

Course Title	Applied Hydrology		
Instructor	Shigeya MAEDA, Koshi YOSHIDA		
Code	MA052700	Semester	2nd (Oct-)
Credit(s)	1	Day/Period	Tue, 3
Description Code			
Outline	Topics of applied hydrology such as restoration of water quality and fish habitat in rivers and canals, numerical simulation of in-stream, surface and subsurface flows, etc. are explained.		
Keywords	Water balance, runoff, water quality, environmental conservation, habitat		
Goals	<p>Understanding methods for conserving water quality and fish habitat in water bodies</p> <p>Understanding concepts of models for simulating water flow and transport phenomena</p> <p>Diploma Policy: 1 Academic and research skills in the specialized field</p>		
Course Plan	<ol style="list-style-type: none"> <li>1. Introduction, governing equations of in-stream flow</li> <li>2. Water quality management in a river</li> <li>3. Evaluation of fish habitat in a river</li> <li>4. Evaluation of fish habitat in eco-friendly physical structures in a canal</li> <li>5. Basic of diffuse model</li> <li>6. Nutrient transfer model</li> <li>7. Kinematic wave model</li> <li>8. Water quality in Lakes</li> </ol>		
Advice for Preview and Review	Read materials offered in the class repeatedly to fully understand the contents. It is recommended to write down equations in mathematical programming and governing equations by hand so that you can get familiar with the logic used in the framework and ph		
Prerequisite	Knowledge of hydrology, hydraulics and basic math is necessary, because the lectures in this class are based on the basic knowledge of the subjects.		
Grading Criteria	Report. No examination.		
Texts/References	Reference: Brutsaert, W.(2005), Hydrology: An Introduction, Cambridge, 8,399yen.		