

Science & Mathematics Education

Experience.
Explore.
Discover.
Achieve.

Departments
and Programs
in the College
of Science

Biochemistry &
Biophysics

Biology

Botany & Plant
Pathology

Chemistry

Environmental
Sciences

Geosciences

Mathematics

Microbiology

Molecular &
Cellular Biology*

Physics

Pre-professional
Programs in the
Health Sciences

Professional
Science Masters*

Science &
Mathematics
Education*

Statistics*

Zoology

*graduate program only

...teaching science and math. Teaching young people demands dedication, but it can be a most rewarding and challenging career. Do you enjoy science and mathematics? Are you enthusiastic about learning and sharing your knowledge and discoveries with others? A teacher should have a keen mind, a desire for continued learning, the ability to stimulate the younger mind, a sense of humor, and a good mental disposition.

Good teachers of science and mathematics are in short supply, and the nation-wide demand for qualified teachers is increasing, compounded by competition from industry for qualified graduates in those fields

Career Opportunities

Teaching is the largest single profession in the world, with more than a million secondary-school teachers in the United States alone. As respected members of their community, teachers are often asked to assume positions of leadership in many areas. The field of education prepares young people for other positions outside the classroom.

A teaching career may lead to an administrative position as department head, principal, or superintendent of a school district. In recent years, teachers are finding careers as educators in business and industry.

The professional teacher education program in science and mathematics at Oregon State University leads to the Oregon Initial Teaching License and a master's in science or mathematics education. The program emphasizes the development of a pre-service teacher's ability to transform what he or she knows to teaching strategies that make knowledge accessible to all learners. Participants are provided opportunities to deal with diverse learners in various settings with talented public school teachers serving as mentors.

The program begins summer term with a three-week intensive course that includes a practicum in which pre-service teachers plan and teach a mini-unit to middle school students. This is followed by September Experience, a full-time, month-long practicum in a classroom. During fall term, pre-service teachers teach in their classroom in the morning and take classes at OSU in the afternoon. During winter term, the focus is on coursework, a school practicum, and preparation for full-time student teaching spring term.

Entry requirements for the professional teacher education programs include a bachelor's degree or probable completion by the time an applicant would enter the program, a combined GPA of 3.00 on the last 90 quarter credit hours of graded undergraduate work, and all work completed thereafter, competence in the subject area as demonstrated by course work, verified successful experience working with children or school-age youth in an educational or social agency, and appropriate answers to "good character" questions required by the Oregon Teacher Standards and Practices Commission. Licensure as a teacher in Oregon requires passing scores on the "teacher tests".

The professional teacher licensure program in science and mathematics education offers two options: elementary/middle (grades 3–10) or middle/high school authorization (grades 5–12) in mathematics, biology, chemistry, integrated science, and physics. Appropriate undergraduate majors include the B.A. or B.S. in chemistry or physics, the B.S. in biology, mathematics, environmental sciences, general science-earth science option or pre-education option, or zoology.

Students may enroll in SED 309 and SED 409 for placement in the teaching level of interest (elementary, middle, or high) in a science or mathematics setting or for experience to meet the school-aged youth requirement for application to the licensure program.

High school students can prepare to become successful secondary school science and math teachers by taking as many science and mathematics courses as possible in high school. Experience in working with children or young adults is also recommended.



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Course of Study

The Professional Teacher Education Licensure Program is a 10 1/2 month program culminating in a master's degree in science or mathematics education. The program begins in August with a three-week intensive course that prepares students for a September practicum in middle school. The fall term consists of spending mornings at a school site and taking OSU classes in the afternoon. During the fall term, you will complete your first work sample. During winter term you take courses at OSU and spend one to two days each week at a new school site. You will also begin planning your second work sample. Spring term consists of a full-time student teaching experience plus a weekly seminar at OSU.

Sample Curriculum

Summer Term (August–September)		credits
Mathematics or Science Methods/Practicum I	SED 552 or 553	3
Summer Practicum	SED 509	2
September Experience	SED 509	3
Graduate subject matter course (if needed)*		3

Fall Term (September–December)		
Mathematics or Science Methods/Practicum II	SED 554 or 555	3
Science or Mathematics Pedagogy I	SED 573 or 574	3
Technology and Pedagogy I	SED 571	1
Part Time Student Teaching Practicum	SED 509	3
Graduate subject matter course (if needed)*		3

Winter Term (January–March)		
Mathematics or Science Methods/Practicum III	SED 556 or 557	3
Advanced Topics in Science/Math: Pedagogy	SED 589 or 599	3
Technology and Pedagogy II	SED 572	1
Psychology of the Adolescent	ED 512	3
Analysis of Classrooms I	SED 511	3
Graduate subject matter course (if needed)*		3

Spring Term (April–June)		
Analysis of Classrooms II	SED 515	3
Professional Internship: Full Time Student Teaching	SED 510	9
Professional Development & Practicum	SED 581 or 592	3

*Note: Students are strongly encouraged to complete some of the graduate subject matter classes prior to fall term. All science students must take at least one History of Science course as part of this requirement.

What to know about Oregon State University

Head Advisor

College of Science
128 Kidder Hall
541-737-4811

OSU Admissions
104 Kerr Administration
541-737-4411
800-291-4192

OSU Financial Aid
Student Employment
Loans & Scholarships
College Work Study
218 Kerr Administration
541-737-2241

OSU Registrar
102 Kerr Administration
541-737-4331

OSU Housing
102 Buxton Hall
541-737-4771

OSU Website
<http://oregonstate.edu>

For more information, please contact:

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Section 504 of the Rehabilitation Act of 1973.

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