

# **Master Program in Water Resources and Hydropower Engineering**

- School of Water Resources and Hydropower Engineering

## **1. Program title**

Program title: Water Resources and Hydropower Engineering

## **2. Program objectives**

The program objectives are to produce graduates with:

1. In depth advanced knowledge of core disciplines in water resources and hydropower engineering;
2. Breadth in integrative skills to apply the knowledge gained in the survey, planning, design, construction and management of hydropower projects;
3. Appreciation of interactions between engineering, business and technology in modern society;
4. Drive for life-long learning and continuous self development;
5. Understanding of their role as hydropower engineers in the development of society at the national and global level.

## **3. Learning Outcomes**

The student learning outcomes are:

1. Apply knowledge of mathematics, science and engineering;
2. Design and conduct experiments, analyze, interpret data and synthesize valid conclusions;
3. Design a system, component, or process, and synthesize solutions to achieve desired needs;
4. Identify, formulate, research through relevant literature review, and solve engineering problems reaching substantiated conclusions;
5. Use the techniques, skills, and modern engineering tools necessary for engineering practice with appropriate considerations for public health and safety, cultural, societal, and environmental constraints;
6. Communicate effectively; (listening, writing and speaking skills) Recognize the need for, and have the ability to engage in life-long learning;
7. Understand the impact of engineering solutions in a societal context and to be able to respond effectively to the needs for sustainable development;
8. Function effectively within multidisciplinary teams and understand the

fundamental precepts of effective project management;

9. Understand professional, ethical and moral responsibility in the workplace.

#### 4. Academic schedule and modular credit requirements

Academic schedule: 2 years

#### 5. Degree conferred

The Master of Engineering will be conferred.

### Curriculum in Water Resources and Hydropower Engineering

课程类别	课程编号	课程名称	英文名称	学分	学时	学期	是否必修	备注	
学位课程	公共必修课	中国概况	Introduction to china	4	72	1	是	不少于8学分	
		汉语综合	Comprehensive Chinese	2	36	1	是		
		运筹学	Operational Research	3	54	1	是		
	专业必修课	43011504	工程经济学	Engineering Economics	2	36	1	是	不少于16为学分
		43011505	水资源系统规划与管理	Water Resources System Planning and Management	3	54	1	是	
		43011507	现代水利水电工程施工技术	Modern Construction Techniques for Hydropower Engineering	3	54	2	是	
		43011508	国际工程合同管理	Contract Management	2	36	2	是	
		43011506	高等坝工学	Advanced Dam Engineering	3	54	2	是	

		430115 11	高等水文学	Advanced Hydrology	3	54	2	是	
选修课		202060 62	水文水利计算	Water Hydrology Calculations	2	36	1	否	不少于 4 学分
		202060 19	流域综合规划	Integrated Watershed Planning	2	36	2	否	
		430115 03	节水灌溉原理与方法	Principles and Methods of Water Saving Irrigation	2.5	45	1	否	
			水文预报	Hydrologic Forecast	2	36	2	否	
			水文统计	Hydrologica l Statistics	2	36	2	否	
		430115 24	工程泥沙及取水工程	Engineering Sediment and Intake Works	2	36	2	否	
必修环节		430115 99	1、专业实践 2、设计院专家交流 3、信息检索讲座	1. Professional Practice 2. Experts Communica tion 3. Information Retrieval Lecture	6	/	2	是	
			1、开题报告 2、论文中期报告	1.Report of dissertation 2.Midterm review of dissertation	/	/	2	是	

**Contact Information:**

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