#), [HDFS 4007W](#), [4087W](#), or [4181W](#).

This major also must include at least 9 [12](#) credits from the following courses: [HDFS 2142E](#), [3042](#), [3083\\*](#), [3092\\*\\*](#), [3095](#), [3098](#), [3101](#), [3102](#), [3103](#), [3110](#), [3120](#), [3122](#), [3123](#), [3125](#), [3127](#), [3141](#), [3240](#), [3249](#), [3250](#), [3251](#), [3252](#), [3261](#), [3268](#), [3277](#), [3310](#), [3311AW](#), [3319](#), [3340](#), [3341](#), [3342](#), [3343](#), [3420](#), [3421](#), [3423](#), [3425](#), [3430](#), [3431](#), [3432](#), [3433](#), [3442](#), [3473](#), [3510](#), [3520](#), [3530](#), [3540W](#), [3550](#), [4004](#), [4007W](#), and [4255](#).

These 9 [12](#) credits may include elections from [HDFS 3520](#), [3530](#), [3540AW](#), [3550](#), or [4007W](#) if not applied to satisfaction of the foregoing requirements.

\* No more than six credits can be counted toward the [129](#) selected credits.

\*\* No more than three credits can be counted toward the [129](#) selected credits.

## **2020-306      MATH 5011      Revise Course**

*Current Copy:*

MATH 5031. Topics in Geometry and Topology II  
3.00 credits | May be repeated for credit.  
Prerequisites: MATH 5030.  
Grading Basis: Graded

Advanced topics in Geometry and Topology.

*Proposed Copy:*

MATH 5031. Topics in Geometry and Topology II  
3.00 credits | May be repeated for credit with a change of topic.  
Prerequisites: None  
Grading Basis: Graded



Advanced topics in Geometry and Topology.

**2020-307     MATH 5031     Revise Course**

*Current Copy:*

MATH 5031. Topics in Geometry and Topology II  
3.00 credits | May be repeated for credit.  
Prerequisites: MATH 5030.  
Grading Basis: Graded

Advanced topics in Geometry and Topology.

*Proposed Copy:*

MATH 5031. Topics in Geometry and Topology II  
3.00 credits | May be repeated for credit with a change of topic.  
Prerequisites: None  
Grading Basis: Graded

Advanced topics in Geometry and Topology.

**2020-308     MATH 5671     Revise Course**

*Current Copy:*

MATH 5671. Financial Data Mining and Big Data Analytics  
3.00 credits  
Prerequisites: None.  
Grading Basis: Graded

Data structures and algorithms; regression; classification; clustering; recommender systems;  
anomaly detection; Big Data tools; databases.

*Proposed Copy:*

MATH 5671. Financial Data Mining and Big Data Analytics  
3.00 credits  
Prerequisites: None.  
Grading Basis: Graded  
Recommended preparation: MATH 5670.

Data structures and algorithms; regression; classification; clustering; recommender systems;  
anomaly detection; Big Data tools; databases.

**2020-309      WGSS 2250      Revise Course**

*Current Copy:*

WGSS 2250. Critical Approaches to Women's, Gender, and Sexuality Studies  
3.00 credits  
Prerequisites: Recommended Preparation: Any 1000 level WGSS course.  
Grading Basis: Graded

Theories, practice, and methodologies of the Women's, Gender, and Sexualities Studies  
interdiscipline.

*Proposed Copy:*

WGSS 2250. Critical Approaches to Women's, Gender, and Sexuality Studies  
3.00 credits  
Prerequisites: None  
Grading Basis: Graded

Theories, practice, and methodologies of the Women's, Gender, and Sexualities Studies  
interdiscipline.

**2020-310      WGSS      Revise Major**

*Current Copy:*

**Core Courses**

Students are required to pass the following core courses (9 credits): [WGSS 1105](#), [2250](#), [4994W](#).

**Supporting Courses**

Students are required to pass six additional 2000-level or above WGSS courses or courses cross-listed with WGSS (18 credits). At least two of these courses (six credits) must be non-cross-listed WGSS courses. Up to six credits of [WGSS 3891](#) (Internship Program) may be counted toward the major. [WGSS 3894](#) is no longer required when students take [WGSS 3981](#).

**Related Courses**

Students must pass an additional 12 credits at the 2000-level or above in fields closely related to the major.

**General Education Requirements**

Passing core course [WGSS 4994W](#) will fulfill the information literacy competency and writing in the major requirements.

A minor in [Women's, Gender, and Sexuality Studies](#) is described in the Minors section.

*Proposed Copy:*

### **Core Courses**

Students are required to pass the following core courses (15 credits): [2250](#), [3251](#), [3265W](#), [3269](#), [4994W](#).

### **Supporting Courses**

Students are required to pass five additional WGSS courses (15 credits). Only one of these may be at the 1000 level and no more than two may be cross-listed with WGSS. [NOTE: Up to 6 credits of WGSS 3891 (Internship Program) may be counted toward the major.]

### **Related Courses**

Students must pass an additional 12 credits at the 2000-level or above in fields closely related to the major.

### **General Education Requirements**

Passing core course [WGSS 4994W](#) will fulfill the information literacy competency and writing in the major requirements.

A minor in [Women's, Gender, and Sexuality Studies](#) is described in the Minors section.

### **2020-311 STAT 2255 Add Course (guest: Elizabeth Schifano) (S)**

*Proposed Copy:*

STAT 2255. Statistical Programming

3.00 credits

Prerequisites: MATH 1131Q and MATH1132Q, or instructor consent.

Grading Basis: Graded

Introduction to statistical programming via Python including data types, control flow, object-oriented programming, and graphical user interface-driven applications such as Jupiter notebooks. The emphasis is on algorithmic thinking, efficient implementation of different data structures, control and data abstraction, file processing, and data analysis and visualization.

### **2020-312 STAT 3255 Add Course (guest: Elizabeth Schifano)**

*Proposed Copy:*

STAT 3255. Introduction to Data Science

3.00 credits

Prerequisites: STAT 2255 and STAT 3115Q, or instructor consent.

Grading Basis: Graded

Introduction to data science for effectively storing, processing, analyzing and making inferences from data. Topics include project management, data preparation, data visualization, statistical models, machine learning, distributed computing, and ethics.

**2020-313      STAT 5255              Add Course (guest: Elizabeth Schifano)**

*Proposed Copy:*

STAT 5255. Introduction to Data Science

3.00 credits

Prerequisites: Open to graduate students in Statistics, others with permission. Not open for credit to students who have passed STAT 3255.

Recommended Preparation: STAT 1000Q or 1100Q or 5005 or equivalent; STAT 2255 or equivalent; and STAT 3115Q or equivalent.

Grading Basis: Graded

Introduction to data science for effectively storing, processing, visualizing, analyzing and making inferences from data to enable decision making. Topics include project management, data preparation, data visualization, statistical modeling, machine learning, distributed computing and ethics. The focus is on the principles underlying applied data science. This proposal outlines the course using python. It may, however, be taught using R, Julia, or other popular and useful languages as well.