PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL ENGINEERING
ABET COURSE SYLLABI

ICH2514 URBAN HYDRAULIC

Credits and contact hours:	10 UC credits/10 hours (4 h Lectures ; 0,5 h. Computer labs and 5.5 h. Independent learning experiences)
Instructor's name:	Jorge Gironás.
Course coordinator's name	Jorge Gironás.
Textbook:	MOP (2013) Manual de Drenaje Urbano (Urban Drainage Manual). Dirección de Obras Hidráulicas, Ministerio de Obras Públicas.
Course Catalog Description:	This course is dedicated to the quantitative and qualitative study of urban water systems including (potable water, domestic wastewater and stormwater). The course focuses on techniques and technologies of sustainable urban water management.
Prerequisite Courses:	ICH 2114 Hydraulic Engineering
Co-requisite Courses:	None
Status in the Curriculum:	Required
Course Learning Outcomes:	1. To know, describe and characterize the networks and components that are part of urban water systems (potable water, domestic wastewater and stormwater). 2. To know the basic regulatory framework governing urban water projects. 3. To be able to participate in the planning and design of urban water systems using modelling tools. 4. Top become familiar with techniques and technologies of sustainable urban water management. 5. To develop simple projects (conception, design, sizing, specifications and evaluation) of urban water systems. 6. To identify and select materials and components used in urban water systems based on project needs and market availability.
Relation of Course to ABET Criteria:	b. Design and conduct experiments: analyze and interpret data c. Design a system, component, or process e. Identify, formulate, and solve engineering problems f. Professional and ethical responsibility g. Effective communication k. Techniques, skills, and modern tools for engineering practice.

Topics covered:

INTRODUCTION

URBAN STORMWATER SYSTEMS

1. General
2. Urban hydrology
3. Flood control
4. Stormwater drainage networks
5. Best management practices and low impact development

POTABLE AND WASTEWATER SYSTEMS

6. General
7. Potable water systems
8. Waste water systems