CLAS C&C

Agenda – Part 1

Chair: Pamela Bedore

10.29.2019

**A. Approvals by the Chair**

2019-291 CHEM 3195 Add Special Topic: Introduction to Wine Chemistry

2019-292 EEB 3895 Add Special Topic: Tropical Ecology

2019-293 GSCI 4995 Add Special Topic: The Human Epoch: Living in the Anthropocene

2019-294 PP 5397 Add Special Topic: Contract Management

2019-295 PP 5397 Add Special Topic: Performance Management and Accountability

**B. New Business**

2019-296 COGS Revise Major (guest: Bernard Grela)

2019-297 COGS Revise Minor (guest: Bernard Grela)

2019-298 ENGL 1007 Add Course (guests: Lisa Blansett) (G) (S)

2019-299 ENGL 1008 Add Course (guests: Lisa Blansett) (G) (S)

2019-300 STAT 5415 Revise Course (guest: Dipak Dey)

2019-301 STAT 5405 Add Course (guest: Dipak Dey)

2019-302 STAT/BIST 5125 Add Course (guest: Dipak Dey)

2019-303 STAT/BIST 5915 Add Course (guest: Dipak Dey)

2019-304 STAT/BIST 6615 Add Course (guest: Dipak Dey)

2019-305 GEOG 1302E Revise Course (guest: Andy Jolly-Ballantine) (G) (S)

2019-306 GEOG 2300E Revise Course (guest: Andy Jolly-Ballantine) (G) (S)

2019-307 GEOG 3410E       Revise Course (guest: Andy Jolly-Ballantine) (G) (S)

2019-308 SCFS Revise Minor (guest: Andy Jolly-Ballantine)

2019-309 HIST 1200            Add Course (G) (S)

2019-310 HIST 2222E         Add Course (G) (S)

2019-311 HIST/AFRA/LLAS 2621     Revise Course (G) (S)

2019-312 ENGL 2640/W Add Course (G) (S)

2019-313 ENGL 3640/W Add Course (G) (S)

2019-314 GEOG 4001W Revise Course (G) (S)

2019-315 JOUR 2065          Add Course (S)

2019-316 MARN 1893        Add Course (S)

2019-317 MARN 2002        Drop Course (S)

2019-318 MARN 2893        Add Course (S)

2019-319 MARN 3893        Revise Course (S)

2019-320 MARN 4210Q     Add Course (G) (S)

2019-321 MARN 4893        Revise Course

2019-322 MARN 5210        Add Course

2019-323 PSYC 3104E Revise Course (G) (S)

2019-324 ECON 4326 Add Course

2019-346 MCB 5900           Add Course

2019-355 PP 5329               Add Course

2019-356 PP 5335               Add Course

2019-357 PP 5336               Add Course

2019-359 PP 5389               Add Course

2019-327 HDFS 5320 Drop Course

2019-328 HDFS 5751 Drop Course

2019-329 HDFS 5752 Drop Course

2019-330 HDFS 5754 Drop Course

2019-331 HDFS 5756 Drop Course

2019-332 HDFS 5757 Drop Course

2019-333 HDFS 5759 Drop Course

2019-334 HDFS 5761 Drop Course

2019-335 HDFS 5763 Drop Course

2019-336 HDFS 5764 Drop Course

2019-337 HDFS 5782 Drop Course

2019-338 HDFS 5790 Drop Course

2019-339 HDFS 5792 Drop Course

2019-340 HDFS 6720 Drop Course

2019-341 HDFS 6730 Drop Course

2019-342 HDFS 6792 Drop Course

2019-343 HDFS 6895 Drop Course

2019-325 GIS Revise Major

2019-326 GSCI                      Revise Major

2019-344 JOUR 3030          Revise Course

2019-345 JOUR Revise Major

2019-347 MCB 5910           Revise Course

2019-348 MCB 6000 Revise Course

2019-349 PP 4031               Revise Course

2019-350 PP 4032               Revise Course

2019-351 PP 4034               Revise Course

2019-352 PP 4346               Revise Course

2019-353 PP 4365               Revise Course

2019-354 PP 5324               Revise Course

2019-358 PP 5361               Revise Course

**C. Courses for Inclusion on Hyphenated-Course Omnibus Motion**

**(*Please review ahead of the meeting – we will discuss only as needed*)**

2019-360 ASLN 1101 Revise Course (G) (S)

2019-361 ASLN 1102 Revise Course (G) (S)

2019-362 ASLN 1103 Revise Course (S)

2019-363 ASLN 1104 Revise Course (S)

2019-364 BIOL 1108 Revise Course (G) (S)

2019-365 JAPN 1101 Revise Course (G) (S)

2019-366 JAPN 1102 Revise Course (G) (S)

2019-367 JAPN 1103 Revise Course (S)

2019-368 JAPN 1104 Revise Course (S)

2019-369 MGRK 1101 Revise Course (G) (S)

2019-370 MGRK 1102 Revise Course (G) (S)

2019-371 MGRK 1103 Revise Course (G) (S)

2019-372 MGRK 1104 Revise Course (G) (S)

2019-373 PHYS 1201Q Revise Course (G) (S)

2019-374 PHYS 1202Q Revise Course (G) (S)

2019-375 PHYS 1230 Revise Course (S)

2019-376 PHYS 1401Q Revise Course (G) (S)

2019-377 PHYS 1402Q Revise Course (G) (S)

2019-378 PHYS 1501Q Revise Course (G) (S)

2019-379 PHYS 1502Q Revise Course (G) (S)

2019-380 PHYS 1601Q Revise Course (G) (S)

2019-381 PHYS 1602Q Revise Course (G) (S)

2019-382 PHYS 3201 Revise Course

2019-383 PHYS 3202 Revise Course

2019-384 PHYS 3401 Revise Course

2019-385 PHYS 3402 Revise Course

2019-386 PNB 2264 Revise Course (S)

2019-387 PNB 2265 Revise Course (S)

**D. Announcements and Discussion**

1. UNIV 4800: Senior-Year Experience is being offered again
2. There are changes to the CAR system! Most are updates based on feedback from all the C&Cs around the university (especially ours ☺). Under Course Features, there’s a new category called Course Components. For a typical three-credit class that may have a mix of lecture, discussion, research, etc., please choose “lecture” since that’s the way it’s generally scheduled.
3. There are plans for a UPAR (Undergraduate Program Action Request) system that mimics GPAR (Graduate Program Action Request). When this is developed, additions, deletions, and revisions to majors and minors may be accomplished through a webform used across the university.
4. The registrar is looking for new scheduling software. To provide feedback, please go to <https://registrar.uconn.edu/2019/10/18/scheduling-software-feedback/>.
5. The Senate Scholastic Standards subcommittee’s research and experiential renumbering proposal was accepted at the 10.7 Senate meeting. The registrar has create a webform for additions, deletions, and revisions to the following courses:

|  |  |  |
| --- | --- | --- |
| **Course type** | **Number** | **Definition** |
| Field study/Field experience | xx90 | Credit awarded for applied academic work done in the field and supervised by a faculty member as a component of a student's academic program. |
| Internship | xx91 | Credit awarded for professional work done in the field, supervised by an external expert and coordinated by a faculty member, which may or may not be part of a student's academic program. |
| Practicum | xx92 | Credit awarded for work done where the primary purpose is to apply information from coursework in a practical setting and aid a student's professional development (may be used for licensure programs). |
| Undergraduate Research | 1x96 | Introduction to ResearchIntroduction to the practice of research for beginning students, which may be individualized or taught to a group. |
| Undergraduate Research | 2x96 | Directed Research 1Introductory research conducted under the supervision of the instructor, which may be individualized or conducted by a group. |
| Undergraduate Research | 3x96 | Directed Research 2Individualized research conducted under the supervision of the instructor.  |
| Undergraduate Research | 4x96 | Independent Research Student-initiated research activities supervised by the instructor. |
| Thesis | xx97 | Credits earned by students for engaging in the process and production of a thesis. |
| Independent Study | xx99 | Credits earned by pursuing individual academic interests under the supervision of a faculty instructor. |

\*\*Note: S/U versions of these courses may be offered by substituting an 8 for a 9 in the third digit (e.g., Independent Study xx89 [S/U] instead of xx99 [graded]).

Please review your department’s courses and fill out the appropriate webforms to update your course numbering and add new courses as desired.

1. The Senate C&C is pursuing the option of changing the bylaws so that S/U-graded, 1000- and 2000-level factotum courses not included in the Research and Experiential Learning Courses webform (Special Topics, Variable Topics, International Study) need not be reviewed by Senate C&C and Senate. Currently all S/U-graded, 1000- and 2000-level courses are reviewed by Senate C&C and Senate. Further, the Senate C&C would like to no longer review s/u graduate-level courses.

**General Education Revision Updates**

**Next Meeting of CLAS C&C: Tues, 11.12.2019, 3:30-5:30PM, Oak 408**

**CATALOG COPY:**

**2019-296 COGS Revise Major (guest: Bernard Grela)**

*Current Copy:*

Cognitive Science is the study of how intelligent beings (including people, animals, and machines) perceive, act, know, and think. It explores the process and content of thought as observed in individuals, distributed through communities, manifested in the structure and meaning of language, modeled by algorithms, and contemplated by philosophies of mind. Its models are formulated using concepts drawn from many disciplines, including psychology, linguistics, logic, communication sciences/disorders, computer science, anthropology, and philosophy, and they are tested using evidence from psychological experiments, clinical studies, field studies, computer simulations, and neurophysiological observation.

This program is intended to prepare students for graduate training in cognitive science and related disciplines or to work in the information sciences. The distribution requirements ensure that students will acquire a truly interdisciplinary education. The research and formal systems requirements provide basic knowledge concerning the experimental and theoretical foundations of cognitive science. Finally, majors are encouraged to learn about theory building and testing in a variety of natural and physical sciences. One way to achieve this is to fulfill the requirements of the Bachelor of Science degree.

### General Requirements

The requirements for the cognitive science major include 40 2000-level or above credits, no more than 21 of which may be taken in any one department. There are several 1000-level courses that are required preparation for the 2000-level and above requirements. These courses should be taken during the first four semesters and may fulfill general education requirements.

A maximum of six 2000-level or above transfer credits may count toward the major with approval of advisor. Students must earn a grade of C- (1.7) or higher in each course that is counted toward the major.

#### Core Courses (16 credits)

[COGS 2201](https://catalog.uconn.edu/COGS/#2201), [3584](https://catalog.uconn.edu/COGS/#3584) and four of the following courses: [ANTH 3250](https://catalog.uconn.edu/ANTH/#3250); [CSE 4705](https://catalog.uconn.edu/CSE/#4705); [LING 2010Q](https://catalog.uconn.edu/LING/#2010Q); [PHIL 3250/W](https://catalog.uconn.edu/PHIL/#3250); [PSYC 2501](https://catalog.uconn.edu/PSYC/#2501); [SLHS 4245/W](https://catalog.uconn.edu/SLHS/#4245)

#### Research Courses (6 credits)

**Statistics** (one of the following for at least 3 credits): [PSYC 2100Q](https://catalog.uconn.edu/PSYC/#2100Q) or [2100WQ](https://catalog.uconn.edu/PSYC/#2100WQ); [STAT 2215Q](https://catalog.uconn.edu/STAT/#2215Q), [3025Q](https://catalog.uconn.edu/STAT/#3025Q) (Calculus level).

**Research Methods** (one of the following for at least 3 credits): [ANTH 3004](https://catalog.uconn.edu/ANTH/#3004) (if elected for 3 credits); [LING 3110](https://catalog.uconn.edu/LING/#3110); [PSYC 3250/W](https://catalog.uconn.edu/PSYC/#3250), [3251/W](https://catalog.uconn.edu/PSYC/#3251), [3253](https://catalog.uconn.edu/PSYC/#3253), [3450W](https://catalog.uconn.edu/PSYC/#3450W), [3550W](https://catalog.uconn.edu/PSYC/#3550W), [3551W](https://catalog.uconn.edu/PSYC/#3551W), [3552](https://catalog.uconn.edu/PSYC/#3552)

#### Formal Systems Courses (3 credits)

* [CSE 2300W](https://catalog.uconn.edu/CSE/#2300W), [2500](https://catalog.uconn.edu/CSE/#2500), [3500](https://catalog.uconn.edu/CSE/#3500)a, [3502](https://catalog.uconn.edu/CSE/#3502)a, [3802](https://catalog.uconn.edu/CSE/#3802);
* [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q)a, [3410Q](https://catalog.uconn.edu/LING/#3410Q)a, [3511Q](https://catalog.uconn.edu/LING/#3511Q)a;
* [MATH 2210Q](https://catalog.uconn.edu/MATH/#2210Q), [2410Q](https://catalog.uconn.edu/MATH/#2410Q), [3160](https://catalog.uconn.edu/MATH/#3160), [3210](https://catalog.uconn.edu/MATH/#3210), [3230](https://catalog.uconn.edu/MATH/#3230);
* [PHIL 2211Q](https://catalog.uconn.edu/PHIL/#2211Q), [3214](https://catalog.uconn.edu/PHIL/#3214)

#### Advanced Courses (12 credits)

Must include courses from at least three departments. Can include core courses not needed to satisfy the core course requirement.

