HYDROLOGY (HYDR)

HYDR 404 (s) Special Topics
Credit arranged

HYDR 409 Quantitative Hydrogeology
3 credits
Joint-listed with HYDR 509
A rigorous introduction to the description of flow in porous media; the basic equations of potential flow theory as they relate to groundwater problems, with application to common engineering problems encountered by hydrogeologists and engineers; dimensional analysis, properties assignment, and heterogeneous systems. Additional reading, presentations, and/or written reports of assigned literature required for graduate credit.
Prereq: MATH 275, STAT 251 or STAT 301

HYDR 412 Environmental Hydrogeology
3 credits
Joint-listed with HYDR 512
Methods of hydrogeologic site characterization for the delineation of environmental problems. Additional independent research paper required for graduate credit.
Prereq: GEOL 309

HYDR 496 Hydrogeology Senior Thesis
3 credits
Completion of original research and report. Course is taken over two semesters; first semester is graded IP until completion of second semester.
Prereq: GEOL 309 or HYDR 409/HYDR 509 and GEOL 410

HYDR 499 (s) Directed Study
Credit arranged

HYDR 500 Master's Research and Thesis
Credit arranged

HYDR 501 (s) Seminar
Credit arranged
Graded P/F.
Prereq: Permission

HYDR 502 (s) Directed Study
Credit arranged

HYDR 503 (s) Workshop
Credit arranged

HYDR 504 (s) Special Topics
Credit arranged

HYDR 509 Quantitative Hydrogeology
3 credits
Joint-listed with HYDR 409
A rigorous introduction to the description of flow in porous media; the basic equations of potential flow theory as they relate to groundwater problems, with application to common engineering problems encountered by hydrogeologists and engineers; dimensional analysis, properties assignment, and heterogeneous systems. Additional reading, presentations, and/or written reports of assigned literature required for graduate credit.
Prereq: MATH 275, STAT 251 or STAT 301

HYDR 512 Environmental Hydrogeology
3 credits
Joint-listed with HYDR 412
Methods of hydrogeologic site characterization for the delineation of environmental problems. Additional independent research paper required for graduate credit.
Prereq: GEOL 309

HYDR 576 Fundamentals of Modeling Hydrogeologic Systems
3 credits
Development and application of models representing physical systems, with particular emphasis on groundwater flow. Development and solution of the basic equations of potential flow will be covered, along with their assumptions and limitations. Properties assignment, parameter sensitivity, and dimensional analysis will also be discussed. The course will emphasize when modeling is appropriate, how to design a model, and how properties should be selected to achieve meaningful results. Cooperative: open to WSU degree-seeking students.
Prereq: MATH 275 or Permission

HYDR 598 (s) Internship
Credit arranged

HYDR 599 (s) Research
Credit arranged
Research not directly related to a thesis or dissertation.
Prereq: Permission