Undergraduate Research Experiences

Director
• Robert F. Kirby

Undergraduate Research Experiences includes areas of study that serve to enhance science, research, and laboratory experiences for undergraduate students: Research Experience for Undergraduates in Microbiology and the Summer Undergraduate MSTP Research Program.

Research Experience for Undergraduates in Microbiology
Website: https://medicine.uiowa.edu/microbiology/education/summer-research-experience-undergraduates-reu-microbiology

The Department of Microbiology and Immunology offers URES:4130 Research Experience for Undergraduates in Microbiology, a 10-week summer program for qualified undergraduate students who are studying microbiology or other biological sciences and are interested in pursuing careers in science. Participants conduct research on a project they select, under the direct supervision of a faculty member.

Each participant receives a stipend and an allowance for incidental expenses. The program also pays for travel expenses and provides housing.

Applicants must be U.S. citizens or permanent residents who are enrolled in a university, college, or community college, and have at least one semester of undergraduate study remaining toward a bachelor’s degree in the biological sciences. Application materials must include a completed online application, transcript, and two letters of recommendation. Application deadline is mid-February for the following summer.

Visit the program’s website or contact the Department of Microbiology and Immunology (Carver College of Medicine) for more information.

Summer Undergraduate MSTP Research Program
Website: https://medicine.uiowa.edu/mstp/sumr

The Summer Undergraduate MSTP Research Program is an intensive 8-week experience for undergraduates interested in becoming physician scientists. Participants gain experience in research laboratories and exposure to clinical medicine and medically relevant research in preparation for careers in academic medicine.

Students conduct research in any one of a variety of research areas, including the biomedical sciences, public health, and biomedical engineering. In addition, students shadow physician scientists in clinical settings, participate in career development seminars, and attend a weekly seminar series focusing on the intersection of science and medicine.

Participants receive a stipend and are reimbursed for most of their travel expenses. The program provides lodging on campus in University housing.

Applicants must be U.S. citizens or permanent residents who will have completed their sophomore or junior year in a bachelor’s degree program in the biological or physical sciences by the summer of entry. Applicants should submit an application (available on the program’s website), an official college transcript, a curriculum vitae, and two letters of recommendation. Application deadline is mid-January for the following summer.

Contact the Medical Scientist Training Program (Carver College of Medicine) for more information.

Courses

Undergraduate Research Experiences Courses

URES:1000 First-Year Seminar 1 s.h.
Small discussion class taught by a faculty member; topics chosen by instructor; may include outside activities (e.g., films, lectures, performances, readings, visits to research facilities); research focus allows students to actively discover new information with guidance from instructor, pursue research in small groups, learn the “how to” of a field, and share their findings; no prior research knowledge or experience required. Requirements: first- or second-semester standing.

URES:2100 Louis Stokes Alliances for Minority Participation STEM Scholars 1 s.h.
Preparation for success in transferring into a STEM major at UI; exposure to undergraduate research opportunities; develop skills of scientific inquiry and communication; presentation of products; connect with current transfer students, active research faculty, campus support services, and program staff members. Requirements: application and acceptance to UI LSAMP program.

URES:2200 Discover Research 1 s.h.
Introduction to research at the University of Iowa; exploration of life as a researcher through a mixture of lecture, faculty and student guest speakers, and virtual lab tours; process of finding and contacting potential research mentors, interviewing for research positions, and making the most out of a research experience; for first-year undergraduates.

URES:3001 Introduction to Translational Research 0-3 s.h.
Array of scientific studies translated into clinical solutions, creative ideas balanced with practical strategies for implementation at bedside, and expansive number of career opportunities becoming available in translational sciences; opportunity to learn how translational research is conceived and developed; interpreting student research in a translational paradigm; survey of translational biomedicine research program covering the scope of interdisciplinary teams and breadth of T1 to T4 research applications. Requirements: enrollment in clinical and translational science certificate program, and engagement in mentored research activity. Recommendations: successful completion of EPID:4400 highly recommended.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>URES:3002</td>
<td>Practicum in Clinical and Translational Science</td>
<td>0-3 s.h.</td>
</tr>
<tr>
<td></td>
<td>How research experience translates into clinical practice; translational</td>
<td></td>
</tr>
<tr>
<td></td>
<td>impact of independent research; summary of research accomplishments; outline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>of a translational paper that is mutually acceptable to student, preceptor,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and faculty; submission of paper and completion of poster presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>describing research project and translational application of research.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prerequisites: URES:3001. Requirements: enrollment in clinical and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>translational science certificate program.</td>
<td></td>
</tr>
<tr>
<td>URES:3100</td>
<td>Iowa Center for Research by Undergraduates Research Ambassador</td>
<td>0-1 s.h.</td>
</tr>
</tbody>
</table>