biocore courses

381 ecology, genetics and evolution (3 cr)
Fall Semester: Three lectures & one 50-min discussion each week. Prereq: Math 221, Chem 104, 109, or 115 and previous or concurrent enrollment in Chem 343 (cons instr). Our foundation course focuses on organisms and their interaction with the environment, evolution and transmission genetics.

382 ecology, genetics and evolution lab (2 cr)
Fall Semester: One 3-hour lab & 50-min discussion each week. Prereq: previous or concur. Enrollment in Biocore 381. Includes field trips to local stream and Biocore Prairie in the Lakeshore Nature Preserve and investigations that focus on genetics and evolution. Writing intensive.

383 cell biology (3 cr)
Spring Semester: Three lectures & one 50-min discussion each week. Prereq: Biocore 381 and Chem 343 (cons instr). The main themes of the course are the structure and function of cells and biomolecules, energy metabolism, the expression and regulation of genetic information, and signal transduction. Writing intensive.

384 cell biology lab (2 cr)
Spring Semester: One 3-hour lab & 50-min discussion each week. Prereq: previous or concurrent registration in Biocore 383. Student investigations include use of cell & molecular techniques to explore enzyme catalysis, gene expression, and signal transduction. Writing intensive.

485 organismal biology (3 cr)
Fall Semester: Two 90-min lectures & one 50-min discussion each week. Prereq: Biocore 381 and 383. This is a physiology course that considers how plants and animals interact with their environment to survive, obtain nutrients, exchange gases, and reproduce.

486 organismal biology lab (2 cr)
Fall Semester: One 3-hour lab & 50-min discussion each week. Prereq: previous or concurrent registration in Biocore 485. Students learn plant & animal physiology by collaborating on independent research projects. Writing intensive.

587 biological interactions (3 cr)
Spring Semester: Three class meetings & one 50-min discussion each week. Prereq: Biocore 381, 383 & 485. This course builds on and integrates concepts from three previous lecture courses & the process of science skills developed in lab. Students work in teams to understand research from current scientific literature.

integration of biocore

Example sequence showing how Biocore can be integrated into a three-year course plan. Check with your academic advisor to obtain the most current course information and requirements for your major.

Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>Chem 103, 109 or 115</td>
<td>Chem 104 or 343</td>
</tr>
<tr>
<td>Math 114, 171 or 221</td>
<td>Math 221, 222 or 217</td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>Biocore 381 &amp; 382</td>
<td>Biocore 383 &amp; 384</td>
</tr>
<tr>
<td>Chem 343 or 344, 345</td>
<td>Chem 343 or 344, 345</td>
</tr>
<tr>
<td>Math 222 or Stats 371</td>
<td>Math 222 or Stats 371</td>
</tr>
</tbody>
</table>

Junior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>Second Semester</td>
</tr>
<tr>
<td>Biocore 485 &amp; 486</td>
<td>Biocore 587</td>
</tr>
<tr>
<td>Physics 207</td>
<td>Physics 208</td>
</tr>
<tr>
<td>Biochem 501 or 507</td>
<td>Biochem 508</td>
</tr>
</tbody>
</table>

The University of Wisconsin-Madison is an AA/EOE institution. University policies create addition protections that prohibit harassment on the basis of cultural background and ethnicity. Inquiries concerning these policies may be directed to appropriate campus admitting or employing unit or to the Office of Equity and Diversity 179-A Bascom Hall, http://www.oed.wisc.edu (608) 263-7500, TYY (608) 263-2400

http://www.biocore.wisc.edu

Biology Core Curriculum
345 Noland Hall
250 N. Mills St.
Madison, WI 53706
(608) 265-2870

http://www.biocore.wisc.edu
The Biology Core Curriculum (Biocore) is a cross-college honors program. It is a challenging four-semester intro to intermediate biology sequence that provides a broad, in-depth & integrated foundation for students interested in any area of biological science.

Biocore is not a major but fulfills some or all of the biology requirements for a variety of bioscience majors, including many in the Colleges of Ag & Life Science, Letters & Science, & Engineering. The faculty and staff associated with the program are drawn from departments across campus and care deeply about undergrad education.

Students wishing to enroll in Biocore must apply for admission. Prereq are 1) Chem 104, 109 or 115, 2) Math 221 or equiv, 3) Concurrent (fall) or prev completion of Chem 343.

Submit applications online from website starting in November with deadline generally mid-March. Late applications accepted until classes fill. Admissions committee will notify students of acceptance by email prior to April registration.

Q. Do I have to take all 4 semesters?
Biocore is a sequence designed to be taken in series. Some majors require only 3 of 4 semesters or 2 of 3 lab courses. Please consult with advisor since course requirements vary among majors.

Q. Can I take Biocore as a freshman?
Yes, if you have taken college level chemistry and completed math. Contact us to discuss your case.

Q. How is Biocore different from Biol/Zoo 151/152 or Zoo 101/102 Bot 130?
Biocore are intermediate courses at 300-500 level and progress at a more challenging pace. Biocore courses cover a greater breath & depth of material. As a result, the course sequences are not equivalent (i.e. Biocore 381 is not equiv to Biol 151). Therefore, students cannot jump between the sequences.

Students who complete Biocore get genetics through the four-semesters and therefore, they are usually not required to take Genetics 466. Biocore 485/486 is an intermed level physiology course equiv to Phys 335 or 435 in some cases and fulfills intermed lab requirement for some majors.

Limited enrollment (150 each fall) allows for high instructor/student ratio. All lab sections are taught by faculty/staff who get to know each student individually. Many Biocore students form collaborative peer groups who network and study together resulting in a supportive learning community.

Q. Can I take Biocore if I study abroad?
Yes. Many Biocore students do. While Biocore courses should be taken in order, many students take the first two semesters (Biocore 381 & 383) as sophomores, go abroad for one or two semesters as juniors, and then complete Biocore their senior year.

Q. Do graduate or med schools recognize Biocore?
Many schools know about Biocore. If not, you can describe the challenging nature of the program on applications or in letters of recommendation. If you are concerned about a particular school’s admissions policy regarding honors courses, you may want to consult with that school directly.

Q. Is Biocore a Pre-Med sequence?
Biocore is an intro to intermediate biology curriculum designed for students with diverse interests. Biocore welcomes premeds and has received high praise from the UW School of Medicine and Public Health and from former Biocore students in schools across the country who say that Biocore provides excellent preparation. Course work includes study at many levels of organization from molecules to biosphere- including but not limited to humans. We consider a wide range of organisms in the study of ecology, genetics, evolution, cell & molecular biology, and physiology.

In addition to courses, we offer opportunities for research at the Biocore Prairie or our labs, participate in Biocore Peer mentoring, leadership in Biocore Outreach Ambassadors to connect with local area schools & students through Science Fun Nights & week long Summer Science Camp. Finally many students volunteer for our student Board of Directors.

“Biocore has help me think about science in a completely different way.”

“I have never been so challenged, nor so excited about learning as during Biocore.”

“Biocore taught me how to think critically and how to question. I learned to be part of a team and made some great friendships.”