

## Manajemen Sumber Daya Air

<b>Course Brief Description:</b>	This lecture discusses the definition and scope of Water Resources Management activities; basic principles, principles; institutions and introduction of regulations, legislation related to Water Resources Management, water source supply systems, types and methods of water demand estimates (irrigation and non-irrigation), data requirements for Water Resources Management, determination of reservoir capacity, reservoir release regulation method, optimization of water allocation models, macro and micro scale flood control, environmental aspects in Water Resources Management.
<b>Course Learning Objectives:</b>	Students will understand the basic principles of development and management of water resources by taking into account the hydrological aspects, hydraulics, patterns of meeting needs, related institutions and laws, and the development of strategies for developing water resources.
<b>Related Expected Learning Outcomes (ELOs):</b>	<ul style="list-style-type: none"> <li>• ELO-4: Use quantitative analysis, information technology and critical thinking in agricultural engineering profession.</li> <li>• ELO-8: Demonstrate capacity in operating agricultural engineering related business either as producer or service provider.</li> <li>• ELO-9: Analyze the impact of engineering solutions to environment and society using multidisciplinary approach.</li> <li>• ELO-10: Explore and develop effective solutions related to agricultural engineering issues</li> </ul>
<b>Teaching Method</b>	<ul style="list-style-type: none"> <li>• Lecture and in-depth discussion</li> <li>• Tutorial</li> <li>• Independent assignment</li> </ul>
<b>Grading Policy</b>	<ul style="list-style-type: none"> <li>• Quiz and Assignment : 20%</li> <li>• Exam : 80%</li> </ul>
<b>Reference</b>	UU No. 7 th 2004 ttg SD Air, Grigg, N.S., 1996. Water Resources Management: Principles, Regulation, and Cases. New York: McGraw-Hill.
<b>Lecturer Name</b>	<ul style="list-style-type: none"> <li>• Dr. Ir Sitti Nur Faridah, MP.</li> <li>• Dr. Suhardi, STP., MP.</li> </ul>

### Course Outline

Lecture:	Topic:
1	Pendahuluan

2,3	Kejadian air dan fungsinya dalam system alam	Quiz 1
4	Sumberdaya air dan potensinya	
5,6	Sistem dan Infrastruktur keairan	
7	Fungsi Air dalam Sistem Sosial	
8	Kondisi dan Tantangan dalam Manajemen SD Air	Assignment 1
9	Pendekatan Perencanaan Berkelanjutan dalam SD Air	
10	Penilaian terhadap Pengelolaan Sumber Daya Air	
11	Pengelolaan Sumber Daya Air Terpadu	Quiz 2
12	Instrumen-instrumen dalam Manajemen	
13	Pengelolaan Sumber Daya Air Berdasarkan UU SD Air	
14	Pengelolaan Sumber DayaAir dalam Kerangka OTODA	Assignment 2
15	Optimasi Pengelolaan Sumber Daya Air	
16	Final Exam	