



WATER ENGINEERING AND MANAGEMENT

DEPARTMENT OF CIVIL AND
INFRASTRUCTURE ENGINEERING

ABOUT THE PROGRAM

The Water Engineering and Management (WEM) field imparts education and training toward an understanding of the complexity of water use and water resources management problems. It offers a balanced curriculum, which covers both the engineering and management aspects of water resource development. Students are trained to acquire knowledge and hands-on practice in tools and techniques to come up with viable and sustainable solutions within the framework of the integrated water resources management at the river basin scale.

AREAS OF SPECIALIZATION

Water Engineering and Management covers five major areas – Agricultural Water, Coastal Water, Urban Water, Water Resources, and Extreme Events and Risk Management. The courses are designed in such a way that students can specialize according to their interests. Courses on watershed hydrology, hydrodynamics, water resources systems, and concepts in water modeling provide the solid foundation to the advanced courses. The field emphasizes on tools and techniques in resource planning and management in addition to laboratory and field practices.

Agricultural Water courses impart knowledge and skills necessary for the development and management of water resources for agriculture.

Coursework and research in **Coastal Water** cover studies of wave characteristics and their action on beaches, coastal sedimentation, estuarine hydraulics and the applied aspects of coastal zone engineering and management.

Urban Water courses relate to water supply and sanitation, storm water, and domestic wastewater and urban drainage for sustainable management of urban areas.



AREAS OF SPECIALIZATION

Courses in **Water Resources** focus on techniques to assess the occurrence and availability of surface and groundwater. Students acquire a sound understanding of basic principles in river engineering and modeling, water resources planning, conjunctive use of surface and groundwater; integrated water resources management and social and environmental impact assessment of water resources projects.

Research in the area of **Extreme Events and Risk Management** includes river flow analysis, and flood control and mitigation, flood modeling and forecasting, flood plain development and



PREFERRED BACKGROUND

Master Program:
Undergraduate degree in Civil or Agricultural Engineering; other relevant engineering fields and applied sciences are considered on case-to-case basis

Doctoral Program:
Master degree in fields related to Water Engineering and Management

ELIGIBILITY REQUIREMENT

- ▶ For the regular Master's program, an applicant must:
hold a Bachelor degree (normally from a four-year program), or its equivalent, in an appropriate field of study from an institution of good standing acceptable to AIT;
have undergraduate grades significantly above average; the minimum cGPA requirement for admission to the Master's Program is 2.75 or equivalent, at the Bachelor degree level

For the regular Doctoral degree program, an applicant must:

- ▶ have strong academic records (both undergraduate and graduate) and normally hold a four-year bachelor's degree, and a Master's degree, preferably with a combination of course and thesis work, from an institution of good standing, acceptable to AIT. The minimum cGPA requirement for admission to the doctoral program is 3.50 or equivalent, at the Master's degree level.
- ▶ submit a brief outline of dissertation research proposal (5-10 pages) including the required research facilities, if necessary.
- ▶ Two recommendation letters.

- ▶▶ English Proficiency Requirement: AIT-EET:6 or IELTS-Academic:6 (writing 6) or TOEFL Paper: 550 (writing 59-61) or TOEFL CBT: 213 (writing 25-26); TOEFL IBT: 80 (writing 21-23);



CONTACT US

Ms. Yanee
Water Engineering and Management (WEM)
Department of CIE
Phone: +66 (0)2 524 6056
Email: yanee@ait.asia

