



RTU Course "Water Treatment Technology"

20314 Ūdens inženierijas un tehnoloģijas katedra

General data

Code	BŪK504
Course title	Water Treatment Technology
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Academic
Field of study	Civil Engineering
Responsible instructor	Tālis Juhna
Volume of the course: parts and credits points	1 part, 5.0 Credit Points, 7.5 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Maximum auditorium capacity	25
Maximum number of students per semester	25
Abstract	Course offers advanced knowledges in physical, chemical and biological water treatment processes, units design and modelling
Goals and objectives of the course in terms of competences and skills	To teach students in desing/modelling and calculation of water treatment plants as well to link teoretical knowledges with measurments in the field
Structure and tasks of independent studies	Individual work with literature, design and development of model for water treatment plant, and processing of data from laboratory measurments
Recommended literature	Crittended J. C. et al. Water Treatment Priciples and Design. John Wiley and Sons, Inc., 2005. 1945 pages. ISBN 0-471-1101018-3
Course prerequisites	Water Purification (Basic course)

Course outline

Theme	Hours
Water treatment tehnology engineering design	16
Water treatment plant mathematical modelling	16
Hydraulic and thermodynamic calculation for water treatment units	16
Processes during water distribution (collection)	16

Learning outcomes and assessment

Learning outcomes	Assessment methods
Skills to detailed design water and wastewater plant	Exam
Skills to develep water treatment plant model	Project work (model) presentation
Ability to calculcate hydraulic gradient and energy consumption at the plant	Project work (design) presentation
Ability to link theoretical calculation with measurments	Laboratory excersise

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	5.0	7.5	2.0	2.0	0.0		*	