## **APPENDIX 1 - Plan of studies for ZHAW students**

## 1<sup>st</sup> year for ZHAW students at ZHAW

Semesters 1 to 2	ECTS
(September to July)	ECIS
All modules in each theme (9 ECTS per theme)	45
Theme 1: Sustainability and Resources	
Theme 2: Technology and Design	
Theme 3: Businesses and Organizations	
Theme 4: Politics, Law and Transformation	
Theme 5: Behavior and Behavior Change	
One specialization cluster (12 ECTS per cluster in semester 2)	12
Cluster 1: Circularity in Product Design	
Cluster 2: Regional Cycles and Resources	
<ul> <li>Cluster 3: Business Economics, Labels and Standards</li> </ul>	
Cluster 4: Government and Stakeholder Management	
Case Study 1	3
Total Credits Semesters 1 and 2	60

## $2^{\text{nd}}$ year for ZHAW students at UPM

Students can choose one of the two specialties.

Semester 3, Specialty in Consumo y Gestión Sostenible del Capital	
Natural (in Spanish)	ECTS
(September to January)	
Gestión de residuos y materias primas secundarias.	4
Reutilización de aguas.	3
Contaminación y biorremediación.	3
Gestión sostenible del capital natural.	3
Restauración ambiental.	3
Conservación de la biodiversidad.	3
Energía, recursos naturales y cambio climático.	4
Mecanismos financieros de adaptación al cambio climático.	3
Instrumentos y herramientas para el control del cambio climático.	4
Total Credits Semester 3	30

Semester 4	ECTS
(February to August)	LOIS
Experiencias Circulares	3
Prácticas Externas	12
Trabajo Fin de Máster* (co-supervised)	15
Total Credits Semester 4	30

<sup>\*</sup>As the Trabajo Fin de Máster (Master's Thesis) will be co-supervised by professors from UPM and ZHAW, it will always be written in English.

## Or

Semester 3, Specialty in Minerals and Construction Products (in English)	ECTS
(September to January)	ECIS
Fundamentals of Urban Mining	4
Alternative Energy in Industrial Processes	3
Energy efficiency in industrial processes	3
Water resource recovery in minerals and construction products	2
Recycled materials for sustainable building construction	4
Characterisation and Management of Construction Products	4
Training for the professional digital competence	6
Technological Innovation and Sustainable Entrepreneurship	2
Technology Watch	2
Total Credits Semester 3	30

Semester 4 (February to August)	ECTS
Circular Experiences	3
Internship	12
Master's Thesis (co-supervised)	15
Total Credits Semester 4	30
Total Credits Semesters 3 and 4	60

Total Credits Double Degree for ZHAW students	120