

Table 2: Core Curriculum for Water Resources Science

Course Number	Course Title	Credits	Required	AIH Category
Core Courses (6 cr) + WRS requirements				
WRE 507	Water Resources Seminar (Fall)	1	yes	
WRP 599	Socio-technical Aspects of Water Resources (Fall)	3	yes	3
FE/WRS 505/507	Hydrology Seminar & Journal Club (Spring)	2	yes	
BRE 512	Physical Hydrology (Fall)	3	yes	1
Water Resources Science Options				
*ATS 520	Principles of Atmospheric Science	4		2
WRP 507	Oregon Water Policy & Law	2	rec.	
ATS/FS 564	Integration of Vegetation and Atmosphere			2
BRE 525	Stochastic Hydrology	3		1
*BRE 533	Irrigation System Design	4		1
BRE 542	Vadose Zone Transport	4		1
BRE/CE 544	Hydraulics of Open Channels	4		1
* BRE 548	Non-point Source Pollution Assessment and Control	3		1
BRE 549	Regional Hydrologic Modeling	3		1
BRE 550	Watershed Modeling	3		1
CE 513	GIS in Water Resources	3		2
* CE 517	Hydraulic Engineering Design	4		1
CE 518	Groundwater Modeling	3		1
CE 543	Applied Hydrology	4		1
CE 546	River Engineering	4		1
CE 547	Water Resources Engineering 1: Principles of Fluid Mechanics	4		2
CE 548	Water Quality Dynamics	3		1
CSS 513	Properties, Processes, and Functions of Soils	4		3
CSS 523	Principles of Stable Isotopes	3		3
* CSS 535 + 536	Physics of Soil Ecosystems + lab	5		1
*CSS 545 + 546	Geochemistry of Soil Ecosystems + lab	5		3
*CSS 555	Biology of Soil Ecosystems	4		3
* ENVE 521	Water and Wastewater Characterization	4		1
*ENVE 531	Fate and Transport of Chemicals in Environmental Systems	4		2
ENVE 532	Aqueous Environmental Chemistry	4		2
ENVE 534	Physical and Chemical Processes for Water Quality Control	4		1
ENVE 536	Laboratory; Aqueous Environmental Chemistry	1		2

ENVE 554	Groundwater Remediation	4		1
*ENVE 556	Sustainable Water Resources Development	3		2
ENVE 699	Multiscale analysis of natural and Engineered Systems	3		2
* FE 530	Watershed Processes	4		1
FE 532	Forest Hydrology	3		1
FE 533	Forest Hydrology Laboratory	1		1
*FE 534	Forest Watershed Management	4		2
FE 535	Water Quality and Forest Land Use	3		3
FE 537	Hillslope Hydrology	4		1
FE 538	Field Hydrology	3		1
FE 630	Special Topics in Forest Hydrology	1-3		1
FS 561	Physiology of Woody Plants	3		2
*FW 556	Limnology	5		2
*FW 579	Wetlands and Riparian Ecology	3		2
FW 580	Stream Ecology	3		2
*GEO 530	Geochemistry	3		3
*GEO 531	Applied Climatology	3		2
*GEO 532	Applied Geomorphology	3		2
GEO 539	Snow Hydrology	3		1
*GEO 544	Remote Sensing	3		3
GEO 548	Advanced Field Research in Geomorphology and Landscape Ecology	3		2
GEO 582	Geomorphology of Forests and Streams	3		2
*GEO 589	Role of Fluids in Geologic Processes	3		2
GEO 691	Mass and Heat Transport in the Environment	4		1
GPH 665	Geophysical Field Techniques	3		
*MS 548	Microbial Ecology	3		2
OC 670	Fluid Dynamics	4		2
RNG 555	Riparian Ecology and Management	3		2

*4XX/5XX slash course