

CALIFORNIA INSTITUTE OF TECHNOLOGY

GRADUATE PROGRAM APPLIED PHYSICS & MATERIALS SCIENCE

$\langle \text{AP} | \hat{h} | \text{MS} \rangle$

The Applied Physics and Materials Science programs at Caltech share a dedication to answering the most important questions and delivering lasting impact in broad areas of technological importance. Research topics in the department span from bulk metallic glass and nanomechanics, to photonics and optoelectronics, to plasma physics and energy technologies, to biophysics and biomechanics.

Applied Physics is a multidisciplinary field of study that lies at the intersection of physics and many other fields of science and engineering. Originally encompassing semiconductor devices and lasers, today it includes subjects spanning quantum engineering to physical biology, and reflects new and varied within science and technology.

The Applied Physics graduate program at Caltech is highly multidisciplinary and is designed to train students in a broad spectrum of physics and engineering fields at an advanced level. Our goal is to cultivate abilities in our graduates to apply this knowledge throughout their lives to make technological and scientific breakthroughs at the edge of current knowledge.

www.aphms.caltech.edu

ADMISSIONS INFORMATION

www.gradoffice.caltech.edu

Materials Science emphasizes the chemistry, physics, and mathematics of materials. The Materials Science graduate program is designed to give students an understanding of general phenomena in synthesis–structure–property relationships in all materials, plus a detailed understanding of phenomena for at least one particular class of materials. Graduates have pursued careers in research in academia, government, and industry, in the operation and control of manufacturing processes, and in management and development positions in the materials industry.

GRADUATE DEGREE PROGRAMS

Though there is not a terminal master's degree program, students in Applied Physics and Materials Science earn their master's degree on their way to their doctorate.

Applied Physics

Ph.D. Degree

Materials Science

Ph.D. Degree

Caltech

⌘ DIVISION OF ENGINEERING AND APPLIED SCIENCE



RESEARCH AREAS

Applied Physics

- Biophysics
- Computational Physics
- Gas and Fluid Mechanics
- Photonics, Optics, and Quantum Electronics
- Plasma Physics
- Solids and Materials
- Solid State Devices
- Quantum Information Devices

Materials Science

- Ceramics and Composites
- Computational Materials Science
- Energy Materials and Storage
- Metamaterials and Metasurfaces
- Nanostructures
- Photovoltaic Materials and Devices
- Thermodynamics and Phase Transformations

All applications must be submitted online through the Graduate Admissions website. The graduate programs in Applied Physics and Materials Science are distinct and admissions are decided by separate committees. Upon reviewing an application, the admissions committee of the option to which it has been submitted may recommend that it also be reviewed by another option which is deemed more suitable.

All qualified applicants will be considered. Women and members of minority groups are especially encouraged to apply. Financial assistance for application fees is available for those who qualify.

OPTIONS MANAGER

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