Department of Science and Mathematics Education

Professional Teacher Licensure Program Prerequisite Courses

All teacher licensure candidates must complete the following prerequisites:

- Before applying:
  - **Appropriate content courses** in math/science as shown on the advising sheets. Note: It is possible to be finishing up content courses after applying but before beginning the program. These courses should be noted on your Content Knowledge Form included in your application.
- Before the program begins (end of July):
  - **60 hours of reflective classroom experience** (TCE 309/409 or the equivalent)
  - **SED 412/512** (Technology Foundations for Teaching Math and Science) – offered Summer and Winter terms.
  - **SED 413/513** (Inquiry in Science and Science Education) **or SED 414/514** (Inquiry in Mathematics and Mathematics Education) – offered Summer and Winter terms.
- Before fall term begins (end of September):
  - **The "teacher tests":** CBEST, ORELA (for middle school), Pearson NES (subject exam(s)). Please visit the program website for up-to-date testing information.
  - **Protecting Student and Civil Rights in the Educational Environment subtest:** The ORELA Protecting Student and Civil Rights in the Educational Environment Examination is required of candidates seeking Oregon licensure.
  - **A course in Adolescent Psychology** (ex. TCE 512, HDFS 313, HDFS 229 at LBCC, or a similar course at another institution)

Graduate Subject Matter Courses

As part of the required coursework for the MS in Science or Mathematics Education, all candidates are required to take three graduate subject matter courses. Although it is possible to take these courses during the licensure program (one course during summer, fall, and winter terms), it is recommended that some or all of these courses be completed before the program begins. Please note that university regulations stipulate that courses may not be used for multiple degrees. Therefore a graduate subject matter course used to fulfill requirements for another masters program cannot be added to your program of study for this program. Undergraduates may petition to reserve a course for graduate credit as long as it is not included in the bachelor's degree.

Science:

Candidates seeking the MS in Science Education must complete at least one course in History of Science (HSTS) or Philosophy of Science (PHL). If one of these courses was taken as part of the candidate's undergraduate program, that course fulfills the requirement but does not count towards the graduate subject matter requirement. In that case, the candidate must still take three graduate level subject matter courses.

Many candidates who are seeking endorsements in Biology, Chemistry, or Physics can also qualify for an endorsement in Integrated Science as long as they complete coursework in geoscience. Graduate subject matter courses that count towards geoscience credit have asterisks.

Courses that have been used in the past to fulfill the graduate subject matter course requirement in science include (but are not limited to) the following:

Example Science Graduate Subject Matter Courses

COURSE NUMBER	COURSE TITLE
BB 550	General Biochemistry
BI 545	Evolution
BI 560	Cell Biology
CSS 599	Soil Science for Teachers
HSTS 514	History of Twentieth-Century Science
HSTS 519	Studies in Scientific Controversy: Method and Practice
HSTS 525	History of the Life Sciences
HSTS 570*	Ecology and History: Landscapes of the Columbia Basin
GEO 501*	National Park Geology and Preservation (Bob Lillie)
PHL 543	World Views and Environmental Values
PHL 570	Philosophy of Science
SED 599*	Communicating Ocean Sciences
Z 581	Biogeography

Please check the current OSU course catalog for other options.

Mathematics:

Candidates seeking the MS in Mathematics Education must complete MTH 491/591 and MTH 492/592. If these courses were taken as part of the candidate's undergraduate program, that fulfills the requirement for the courses but does not count towards the graduate subject matter requirement. In that case, the candidate must still take three graduate level subject matter courses.

Courses that have been used in the past to fulfill the graduate subject matter course requirement in mathematics include (but are not limited to) the following:

Example Mathematics Graduate Subject Matter Courses

COURSE NUMBER	COURSE TITLE
MTH 591	Algebra and Geometric Transformations
MTH 592	Algebra and Geometric Transformations
MTH 593	Algebra and Geometric Transformations
MTH 683	Graphics Calculators in Pre-calculus Mathematics
MTH 689	History of Mathematics

Please check the current OSU course catalog for other options.

For more information, please contact the Licensure Coordinator at:
LearnToTeach@science.oregonstate.edu or 541-737-9286