The Mathematical, Physical, and Life Sciences have revolutionized our view of the world. By providing the foundations for the technology shaping our every day life, they have an enormous impact on our physical, economic, social, and intellectual well being and hold a key to understanding and solving many of today's most pressing problems.

Education

The educational mission of the Natural Sciences Division ranges from promoting an understanding of the scientific method among all students to training the next generation of researchers advancing the forefront of knowledge. Reflecting the growing student interest in Science, Technology, Engineering, and Math (STEM), demand for courses offered by the Division (measured in student credit hours) has increased by 20% since 2004. Coursework in mathematics, physics, chemistry, and biology occupies a central place in the education of all STEM majors.

Following the same trend, the number of bachelor's degrees awarded by the Division has increased by 50% since 2004. During the same period, master's degrees increased by 60% and PhD degrees increased by 40%. The departments of Biology, Chemistry, Mathematics, and Physics alone accounted for 1300 bachelor degrees in 2014 (compared to 900 for the entire College of Engineering). The Natural Sciences Division is the largest major provider of STEM education at the UW and has accommodated the tremendous growth in student demand without an anywhere-near-commensurate increase in personnel and space.

Despite growing demands on their time, faculty and staff continue to improve the student experience. For example, they pioneer new instructional methods to promote student engagement in large classes, they provide authentic research experiences, and they make use of new educational possibilities offered by the Web.

Research

Researchers in the Natural Sciences are at the forefront of such diverse fields as computational neuroscience; neural engineering and machine learning; survey astronomy; ecology and climate change; renewable energy; nuclear physics; treatment of mental diseases and speech and hearing disorders; and early childhood development. In the 2013-2014 fiscal year this research was supported by $70 million in grants and contracts, most of which came from federal sources such as the National Science Foundation, the National Institutes of Health, and the Department of Energy.

The faculty counts among its members 2 MacArthur Fellows, 22 members of the National Academy of Sciences, and 27 members of the American Academy of Arts and Sciences. Physics Professor Hans Dehmelt was awarded the 1989 Nobel Prize for his pioneering work in atomic physics. Many of today's important research problems require expertise from multiple disciplines; a culture of encouraging and facilitating teamwork and collaboration is a hallmark and a major strength of UW research.

Conducting research is also an important part of science education, at both the graduate and undergraduate level. An authentic research experience is the best way for students to comprehend and appreciate the power of science and the scientific method in advancing our understanding of how the world works.

Suzanne Hawley, Divisional Dean

DEPARTMENTS
- Applied Mathematics
- Astronomy
- Biology
- Chemistry
- Mathematics
- Physics
- Psychology
- Speech and Hearing Sciences
- Statistics

STUDENTS (AUTUMN 2014)

<table>
<thead>
<tr>
<th>Undergraduate majors</th>
<th>3,938</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students</td>
<td>920</td>
</tr>
</tbody>
</table>

DEGREES GRANTED (2013-2014)

<table>
<thead>
<tr>
<th>Bachelor's degrees</th>
<th>1,887</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master's degrees</td>
<td>224</td>
</tr>
<tr>
<td>PhD degrees</td>
<td>130</td>
</tr>
</tbody>
</table>
Outreach

Besides fulfilling their traditional missions of undergraduate and graduate education and research, the Natural Sciences contribute valuable expertise and services to the local community and the state. A few examples:

- Faculty members start companies and consult for local businesses and other organizations.
- Natural Sciences departments offer opportunities for continuing education through courses and degree programs targeted at working adults.
- Psychology and Speech and Hearing Sciences offer clinical services at low cost, benefiting the public and providing invaluable learning opportunities for students.
- Astronomy organizes public viewing sessions at the Jacobsen Observatory on campus and at their state-of-the-art digital planetarium.
- Nearly all of the Natural Sciences departments have programs for K-12 teachers, including workshops during the academic year and more intensive summer institutes.
- Departments reach out to K-12 students through programs on and off campus. Statistics students tutor in local schools; mathematics students volunteer weekly through Math Circles, a program to nurture an early interest in mathematics; Astronomy offers presentations for school groups in its digital planetarium; the Botany Greenhouse offers tours for K-12 students and their teachers; and the annual Math Day draws thousands of high school students to campus.

FACULTY (AUTUMN 2014)

| 171 | Professors |
| 41  | Associate Professors |
| 44  | Assistant Professors |
| 15  | Senior Lecturers |
| 3   | Lecturers (full-time) |

SELECTED CENTERS & INSTITUTES

Astrobiology Program
UW Institute for Neuroengineering
Center for Enabling New Technologies Through Catalysis
Center for Experimental Nuclear Physics and Astrophysics
Institute for Nuclear Theory
Center for Child and Family Well-Being
Institute for Learning and Brain Sciences
Center for Statistics and the Social Sciences

Top: Astronomy faculty and students involved in the Large Synoptic Survey Telescope project.
Above, from left: High school students visit biology laboratories through an outreach program, early learning is the focus of the Institute for Learning & Brain Sciences, and researchers in the Department of Chemistry work toward solutions for defeating malaria.