2020-21 Interdisciplinary Science Program Worksheet

See page 3 for generic examples of course sequences for the major and the minor in Interdisciplinary Science and for the Interdisciplinary Science Major Statement, to be completed when the student declared the major.

Requirements for the Interdisciplinary Science major (BA)

In addition to the requirements outlined in this program worksheet, Lang has specific general requirements, including a minimum number of credits in liberal arts courses as well as college residency requirements. All students should read the general Degree Requirements at the Lang website [bit.ly/LangBABS] and consult with their Student Success advisor in addition to their Departmental Faculty Advisor each semester to ensure they are on track to graduate.

To be sure the Degree Works version of this worksheet reflects the same information, students should forward any approved exceptions of the following requirements to their Student Success advisor.

STUDENT NAME: ____________________  NEW SCHOOL ID: ________________  Degree: ☐ BA  ☐ BA/BFA  ☐ BA/MA

EXPECTED GRADUATION DATE: ____________________  FACULTY ADVISOR: ____________________

The Interdisciplinary Science major requires thirteen (13) courses outlined as follows. Visit the IS Advising and Resources page at Lang’s website for information about identifying and selecting courses that meet the requirements. Students must receive grades of C or better in all courses taken to fulfill major requirements.

REQUIRED INTRODUCTORY COURSES:

SEMIESTER/YEAR (TO BE) COMPLETED:

1. ☐ LSCI 2700 Energy and Sustainability (Spring; 4 cr.) ____________________
2. ☐ LMTH 2050 Math Models in Nature (Spring, 4 cr.) ____________________
3. ☐ LSCI 2500 Chemistry of Environment (Fall, 4 cr.) ____________________
4. ☐ LSCI 2040 Genes, Environment & Behavior (Spring, 4 cr.) ____________________
5. ☐ LSCI 3020 Methods of Scientific Inquiry (4 cr.) ____________________
   (For Methods, consult with Departmental Faculty Advisor. LSCI 3031 Chemistry of Atmosphere can count in some cases, and LSCI 3055 Microbiome of Urban Spaces )

OTHER REQUIRED COURSES:

Choose two (2) LSCI Foundation Courses from the courses below (total 8 cr.):
LSCI 2300 Urban Environmental Health (Fall)
LSCO 2840 Science and Politics of Infectious Diseases (Spring)
LSCI 2320 Microbial Ecologies (Fall)

6. ☐ _______________________________  Semester taken ________  Advisor’s initials ________
   (LSCI Foundation course title)
7. ☐ _______________________________  Semester taken ________  Advisor’s initials ________
   (LSCI Foundation course title)

continued . . .
Interdisciplinary Science BA requirements continued...

One (1) LMTH Mathematics course from the courses below (3-4 cr.). Consult with Departmental Faculty Advisor.

LMTH 2040 Calculus I (Spring/Fall)
LMTH 2045 Calculus II (Spring/Fall)
LMTH 2030 Statistics with SPSS (Spring/Fall)
LMTH 2014 Quant Reasoning II: Research Methods and Data Visualization

8. □ ________________________________ Semester taken ________ Advisor’s initials ________
   (LMTH Mathematics course title)

One (1) LSCI Laboratory Science course from the courses below. ALL have pre-requisites. (4-6 cr.).
LSCI 3030 Biodiversity Achieved Lab (6 credits; pre-req LSCI 2040; Alternate years in the Fall)
LSCI 3029 Water Quality Lab (4 credits; pre-req LSCI 2500; Alternate years in the Spring)
LSCI 3055 Microbiome of Urban Spaces (4 credits; pre-req LSCI 2320 or LSCI 2040) (only for BA/ BFA students and Interdisciplinary Science Minors)
LSCI 2320 Microbial Ecologies (Fall) (4 credits; only for BA/ BFA students and Interdisciplinary Science Minors)

9. □ ________________________________ Semester taken ________ Advisor’s initials ________
   (LSCI Lab Science course title)

TWO (2) LSCI Intermediate-/Advanced-level courses from the courses below. ALL have pre-requisites; offered alternate years (total 8 cr.).
LSCI 3031 Chemistry of Atmosphere
LSCI 3400 Genomes, Populations and Identities
Other approved 3000-level LSCI or LMTH course that has a pre-requisite

10. □ ________________________________ Semester taken ________ Advisor’s initials ________
11. □ ________________________________ Semester taken ________ Advisor’s initials ________
    (LSCI Lab Science course title)

One (1) additional LSCI, LMTH, or UENV elective that has not been applied toward satisfying a requirement above.
Must be selected in consultation with Departmental Faculty Advisor (3-4 cr.). NOTE: The following courses do not satisfy this requirement: Quantitative Reasoning I, Pre-Calculus, and Statistics for the Social Sciences. First Year courses and History or Philosophy courses can count in some cases, with approval from the Departmental Faculty Advisor.

