**Academic Year 2023/24 (Study plan valid for winter semester 2023/24)**

| Beschluss Fakultätsrat FMA |
|---|
| 04.07.2023 |
| WiSe 2023/24 |

| Subject No. | Name | abbr. | SWSgs | ECTS | Courses | | | Final Examinations | | | Examiner | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | WiSe 202/24 | | | WiSe 2023/24 | | | | |
| | | | | | SU / S | Ü (Ü$_i$) | Pr (Pr$_i$) | schrP | LNe | duration min | First examiner | Second examiner |
| | **Module** | | | | | | | | | | | |
| Module1 | **Human-Centered Design & Development Processes** | KON | 6 | 8 | 2,9 | 3,1 | | | **PF** [1] | | Arb, Pat, Lind | Pat |
| | **A) Introduction to V2X (SU)** | | | | | | | | | | | |
| | **B) Introduction to requirements engineering (SU)** | | | | | | | | | | | |
| | **C) Programming basics (SU)** | | | | | | | | | | | |
| | **D) Introduction to agile project execution (SU)** | | | | | | | | | | | |
| | **E) Introduction to human-centered design (SU)** | | | | | | | | | | | |
| | **F) Supervised project work (Ü)** | | | | | | | | | | | |
| Module 2 | **System Architecture & Safety Concept** | SKON | 6 | 8 | 1,9 | 4,1 | | | **PF** [2] | | Arb, Pat, Lind | Arb |
| | **A) Basics of systems engineering (SU)** | | | | | | | | | | | |
| | **B) Introduction to Deep Learning (SU)** | | | | | | | | | | | |
| | **C) V2X-Technologies (SU)** | | | | | | | | | | | |
| | **D) Human factors (SU)** | | | | | | | | | | | |
| | **E) Supervised project work (Ü)** | | | | | | | | | | | |
| Module 3 | **Sensors for Environmental Perception & Data Fusion** | USD | 10 | 14 | 4,8 | 5,2 | | | **PF** [3] | | Arb, Pat, Lind | Lind |
| | **A) Sensor technologies (SU)** | | | | | | | | | | | |
| | **B) Deep Learning (SU)** | | | | | | | | | | | |
| | **C) Vehicle communication (SU)** | | | | | | | | | | | |
| | **D) Sensor data fusion (SU)** | | | | | | | | | | | |
| | **E) User experience (SU)** | | | | | | | | | | | |
| | **F) Supervised project work (Ü)** | | | | | | | | | | | |
| Module 4 | **Vehicle Connectivity & Localization** | INF | 8 | 10 | 4,7 | | 3,3 | | **PF** [4] | | Arb, Pat, Lind, Rß | Lind |
| | **A) Fundamentals of traffic management and simulation (SU)** | | | | | | | | | | | |
| | **B) Validation methods I (SU)** | | | | | | | | | | | |
| | **C) Introduction localization and mapping (SU)** | | | | | | | | | | | |
| | **D) Advanced AI (SU)** | | | | | | | | | | | |
| | **E) Driving dynamics (SU)** | | | | | | | | | | | |
| | **F) Empirical research methods I (SU)** | | | | | | | | | | | |
| | **G) Supervised project work (Pr)** | | | | | | | | | | | |
| Module 5 | **Navigation and Virtual Safegurading** | VIR | 8 | 10 | 4,7 | | 3,3 | | **PF** [5] | | Arb, Pat, Lind, Rß | Pat |
| | **A) V2X in practise (SU)** | | | | | | | | | | | |
| | **B) Route and trajectory planning (SU)** | | | | | | | | | | | |
| | **C) Localization and mapping (SU)** | | | | | | | | | | | |
| | **D) Vehicle control (SU)** | | | | | | | | | | | |
| | **E) Validation methods II (SU)** | | | | | | | | | | | |
| | **F) Empirical research methods II (SU)** | | | | | | | | | | | |
| | **G) Supervised project work (Pr)** | | | | | | | | | | | |
| Module 6 | **System Test & Product Launch** | FER | 8 | 10 | 4,0 | | 4,0 | | **PF** [6] | | Arb, Pat, Lind, Bra, Rß | Arb |
| | **A) Market/product launch and digital business models (SU)** | | | | | | | | | | | |
| | **B) User test (SU)** | | | | | | | | | | | |
| | **C) Validation methods III (SU)** | | | | | | | | | | | |
| | **D) Scientific colloquium (S)** | | | | | | | | | | | |
| | **E) Supervised project work (Pr)** | | | | | | | | | | | |
| | **Master thesis** | | | | | | | | | | | |
| | Master thesis | MA | | 30 | | | | | | | | |
| | Total | | | **90** | | | | | | | | |

**Study and Examination Regulations for the M.Eng. Autonomous Driving  at Coburg university of Applied Sciences and Arts (SPO M AD)** **Sheet   2**

**Academic Year 2023/24 (Study plan valid for winter semester 2023/24)**

## List of abbreviations, Underlining:

| | |
|---|---|
| HA | Hausarbeit - Term paper |
| KI | Klausur – Written exam |
| LNe | studienbegleitende Leistungsnachweise – Course -related credit certificvate |
| mdlP | mündliche Prüfung – oral examination |
| PA | Projektarbeit  - project work |
| PF | Portfolio - portfolio |
| LTB | Lerntagebuch – Learning diary |
| Pr | teilnahme- und testatpflichtige (Labor-) Praktika mit expliziter Ausweisung im Stundenplan -  (Labotratory) practicals requiring attendance and compulsory examination with explicit indication in the timetable |
| Pr$_i$ | in SU integrierte (Labor-) Praktikumsteile ohne explizite Ausweisung im Stundenplan; Festlegung des prozentualen Anteils im Studienplan – (Laboratory) practicals integrated into SU without  explicit indication in the timetable, Determination  of the percentage in the curriculum |
| Präs | Präsentation – Presentation |
| prLNe | studienbegleitende praktische Leistungsnachweise – practical performance records accompanying the studies |
| S | Seminar - Seminars |
| schrP | schriftliche Prüfung – Written examination |
| StAn | Studienarbeiten – Student research projects |
| SU | seminaristischer Unterricht – seminar-based teaching |
| SWS | Semesterwochenstunden – semester  hours per week |
| Ü | teilnahme- und testatpflichtige Übungen mit expliziter Ausweisung im Stundenplan -  (Labotratory) practicals requiring attendance and compulsory examination with explicit indication in the timetable |
| Ü$_i$ | in SU integrierte Übungsanteile ohne explizite Ausweisung im Stundenplan – exercises integrated into SU without explicit indication in the timetable |
| wBer | wissenschaftlicher Bericht -  scientific report |
| WDH | Wiederholer -  Repeater |
| __ | In subject with more than one examiner, the examiner enter the notes, whose names are underlined. |

**Study and Examination Regulations for the M.Eng. Autonomous Driving at Coburg university of Applied Sciences and Arts (SPO M AD)** **Sheet 3**

**Academic Year 2023/24 (Study plan valid for winter semester 2023/24)**

**Footnotes:**

1) The portfolio examination **(PF)** is made up of several tasks to be completed by the students during the courses. The partial submissions include reports, presentations, exwercises, oral examinations, poster, hardware and software prototypes. The assignments to be worked on are announced by the lecturer at the beginning of the semester. The portfolio examination is considered passed if 50% of the sum of points from the examination elements is achieved.

**Permitted aids:**

Permitted aids for the examination see the respective valid module handbook; in general, no communication aids are permitted.