

# WATER RESOURCES ENGINEERING GRADUATE MAJOR (MS, PHD)

## Graduate Areas of Concentration

*Groundwater engineering, surface water engineering, watershed engineering*

A graduate major in Water Resources Engineering for the master of science and doctor of philosophy degree programs is offered with specialization in groundwater engineering, surface water engineering, or watershed engineering. Seminars, courses, and reading and conference courses in water resources engineering are offered by the Water Resources Graduate Program.

The graduate major options are structured around courses designed to broaden the student's education in one of the above areas of concentration. University departments and schools that offer courses related to water resources engineering include the departments of Biochemistry and Biophysics; Biological and Ecological Engineering; Botany and Plant Pathology; Chemistry; Crop and Soil Science; Geosciences; Mathematics; Rangeland Ecology and Management; Statistics; the School of Forest Engineering, Resources and Management; the School of Biological and Population Health Sciences; the School of Chemical, Biological, and Environmental Engineering; the School of Civil and Construction Engineering; the School of Mechanical, Industrial, and Mechanical Engineering; and the College of Earth, Ocean, and Atmospheric Sciences. About 20 departments conduct teaching or research programs in water resources.

For more information, contact [gradwater\\_director@oregonstate.edu](mailto:gradwater_director@oregonstate.edu) or visit <http://oregonstate.edu/gradwater/>

Code	Title	Hours
<b>Core Courses</b>		
WRP 507	SEMINAR	1
or WRS 507	SEMINAR	
WRP 505	READING AND CONFERENCE	1
or WRE 505	READING AND CONFERENCE	
or WRS 505	READING AND CONFERENCE	
WRP 507	SEMINAR	1
or WRE 507	SEMINAR	
or WRS 507	SEMINAR	
WRP 524	SOCIOTECHNOLOGICAL ASPECTS OF WATER RESOURCES	3
<b>Groundwater Engineering</b>		
BEE 512	PHYSICAL HYDROLOGY	3
BEE 529	BIOSYS MODELING TECHNIQUES	3
BEE 533	IRRIGATION SYSTEM DESIGN	4
BEE 542	VADOSE ZONE TRANSPORT	4
CE 514	GROUNDWATER HYDRAULICS	4
ENVE 554	GROUNDWATER REMEDIATION	4
GPH 665	GEOPHYSICAL FIELD TECHNIQUES	3
<b>Surface Water Engineering</b>		
BEE 512	PHYSICAL HYDROLOGY	3
BEE 529	BIOSYS MODELING TECHNIQUES	3

BEE 533	IRRIGATION SYSTEM DESIGN	4
BEE 544	OPEN CHANNEL HYDRAULICS	4
BEE 546	RIVER ENGINEERING	4
CE 518	GROUNDWATER MODELING	4
CE 543	APPLIED HYDROLOGY	4
FE 536	FOREST DISTURBANCE HYDROLOGY	3
<b>Watershed Engineering</b>		
ATS 564	INTERACTIONS OF VEGETATION AND ATMOSPHERE	3
BEE 512	PHYSICAL HYDROLOGY	3
BEE 525	STOCHASTIC HYDROLOGY	3
BEE 529	BIOSYS MODELING TECHNIQUES	3
BEE 549	REGIONAL HYDROLOGIC MODELING	3
CE 517	HYDRAULIC ENGINEERING DESIGN	4
CE 547	WATER RESOURCES ENGINEERING I: PRINCIPLES OF FLUID MECHANICS	4
CE 548	WATER QUALITY DYNAMICS	3
ENVE 521	DRINKING WATER TREATMENT PROCESSES	4
ENVE 531	FATE AND TRANSPORT OF CHEMICALS IN ENVIRONMENTAL SYSTEMS	4
ENVE 532	AQUATIC CHEMISTRY: NATURAL AND ENGINEERED SYSTEMS	4
FE 530	WATERSHED PROCESSES	4
FE 532	FOREST HYDROLOGY	4
Total Hours		106

**Major Code: 3100**