* [ANTH 3200](https://catalog.uconn.edu/ANTH/#3200), [3405](https://catalog.uconn.edu/ANTH/#3405); [CSE 3500](https://catalog.uconn.edu/CSE/#3500)a, [3502](https://catalog.uconn.edu/CSE/#3502)a, [4095](https://catalog.uconn.edu/CSE/#4095);
* [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q)a, [3410Q](https://catalog.uconn.edu/LING/#3410Q)a, [3511Q](https://catalog.uconn.edu/LING/#3511Q)a; [3610W](https://catalog.uconn.edu/LING/#3610W);
* [PHIL 2208/W](https://catalog.uconn.edu/PHIL/#2208), [2210/W](https://catalog.uconn.edu/PHIL/#2210), [2212/W](https://catalog.uconn.edu/PHIL/#2212), [3241](https://catalog.uconn.edu/PHIL/#3241), [3247/W](https://catalog.uconn.edu/PHIL/#3247), [3249W](https://catalog.uconn.edu/PHIL/#3249W), [3256/W](https://catalog.uconn.edu/PHIL/#3256);
* [PNB 3251](https://catalog.uconn.edu/PNB/#3251);
* [PSYC 2200](https://catalog.uconn.edu/PSYC/#2200), [2208](https://catalog.uconn.edu/PSYC/#2208), [2209](https://catalog.uconn.edu/PSYC/#2209), [2400](https://catalog.uconn.edu/PSYC/#2400), [2500](https://catalog.uconn.edu/PSYC/#2500), [3100/W](https://catalog.uconn.edu/PSYC/#3100), [3440](https://catalog.uconn.edu/PSYC/#3440), [3470/W](https://catalog.uconn.edu/PSYC/#3470)b, [3500](https://catalog.uconn.edu/PSYC/#3500), [3501](https://catalog.uconn.edu/PSYC/#3501), [3502](https://catalog.uconn.edu/PSYC/#3502);
* [SLHS 2203](https://catalog.uconn.edu/SLHS/#2203), [2204](https://catalog.uconn.edu/SLHS/#2204), [4123](https://catalog.uconn.edu/SLHS/#4123), [4254/W](https://catalog.uconn.edu/SLHS/#4254)

#### Electives (3-6 credits)

One or two additional courses (from above lists or other related courses from any department), chosen with the approval of the advisors.

a The following courses may be used to fulfill both the Formal Systems and Advanced Courses requirements: [CSE 3500](https://catalog.uconn.edu/CSE/#3500), [3502](https://catalog.uconn.edu/CSE/#3502); [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q), [3410Q](https://catalog.uconn.edu/LING/#3410Q), [3511Q](https://catalog.uconn.edu/LING/#3511Q). In this event, two electives are required.

b [PSYC 3470](https://catalog.uconn.edu/PSYC/#3470) is a variable topics course and may only be counted toward the major with advisors’ approval.

### Competency and Writing Requirements

The exit requirements for information literacy will be met by satisfaction of the Research Methods Requirement. The exit requirements for writing in the major are met by taking any W course on the Plan of Study. Students in the program will have an advisor and an associate advisor, each in different departments contributing to the cognitive science program. Students will consult with both of them to plan a course of study.

*Proposed Copy:*

Cognitive Science is the study of how intelligent beings (including people, animals, and machines) perceive, act, know, and think. It explores the process and content of thought as observed in individuals, distributed through communities, manifested in the structure and meaning of language, modeled by algorithms, and contemplated by philosophies of mind. Its models are formulated using concepts drawn from many disciplines, including psychology, linguistics, logic, communication sciences/disorders, computer science, anthropology, and philosophy, and they are tested using evidence from psychological experiments, clinical studies, field studies, computer simulations, and neurophysiological observation.

This program is intended to prepare students for graduate training in cognitive science and related disciplines or to work in the information sciences. The distribution requirements ensure that students will acquire a truly interdisciplinary education. The research and formal systems requirements provide basic knowledge concerning the experimental and theoretical foundations of cognitive science. Finally, majors are encouraged to learn about theory building and testing in a variety of natural and physical sciences. One way to achieve this is to fulfill the requirements of the Bachelor of Science degree.

### General Requirements

The requirements for the cognitive science major include 40 2000-level or above credits, no more than 21 of which may be taken in any one department. There are several 1000-level courses that are required preparation for the 2000-level and above requirements. These courses should be taken during the first four semesters and may fulfill general education requirements.

A maximum of six 2000-level or above transfer credits may count toward the major with approval of advisor. Students must earn a grade of C- (1.7) or higher in each course that is counted toward the major.

#### Core Courses (16 credits)

[COGS 2201](https://catalog.uconn.edu/COGS/#2201), [3584](https://catalog.uconn.edu/COGS/#3584) and four of the following courses: [ANTH 3250](https://catalog.uconn.edu/ANTH/#3250); [CSE 4705](https://catalog.uconn.edu/CSE/#4705); [LING 2010Q](https://catalog.uconn.edu/LING/#2010Q); [PHIL 3250/W](https://catalog.uconn.edu/PHIL/#3250); [PSYC 2501](https://catalog.uconn.edu/PSYC/#2501); [SLHS 4245/W](https://catalog.uconn.edu/SLHS/#4245)

#### Research Courses (6 credits)

**Statistics** (one of the following for at least 3 credits): [PSYC 2100Q](https://catalog.uconn.edu/PSYC/#2100Q) or [2100WQ](https://catalog.uconn.edu/PSYC/#2100WQ); [STAT 2215Q](https://catalog.uconn.edu/STAT/#2215Q), [3025Q](https://catalog.uconn.edu/STAT/#3025Q) (Calculus level).

**Research Methods** (one of the following for at least 3 credits): [ANTH 3004](https://catalog.uconn.edu/ANTH/#3004) (if elected for 3 credits); [LING 3110](https://catalog.uconn.edu/LING/#3110); [PSYC 3250/W](https://catalog.uconn.edu/PSYC/#3250), [3251/W](https://catalog.uconn.edu/PSYC/#3251), [3253](https://catalog.uconn.edu/PSYC/#3253), [3450W](https://catalog.uconn.edu/PSYC/#3450W), [3550W](https://catalog.uconn.edu/PSYC/#3550W), [3551W](https://catalog.uconn.edu/PSYC/#3551W), [3552](https://catalog.uconn.edu/PSYC/#3552)

#### Formal Systems Courses (3 credits)

* [CSE 2300W](https://catalog.uconn.edu/CSE/#2300W), [2500](https://catalog.uconn.edu/CSE/#2500), [3500](https://catalog.uconn.edu/CSE/#3500)a, [3502](https://catalog.uconn.edu/CSE/#3502)a, [3802](https://catalog.uconn.edu/CSE/#3802);
* LING 3000Q a, [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q)a, [3410Q](https://catalog.uconn.edu/LING/#3410Q)a, [3511Q](https://catalog.uconn.edu/LING/#3511Q)a;
* [MATH 2210Q](https://catalog.uconn.edu/MATH/#2210Q), [2410Q](https://catalog.uconn.edu/MATH/#2410Q), [3160](https://catalog.uconn.edu/MATH/#3160), [3210](https://catalog.uconn.edu/MATH/#3210), [3230](https://catalog.uconn.edu/MATH/#3230);
* [PHIL 2211Q](https://catalog.uconn.edu/PHIL/#2211Q), [3214](https://catalog.uconn.edu/PHIL/#3214)

#### Advanced Courses (12 credits)

Must include courses from at least three departments. Can include core courses not needed to satisfy the core course requirement.

* [ANTH 3200](https://catalog.uconn.edu/ANTH/#3200), [3405](https://catalog.uconn.edu/ANTH/#3405); [CSE 3500](https://catalog.uconn.edu/CSE/#3500)a, [3502](https://catalog.uconn.edu/CSE/#3502)a, [4095](https://catalog.uconn.edu/CSE/#4095);
* LING 3000Q a, [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q)a, [3410Q](https://catalog.uconn.edu/LING/#3410Q)a, [3511Q](https://catalog.uconn.edu/LING/#3511Q)a; [3610W](https://catalog.uconn.edu/LING/#3610W);
* [PHIL 2208/W](https://catalog.uconn.edu/PHIL/#2208), [2210/W](https://catalog.uconn.edu/PHIL/#2210), [2212/W](https://catalog.uconn.edu/PHIL/#2212), [3241](https://catalog.uconn.edu/PHIL/#3241), [3247/W](https://catalog.uconn.edu/PHIL/#3247), [3249W](https://catalog.uconn.edu/PHIL/#3249W), [3256/W](https://catalog.uconn.edu/PHIL/#3256);
* [PNB 3251](https://catalog.uconn.edu/PNB/#3251);
* [PSYC 2200](https://catalog.uconn.edu/PSYC/#2200), [2208](https://catalog.uconn.edu/PSYC/#2208), [2209](https://catalog.uconn.edu/PSYC/#2209), [2400](https://catalog.uconn.edu/PSYC/#2400), [2500](https://catalog.uconn.edu/PSYC/#2500), [3100/W](https://catalog.uconn.edu/PSYC/#3100), 3270, [3440](https://catalog.uconn.edu/PSYC/#3440), [3470/W](https://catalog.uconn.edu/PSYC/#3470)b, [3500](https://catalog.uconn.edu/PSYC/#3500), [3501](https://catalog.uconn.edu/PSYC/#3501), [3502](https://catalog.uconn.edu/PSYC/#3502);
* [SLHS 2203](https://catalog.uconn.edu/SLHS/#2203), [2204](https://catalog.uconn.edu/SLHS/#2204), [4123](https://catalog.uconn.edu/SLHS/#4123), [4254/W](https://catalog.uconn.edu/SLHS/#4254), 4376

#### Electives (3-6 credits)

One or two additional courses (from above lists or other related courses from any department), chosen with the approval of the advisors.

a The following courses may be used to fulfill both the Formal Systems and Advanced Courses requirements: [CSE 3500](https://catalog.uconn.edu/CSE/#3500), [3502](https://catalog.uconn.edu/CSE/#3502); [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q), [3410Q](https://catalog.uconn.edu/LING/#3410Q), [3511Q](https://catalog.uconn.edu/LING/#3511Q). In this event, two electives are required.

b [PSYC 3470](https://catalog.uconn.edu/PSYC/#3470) is a variable topics course and may only be counted toward the major with advisors’ approval.

### Competency and Writing Requirements

The exit requirements for information literacy will be met by satisfaction of the Research Methods Requirement. The exit requirements for writing in the major are met by taking any W course on the Plan of Study. Students in the program will have an advisor and an associate advisor, each in different departments contributing to the cognitive science program. Students will consult with both of them to plan a course of study.

**2019-297 COGS Revise Minor (guest: Bernard Grela)**

*Current Copy:*

Cognitive Science is the interdisciplinary study of mind and intelligence, bringing together course content from Psychology; Linguistics; Artificial Intelligence; Anthropology; Speech, Language and Hearing Sciences; Neuroscience; and Philosophy. While available with any undergraduate major, the minor in Cognitive Science is especially appropriate for majors in the fields listed above.

### Requirements

To earn a minor in Cognitive Science, students must complete 15 credits at the 2000-level or above. [COGS 2201](https://catalog.uconn.edu/COGS/#2201) is required, plus four additional courses coming from at least three areas (A through F). No more than two courses may be counted from any one department.

