

## Master Degree in Environmental Process Engineering

1<sup>st</sup> year

### Fall Semester

Courses	Credits	Coefficient	weekly time load			Time load/semester (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
			Lectures	DW	PW			Continuous Assessment Exam	Exam
Water Chemistry	4	2	1h30	1h30		45h00	55h00	40%	60%
Atmospheric Pollution	4	2	1h30	1h30		45h00	55h00	40%	60%
Fluid-Fluid Unit Operations (extraction, distillation, absorption, and stripping)	6	3	3h00	1h30		67h30	82h30	40%	60%
Heat Exchangers	4	2	1h30	1h30		45h00	55h00	40%	60%
Lab Work for Water Chemistry	2	1			1h30	22h30	27h30	100%	
Lab Work for Fluid-Fluid Unit Operations	2	1			1h30	22h30	27h30	100%	
Lab Work for Heat Exchangers	2	1			1h30	22h30	27h30	100%	
Process Engineering Simulators	3	2	1h30		1h00	37h30	37h30	40%	60%
Elective Subject 1	1	1	1h30			22h30	2h30		100%
Elective Subject 2	1	1	1h30			22h30	2h30		100%
Technical English and Terminology.	1	1	1h30			22h30	2h30		100%
<b>Total</b>	<b>30</b>	<b>17</b>	<b>13h30</b>	<b>6h00</b>	<b>5h30</b>	<b>375h00</b>	<b>375h00</b>		

**Spring Semester**

Courses	Credits	Coefficient	weekly time load			Time load/semester (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
			Lectures	DW	PW			Continuous Assessment Exam	Exam
<b>Drinking Water Production</b>	6	3	3h00	1h30		67h30	82h30	40%	60%
<b>Solid Waste Management and Treatment</b>	4	2	1h30	1h30		45h00	55h00	40%	60%
<b>Adsorption Processes and Membrane Separation</b>	4	2	1h30	1h30		45h00	55h00	40%	60%
<b>Physico-Chemical Treatment of Wastewater</b>	4	2	1h30	1h30		45h00	55h00	40%	60%
<b>Porous and Dispersed Media</b>	3	2	1h30	1h00		37h30	37h30	40%	60%
<b>Lab Work for Water Treatment and Adsorption Processes and Membrane Separation</b>	2	1			1h30	22h30	27h30	100%	
<b>Treatment and Conditioning of Process Water</b>	4	2	1h30	1h30		45h00	55h00	40%	60%
<b>Elective Subject 3</b>	1	1	1h30			22h30	2h30		100%
<b>Elective Subject 4</b>	1	1	1h30			22h30	2h30		100%
<b>Compliance with Standards and Rules of Ethics and Integrity.</b>	1	1	1h30			22h30	2h30		100%
<b>Total</b>	<b>30</b>	<b>17</b>	<b>15h00</b>	<b>8h30</b>	<b>1h30</b>	<b>375h00</b>	<b>375h00</b>		

## Spring Semester

Courses	Credits	Coefficient	weekly time load			Time load/semester (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
			Lectures	DW	PW			Continuous Assessment Exam	Exam
Theoretical Foundations and Biological Treatment of Wastewater	4	2	1h30	1h30		45h00	55h00	40%	60%
Treatment of Gaseous Effluents	4	2	1h30	1h30		45h00	55h00	40%	60%
Technical Thermodynamics	4	2	1h30	1h30		45h00	55h00	40%	60%
Multiphase Reactors and Bioreactors	6	3	3h00	1h30		67h30	82h30	40%	60%
Lab Work for Biological Wastewater Treatment/Bioreactors	2	1			1h30	22h30	27h30	100%	
Process Intensification	2	1	1h30			22h30	27h30		100%
Treatment of Polluted Soils	2	1	1h30			22h30	27h30		100%
Experimental Design	3	2	1h30		1h00	37h30	37h30	40%	60%
Elective Subject 5	1	1	1h30			22h30	2h30		100%
Elective Subject 6.	1	1	1h30			22h30	2h30		100%
Documentary Research and Thesis Design.	1	1	1h30			22h30	2h30		100%
<b>Total</b>	<b>30</b>	<b>17</b>	<b>16h30</b>	<b>6h00</b>	<b>2h30</b>	<b>375h00</b>	<b>375h00</b>		

Spring Semester of the 2<sup>nd</sup> year is dedicated to thesis and dissertation.