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

**OBLIGATORY COURSES**

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| RO47001 | Dynamics & Control | 5 |
| RO47002 | Machine Learning for Robotics | 5 |
| RO47003 | Robot Software Practicals | 5 |
| RO47004 | Machine Perception | 5 |
| RO47005 | Planning & Decision Making | 5 |
| RO47006 | Human Robot Interaction | 5 |
| RO47007 | Multidisciplinary Project | 5 |
| RO47008 | Robot & Society | 5 |
| RO47000 | Student Portfolio | 0 |
|  | **Total** | **40** |

**RECOMMENDED ELECTIVE COURSES** Choose at least 5 EC

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| CS4240 | Deep Learning | 5 |
| RO47013 | Control in Human-Robot Interaction | 5 |
| RO47014 | Knowledge Representation & Symbolic Reasoning | 5 |
| RO47015 | Applied Experimental Methods | 5 |
| RO47016 | Automotive Human Factors | 5 |
| RO47017 | Vehicle Dynamics & Control | 5 |
|  | **Total** |  |

**RECOMMENDED SOCIAL COURSES / COURSES ON TRANSFERABLE SKILLS** Choose a total of 5 to 6 EC.   
*It is permitted to select courses outside this list. Please look in the TU Delft study guide for MSc courses on logistics, cultural differences, regulations, production processes, sustainability, design, economy/business, (project) management, consultancy, organisations, societal/social topics. Courses about language, presentation skills, writing skills, or research skills are not permitted. BSc courses and Minor courses are not permitted either. Please check the eligibility criteria and enrolment opportunities yourself. For Industrial Design Engineering courses, you will have to apply early.*

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| AE4321-15 | Air Traffic Management | 4 |
| CIE4811-18 | Planning and Operations of Public Transport Systems | 6 |
| CIE5805-18 | Intelligent Vehicles for Safe and Efficient Traffic: Design and Assessment | 4 |
| EPA1223 | Macro-Economics for Policy Analyses | 5 |
| EPA1434 | Intercultural Relations and Project Management | 5 |
| ET4247 | HighTech Start Ups | 5 |
| ID4180 | Managing Product Innovation | 3 |
| ID4185 | Strategic & Sustainable Design | 3 |
| ID5311-19 | Design Innovation 4.0 in Supply Networks | 6 |
| MOT1524 | Leadership and Technology Management | 5 |
| MOT1531 | Digital Business Process Management | 5 |
| MT44070 | Shipping Management | 5 |
| SEN9115 | Participatory Systems | 5 |
| SPM5442 | Cyber Risk Management | 5 |
| SPM9730 | Sustainable Innovation and Transitions | 3 |
| SPM9448 | Methods for Risk Analysis and Management | 5 |
| TPM416A | Turning Technology into Business | 6 |
| TPM420A | Ready to Startup | 6 |
| WI4156(TU) | Game Theory | 6 |
| WI4425 | Financial Markets Theory | 6 |
| WM0329TU | Ethics and Engineering | 6 |
| WM0349WB | Philosophy of Engineering Science and Design | 3 |
| WM0376TU | Ethics of Technological Risks | 5 |
| WM0637SET | Economic Policy for Sustainable Energy | 4 |
| WM0801TU | Introduction to Safety Science | 3 |
| WM1302TU | Ethics of Transportation | 5 |
|  |  |  |
|  | **Total** |  |

**15 EC OF THE 2nd YEAR**

|  |  |  |
| --- | --- | --- |
| Code | Course name | EC |
| TU4040 | Joint Interdisciplinary Project | 15 |
| RO57015 | RO Internship / Research Assignment | 15 |
| \* | Elective Courses (15 EC) | 15 |
|  | **Total** | **15** |

*\*Tick this box if you used 15 or more EC in electives as a replacement for the Joint Interdisciplinary Project or Internship/Research Assignment.*

**GENERAL ELECTIVE COURSES** from the *Robotics Elective courses* list in [www.studyguide.tudelft.nl](http://www.studyguide.tudelft.nl)

|  |  |  |
| --- | --- | --- |
| Course code | Course name | EC |
| AE4316 | Aerospace Human-Machine Systems | 4 |
| AE4317 | Autonomous Flight of Micro Air Vehicles | 4 |
| BM41040 | Neuromechanics & Motor Control | 5 |
| CIE4801-18 | Transport Modelling | 6 |
| CIE4825 | Traffic Flow Modelling and Control Part 1 | 6 |
| CIE5805-18 | Intelligent Vehicles for Safe and Efficient Traffic | 4 |
| CIE5810-19 | Traffic Safety | 4 |
| CS4235 | Socio-Cognitive Engineering | 5 |
| CS4245 | Seminar Computer Vision by Deep Learning | 5 |
| ET4117 | Electrical Machines and Drives | 4 |
| ET4169 | Radar I: From Basic Principles to Applications | 5 |
| IN4010 | Artificial Intelligence Techniques | 6 |
| ME41005 | Musculoskeletal Modelling and Simulation | 3 |
| ME41055 | Multibody Dynamics B | 4 |
| ME41065 | System Identification and Parameter Estimation | 7 |
| ME41125 | Introduction to Engineering Research | 3 |
| ME46041 | Experimental Dynamics | 4 |
| SC42050 | Knowledge Based Control Systems | 4 |
| SC42056 | Optimization for Systems and Control | 3 |
| SC42075 | Modelling and Control of Hybrid Systems | 3 |
| SC42095 | Control Engineering | 3 |
| SC42125 | Model Predictive Control | 4 |
| SC42110 | Dynamic Programming and Stochastic Control | 5 |
| SC42100 | Networked and Distributed Control Systems | 3 |
| WI4771TU | Object Oriented Scientific Programming C++ | 3 |
|  | **Total** |  |

**FREE ELECTIVE COURSES**

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

For the **FREE ELECTIVE COURSES**, please briefly explain your choice

|  |  |
| --- | --- |
| Course code | Motivation |
|  |  |
|  |  |
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**RO GRADUATION PROJECT**

|  |  |  |
| --- | --- | --- |
| Code | Course name | EC |
| RO57010-20 | RO Literature Research | 10 |
| RO57035 | RO MSc thesis | 35 |
|  | **Total** | **45** |

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

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