

# Course of Study Environmental Engineering (Study Cohort w22)

Sample course plan A Master Environmental Engineering (IMPEE)

|                                                         |                                                                                    | Core Qualification Compulsory          |        | Specialisation Compulsory                                           |      | Focus Compulsory          |                                                              | Thesis Compulsory            |        |                      |      |        |
|---------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------|--------|---------------------------------------------------------------------|------|---------------------------|--------------------------------------------------------------|------------------------------|--------|----------------------|------|--------|
|                                                         |                                                                                    | Core Qualification Elective Compulsory |        | Specialisation Elective Compulsory                                  |      | Focus Elective Compulsory |                                                              | Interdisciplinary complement |        |                      |      |        |
| Specialisation                                          | Water                                                                              | Form                                   | Hrs/wk | Semester 2                                                          | Form | Hrs/wk                    | Semester 3                                                   | Form                         | Hrs/wk | Semester 4           | Form | Hrs/wk |
| 1                                                       | <b>Waste Treatment Technologies</b>                                                |                                        |        | <b>Management of Surface Water</b>                                  |      |                           | <b>Study Work Water</b>                                      |                              |        | <b>Master Thesis</b> |      |        |
| 2                                                       | Biological Waste Treatment                                                         | PBL                                    | 3      | Modelling of Flow in Rivers and Estuaries                           | VL   | 3                         |                                                              |                              |        |                      |      |        |
| 3                                                       | Waste and Environmental Chemistry                                                  | PR                                     | 2      | Nature-Oriented Hydraulic Engineering / Integrated Flood Protection | PBL  | 2                         |                                                              |                              |        |                      |      |        |
| 4                                                       |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 5                                                       |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 6                                                       |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 7                                                       | <b>Environmental Protection and Management</b>                                     |                                        |        | <b>Nexus Engineering - Water, Soil, Food and Energy</b>             |      |                           |                                                              |                              |        |                      |      |        |
| 8                                                       | Health, Safety and Environmental Management                                        | VL                                     | 2      | Water & Wastewater Systems in a Global Context                      | VL   | 2                         |                                                              |                              |        |                      |      |        |
| 9                                                       | Health, Safety and Environmental Management                                        | GÜ                                     | 1      | Ecological Town Design - Water, Energy, Soil and Food Nexus         | SE   | 2                         |                                                              |                              |        |                      |      |        |
| 10                                                      | Integrated Pollution Control                                                       | VL                                     | 2      |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 11                                                      |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 12                                                      |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 13                                                      | <b>Sustainable Water Management and Microbiology of Water Systems</b>              |                                        |        | <b>Selected Topics in Environmental Engineering (part 1)</b>        |      |                           | <b>Selected Topics in Environmental Engineering (part 2)</b> |                              |        |                      |      |        |
| 14                                                      | Sustainable Water Management                                                       | PBL                                    | 2      | Selection from a catalog                                            |      |                           | Selection from a catalog                                     |                              |        |                      |      |        |
| 15                                                      | Microbiology of water systems                                                      | VL                                     | 2      |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 16                                                      |                                                                                    |                                        |        |                                                                     |      |                           | <b>Water Protection</b>                                      |                              |        |                      |      |        |
| 17                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Water Protection and Wastewater Management                   | VL                           | 3      |                      |      |        |
| 18                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Water Protection and Wastewater Management                   | PS                           | 3      |                      |      |        |
| 19                                                      | <b>Environmental Analysis and Water Technology Practice</b>                        |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 20                                                      | Environmental Analysis                                                             | VL                                     | 2      |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 21                                                      | Practical Course in Water and Wastewater Technology I                              | PR                                     | 3      |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 22                                                      |                                                                                    |                                        |        |                                                                     |      |                           | <b>Membrane Technology</b>                                   |                              |        |                      |      |        |
| 23                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Membrane Technology                                          | VL                           | 2      |                      |      |        |
| 24                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Membrane Technology                                          | GÜ                           | 1      |                      |      |        |
| 25                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Membrane Technology                                          | PR                           | 1      |                      |      |        |
| 26                                                      | <b>Fluid Mechanics, Hydraulics and Geo-Information-Systems in Water Management</b> |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 27                                                      | Geo-Information-Systems in Water Management and Hydraulic Engineering              | PBL                                    | 2      |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 28                                                      | Fluid Mechanics and Hydraulics                                                     | VL                                     | 2      |                                                                     |      |                           | <b>Process Modeling in Water Technology</b>                  |                              |        |                      |      |        |
| 29                                                      | Fluid Mechanics and Hydraulics                                                     | GÜ                                     | 1      |                                                                     |      |                           | Process Modeling in Drinking Water Treatment                 | PBL                          | 2      |                      |      |        |
| 30                                                      |                                                                                    |                                        |        |                                                                     |      |                           | Process Modelling of Wastewater Treatment                    | PBL                          | 2      |                      |      |        |
| 31                                                      |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 32                                                      |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| 33                                                      |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| Business & Management (from catalogue) - 6LP            |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |
| Non-technical Courses for Master (from catalogue) - 6LP |                                                                                    |                                        |        |                                                                     |      |                           |                                                              |                              |        |                      |      |        |

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.