1. Cognition: [ANTH 3250](https://catalog.uconn.edu/ANTH/#3250); [CSE 4705](https://catalog.uconn.edu/CSE/#4705); [PHIL 3247/W](https://catalog.uconn.edu/PHIL/#3247), [3250/W](https://catalog.uconn.edu/PHIL/#3250); [PSYC 2500](https://catalog.uconn.edu/PSYC/#2500), [2501](https://catalog.uconn.edu/PSYC/#2501)
2. Language: [LING 3610W](https://catalog.uconn.edu/LING/#3610W); [LING 2010Q](https://catalog.uconn.edu/LING/#2010Q); [PHIL 3241](https://catalog.uconn.edu/PHIL/#3241); [PSYC 3500](https://catalog.uconn.edu/PSYC/#3500)
3. Perception: [PHIL 3256/W](https://catalog.uconn.edu/PHIL/#3256); [PSYC 3501](https://catalog.uconn.edu/PSYC/#3501), [3502](https://catalog.uconn.edu/PSYC/#3502)
4. Development: [PSYC 2400](https://catalog.uconn.edu/PSYC/#2400); [PSYC 3470/W](https://catalog.uconn.edu/PSYC/#3470) or [SLHS 2204](https://catalog.uconn.edu/SLHS/#2204); [SLHS 4254/W](https://catalog.uconn.edu/SLHS/#4254)
5. Neuroscience: [PHIL 3249W](https://catalog.uconn.edu/PHIL/#3249W); [PNB 3251](https://catalog.uconn.edu/PNB/#3251); [PSYC 2200](https://catalog.uconn.edu/PSYC/#2200); [SLHS 4245W](https://catalog.uconn.edu/SLHS/#4245W)
6. Formal Systems: [CSE 2500](https://catalog.uconn.edu/CSE/#2500), [3502](https://catalog.uconn.edu/CSE/#3502); [LING 3310Q](https://catalog.uconn.edu/LING/#3310Q), [3410Q](https://catalog.uconn.edu/LING/#3410Q), [3511Q](https://catalog.uconn.edu/LING/#3511Q); [PHIL 2211Q](https://catalog.uconn.edu/PHIL/#2211Q), [3214](https://catalog.uconn.edu/PHIL/#3214)

The minor is offered by the College of Liberal Arts and Sciences. For the Cognitive Science minor, contact Prof. William Snyder, Director of Undergraduate Studies in Cognitive Science, Oak Hall, Room 350.

*Proposed Copy:*

Cognitive Science is the interdisciplinary study of mind and intelligence, bringing together course content from Psychology; Linguistics; Artificial Intelligence; Anthropology; Speech, Language and Hearing Sciences; Neuroscience; and Philosophy. While available with any undergraduate major, the minor in Cognitive Science is especially appropriate for majors in the fields listed above.

### Requirements

To earn a minor in Cognitive Science, students must complete 15 credits at the 2000-level or above. [COGS 2201](https://catalog.uconn.edu/COGS/#2201) is required, plus four additional courses coming from at least three areas (A through F). No more than two courses may be counted from any one department.

1. Cognition: [ANTH 3250](https://catalog.uconn.edu/ANTH/#3250); [CSE 4705](https://catalog.uconn.edu/CSE/#4705); [PHIL 3247/W](https://catalog.uconn.edu/PHIL/#3247), [3250/W](https://catalog.uconn.edu/PHIL/#3250); [PSYC 2500](https://catalog.uconn.edu/PSYC/#2500), [2501](https://catalog.uconn.edu/PSYC/#2501)
2. Language: [LING 3610W](https://catalog.uconn.edu/LING/#3610W), [2010Q](https://catalog.uconn.edu/LING/#2010Q); [PHIL 3241](https://catalog.uconn.edu/PHIL/#3241); [PSYC 3500](https://catalog.uconn.edu/PSYC/#3500)
3. Perception: [PHIL 3256/W](https://catalog.uconn.edu/PHIL/#3256); [PSYC 3501](https://catalog.uconn.edu/PSYC/#3501), [3502](https://catalog.uconn.edu/PSYC/#3502)
4. Development: [PSYC 2400](https://catalog.uconn.edu/PSYC/#2400), [3470/W](https://catalog.uconn.edu/PSYC/#3470) or [SLHS 2204](https://catalog.uconn.edu/SLHS/#2204), [4254/W](https://catalog.uconn.edu/SLHS/#4254), 4376
5. Neuroscience: [PHIL 3249W](https://catalog.uconn.edu/PHIL/#3249W); [PNB 3251](https://catalog.uconn.edu/PNB/#3251); [PSYC 2200](https://catalog.uconn.edu/PSYC/#2200), 3270; [SLHS 4245W](https://catalog.uconn.edu/SLHS/#4245W)
6. Formal Systems: [CSE 2500](https://catalog.uconn.edu/CSE/#2500), [3502](https://catalog.uconn.edu/CSE/#3502); [LING 3000Q, 3310Q](https://catalog.uconn.edu/LING/#3310Q), [3410Q](https://catalog.uconn.edu/LING/#3410Q), [3511Q](https://catalog.uconn.edu/LING/#3511Q); [PHIL 2211Q](https://catalog.uconn.edu/PHIL/#2211Q), [3214](https://catalog.uconn.edu/PHIL/#3214)

The minor is offered by the College of Liberal Arts and Sciences. For the Cognitive Science minor, contact Prof. William Snyder, Director of Undergraduate Studies in Cognitive Science, Oak Hall, Room 350.

**2019-298 ENGL 1007 Add Course (guests: Lisa Blansett) (G) (S)**

*Proposed Copy:*

ENGL 1007. Seminar in Writing and Multimodal Composition

Three credits. Prerequisite: Students placed in ENGL 1004 must pass that class before enrolling in ENGL 1007 and 1008. Corequisite: ENGL 1008.

Introduction to college composition through multiple technologies. The development of creatively intellectual inquiries through sustained engagement with texts, ideas, and problems. Emphasis on transfer of writing and rhetorical skills to academic and daily life.

**2019-299 ENGL 1008 Add Course (guests: Lisa Blansett) (G) (S)**

*Proposed Copy:*

ENGL 1008. Studio for the Seminar in Writing & Multimodal Composition.

One credit. Corequisite: ENGL 1007. Grading basis: S/U

Introduction to multiple forms of literacy, including rhetorical, digital, and information literacies necessary for twenty-first century contexts. Students begin to design a digital portfolio to showcase artifacts they create and skills-based micro-credentials they earn in coursework.

**2019-300 STAT 5415 Revise Course (guest: Dipak Dey)**

*Current Copy:*

STAT 5415. Advanced Statistical Methods

3.00 credits

Prerequisites: Open to graduate students in Statistics, others with permission (RG814).

Grading Basis: Graded

Discrete and continuous random variables, exponential family, joint and conditional distributions, order statistics, statistical inference: point estimation, confidence interval estimation, and hypothesis testing.

*Proposed Copy:*

STAT 5415. Mathematical Statistics for Data Science

3.00 credits

Prerequisites: Open to graduate students in Statistics, others with permission (RG814).

Grading Basis: Graded

Discrete and continuous random variables, exponential family, joint and conditional distributions, order statistics, statistical inference: point estimation, confidence interval estimation, and hypothesis testing.

**2019-301 STAT 5405 Add Course (guest: Dipak Dey)**

*Proposed Copy:*

STAT 5405. Applied Statistics for Data Science

3.0 credits. Prerequisites: Introductory course in mathematical statistics and regression analysis or instructor consent.

Statistics essential for data science incorporating descriptive statistics; integrative numerical description and visualization of data; graphical methods for determining and comparing distributions of data; data-driven statistical inference of one-sample, two-sample, and k-sample problems; linear regression; and non-linear regression.

**2019-302 STAT/BIST 5125 Add Course (guest: Dipak Dey)**

*Proposed Copy:*

STAT/BIST 5125. Computing for Statistical Data Science

3.0 credits. Prerequisites: Introductory course in mathematical and applied statistics; introductory course in programming. Instructor consent required.

Principles and practice of statistical computing in data science: data structure, data programming, data visualization, simulation, resampling methods, distributed computing, and project management tools.

**2019-303 STAT/BIST 5915 Add Course (guest: Dipak Dey)**

*Proposed Copy:*

STAT/BIST 5915. Statistical Data Science in Action.

3.0 credits. Prerequisites: STAT 5405 or instructor consent.

Real-world statistical data science practice: problem formulation; integration of statistics, computing, and domain knowledge; collaboration; communication; reproducibility; project management.

**2019-304 STAT/BIST 6615 Add Course (guest: Dipak Dey)**

*Proposed Copy:*

STAT/BIST 6615. Statistical Learning and Optimization.

3.0 Credits. Prerequisites: Intermediate courses in mathematical and applied statistics. Instructor consent required.

Computationally intensive statistical learning methods with optimization techniques: classification, discriminant analysis, (generalized) additive models, boosting, regression trees, regularized regression, principal components, support vector machines, and (deep) neural networks.

**2019-305 GEOG 1302E Revise Course (guest: Andy Jolly-Ballantine) (G) (S)**

*Current Copy:*

GEOG 1302. GIS Modeling of Environmental Change

4.00 credits Prerequisites: None.

Grading Basis: Graded

An introduction to environmental processes and patterns, especially assessing change in environmental systems using spatial analysis techniques. Students will map field sites using Global Positioning System technology and aerial photographs, collect field data on various environmental systems, and build and test a Geographical Information System-based environmental model. CA 3-LAB.

*Proposed Copy:*

GEOG 1302E. GIS Modeling of Environmental Change

4.00 credits Prerequisites: None.

Grading Basis: Graded

An introduction to environmental processes and patterns, especially assessing change in environmental systems using spatial analysis techniques. Students will map field sites using Global Positioning System technology and aerial photographs, collect field data on various environmental systems, and build and test a Geographical Information System-based environmental model. CA 3-LAB.

**2019-306 GEOG 2300E Revise Course (guest: Andy Jolly-Ballantine) (G) (S)**

*Current Copy:*

GEOG 2300. Introduction to Physical Geography

3.00 credits Prerequisites: Cannot be taken for credits after passing GEOG 4300.

Grading Basis: Graded

The physical elements and processes of the lithosphere, hydrosphere and atmosphere are considered in relation to one another and to the distribution of the world's environments. Emphasis on the basic concepts and theories of physical geography. CA 3.

*Proposed Copy:*

GEOG 2300E. Introduction to Physical Geography

3.00 credits Prerequisites: Cannot be taken for credits after passing GEOG 4300.

Grading Basis: Graded

The physical elements and processes of the lithosphere, hydrosphere and atmosphere are considered in relation to one another and to the distribution of the world's environments. Emphasis on the basic concepts and theories of physical geography. CA 3.

**2019-307 GEOG 3410E       Revise Course (guest: Andy Jolly-Ballantine) (G) (S)**

*Current Copy:*

GEOG 3410. Human Modifications of Natural Environments

3.00 credits Prerequisites: None.

Grading Basis: Graded

A geographical and historical interpretation of the changing relationships between culture and environment. Emphasis on the modifications of the biophysical environment by preagricultural, agricultural and urban societies in Europe, southwest Asia, and North America.

*Proposed Copy:*

GEOG 3410E. Human Modifications of Natural Environments

3.00 credits Prerequisites: None.

Grading Basis: Graded

A geographical and historical interpretation of the changing relationships between culture and environment. Emphasis on the modifications of the natural environment by preagricultural, agricultural and urban societies.

**2019-308 SCFS Revise Minor (guest: Andy Jolly-Ballantine)**

*Current Copy:*

The Sustainable Community Food Systems (SCFS) minor provides an in-depth exploration of food systems through performing an intensive summer work experience and fall internship (six credits), and reflecting on the practice of working in a sustainable community food system. Farm experience through working at the Spring Valley Student Farm (or another approved farm) is required and residence at the farm for at least a summer is encouraged.

**Requirements**

The minor consists of 18 credits as follows:

* An elective course in social dimensions of food resources that complements the student’s plan of study, as approved by the students’ SCFS adviser. Options include: [ARE 3260](https://catalog.uconn.edu/ARE/#3260), [4438](https://catalog.uconn.edu/ARE/#4438); [NRE 3265](https://catalog.uconn.edu/NRE/#3265); [NUSC 3230](https://catalog.uconn.edu/NUSC/#3230); [SOCI 2705](https://catalog.uconn.edu/SOCI/#2705).
* A capstone writing class: [GEOG 4000W](https://catalog.uconn.edu/GEOG/#4000W).
* A capstone seminar in Sustainable Community Food Systems: [GEOG 4098](https://catalog.uconn.edu/GEOG/#4098).
* Six credits of an internship class in a department appropriate to the SCFS minor.
* One elective class from the College of Agriculture, Health and Natural Resources, related to sustainable food production that complements the student’s plan of study, as approved by the students’ SCFS adviser. Options include: [SPSS 2100](https://catalog.uconn.edu/SPSS/#2100), [2500](https://catalog.uconn.edu/SPSS/#2500), and [3610](https://catalog.uconn.edu/SPSS/#3610).

This minor is offered by the Environmental Studies program (EVST), and is offered jointly by the College of Liberal Arts and Sciences and the College of Agriculture, Health and Natural Resources.

*Proposed Copy:*

The Sustainable Community Food Systems (SCFS) minor provides an in-depth exploration of food systems through performing an intensive summer work experience and fall internship (six credits), and reflecting on the practice of working in a sustainable community food system. Farm experience through working at the Spring Valley Student Farm (or another approved farm) is required and residence at the farm for at least a summer is encouraged.

