

# MATERIALS SCIENCE AND ENGINEERING

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## Dual-Titles

### Dual-title Ph.D. in Materials Science and Engineering and Biogeochemistry

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

#### Admission Requirements

Students must apply and be admitted to the graduate program in Materials Science and Engineering and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Biogeochemistry dual-title program. Refer to the Admission Requirements section of the Biogeochemistry Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/biogeochemistry/>). Doctoral students must be admitted into the dual-title degree program in Biogeochemistry prior to taking the qualifying examination in their primary graduate program.

#### Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Materials Science and Engineering. In addition, students must complete the degree requirements for the dual-title in Biogeochemistry, listed on the Biogeochemistry Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/biogeochemistry/>).

The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Materials Science and Engineering and must include at least one Graduate Faculty member from the Biogeochemistry program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Materials Science and Engineering and Biogeochemistry. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Materials Science and Engineering and Biogeochemistry dual-title Ph.D. student must include at least one member of the Biogeochemistry Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Biogeochemistry, the member of the committee representing Biogeochemistry must be appointed as co-chair. The Biogeochemistry representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Materials

Science and Engineering and Biogeochemistry. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.