MELLON COLLEGE OF SCIENCE (MCS)

MCS undergraduates are breaking the boundaries of science.

MCS undergraduates are integral parts of faculty research teams — they don't just repeat experiments that have been done before. They discover something new, publish their results in top journals and present their work at local and national conferences. They explore real-world problems that go beyond the categories simply labeled biology, chemistry, math or physics.

PROGRAMS

**Biological Sciences**
- Biological Sciences (BA or BS)
- Biological Sciences and Psychology (BS)
- Biological Sciences/Neuroscience Track (BS)
- Computational Biology (BS) (joint with SCS)
- Neuroscience (BS)

**Chemistry**
- Chemistry (BA or BS)
- Chemistry/Biological Chemistry Track (BS)

**Mathematical Sciences**
- Computational Finance (BS)
- Mathematical Sciences (BS)
- Mathematical Sciences (Computational and Applied Mathematics) (BS)
- Mathematical Sciences (Discrete Mathematics and Logic) (BS)
- Mathematical Sciences (Operations Research and Statistics) (BS)
- Mathematical Sciences (Statistics) (BS)
- Mathematical Sciences and Economics (BS)

**Physics**
- Physics (BA or BS)
- Physics/Applied Physics Track (BS)
- Physics/Astrophysics Track (BS)
- Physics/Biological Physics Track (BS)
- Physics/Chemical Physics Track (BS)
- Physics/Computational Physics Track (BS)

**Intercollege**
- Bachelor of Science and Arts (BSA)
- Science and Humanities Scholars Program (SHS, joint with DC)

FRESHMAN STUDENTS

- Biological Sciences: 32%
- Mathematical Sciences: 26%
- Chemistry: 17%
- Physics: 18%
- Undeclared: 7%

**MCS Admitted Student Statistics**

<table>
<thead>
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<th>SATCR</th>
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<th>SATWR</th>
<th>ACTE</th>
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<td>700-780</td>
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Rank 4% GPA 3.86 *Middle 50% range

More than 70% of undergraduates conduct cutting-edge research. Create new knowledge. Advance their fields. Publish results.

FACULTY

- Physics: 28%
- Chemistry: 23%
- Biological Sciences: 23%
- Mathematical Sciences: 21%
- Interdisciplinary: 5%

**Notable Faculty**

- Alison Barth, professor of biological sciences, is a recipient of the Society for Neuroscience's Research Award for Innovation in Neuroscience. Barth is an inventor of technologies that are advancing the field of brain research.

- Po-Shen Loh, assistant professor of mathematical sciences, is the academic director of the United States Mathematical Olympiad program and national lead coach of the U.S. team. He’s also founder of the crowd-sourced science and math education website Expii.com.
An Investigation of Cluster Galaxies

Models for galaxy formation and evolution predict that the dense environment of galaxy clusters (galaxies bound in orbits through the hot gas of Intracluster Mediums) will physically alter the properties of galaxies in a cluster. This research is investigating these properties in the galaxies in the Sloan Digital Sky Survey, in the redshift range.

Math-Made Materials

Materials design can be hit-or-miss, with scientists mixing materials together until they get something with interesting and commercially relevant properties. This research uses mathematical tools to explain what happens as materials are made, helping researchers create better materials used in things like batteries, fuel cells, liquid crystals and shape memory alloys.

MRI Cell Technology

Tracking cells as they move through the body has proven to be a valuable tool in understanding disease. This research uses a multifaceted MRI technology that allows the researchers to visualize cells in real-time, providing valuable information about disease progression. The technique has been used to detect early stages of graft rejection in kidney, lung and heart transplant models.