**Requirements**

The minor consists of 18 credits as follows:

* An elective course in social dimensions of food resources that complements the student’s plan of study, as approved by the students’ SCFS adviser. Options include: [ARE 3260](https://catalog.uconn.edu/ARE/#3260), [4438](https://catalog.uconn.edu/ARE/#4438); [NRE 3265](https://catalog.uconn.edu/NRE/#3265); [NUSC 3230](https://catalog.uconn.edu/NUSC/#3230); [SOCI 2705](https://catalog.uconn.edu/SOCI/#2705).
* A capstone writing class: [GEOG 4000W](https://catalog.uconn.edu/GEOG/#4000W) or EVST 4000W.
* A capstone seminar in Sustainable Community Food Systems: [GEOG 4095](https://catalog.uconn.edu/GEOG/#4098).
* Six credits of an internship class in a department appropriate to the SCFS minor.
* One elective class from the College of Agriculture, Health and Natural Resources, related to sustainable food production that complements the student’s plan of study, as approved by the students’ SCFS adviser. Options include: [SPSS 2100](https://catalog.uconn.edu/SPSS/#2100), [2500](https://catalog.uconn.edu/SPSS/#2500), and [3610](https://catalog.uconn.edu/SPSS/#3610).

This minor is offered by the Environmental Studies program (EVST), and is offered jointly by the College of Liberal Arts and Sciences and the College of Agriculture, Health and Natural Resources.

**2019-309 HIST 1200            Add Course (G) (S)**

*Proposed Copy:*

HIST 1200: World History, 1200-1800

Three credits.

A global approach to human history, 1200CE to 1800CE, emphasizing political, intellectual, economic, and social interactions among peoples with diverse cultures, ideas, and values. CA1 (C). CA4-INT.

**2019-310 HIST 2222E         Add Course (G) (S)**

*Proposed Copy:*

HIST 2222E. Global Environmental History

Three credits.

Transformations of the global environment since 1450: the effects of human practices and ideas, especially on energy, landscapes, and commodities. CA 1 (C). CA 4-INT

**2019-311 HIST/AFRA/LLAS 2621     Revise Course (G) (S)**

*Current Copy:*

HIST 3621. Cuba in Local and Global Perspective

Three credits. Recommended preparation: HIST 3607, 3608, 3609, 3620 and 3635.

Major themes in Cuban politics and culture. Local and global perspective. Key topics include race, gender, class, cultural movements and practices, slavery, political economy and movements, nationalism.

*Proposed Copy:*

HIST 2621. Cuba in Local and Global Perspective

(Also offered as LLAS 2621 and AFRA 2621.)

Three credits. Recommended preparation: HIST 3607, 3608, 3609, 3620 and 3635.

Major themes in Cuban politics and culture. Local and global perspective. Key topics include race, gender, class, cultural movements and practices, slavery, political economy and movements, nationalism.

**2019-312 ENGL 2640/W Add Course (G) (S)**

*Proposed Copy:*

ENGL 2640. Studies in Film

Three credits. Prerequisite: ENGL 1010 or 1011 or 2011. May be repeated for credit with a change of topic to a maximum of six credits.

Exploration of focused topics in film. Course content varies by section.

ENGL 2640W. Studies in Film Three credits. Prerequisite: ENGL 1010 or 1011 or 2011. May be repeated for credit with a change of topic to a maximum of six credits.

**2019-313 ENGL 3640/W Add Course (G) (S)**

*Proposed Copy:*

ENGL 3640. British Film

3.00 credits. Prerequisites: ENGL 1010 or 1011 or 2011.

British film from 1895 to the present.

ENGL 3640W. British Film

3.00 credits. Prerequisite: ENGL 1010 or 1011 or 2011.

**2019-314 GEOG 4001W Revise Course (G) (S)**

*Current Copy:*

GEOG 4001W. Writing in Geography

1.00 credit.

Prerequisites: One Geography course at the 2000 level or higher; ENGL 1010 or 1011 or 2011; open to junior or higher Geography majors. Corequisite: One Geography course at the 3000 level or higher.

Grading Basis: Graded

Techniques for, and practice in, research, writing, citation, and data presentation in geography.

*Proposed Copy:*

GEOG 4001W. Writing in Geography

1.00 credit.

Prerequisites: One Geography course at the 2000 level or higher; ENGL 1010 or 1011 or 2011; open to junior or higher Geography and GIS majors. Corequisite: One Geography course at the 3000 level or higher.

Grading Basis: Graded

Techniques for, and practice in, research, writing, citation, and data presentation in geography.

**2019-315 JOUR 2065          Add Course (S)**

*Proposed Copy:*

JOUR 2065. Mobile Storytelling

Three credits. Prerequisite or Corequisite: JOUR 1002. Open to sophomores or higher.

Entry-level photojournalism course that develops aesthetic and technical skills for storytelling using mobile equipment such as smart phones.

**2019-316 MARN 1893        Add Course (S)**

*Proposed Copy:*

MARN 1893. International Study

1.00 - 6.00 credits | May be repeated for credit. Prerequisites: Consent of department head Grading Basis: Graded

Special topics taken in an international study program. Credits and hours by arrangement up to a maximum of six credits. Consultation with Marine Sciences program coordinator recommended prior to the student's departure. With a change of content, may be repeated for credit.

**2019-317 MARN 2002        Drop Course (S)**

**2019-318 MARN 2893        Add Course (S)**

*Proposed Copy:*

MARN 2893. International Study

1.00 - 6.00 credits | May be repeated for credit. Prerequisites: Consent of department head Grading Basis: Graded

Special topics taken in an international study program. Credits and hours by arrangement up to a maximum of six credits. Consultation with Marine Sciences program coordinator recommended prior to the student's departure. With a change of content, may be repeated for credit.

**2019-319 MARN 3893        Revise Course (S)**

*Current Copy:*

MARN 3893. Foreign Study

1.00 - 6.00 credits | May be repeated for credit.

Prerequisites: None.

Grading Basis: Graded

Consent of Department Head required, preferably prior to the student's departure. With a change in content, may be repeated for credit.

*Proposed Copy:*

MARN 3893. International Study

1.00 - 6.00 credits | May be repeated for credit.

Prerequisites: Consent of department head

Grading Basis: Graded

Special topics taken in an international study program. Credits and hours by arrangement up to a maximum of six credits. Consultation with Marine Sciences program coordinator recommended prior to the student's departure. With a change of content, may be repeated for credit.

**2019-321 MARN 4893        Revise Course**

*Current Copy:*

MARN 4893. Foreign Study

1.00 - 6.00 credits | May be repeated for credit.

Prerequisites: None.

Grading Basis: Graded

Credits and hours by arrangement up to a maximum of six credits. Prerequisite: Consent of department head required, preferably prior to the student's departure. With a change of content, may be repeated for credit.

*Proposed Copy:*

MARN 4893. International Study

1.00 - 6.00 credits | May be repeated for credit.

Prerequisites: Consent of department head

Grading Basis: Graded

Special topics taken in an international study program. Credits and hours by arrangement up to a maximum of six credits. Consultation with Marine Sciences program coordinator recommended prior to the student's departure. With a change of content, may be repeated for credit.

**2019-320 MARN 4210Q     Add Course (G) (S)**

*Proposed Copy:*

MARN 4210Q. Experimental Design in Marine Ecology

Three credits. Prerequisites: MARN 3001 or MARN 3014/EEB 3230 or instructor consent

Introduction to experimental design and data analysis for marine biology and ecology. Analysis and visualization of experimental data using the statistical software package R. Topics include analysis of variance, replication and pseudoreplication, factorial designs, and significance testing.

**2019-322 MARN 5210        Add Course**

*Proposed Copy:*

MARN 5210. Experimental Design in Marine Ecology

Three credits. Not open for credit to students who have passed MARN 4210Q.

Introduction to experimental design and data analysis for marine biology and ecology. Analysis and visualization of experimental data using the statistical software package R. Topics include analysis of variance, replication and pseudoreplication, factorial designs, and significance testing.

**2019-323 PSYC 3104E Revise Course (G) (S)**

*Current Copy:*

PSYC 3104. Environmental Psychology

3.00 credits

Prerequisites: PSYC 2700.

Grading Basis: Graded

Reciprocal relationships between built and natural environments and human behavior.

*Proposed Copy:*

PSYC 3104E. Environmental Psychology

3.00 credits

Prerequisites: PSYC 1100; PSYC 1101 or PSYC 1103

Grading Basis: Graded

Reciprocal relationships between built and natural environments and human behavior.

**2019-324 ECON 4326 Add Course**

*Proposed Copy:*

ECON 4326. Operations Research for Benchmarking.

3.00 credits

Prerequisites: ECON 2301; ECON 2201 or 2211Q. Recommended preparation: ECON 2326.

Resource allocation decisions in complex organizations formulated as standard mathematical optimization problems that can be solved using Excel. Focus on the interface between Neoclassical Production Economics and Operations Research for performance evaluation by benchmarking.

**2019-346 MCB 5900           Add Course**

*Proposed Copy:*

MCB 5900 Professional Writing and Communication Skills

1 credit. Open only to MCB and MATH Professional Science Master's (PSM) students and MCB Professional Master's (PM) students.

Professional communication skills focused on jobs in industry. Hands-on practice in writing resumes and interviewing.

**2019-355 PP 5329               Add Course**

*Proposed Copy:*

PP 5329 Nonprofit Advocacy, Government Relations, and Law

Three credits.

Legal landscape of nonprofit organizations; theory and application of effective tactics and approaches to advocacy and government relations by nonprofit organizations.

**2019-356 PP 5335               Add Course**

*Proposed Copy:*

PP 5335 Nonprofit Marketing and Stakeholder Communications

Three credits.

Approaches for creating effective nonprofit stakeholder communications and marketing plans to promote the mission and service of the organizations.

**2019-357 PP 5336               Add Course**

*Proposed Copy:*

PP 5336 Fund Development and Nonprofit Sustainability

Three credits.

Core elements of developing a fund development (revenue) strategy for nonprofit organizations, including common revenue models, philanthropic models, and earned-income methods for funding organizational sustainability.

**2019-359 PP 5389               Add Course**

*Proposed Copy:*

PP 5389: Capstone on the Future of Survey Research

Three credits.

Restrictions: Permission of department.

Grading Basis: Graded

Capstone research on problems and opportunities in the survey research industry for students nearing completion of the Master of Arts in Survey Research program.

**2019-327 HDFS 5320 Drop Course**

**2019-328 HDFS 5751 Drop Course**

**2019-329 HDFS 5752 Drop Course**

**2019-330 HDFS 5754 Drop Course**

**2019-331 HDFS 5756 Drop Course**

**2019-332 HDFS 5757 Drop Course**

**2019-333 HDFS 5759 Drop Course**

**2019-334 HDFS 5761 Drop Course**

**2019-335 HDFS 5763 Drop Course**

**2019-336 HDFS 5764 Drop Course**

**2019-337 HDFS 5782 Drop Course**

**2019-338 HDFS 5790 Drop Course**

**2019-339 HDFS 5792 Drop Course**

**2019-340 HDFS 6720 Drop Course**

**2019-341 HDFS 6730 Drop Course**

**2019-342 HDFS 6792 Drop Course**

**2019-343 HDFS 6895 Drop Course**

**2019-325 GIS Revise Major**

*Current Copy:*

**Geographic Information Science**

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](https://catalog.uconn.edu/geog/#1302) and [2410](https://catalog.uconn.edu/geog/#2410).

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

GEOG [2500](https://catalog.uconn.edu/geog/#2500), [2505](https://catalog.uconn.edu/geog/#2505), [3510](https://catalog.uconn.edu/geog/#3510) or [3500Q](https://catalog.uconn.edu/geog/#3500Q), or [3530](https://catalog.uconn.edu/geog/#3530), and any GEOG W course at the 2000 level or above (1 or 3 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](https://catalog.uconn.edu/geog/#2510), [3110](https://catalog.uconn.edu/geog/#3110), [3500Q](https://catalog.uconn.edu/geog/#3500)\*, [3505](https://catalog.uconn.edu/geog/#3505), [3510](https://catalog.uconn.edu/geog/#3510)\*, [3512](https://catalog.uconn.edu/geog/#3512), [4130](https://catalog.uconn.edu/geog/#4130), [4230](https://catalog.uconn.edu/geog/#4230), [4515](https://catalog.uconn.edu/geog/#4515), [4516](https://catalog.uconn.edu/geog/#4516), [4518](https://catalog.uconn.edu/geog/#4518).

