

Physics bachelor's degrees in the US trend downward **FREE**

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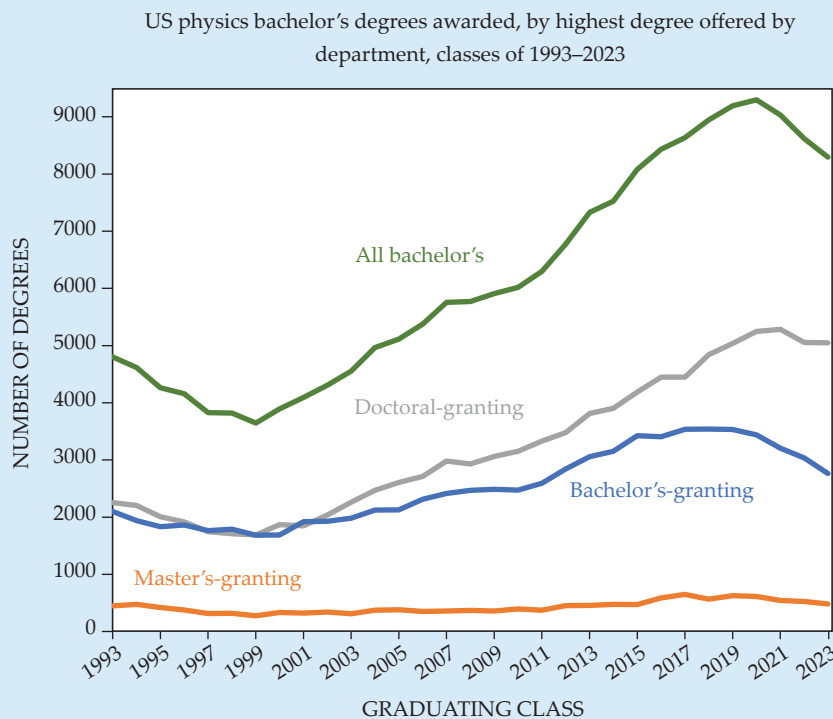
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Physics bachelor's degrees in the US trend downward

For the third year in a row, the number of physics bachelor's degrees awarded by US institutions has declined. In the 2022–23 academic year, 8295 students received their degree, a drop of 11% from the all-time high of 9296 in 2020, according to a report released in September by the statistics team at the American Institute of Physics (AIP; publisher of *PHYSICS TODAY*).

Physics departments whose highest degree offered was a bachelor's or master's experienced the steepest declines, of more than 20%. Departments that offered a PhD awarded about 4% fewer bachelor's degrees in 2023 than in 2020.

The number of US bachelor's degrees awarded in the broader physical sciences declined about 10% from 2018 to 2022, according to data from the National Center for Education Statistics. About 30% of those degrees were in physics. The reason for the decrease is not clear, says Patrick Mulvey, research manager for



AIP's statistics group. Additional data on the recent decline in physics bachelor's degrees awarded by department type and on the number of physics degrees awarded in the 2022–23 academic year by

institution can be found in the report at <https://ww2.aip.org/statistics/roster-of-physics-department-with-enrollment-and-degree-data-2023>.

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FYI SCIENCE POLICY BRIEFS

AGU offers ethics framework for geoengineering research

The American Geophysical Union released a framework on 22 October proposing ethical principles for geoengineering research. Also known as climate intervention, geoengineering involves large-scale attempts to alter the climate system with the purpose of countering climate change. The unintended consequences of large-scale deployment are largely unknown, and any research into it must be grounded in sound ethical principles, the report states. "The fundamental issue with this field is public trust, and so we offered some ways in which we think public trust would be enhanced," said Daniele Visioni, one of the framework's coauthors.

The key principles emphasize responsible assessment of physical, environmen-

tal, and social consequences of the research and propose that potentially impacted groups be included in the discussion of research purposes and design. Visioni noted that several proposed small-scale outdoor experiments, such as the Harvard SCoPEX program and the University of Washington CAARE project, have been blocked by local opposition despite meeting the current legal requirements for environmental reviews and the like. He argued that the framework provides a path for projects to avoid such obstacles by proactively engaging stakeholders earlier in the process.

Other principles include making funding and research processes transparent, requiring reviews and approvals from an independent body before research begins, and establishing mechanisms for accountability to public institutions and representatives. Eventually, Visioni hopes the prin-

ciples are used not just to block unethical research methods but also to foster more projects by providing researchers with a better understanding of responsible practices, he said. —CZ

White House releases national plan for spectrum R&D

The White House Office of Science and Technology Policy published its National Spectrum Research and Development Plan on 9 October. The strategy outlines priorities for fundamental and applied spectrum research. It also lays out strategies for the public and private sector to work together to maximize the usefulness of the US's finite RF spectrum, which is used in a wide range of wireless communications.