|  |  |  |  |
| --- | --- | --- | --- |
| Student name |  | e-mail |  |
| Student number |  |  |  |

ME Core Courses (Select at least 2 courses in addition to the 3 obligatory courses)

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| ME41055 | Multibody Dynamics B | 4 |
| ME41106 | Intelligent Vehicles 3ME | 5 |
| ME44210 | Drive & Energy Systems | 3 |
| ME45001 | Advanced Heat Transfer | 4 |
| ME45042 | Advanced Fluid Dynamics | 5 |
| ME46000 | Nonlinear Mechanics | 4 |
| ME46006 | Physics for Mechanical Engineers | 4 |
| ME46007 | Measurement Technology | 3 |
| ME46055 | Engineering Dynamics | 4 |
| ME46085 | Mechatronic System Design | 4 |
| SC42001 | Control System Design | 5 |
|  | **Total** |  |

ME Social courses (Select min 3 ECTS, max. 6 ECTS)

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| RO47009 | Robot & Society | 4 |
| TBM022A | Technology, Innovation and Ethics for Companies | 5 |
| TPM013A | Environmental Ethics | 5 |
| TPM015B | Ethics of AI | 3 |
| TPM024A | Methods for Risk Analysis and Management | 5 |
| TPM404B | Technology Entrepreneurship and Internationalization | 5 |
| TPM416A | Turning Technology into Business | 6 |
| TPM420A | Ready to Start-up | 6 |
| WM0320TU | Ethics and Engineering | 3 |
| WM0329TU | Ethics and Engineering | 6 |
| WM0349WB | Philosophy of Engineering Science and Design | 3 |
| WM0353TU | Climate Ethics | 3 |
| WM0375TU | Ethics of Technological Risks | 3 |
| WM0801TU | Introduction to Safety Science | 3 |
| WM1301TU | Ethics of Transportation | 3 |
| WM1302TU | Ethics of Transportation | 5 |
| WM1401TU | Ethics of Healthcare Technologies | 3 |
| WM1402TU | Ethics of Healthcare Technologies | 5 |
|  | **Total** |  |

ME-BMD Obligatory courses

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| BM41040 | Neuromechanics & Motor Control | 5 |
| ME41006 | Musculoskeletal Modeling and Simulation | 4 |
| RO47006 | Human Robot Interaction | 5 |
|  | **Total** | **14** |

ME-BMD Design Project Courses: Select at least 2

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| BM41070 | Medical Device Prototyping | 6 |
| ME41085 | Biomechatronics | 4 |
| ME41096 | Bio Inspired Design | 5 |
| ME46015 | Precision Mechanism Design | 4 |
| ME46115 | Compliant Mechanisms | 4 |
|  | **Total** |  |

ME-BMD Electives

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| BM41050 | Applied Experimental Methods: Medical Instruments | 4 |
| BM41055 | Anatomy and Physiology | 4 |
| BM41130 | Tissue Biomechanics | 3 |
| BM41155 | 3D Printing | 4 |
| ME41035 | Special Topics in Sports Engineering | 3 |
| ME41060 | Matlab in Engineering Mechanics | 2 |
| ME41065 | System Identification and Parameter Estimation | 7 |
| ME41120 | Freehand Sketching of Products and Mechanisms | 3 |
| ME41125 | Introduction to Engineering Research | 3 |
| ME46041 | Experimental Dynamics | 4 |
| ME46050 | Advanced Finite Element Methods | 4 |
| ME46060 | Engineering Optimization: Concepts and Applications | 3 |
| ME46070 | Fundamentals of Mechanical Analysis | 4 |
| RO47003 | Robot Software Practicals | 5 |
| RO47004 | Machine Perception | 5 |
| RO47005 | Planning & Decision Making | 5 |
| RO47013 | Control in Human-Robot Interaction | 5 |
| RO47015 | Applied Experimental Methods | 5 |
| RO47019 | Intelligent Control Systems | 4 |
| SC42045 | Control Systems Lab | 4 |
| SC42056 | Optimization for Systems and Control | 3 |
| TW3720TU | Object Oriented Scientific Programming C | 3 |
|  | **Total** |  |

Alternative electives

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
|  |  |  |
|  |  |  |
|  | **Total** |  |

If you chose alternative electives, please briefly explain your choice:

|  |  |
| --- | --- |
| Course code | Motivation |
|  |  |
|  |  |

ME-BMD Second Year Project: Select 1

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| ME51015 | ME-BMD Internship / Research Assignment | 15 |
| TUD4040 | Joint Interdisciplinary Project | 15 |
|  | **Total** | **15** |

ME-BMD Graduation Project Obligatory (45 ECTS)

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| ME51010-20 | ME-BMD Literature Research | 10 |
| ME51035 | ME-BMD MSc Thesis | 35 |
|  | **Total** | **45** |

|  |  |
| --- | --- |
| **Total EC of study program** |  |

|  |  |  |
| --- | --- | --- |
| Signature Master Coordinator  Date: | Signature Student  Date: | On behalf of the Examination Board  Date: |