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

**Human and Physical Geography Courses:**

[GEOG 2000](https://catalog.uconn.edu/geog/#2000), [2100](https://catalog.uconn.edu/geog/#2100), [2200](https://catalog.uconn.edu/geog/#2200), [2300](https://catalog.uconn.edu/geog/#2300), [2310](https://catalog.uconn.edu/geog/#2310), [2320](https://catalog.uconn.edu/geog/#2320), [2400](https://catalog.uconn.edu/geog/#2400), [3000](https://catalog.uconn.edu/geog/#3000), [3200](https://catalog.uconn.edu/geog/#3200), [3310](https://catalog.uconn.edu/geog/#3310), [3400](https://catalog.uconn.edu/geog/#3400), [3410](https://catalog.uconn.edu/geog/#3410), [3420](https://catalog.uconn.edu/geog/#3420), [4210](https://catalog.uconn.edu/geog/#4210), [4220](https://catalog.uconn.edu/geog/#4220), [4300](https://catalog.uconn.edu/geog/#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](https://catalog.uconn.edu/nre/#3535), [4535](https://catalog.uconn.edu/nre/#4535), [4545](https://catalog.uconn.edu/nre/#4545), [4575](https://catalog.uconn.edu/nre/#4575).

**Computer Science and Engineering Courses:**

CSE [2050](https://catalog.uconn.edu/cse/#2050), [2100](https://catalog.uconn.edu/cse/#2100), [2102](https://catalog.uconn.edu/cse/#2102), [2300](https://catalog.uconn.edu/cse/#2300), [2304](https://catalog.uconn.edu/cse/#2304), [2500](https://catalog.uconn.edu/cse/#2500), [3000](https://catalog.uconn.edu/cse/#3000), [3100](https://catalog.uconn.edu/cse/#3100), [3150](https://catalog.uconn.edu/cse/#3150); [3300](https://catalog.uconn.edu/cse/#3300), [3400](https://catalog.uconn.edu/cse/#3400), [3500](https://catalog.uconn.edu/cse/#3500); CE [2251](https://catalog.uconn.edu/ce/#2251), [2310](https://catalog.uconn.edu/ce/#2310), [2410](https://catalog.uconn.edu/ce/#2410), [2710](https://catalog.uconn.edu/ce/#2710).

**Math and Statistics Courses:**

MATH [2110Q](https://catalog.uconn.edu/math/#2110), [2130Q](https://catalog.uconn.edu/math/#2030), [2143](https://catalog.uconn.edu/math/#2143), [2144](https://catalog.uconn.edu/math/#2144), [2210Q](https://catalog.uconn.edu/math/#2210), [2410Q](https://catalog.uconn.edu/math/#2410), [2420Q](https://catalog.uconn.edu/math/#2420), [3160](https://catalog.uconn.edu/math/#3160), [3410](https://catalog.uconn.edu/math/#3410), [3435](https://catalog.uconn.edu/math/#3435), [3710](https://catalog.uconn.edu/math/#3710); STAT [2215Q](https://catalog.uconn.edu/stat/#2215), [3025Q](https://catalog.uconn.edu/stat/#3025), [3115Q](https://catalog.uconn.edu/stat/#3115), [3375Q](https://catalog.uconn.edu/stat/#3375), [3445](https://catalog.uconn.edu/stat/#3445), [3515](https://catalog.uconn.edu/stat/#3515)Q.

**Social Science Courses:**

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

**Natural Science Courses:**

GSCI [2500](https://catalog.uconn.edu/gsci/#2500), [3230](https://catalog.uconn.edu/gsci/#3230), [4050W](https://catalog.uconn.edu/gsci/#4050), [4210](https://catalog.uconn.edu/gsci/#4210), [4735](https://catalog.uconn.edu/gsci/#4735); EEB [4100](https://catalog.uconn.edu/eeb/#4100), [4230W](https://catalog.uconn.edu/eeb/#4230W); MARN [2060](https://catalog.uconn.edu/marn/#2060), [3000](https://catalog.uconn.edu/marn/#3000), [3014](https://catalog.uconn.edu/marn/#3014), [3030](https://catalog.uconn.edu/marn/#3030), [3812](https://catalog.uconn.edu/marn/#3812).

**Economics Courses:**

ECON [2201](https://catalog.uconn.edu/econ/#2201), [2202](https://catalog.uconn.edu/econ/#2202),  [2211Q](https://catalog.uconn.edu/econ/#2211Q), [2212Q](https://catalog.uconn.edu/econ/#2212Q), [2301](https://catalog.uconn.edu/econ/#2301), [2311](https://catalog.uconn.edu/econ/#2311), [2312](https://catalog.uconn.edu/econ/#2312), [2326](https://catalog.uconn.edu/econ/#2326), [2327](https://catalog.uconn.edu/econ/#2327), [3103](https://catalog.uconn.edu/econ/#3103), [3313](https://catalog.uconn.edu/econ/#3313), [3421](https://catalog.uconn.edu/econ/#3421), [3439](https://catalog.uconn.edu/econ/#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**

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](https://catalog.uconn.edu/geog/#1302) and [2410](https://catalog.uconn.edu/geog/#2410).

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

GEOG [2500](https://catalog.uconn.edu/geog/#2500), [2505](https://catalog.uconn.edu/geog/#2505), [3510](https://catalog.uconn.edu/geog/#3510) or [3500Q](https://catalog.uconn.edu/geog/#3500Q), 3512 or [3530](https://catalog.uconn.edu/geog/#3530), and any GEOG W course at the 2000 level or above (1 or 3 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](https://catalog.uconn.edu/geog/#2510), [3110](https://catalog.uconn.edu/geog/#3110), [3500Q](https://catalog.uconn.edu/geog/#3500)\*, [3505](https://catalog.uconn.edu/geog/#3505), [3510](https://catalog.uconn.edu/geog/#3510)\*, [3512](https://catalog.uconn.edu/geog/#3512)\*, 3530\*, [4130](https://catalog.uconn.edu/geog/#4130), [4230](https://catalog.uconn.edu/geog/#4230), [4515](https://catalog.uconn.edu/geog/#4515), [4516](https://catalog.uconn.edu/geog/#4516), [4518](https://catalog.uconn.edu/geog/#4518), 4519.

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

**Human and Physical Geography Courses:**

[GEOG 2000](https://catalog.uconn.edu/geog/#2000), [2100](https://catalog.uconn.edu/geog/#2100), [2200](https://catalog.uconn.edu/geog/#2200), [2300](https://catalog.uconn.edu/geog/#2300), [2310](https://catalog.uconn.edu/geog/#2310), [2320](https://catalog.uconn.edu/geog/#2320), [2400](https://catalog.uconn.edu/geog/#2400), [3000](https://catalog.uconn.edu/geog/#3000), [3200](https://catalog.uconn.edu/geog/#3200), [3310](https://catalog.uconn.edu/geog/#3310), [3400](https://catalog.uconn.edu/geog/#3400), [3410](https://catalog.uconn.edu/geog/#3410), [3420](https://catalog.uconn.edu/geog/#3420), [4210](https://catalog.uconn.edu/geog/#4210), [4220](https://catalog.uconn.edu/geog/#4220), [4300](https://catalog.uconn.edu/geog/#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](https://catalog.uconn.edu/nre/#3535), [4535](https://catalog.uconn.edu/nre/#4535), [4545](https://catalog.uconn.edu/nre/#4545), [4575](https://catalog.uconn.edu/nre/#4575).

**Computer Science and Engineering Courses:**

CSE [2050](https://catalog.uconn.edu/cse/#2050), [2100](https://catalog.uconn.edu/cse/#2100), [2102](https://catalog.uconn.edu/cse/#2102), [2300](https://catalog.uconn.edu/cse/#2300), [2304](https://catalog.uconn.edu/cse/#2304), [2500](https://catalog.uconn.edu/cse/#2500), [3000](https://catalog.uconn.edu/cse/#3000), [3100](https://catalog.uconn.edu/cse/#3100), [3150](https://catalog.uconn.edu/cse/#3150); [3300](https://catalog.uconn.edu/cse/#3300), [3400](https://catalog.uconn.edu/cse/#3400), [3500](https://catalog.uconn.edu/cse/#3500); CE [2251](https://catalog.uconn.edu/ce/#2251), [2310](https://catalog.uconn.edu/ce/#2310), [2410](https://catalog.uconn.edu/ce/#2410), [2710](https://catalog.uconn.edu/ce/#2710).

**Math and Statistics Courses:**

MATH [2110Q](https://catalog.uconn.edu/math/#2110), [2130Q](https://catalog.uconn.edu/math/#2030), [2143](https://catalog.uconn.edu/math/#2143), [2144](https://catalog.uconn.edu/math/#2144), [2210Q](https://catalog.uconn.edu/math/#2210), [2410Q](https://catalog.uconn.edu/math/#2410), [2420Q](https://catalog.uconn.edu/math/#2420), [3160](https://catalog.uconn.edu/math/#3160), [3410](https://catalog.uconn.edu/math/#3410), [3435](https://catalog.uconn.edu/math/#3435), [3710](https://catalog.uconn.edu/math/#3710); STAT [2215Q](https://catalog.uconn.edu/stat/#2215), [3025Q](https://catalog.uconn.edu/stat/#3025), [3115Q](https://catalog.uconn.edu/stat/#3115), [3375Q](https://catalog.uconn.edu/stat/#3375), [3445](https://catalog.uconn.edu/stat/#3445), [3515](https://catalog.uconn.edu/stat/#3515)Q.

**Social Science Courses:**

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

**Natural Science Courses:**

GSCI [2500](https://catalog.uconn.edu/gsci/#2500), [3230](https://catalog.uconn.edu/gsci/#3230), [4050W](https://catalog.uconn.edu/gsci/#4050), [4210](https://catalog.uconn.edu/gsci/#4210), [4735](https://catalog.uconn.edu/gsci/#4735); EEB [4100](https://catalog.uconn.edu/eeb/#4100), [4230W](https://catalog.uconn.edu/eeb/#4230W); MARN [2060](https://catalog.uconn.edu/marn/#2060), [3000](https://catalog.uconn.edu/marn/#3000), [3014](https://catalog.uconn.edu/marn/#3014), [3030](https://catalog.uconn.edu/marn/#3030), [3812](https://catalog.uconn.edu/marn/#3812).

**Economics Courses:**

ECON [2201](https://catalog.uconn.edu/econ/#2201), [2202](https://catalog.uconn.edu/econ/#2202),  [2211Q](https://catalog.uconn.edu/econ/#2211Q), [2212Q](https://catalog.uconn.edu/econ/#2212Q), [2301](https://catalog.uconn.edu/econ/#2301), [2311](https://catalog.uconn.edu/econ/#2311), [2312](https://catalog.uconn.edu/econ/#2312), [2326](https://catalog.uconn.edu/econ/#2326), [2327](https://catalog.uconn.edu/econ/#2327), [3103](https://catalog.uconn.edu/econ/#3103), [3313](https://catalog.uconn.edu/econ/#3313), [3421](https://catalog.uconn.edu/econ/#3421), [3439](https://catalog.uconn.edu/econ/#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.

**2019-326 GSCI                      Revise Major**

*Current Copy:*

# Geoscience

[Course descriptions](https://catalog.uconn.edu/gsci/)

The major in Geoscience is designed for students interested in the science of the Earth, with special emphasis on environmental change over geologic time scales, natural hazards, rocks and fossils, planetary science, paleoclimate variability, surface processes, mountain building, and the link between Earth’s physicochemical conditions and the evolution of life. Students may obtain a Bachelor of Arts degree or a Bachelor of Science degree.

### Requirements

Geoscience majors (B.A. and B.S.) must successfully complete the following course of study:

1. [GSCI 2500](https://catalog.uconn.edu/GSCI/#2500)
2. All of the following core courses: [GSCI 3010](https://catalog.uconn.edu/GSCI/#3010), [3020](https://catalog.uconn.edu/GSCI/#3020), [3030](https://catalog.uconn.edu/GSCI/#3030), [3040](https://catalog.uconn.edu/GSCI/#3040).
3. One of the following capstone courses: [GSCI 4050W](https://catalog.uconn.edu/GSCI/#4050W), [4996W](https://catalog.uconn.edu/GSCI/#4996W)
4. At least 11 additional credits of 3000-level and 4000-level GSCI courses. No more than 3 credits can be from [GSCI 4989](https://catalog.uconn.edu/GSCI/#4989), [4990](https://catalog.uconn.edu/GSCI/#4990), [4991](https://catalog.uconn.edu/GSCI/#4991), [4999](https://catalog.uconn.edu/GSCI/#4999).
5. At least 12 credits at the 2000-level or above in related areas. The suitability of courses will be determined by the student’s advisor. Courses cross-listed with geoscience courses may not be used to satisfy this requirement.

Geoscience majors satisfy the writing in the major and information literacy competency requirements by passing [GSCI 4050W](https://catalog.uconn.edu/GSCI/#4050W) or [GSCI 4996W](https://catalog.uconn.edu/GSCI/#4996W).

