

APPENDIX 2 - Plan of studies for UPM students

1st year for UPM students at UPM

Semester 1 (February to June)	ECTS
Marco político y normativo. Derecho económico e industrial.	4
Modelos de Economía Circular.	3
Diseño de productos y servicios circulares: Ecodiseño.	3
Redes de suministro circulares.	3
Industria 4.0.	2
Análisis de proyectos e inversiones ambientales.	3
Marketing y comunicación.	3
Indicadores y métrica de la economía circular.	3
Big data y tratamiento de datos.	3
Ciclo de vida de productos y servicios.	3
Total Credits Semester 1	30

Semester 2, specialty of Consumo y Gestión Sostenible del Capital Natural (in Spanish) (September to January)	ECTS
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 2	30
Total Credits Semesters 1 and 2	60

Or

Semester 2, specialty of Minerals and Construction Products (in English) (September to January)	ECTS
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 2	30
Total Credits Semesters 1 and 2	60

2nd year for UPM students at ZHAW

Semester 3 (February to June)	ECTS
Transformation Processes	3
Behavioral Psychology	3
Change Management	3
18 ECTS from the following modules: <ul style="list-style-type: none"> - Communications and Consulting (6 ECTS) - Systems and Potential Analysis (6 ECTS) - Data Analysis and Monitoring (6 ECTS) - Technology Assessment (6 ECTS) 	18
Case Study 1	3
Total Credits Semester 3	30

Semester 4 (September to January)	ECTS
12 ECTS from the following modules: <ul style="list-style-type: none"> - Financing - Private and Public Sectors (6 ECTS) - Real Estate, Energy and Waste Management (6 ECTS) - Business, Production and Service Transformation (6 ECTS) - Food Systems & Natural Resources (6 ECTS) 	12
Case Study 2	3
Master's Thesis (co-supervised)	15
Total Credits Semester 4	30
Total Credits Semesters 3 and 4	60
Total Credits Double Degree for UPM Students	120