12. □ ________________________________ Semester taken ________ Advisor’s initials ________
    (LSCI Lab Science course title)

SENIOR CAPSTONE 4000 level course (selected in consultation with faculty advisor or Chair of Department) (3-4 cr.)
LSCI 4900 IS Capstone: Planetary Health (4 cr.)
LSCI 4050 Science and Politics of Cancer (4 cr.)

13. □ ________________________________ Semester taken ________ Advisor’s initials ________
    (LSCI Lab Science course title)

☐ INTERNSHIP/RESEARCH (recommended): ______________________ Semester taken ________ Advisor’s initials ________
   (internship title)

☐ SCIENCE FELLOWSHIP (optional; merit-based): ______________________ Semester taken ________ Advisor’s initials ________
   (fellowship title)

TOTAL INTERDISCIPLINARY SCIENCE CREDITS (49-54)

________________________________________
ADVISOR’S SIGNATURE

DATE
Students who choose to major in IS should consider the ways in which their academic and experiential work lead to a focus in environmental health, public or planetary health, climate change, science education, or other areas of interest. Upon declaring the Major/Minor, students should review the guidelines for writing a Major/Minor statement and submit a statement outlining their goals for the academic course of study. This statement should be submitted to their faculty advisor in the department and be revisited and revised each year with this advisor.

More advising documents are available in the shared google drive: bit.ly/ISresources

The template below is not written in stone, but rather suggests a useful sequence in which to complete the requirements for this program. Students declare their major at various points, but we recommend that when you declare, you review this chart, submit a MAJORS/MINOR statement, and schedule an advising appointment with a faculty member of the Interdisciplinary Science Program so that advising can be personalized and appropriate to your interests and post-graduate plans.

Note: that because students’ schedules vary, the highlighted courses below are more than the 13 required as some students will complete them earlier and others in later semesters, but we do advise that all 2000 level course be taken early on if possible.

Because we aim to teach students science at different levels of scale, we recommend that the Two Foundations Courses span TWO scientific discipline (biology, chemistry, epidemiology, and physics).

For MAJORS: Generic Sample Interdisciplinary Course Menu

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR 1</td>
<td>First-year Seminar (can count towards IS elective in some cases)</td>
<td>IS Elective</td>
</tr>
<tr>
<td></td>
<td>Writing 1 Course</td>
<td>Energy and Sustainability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Writing 2 Course</td>
</tr>
<tr>
<td>YEAR 2</td>
<td>Chemistry of the Environment University Lecture Course</td>
<td>Genes Environment and Behavior Mathematical Models in Nature</td>
</tr>
<tr>
<td>YEAR 3</td>
<td>IS Foundation Course</td>
<td>IS Intermediate Course</td>
</tr>
<tr>
<td></td>
<td>Second Math Course</td>
<td>IS Foundation Course or Lab Course</td>
</tr>
<tr>
<td></td>
<td>IS Internship</td>
<td>University Lecture Course</td>
</tr>
<tr>
<td>YEAR 4</td>
<td>Methods of Sci Inquiry/Chem of Atm IS Intermediate/Advanced Course or Lab Course</td>
<td>IS Capstone: Planetary Health IS Elective, Intermediate or Lab Course</td>
</tr>
</tbody>
</table>

For MINORS: Generic Sample Interdisciplinary Course Menu

- LSCI 2700 Energy and Sustainability
- One Mathematics Course (Pre Calculus and QR I do not count towards the Minor)
- One Lab Course (note that these have prerequisites that are Foundations courses)
- Two Foundations (across any two following disciplines; biology, chemistry, ecology, epidemiology, physics)

**** all students must receive a C or higher in all courses that meet the requirements of the major/minor****