A minor in Geoscience is described in the [Minors](https://catalog.uconn.edu/minors/geoscience/) section.

*Proposed Copy:*

**Geoscience**

Majors in Geoscience focus on the materials, processes, and histories of Earth as a planetary system, with a special emphasis on environmental change at geologic time scales. Interest areas include global change, climate adaptation, water resources, planetary science, tectonics, paleontology and evolution, natural hazards, mineral and energy resources, surface processes, geophysics, and paleoclimatology.

Students may obtain a Bachelor of Science degree or a Bachelor of Arts degree. The Bachelor of Science degree has three tracks.

**Bachelor of Science**

At least 30 credits of Geoscience courses at the 2000 level and above and at least 12 credits of related courses at the 2000 level and above must be successfully completed for the Bachelor of Science in Geoscience in addition to the College B.S. requirements. Courses cross-listed with Geoscience courses cannot be used to fulfill the related courses requirement.

The requirements include GSCI 2500, one of the following capstone courses: GSCI 4050W or 4996W, and a concentration listed below. No more than 3 credits in the major can be from GSCI 4989, 4990, 4991, 4999.

**Earth Track**

I. All of the following core courses: GSCI 3010, 3030, 3040.
II. At least 14 additional credits of Geoscience courses at the 3000 level and above.

**Environment Track**
I. All of the following core courses: GSCI 3020, 3030, 3040.
II. Three courses chosen from GSCI 3710, 4130, 4150, 4210, 4230, 4430, 4710, 4720, 4735.

III. At least 5 additional credits of Geoscience courses at the 3000 level and above.

**Atmosphere Track**
I. The following core course: GSCI 3010.
II. One of the following core courses: GSCI 3020, 3030, 3040.

III. Three courses chosen from 2800, 4150, 4230, 4430, 4810, 4850.

IV. At least 9 additional credits of Geoscience courses at the 3000 level and above.

**Bachelor of Arts**

At least 24 credits of Geoscience courses at the 2000 level and above and at least 12 credits of related courses at the 2000 level and above must be successfully completed for the Bachelor of Arts in Geoscience in addition to the College B.A. requirements. Courses cross-listed with Geoscience courses cannot be used to fulfill the related courses requirement.

The requirements include the following.

I. GSCI 2500.
II. Two of the following core courses: 3010, 3020, 3030, 3040.
III. One of the following capstone courses: 4050W or 4996W.
IV. At least 12 additional credits of Geoscience courses at the 2000 level and above. No more than 3 credits can be at the 2000 level. No more than 3 credits can be from GSCI 4989, 4990, 4991, 4999.

Geoscience majors satisfy the writing in the major and information literacy competency requirements by passing GSCI 4050W or GSCI 4996W.

A minor in Geoscience is described in the Minors section.

**2019-344 JOUR 3030          Revise Course**

*Current Copy:*

JOUR 3030. Copy Editing

Three credits. Prerequisites: JOUR 2000.

Editing for grammar, style and content, headline writing, introduction to basic news design concepts.

*Proposed Copy:*

JOUR 3030. The News Editor's Craft

Three credits. Prerequisite: JOUR 2000W. Recommended Preparation: JOUR 2001W.

News value; information verification; editing for grammar, spelling, punctuation and style; content editing; headline writing; search engine optimization; handling visuals; building data visualizations; basic layout and design for print and digital platforms.

**2019-345 JOUR Revise Major**

*Current Copy:*

This department offers professional preparation for students who are planning careers in journalism. It also offers other students the chance to improve their writing, interviewing and research skills and to learn about the news media. Students in writing courses are expected to produce work of professional quality and to publish that work when possible.

Students who major in journalism should also take related courses in history, economics, political science and other liberal arts disciplines as a sound preparation for news reporting. The department strongly urges students to complete a second major. Students also should gain professional experience before graduation, either through part-time jobs, the Co-operative Education Program or the department’s internship program. Internships are available at newspapers, radio and television stations, magazines, online publications and political press offices.

In addition to satisfying the requirements of the College, majors must complete 27 credits in journalism at the 2000-level or above, including [JOUR 2000W](https://catalog.uconn.edu/JOUR/#2000W), [2001W](https://catalog.uconn.edu/JOUR/#2001W), [3002](https://catalog.uconn.edu/JOUR/#3002), [3020](https://catalog.uconn.edu/JOUR/#3020), and [3030](https://catalog.uconn.edu/JOUR/#3030); the three credit portfolio sequence ([JOUR 2111](https://catalog.uconn.edu/JOUR/#2111), [3111](https://catalog.uconn.edu/JOUR/#3111), and [4111](https://catalog.uconn.edu/JOUR/#4111)) and one of the following courses: [JOUR 3000](https://catalog.uconn.edu/JOUR/#3000), [3012](https://catalog.uconn.edu/JOUR/#3012), [3013](https://catalog.uconn.edu/JOUR/#3013), [3041](https://catalog.uconn.edu/JOUR/#3041), [3045](https://catalog.uconn.edu/JOUR/#3045), [3046](https://catalog.uconn.edu/JOUR/#3046), [4035](https://catalog.uconn.edu/JOUR/#4035), or other advanced courses if accepted with the consent of the department. [JOUR 1002](https://catalog.uconn.edu/JOUR/#1002) is a prerequisite for [JOUR 3002](https://catalog.uconn.edu/JOUR/#3002).

A journalism education is, by definition, an education in writing and information literacy. A journalism major will fulfill the writing in the major requirement and the information literacy competency by completing the department’s core courses ([JOUR 2000W](https://catalog.uconn.edu/JOUR/#2000W), [2001W](https://catalog.uconn.edu/JOUR/#2001W), [3002](https://catalog.uconn.edu/JOUR/#3002), [3020](https://catalog.uconn.edu/JOUR/#3020), and [3030](https://catalog.uconn.edu/JOUR/#3030)).

Journalism majors are advised to consult with their advisors about computer skills that may be helpful to them, based on individual career plans. Students who major in journalism will be expected to own basic digital audio and imaging equipment for use in classes and professionally. The [Journalism department website](http://journalism.uconn.edu/) lists current requirements.

Students must apply to the Journalism Department to become majors. They must do so by the end of the third full week of classes in the fall or spring semester.

A student who is not accepted initially may reapply in subsequent semesters. Forms can be obtained online or in the Journalism Department Student Resource Room, 457 Oak Hall.

Students must meet the following two requirements:

1. Successful completion of at least 39 credits. (Students who are members in good standing of the University Honors Program may apply after completing 23 credits at UConn.)
2. Cumulative GPA of at least 2.8, or successful performance on a timed writing exercise administered by the department. Applicants taking the test must show mastery of the fundamental tools of writing, including spelling, grammar and syntax. The applicant’s academic record and goals also will be considered.

*Proposed Copy:*

This department offers professional preparation for students who are planning careers in journalism. It also offers other students the chance to improve their writing, interviewing and research skills and to learn about the news media. Students in writing courses are expected to produce work of professional quality and to publish that work when possible.

Students who major in journalism should also take related courses in history, economics, political science and other liberal arts disciplines as a sound preparation for news reporting. The department strongly urges students to complete a second major. Students also should gain professional experience before graduation, either through part-time jobs, the Co-operative Education Program or the department’s internship program. Internships are available at newspapers, radio and television stations, magazines, online publications and political press offices.

In addition to satisfying the requirements of the College, majors must complete 27 credits in journalism at the 2000-level or above, including [JOUR 2000W](https://catalog.uconn.edu/JOUR/#2000W), [2001W](https://catalog.uconn.edu/JOUR/#2001W), [3002](https://catalog.uconn.edu/JOUR/#3002), [3020](https://catalog.uconn.edu/JOUR/#3020), and [3030](https://catalog.uconn.edu/JOUR/#3030); the three credit portfolio sequence ([JOUR 2111](https://catalog.uconn.edu/JOUR/#2111), [3111](https://catalog.uconn.edu/JOUR/#3111), and [4111](https://catalog.uconn.edu/JOUR/#4111)) and one of the following courses: [JOUR 3000](https://catalog.uconn.edu/JOUR/#3000), [3012](https://catalog.uconn.edu/JOUR/#3012), [3013](https://catalog.uconn.edu/JOUR/#3013), [3041](https://catalog.uconn.edu/JOUR/#3041), [3045](https://catalog.uconn.edu/JOUR/#3045), [3046](https://catalog.uconn.edu/JOUR/#3046), [4035](https://catalog.uconn.edu/JOUR/#4035), or other advanced courses if accepted with the consent of the department. [JOUR 1002](https://catalog.uconn.edu/JOUR/#1002) is a prerequisite for [JOUR 3002](https://catalog.uconn.edu/JOUR/#3002).

A journalism education is, by definition, an education in writing and information literacy. A journalism major will fulfill the writing in the major requirement and the information literacy competency by completing the department’s core courses ([JOUR 2000W](https://catalog.uconn.edu/JOUR/#2000W), [2001W](https://catalog.uconn.edu/JOUR/#2001W), [3002](https://catalog.uconn.edu/JOUR/#3002), [3020](https://catalog.uconn.edu/JOUR/#3020), and [3030](https://catalog.uconn.edu/JOUR/#3030)).

Journalism majors are advised to consult with their advisors about computer skills that may be helpful to them, based on individual career plans. Students who major in journalism will be expected to own basic digital audio and imaging equipment for use in classes and professionally.

The [Journalism department website](http://journalism.uconn.edu/) lists current requirements.

Students must apply to the Journalism Department to become majors. They must do so by the end of the third full week of classes in the fall or spring semester.

A student who is not accepted initially may reapply in subsequent semesters. Forms can be obtained online or in the Journalism Department Office, 468 Oak Hall.

Admission is limited to students who:

1. Have successfully completed at least 39 credits. (Students who are members in good standing of the University Honors Program may apply after completing 23 credits at UConn.)
2. Have a cumulative GPA of at least 2.6 OR have a GPA below 2.6 and provide a personal essay that shows mastery of the fundamental tools of writing, including spelling, grammar and syntax. The applicant’s academic record and goals also will be considered.

**2019-347 MCB 5910           Revise Course**

*Current Copy:*

GRAD 5910. Responsible Conduct in Research

One credit. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory).

The core principles pertaining to responsible conduct in research are covered through extensive use of case studies, along with readings and classroom instruction. Different sections of the course utilize case studies that emphasize discipline-specific issues. Satisfactory completion is based on participation in the discussions and completion of a case study presentation.

*Proposed Copy:*

MCB 5910. Responsible Conduct in Research

One credit. Open to graduate students in MCB, others by permission. Students taking this course will be assigned a final grade of S (satisfactory) or U (unsatisfactory).

Core principles pertaining to responsible conduct in research are covered through case studies, readings and classroom instruction.

**2019-348 MCB 6000 Revise Course**

*Current Copy:*

MCB 6000. Rotations in MCB Laboratories

1.00 credits Prerequisites: MCB Graduate Students Only

Grading Basis: Satisfactory/Unsatisfactory

Open only to students in MCB graduate programs with permission of the instructor.

Provides entering graduate students with experience in three different laboratory settings during the first semester of graduate studies to assist with the selection of a research theme for their degree. Students are expected to participate in laboratory meetings, journal clubs, bench work, and other activities as defined by each of three host faculty members. Grading will be based on an aggregate of the performance in each of the host laboratories. Preference is given to students in the MCB doctoral program.

*Proposed Copy:*

MCB 6000. Rotations in MCB Laboratories

3.00 credits Open only to MCB PhD Students

Grading Basis: Satisfactory/Unsatisfactory

Provides entering PhD students with research experience in three different laboratory settings during the first semester of graduate studies to assist with the selection of a mentor for their degree. Students are expected to participate in laboratory meetings, journal clubs, bench work, and other activities as defined by each of three host faculty members.

**2019-349 PP 4031               Revise Course**

*Current Copy:*

PP 4031. Financial Management for Public & Nonprofit Organizations

3.00 credits

Prerequisites: None.

Grading Basis: Graded

Management of financial resources in public service organizations. Topics include variance analysis, cost analysis, public sector and nonprofit accounting, financial statement analysis, and forecasting.

*Proposed Copy:*

PP 4031. Financial Management for Public & Nonprofit Organizations

3.00 credits

Prerequisites: Open to juniors or higher or instructor permission

Grading Basis: Graded

Management of financial resources in public service organizations. Topics include variance analysis, cost analysis, public sector and nonprofit accounting, financial statement analysis, and forecasting.

**2019-350 PP 4032               Revise Course**

*Current Copy:*

PP 4032. Capital Financing and Budgeting

3.00 credits

Prerequisites: None.

Grading Basis: Graded

An examination of the municipal bond market, capital budgeting techniques, and related public policy issues.

*Proposed Copy:*

PP 4032. Capital Financing and Budgeting

3.00 credits

Prerequisites: Open to juniors or higher or instructor permission

Grading Basis: Graded

An examination of the municipal bond market, capital budgeting techniques, and related public policy issues.

**2019-351 PP 4034               Revise Course**

*Current Copy:*

PP 4034. Social Policy

3.00 credits

Prerequisites: None.

Grading Basis: Graded

Examination of the concepts and principles of public policy analysis, with applications to important social issues.

*Proposed Copy:*

PP 4034. Social Policy

3.00 credits

Prerequisites: open to junior or higher or instructor permission

Grading Basis: Graded

Examination of the concepts and principles of public policy analysis, with applications to important social issues.

**2019-352 PP 4346               Revise Course**

*Current Copy:*

PP 4346. Child and Family Policy

3.00 credits

Prerequisites: None.

Grading Basis: Graded

Theory and practice of child and family policy. Topics may include marriage and divorce, fertility, employment, and human capital.

*Proposed Copy:*

PP 4346. Child and Family Policy

3.00 credits

Prerequisites: open to juniors or higher or instructor permission

Grading Basis: Graded

Theory and practice of child and family policy. Topics may include marriage and divorce, fertility, employment, and human capital.

**2019-353 PP 4365               Revise Course**

*Current Copy:*

PP 4365. Human Resource Management

3.00 credits

Prerequisites: None.

Grading Basis: Graded

The structures, processes, and principles of human resource management in public service and examination of contemporary human resource policies and challenges.

*Proposed Copy:*

PP 4365. Human Resource Management

3.00 credits

Prerequisites: Open to junior or higher or permission of instructor

Grading Basis: Graded

The structures, processes, and principles of human resource management in public service and examination of contemporary human resource policies and challenges.

**2019-354 PP 5324               Revise Course**

*Current Copy:*

PP 5324. Grant Writing and Fund Development for Nonprofit Organizations

3.00 credits

Prerequisites: None.

Grading Basis: Graded

Core fundamentals of fund development and grant writing practices for nonprofit organizations.

*Proposed Copy:*

PP5324 Grant Writing and Government Contracting

3.00 credits

Grading Basis: Graded

Introduction to writing for private grants and government contracts. Includes responding to requests for proposals for government and nonprofit service provision as well as writing and managing a formal proposal preparation.

**2019-358 PP 5361               Revise Course**

*Current Copy:*

PP 5361. Theory and Management of Public Organizations.

Three credits.

Core management and behavioral concepts to effectively lead a public organization. Topics include leadership, strategic planning, managing organizational performance, and organizational structure, culture and politics.

*Proposed Copy:*

PP 5361. Theory and Management of Public Service Organizations.

Three credits.

Core management and behavioral concepts to effectively lead a public organization. Topics include leadership, strategic planning, managing organizational performance, and organizational structure, culture and politics.

**C. Courses for Inclusion on Hyphenated-Course Omnibus Motion**

**(*Please review ahead of the meeting – we will discuss only as needed*)**

**2019-360 ASLN 1101 Revise Course (G) (S)**

*Current Copy:*

### ASLN 1101. Elementary American Sign Language I

4.00 credits

Prerequisites: None.

Grading Basis: Graded

Instruction in elementary American Sign Language.

*Proposed Copy:*

### ASLN 1101. Elementary American Sign Language I

4.00 credits

Prerequisites: None.

Grading Basis: Graded

Introductory course in ASL designed for students who have little or no previous knowledge of ASL.

**2019-361 ASLN 1102 Revise Course (G) (S)**

*Current Copy*

ASLN 1102. Elementary American Sign Language II

4.00 credits

Prerequisites: ASLN 1101. Cannot be taken for credit after passing ASLN 2700, 2800, or 3650.

Grading Basis: Graded

Instruction in elementary American Sign Language.

*Proposed Copy:*

ASLN 1102. Elementary American Sign Language II.

4.00 credits

Prerequisite: ASLN 1101.

Grading Basis: Graded

Continued development of basic knowledge of and understanding of conversational ASL.

**2019-362 ASLN 1103 Revise Course (S)**

*Current Copy:*

ASLN1103. Intermediate American Sign Language I

4.00 credits

Prerequisites: ASLN 1102

Grading Basis: Graded

Instruction in intermediate American Sign Language.

*Proposed Copy:*

ASLN 1103. Intermediate American Sign Language I

4.00 credits

Prerequisites: ASLN 1102

Grading Basis: Graded

Development of intermediate expressive and receptive skills in ASL.

**2019-363 ASLN 1104 Revise Course (S)**

*Current Copy:*

ASLN 1104. Intermediate American Sign Language II

4.00 credits

Prerequisites: ASLN 1103

Grading Basis: Graded

Instruction in intermediate American Sign Language.

*Proposed Copy:*

ASLN 1104. Intermediate American Sign Language II

4.00 credits

Prerequisites: ASLN 1103

Grading Basis: Graded

Continued development of intermediate expressive and receptive skills in ASL.

**2019-364 BIOL 1108 Revise Course (G) (S)**

*Current Copy:*

BIOL 1108. Principles of Biology II

Prerequisites: Students may not receive more than 12 credits in Biology at the 1000 level.

Grading Basis: Graded

Designed to provide a foundation for more advanced courses in Biology and related sciences. Topics covered include plant biology, genetics, ecology and evolution. CA 3-LAB.

*Proposed Copy:*

BIOL 1108. Principles of Biology II

Prerequisites: Students may not receive more than 12 credits in Biology at the 1000 level.

Grading Basis: Graded

Designed to provide a foundation for more advanced courses in biology and related sciences. Topics covered include evolution and population genetics, plant physiology and diversity, animal diversity and behavior, and ecology. CA 3-LAB.

**2019-365 JAPN 1101 Revise Course (G) (S)**

*Current Copy:*

### JAPN 1101. Elem Japanese I

4.00 credits

Prerequisites: Open only to students with no prior contact with the language.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing elementary Japanese.

*Proposed Copy:*

### JAPN 1101. Elementary Japanese I

4.00 credits

Prerequisites: Open only to students with no prior experience with the language.

Grading Basis: Graded

Introduction to elementary Japanese emphasizing speaking, understanding, reading and writing through a communicative approach.

**2019-366 JAPN 1102 Revise Course (G) (S)**

*Current Copy:*

### JAPN 1102. Elem Japanese II

4.00 credits

Prerequisites: JAPN 1101 or equivalent. Cannot be taken after JAPN 1103 or 1104.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing elementary Japanese.

### ***Proposed Copy:***

### JAPN 1102. Elementary Japanese II

4.00 credits

Prerequisites: JAPN 1101 or equivalent. May not be taken out of sequence after passing JAPN 1103 or 1104.

Grading Basis: Graded

Still using a communicative approach, more elementary Japanese emphasizing speaking, understanding, reading and writing skills using simple examples from contemporary media and culture

**2019-367 JAPN 1103 Revise Course (S)**

*Current Copy:*

### JAPN1103. Inter Japanese I

4.00 credits

Prerequisites: JAPN 1102 or equivalent. Cannot be taken after JAPN 1104.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing intermediate Japanese.

*Proposed Copy:*

### JAPN 1103. Intermediate Japanese I

4.00 credits

Prerequisites: JAPN 1102 or equivalent. May not be taken out of sequence after passing JAPN 1104.

Grading Basis: Graded

Increasing communicative abilities in Japanese using more examples from contemporary Japanese media and culture.

**2019-368 JAPN 1104 Revise Course (S)**

*Current Copy:*

### JAPN1104. Inter Japanese II

4.00 credits

Prerequisites: JAPN 1103 or equivalent

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing intermediate Japanese.

*Proposed Copy:*

### JAPN 1104. Intermediate Japanese II

4.00 credits

Prerequisites: JAPN 1103 or equivalent

Grading Basis: Graded

Increasing communicative abilities in Japanese with stronger emphasis on vocabulary and grammar using  examples from contemporary Japanese media, politics, and culture.

**2019-369 MGRK 1101 Revise Course (G) (S)**

### *Current Copy:*

### MGRK 1101. Elem Modern Greek I

4.00 credits

Prerequisites: Open only to students with no prior contact with the language.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing elementary Modern Greek.

*Proposed Copy:*

### MGRK 1101. Elementary Modern Greek I

4.00 credits

Prerequisites: Open only to students with no prior experience with the language.

Grading Basis: Graded

Introduction to the basic elements of Modern Greek emphasizing speaking, understanding, reading and writing through a communicative approach.

**2019-370 MGRK 1102 Revise Course (G) (S)**

### *Current Copy:*

### MGRK 1102. Elem Modern Greek II

4.00 credits

Prerequisites: MGRK 1101. Cannot be taken for credit after three or more years high school Greek or MGRK 1103 or 1104.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing elementary Modern Greek.

*Proposed Copy:*

### MGRK 1102. Elementary Modern Greek I

4.00 credits

Prerequisites: MGRK 1101. Not open for credit to students with three or more years of high school Greek. May not be taken out of sequence after passing MGRK 1103 or 1104.

Grading Basis: Graded

More elements of introductory Modern Greek emphasizing speaking, understanding, reading and writing using simple examples from contemporary media and culture

**2019-371 MGRK 1103 Revise Course (G) (S)**

### *Current Copy:*

### MGRK 1103. Inter Mod Greek I

4.00 credits

Prerequisites: MGRK 1102. Cannot be taken for credit after MGRK 1104.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing intermediate Modern Greek.

### *Proposed Copy:*

### MGRK 1103. Intermediate Modern Greek I

4.00 credits

Prerequisites: MGRK 1102. May not be taken out of sequence after passing MGRK 1104.

Grading Basis: Graded

Increasing communicative abilities in Modern Greek emphasizing an interactive approach using more examples from Greek culture.

**2019-372 MGRK 1104 Revise Course (G) (S)**

### ***Current Copy:***

### MGRK 1104. Inter Mod Greek II

4.00 credits

Prerequisites: MGRK 1103.

Grading Basis: Graded

Instruction in speaking, understanding, reading and writing intermediate Modern Greek.

*Proposed Copy:*

### MGRK 1104. Intermediate Modern Greek II

4.00 credits

Prerequisites: MGRK 1103.

Grading Basis: Graded

Increasing communicative abilities in Modern Greek with stronger emphasis on vocabulary and grammar using  examples from media, politics, and culture.

**2019-373 PHYS 1201Q Revise Course (G) (S)**

*Current Copy*:

PHYS 1201Q. General Physics

4.00 credits

Prerequisites: MATH 1060 or 1110 or 1120 or 1125 or equivalent. PHYS 1201 is not open for credit to students who have passed PHYS 1202, 1401, 1501 or 1601.

Grading Basis: Graded

Basic facts and principles of physics. The laboratory offers fundamental training in precise measurements. CA 3-LAB.

*Proposed Copy*:

PHYS 1201Q. General Physics I

4.00 credits

Prerequisites: MATH 1060 or 1110 or 1120 or 1125 or equivalent. PHYS 1201 is not

open for credit to students who have passed PHYS 1401, 1501 or 1601

Grading Basis: Graded

A non-calculus based course introducing the laws of force and motion applied to mechanical phenomena. Concepts such as work, mechanical energy, linear and angular momentum, and energy conservation are explained. The laboratory offers fundamental training in precise measurements. CA 3-LAB.

**2019-374 PHYS 1202Q Revise Course (G) (S)**

### *Current Copy:*

PHYS 1202Q. General Physics

4.00 credits

Prerequisites: PHYS 1201. Not open for credit to students who have passed PHYS 1402, 1502, or 1602.

Grading Basis: Graded

Basic facts and principles of physics. The laboratory offers fundamental training in exact measurements. CA 3-LAB.

*Proposed Copy*:

PHYS 1202Q. General Physics II

4.00 credits

Prerequisites: PHYS 1201. Not open for credit to students who have passed PHYS 1402, 1502, or 1602.

Grading Basis: Graded

A non-calculus based course introducing the principles governing electromagnetic phenomena, including electromagnetic radiation and waves and electric circuits. The laboratory offers fundamental training in precise measurements. CA 3-LAB.

**2019-375 PHYS 1230 Revise Course (S)**

*Current Copy*:

PHYS 1230. General Physics Problems

3.00 credits

Prerequisites: PHYS 1202, which may be taken concurrently; MATH 1122 or 11332, either of which may be taken concurrently. Not open to students who have passed PHYS 1501 or 1601.

Grading Basis: Graded

Problems, emphasizing applications of calculus, dealing with topics in general physics. Intended for those students who have taken or are taking PHYS 1202 and who desire to have a calculus-based physics sequence equivalent to PHYS 1401-1402.

*Proposed Copy:*

PHYS 1230. General Physics Problems

3.00 credits

Prerequisites: PHYS 1202, which may be taken concurrently; MATH 1122 or 1132, either of which may be taken concurrently. Not open to students who have passed PHYS 1501 or 1601.

Grading Basis: Graded

Physics problems, emphasizing applications of calculus, dealing with topics in general physics. Intended for those students who have taken or are taking PHYS 1202 and who desire to have a calculus-based physics sequence equivalent to PHYS 1401-1402 or 1501-1502.

**2019-376 PHYS 1401Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1401Q. General Physics with Calculus

4.00 credits

Prerequisites: Recommended preparation: MATH 1121 or 1131; not open to students who have passed PHYS 1402, 1601 or 1501. May be taken for two credits, with the permission of the instructor, after PHYS 1201.

Grading Basis: Graded

Quantitative study of the basic facts and principles of physics. The laboratory offers fundamental training in physical measurements. This course is recommended for students planning to apply for admission to medical, dental or veterinary schools. It is also recommended for science majors for whom a one year introductory physics course is adequate. CA 3-LAB.

*Proposed Copy:*

PHYS 1401Q.  General Physics with Calculus I

4.00 credits

Prerequisites: Recommended preparation: MATH 1121 or 1131; not open to students who have passed PHYS 1402, 1601 or 1501. May be taken for two credits, with the permission of the instructor, after PHYS 1201.

Grading Basis: Graded

Quantitative study of the basic facts and principles of physics with an emphasis on mechanical phenomena. Concepts such as work, mechanical energy, linear and angular momentum, and energy conservation are explained. The laboratory offers fundamental training in physical measurements. Recommended for non-engineering students who desire to have a calculus-based physics sequence. It is also recommended for science majors for whom a one year introductory physics course is adequate. CA 3-LAB.

**2019-377 PHYS 1402Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1402Q. General Physics with Calculus

4.00 credits

Prerequisites: PHYS 1401. Recommended preparation: MATH 1122 or 1132. Not open for credit to students who have passed PHYS 1502 or 1602. May not be taken for more than two credits, with the permission of the instructor, by students who have passed PHYS 1202.

Grading Basis: Graded

Quantitative study of the basic facts and principles of physics. The laboratory offers fundamental training in physical measurements. Recommended for students planning to apply for admission to medical, dental or veterinary schools. It is also recommended for science majors for whom a one year introductory physics course is adequate. CA 3-LAB.

*Proposed Copy*:

PHYS 1402Q. General Physics with Calculus II

4.00 credits

Prerequisites: PHYS 1401. Recommended preparation: MATH 1122 or 1132. Not open for credit to students who have passed PHYS 1502 or 1602. May not be taken for more than two credits, with the permission of the instructor, by students who have passed PHYS 1202.

Grading Basis: Graded

Quantitative study of the basic facts and principles of physics with an emphasis on electromagnetic phenomena, including electromagnetic radiation and waves and electric circuits. The laboratory offers fundamental training in physical measurements. Recommended for non-engineering students who desire to have a calculus-based physics sequence. It is also recommended for science majors for whom a one year introductory physics course is adequate. CA 3-LAB.

**2019-378 PHYS 1501Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1501Q. Physics for Engineers I

4.00 credits

Prerequisites: Recommended preparation: PHYS 1010 or high school physics; CE 2110 ; MATH 2110 or 2130 which may be taken concurrently. Not open for credit after PHYS 1401, 1601 or 1502. Only two credits, with instructor's permission, if PHYS 1201 taken prior.

Grading Basis: Graded

Basic facts and principles of physics. Elementary concepts of calculus are used. Classical dynamics, rigid-body motion, harmonic motion, wave motion, acoustics, relativistic dynamics, thermodynamics. CA 3-LAB.

*Proposed Copy:*

PHYS 1501Q. Physics for Engineers I

4.00 credits

Prerequisites: Recommended preparation: PHYS 1010 or high school physics; CE 2110 ; MATH 2110 or 2130 which may be taken concurrently. Not open for credit after PHYS 1401, 1601 or 1502. Only two credits, with instructor's permission, if PHYS 1201 taken prior.

Grading Basis: Graded

Introduction to Newton’s laws, their extensions and applications. Concepts such as work, mechanical energy, linear and angular momentum, and energy conservation are explained. Basic concepts of calculus are used. Recommended for prospective Engineering majors. CA 3-LAB.

**2019-379 PHYS 1502Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1502Q. Physics for Engineers II

4.00 credits

Prerequisites: PHYS 1501. Not open to students who have passed PHYS 1402 or 1602. May be taken for not more than 2 credits, with instructor's permission, by students who have passed PHYS 1202.

Grading Basis: Graded

Electric and magnetic fields, electromagnetic waves, quantum effects, introduction to atomic physics. CA 3-LAB.

*Proposed Copy*:

PHYS 1502Q. Physics for Engineers II

4.00 credits

Prerequisites: PHYS 1501. Not open to students who have passed PHYS 1402 or 1602. May be taken for not more than 2 credits, with instructor's permission, by students who have passed PHYS 1202.

Grading Basis: Graded

Introduction to principles of electromagnetism and Maxwell’s equations, including electric circuits, electromagnetic wave propagation, optics, and other relevant applications to engineering. Basic concepts of calculus are used. Recommended for prospective Engineering majors. CA 3-LAB.

**2019-380 PHYS 1601Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1601Q. Fundamentals of Physics I

4.00 credits

Prerequisites: Recommended Preparation: MATH 1121 or 1131 or 1151 (1151 is preferred for physics majors). Not open to students who have passed PHYS 1401 or 1501. May be taken for not more than 3 credits, with instructor's approval, by students who passed PHYS 1201.

Grading Basis: Graded

Fundamental principles of mechanics. statistical physics, and thermal physics. Basic concepts of calculus are used. Recommended for prospective Physics majors. CA 3-LAB.

*Proposed Copy:*

PHYS 1601Q.  Fundamentals of Physics I

4.00 credits

Prerequisites: Recommended Preparation: MATH 1121 or 1131 or 1151 (1151 is preferred for physics majors). Not open to students who have passed PHYS 1401 or 1501. May be taken for not more than 3 credits, with instructor's approval, by students who passed PHYS 1201.

Grading Basis: Graded

Foundational principles of mechanics: kinematics, forces, energy, momentum, angular momentum, torque, gravitation, waves, harmonic motion and nonlinear dynamics. Basic concepts of calculus are used. Recommended for prospective Physics majors, this course is taught integrating theory, experimental activities, and collaborative problem solving in an active learning setting. CA 3-LAB.

**2019-381 PHYS 1602Q Revise Course (G) (S)**

*Current Copy:*

PHYS 1602Q. Fundamentals of Physics II

4.00 credits

Prerequisites: Recommended preparation: PHYS 1601; MATH 1122 or 1132 or 1152 (1152 preferred for Physics majors). Not open for credit to students who have passed PHYS 1402 or 1502. May not be taken for more than 3 credits after passing PHYS 1202.

Grading Basis: Graded

Fundamental principles of electromagnetism, optics and wave propagation. Basic concepts of calculus are used. Recommended for prospective Physics majors. CA 3-LAB.

*Proposed Copy*:

PHYS 1602Q. Fundamentals of Physics II

4.00 credits

Prerequisites: Recommended preparation: PHYS 1601; MATH 1122 or 1132 or 1152 (1152 preferred for Physics majors). Not open for credit to students who have passed PHYS 1402 or 1502. May not be taken for more than 3 credits after passing PHYS 1202.

Grading Basis: Graded

 Foundational principles of electromagnetism: electrostatics, magnetostatics, electrodynamics, Maxwell’s equations, electromagnetic wave propagation, and optics, including some of their relevant applications to physics. Basic concepts of calculus are used. Recommended for prospective Physics majors, this course is taught integrating theory, experimental activities, and collaborative problem solving in an active learning setting. CA 3-LAB.

**2019-382 PHYS 3201 Revise Course**

*Current Copy:*

PHYS 3201. Electricity and Magnetism I

3.00 credits

Prerequisites: PHYS 1602 or with consent of instructor PHYS 1230 or 1530 or 1402 or 1502 or 3104; MATH 2110 and 2410 or MATH 2130 and 2420.

Grading Basis: Graded

Properties of electric and magnetic fields; direct and alternating current circuits.

*Proposed Copy:*

PHYS 3201. Electricity and Magnetism I

3.00 credits

Prerequisites: PHYS 1602 or with consent of instructor PHYS 1230 or 1530 or 1402 or 1502 or 3104; MATH 2110 and 2410 or MATH 2130 and 2420.

Grading Basis: Graded

Advanced theory and applications of electrostatics, magnetostatics, potentials, and electromagnetic fields in matter.

**2019-383 PHYS 3202 Revise Course**

*Current Copy:*

PHYS 3202. Electricity and Magnetism II

3.00 credits

Prerequisites: PHYS 3201.

Grading Basis: Graded

Mathematical theory of the electromagnetic field; electric and magnetic properties of matter.

*Proposed Copy:*

PHYS 3202. Electricity and Magnetism II

3.00 credits

Prerequisites: PHYS 3201.

Grading Basis: Graded

Advanced theory and applications of electromagnetic fields. Gauge transformations, electromagnetic waves and radiation, and relativistic corrections to electrodynamics.

**2019-384 PHYS 3401 Revise Course**

*Current Copy:*

PHYS 3401. Introductory Quantum Mechanics

3.00 credits

Prerequisites: PHYS 2300; MATH 2110 and 2410 or MATH 2130 and 2420.

Grading Basis: Graded

Elementary principles of quantum mechanics; applications to electrons, atoms, molecules, nuclei, elementary particles, and solids.

*Proposed Copy*:

PHYS 3401. Quantum Mechanics I

3.00 credits

Prerequisites: PHYS 2300; MATH 2110 and 2410 or MATH 2130 and 2420.

Grading Basis: Graded

Elementary Principles of quantum mechanics; solutions to the Schrödinger equation for bound states and scattering in one dimension; general solution for central forces in two and three dimensions, orbital angular momentum and spin, and other fundamental quantum mechanical principles.

**2019-385 PHYS 3402 Revise Course**

*Current Copy*:

PHYS 3402. Introductory Quantum Mechanics

3.00 credits

Prerequisites: PHYS 3401.

Grading Basis: Graded

Elementary principles of quantum mechanics; applications to electrons, atoms, molecules, nuclei, elementary particles, and solids.

*Proposed Copy:*

PHYS 3402. Quantum Mechanics II

3.00 credits

Prerequisites: PHYS 3201.

Grading Basis: Graded

Applications of quantum mechanics, useful approximation methods, the variational method, the WKB method, scattering and other advanced topics.

**2019-386 PNB 2264 Revise Course (S)**

*Current Copy:*

PNB 2264. Human Physiology and Anatomy

4.00 credits

Prerequisites: BIOL 1107; CHEM 1122 or 1124 or 1127. Not open to students who have passed PNB 2274. Must be taken prior to PNB 2265. Repeat restrictions apply.

Grading Basis:Graded

Fundamentals of human anatomy and physiology for students in medical technology, physical therapy, nursing, and education (Sport Science). May not be counted toward the Biological Sciences or PNB majors.

*Proposed Copy:*

PNB 2264. Human Physiology and Anatomy

4.00 credits

Prerequisites: BIOL 1107; CHEM 1122 or 1124Q or 1127Q. Not open to students who have passed PNB 2274. Must be taken prior to PNB 2265. Repeat restrictions apply.

Grading Basis: Graded

Fundamentals of human anatomy and physiology, for students in human health and human performance related majors. Topics covered include the musculoskeletal system, membrane potential, neurophysiology, the central nervous system, sensation, and the endocrine system. May not be counted toward the Biological Sciences or PNB majors.

**2019-387 PNB 2265 Revise Course (S)**

### *Current Copy:*

### PNB 2265. Human Physiology and Anatomy

4.00 credits

Prerequisites: PNB 2264. Not open to students who have passed PNB 2275. Must be taken after PNB 2264 to count for credit. Repeat restrictions apply.

Grading Basis: Graded

Fundamentals of human anatomy and physiology for students in medical technology, physical therapy, nursing, and education (Sport Science). May not be counted toward the Biological Sciences or PNB majors.

*Proposed Copy:*

*PNB 2265. H*uman Physiology and Anatomy

4.00 credits

**Prerequisites:**PNB 2264. Not open to students who have passed PNB 2275. Must be taken after PNB 2264 to count for credit. Repeat restrictions apply.

**Grading Basis:**Graded

Fundamentals of human anatomy and physiology, for students in human health and human performance related majors. Topics covered include the cardiovascular, immune, respiratory, digestive, renal, and reproductive systems. May not be counted toward the Biological Sciences or PNB majors.