S7 - Advanced Mobility

General information OWE / course	
Degree programme	Automotive Engineering
Semester	S7
Course Code (OSIRIS)	ADVAMO04
Academic year	2025
Name Course short Dutch	AUM S7 Minor Advanced Mobility
Name Course long Dutch	Advanced Mobility
Name Course short English	AUM S7 Minor Advanced Mobility
Name Course long English	Advanced Mobility
Coordinating unit	AEA
Course type	OWE
Credits	30
Degree	B (post propaedeutic bachelor)
Grading scale course grades	Whole (without decimal)
Language of communication	English
Study load in hours	840
Instructional modes	OW (Education)
Starting term education	P1A
Duration of education	Semester
Compensation options	Not applicable
Entry requirements course	The Advanced Mobility minor is a truly multi-disciplinary course for students from the Bachelor of Automotive Engineering or other engineering programmes in logistics, law, ICT, or business (i.e. marketing, communication, finance). Other students can apply, but admission is subject to an intake interview with the minor coordinator.
General discription	
Mandatory participation	No
Examination	
Exam number in OSIRIS	**TOETS-01**
Fulltime/Parttime	Fulltime
Description (Dutch)	Smart Vehicles
Description (English)	Smart Vehicles
Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	Knowledge and understanding of the following topics: - Mobility control systems (ADAS, IVHS and V2x); - Human machine interface; - Augmented/virtual reality; - Al deep learning.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-02**
Fulltime/Parttime	Fulltime
Description (Dutch)	Smart Infrastructure

Description (English)	Smart Infrastructure
Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	Knowledge and understanding of the following topics: - (Big) Data driven traffic management; - Wifi-P and 5G networks/C-ITS solutions.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-03**
Fulltime/Parttime	Fulltime
Description (Dutch)	Management
Description (English)	Management
Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	Knowledge and understanding of the following topics: - Legal issues; - Smart logistics; - Innovative revenue models; - Implementation (change) management.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-04**
Fulltime/Parttime	Fulltime
Description (Dutch)	Professional skills
Description (English)	Professional skills
Format (modular)exam	KENN Knowledge exam
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	PROD (Beroeps)Product
Assessment criteria (OWE)/Learning outcomes (EVL)	Knowledge and understanding of the following topics: - Competitive attitude; - Negotiating in an intercultural setting; - Empathic capabilities; - Personal presentation; - Legal aspects of autonomous driving; - Legal aspects of international business; - Legal aspects of innovation joint ventures in the value chain.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-05**
Fulltime/Parttime	Fulltime
Description (Dutch)	Minor project
Description (English)	Minor project

Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	The student: Research and Analysis (3): - Carries out multi stakeholder feasibility studies as a member of a team implementing high tech innovations in order to make mobility more sustainable and efficient. Design (3): - Determines a vehicle and infrastructure architecture in order to maximise societal value. Consultation (3): - Gives data-driven modular production and purchasing advice and analyses possible partnerships in the supply chain; Design (3): - Designs and implements a control system strategy to manage mobility processes and automotive systems. The student can (Research and Professionalisation (3)): - write effectively (in-depth subject matter, English language and diction) taking into account the targeted reader(s); - substantiate choice tasks; - can send the relevant message convincingly to the different stakeholders; - use appropriate sources and quote them properly; - use attractive and technically correct language; - write text on both a substantial and relational level; - half way report and end report.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-06**
Fulltime/Parttime	Fulltime
Description (Dutch)	Minor presentations
Description (English)	Minor presentations
Format (modular)exam	PRES Presentation
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	A “halfway” and final presentation about the analysis results and proposed advice including replies to the asked questions (Professionalisation (3)). These presentations must be: - relevant to the target audience and must be given within the time limit set; - have a clear and logical structure; - effective in use or presentation means; - clear and attractive in use of English suited to the target audience;

	- effective when replying to questions; - engaging for the target audience.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-07**
Fulltime/Parttime	Fulltime
Description (Dutch)	Reflection report
Description (English)	Reflection report
Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	A personal reflection report in which a student describes and reflects on their professional skills showing that they can (Professionalisation (3)): - be proactive and show initiative; - give feedback to their fellow students and call on them for assistance with the project; - negotiate showing they can emphasise with another without letting their own goals be compromised; - do their fair share of the workload; - build up a working relationship with fellow students, lecturers and professionals involved in the project; - take collaborative responsibility; - respond to instructions of the project leader; - respond adequately to conflict situations; - work in a structured way; - register activities and follow them up; - adapt to change and assess risks; - place the project assignment in a social and environmental context and deduce ethical issues; - reflect on the process of the project; - reflect on their own performance and teamwork; - acquire the missing knowledge that is relevant to the project; - show a professional attitude (is flexible, shows initiative, is focussed on results); - be creative and provide solutions for expected circumstances; - work according to the plan; - when a milestone is reached, make good judgement calls when deciding whether the quality of the work is sufficient to proceed to the next phase of the project; - operate in an international context taking into account cultural differences; - make themselves presentable when visiting or receiving stakeholders and business contacts.
Educational activities offered	Not applicable
Exam number in OSIRIS	**TOETS-08**
Fulltime/Parttime	Fulltime

Description (Dutch)	Project Engineering
Description (English)	Project Engineering
Format (modular)exam	PROD (Professional) product
Weight factor of (modular) exam	1
Minimum result	5,5
Grading scale	Decimal
Exam sittings	YEARA
Written exam type	Not applicable
Assessment criteria (OWE)/Learning outcomes (EVL)	Students can manage the project by using the IPMA method that includes the following items (Managing (3)): - making a mind map and determining the scope of the project; - performing an analysis of the problem and delimiting the project; - defining SMART goals; - defining main and sub questions; - defining activities, setting them in a logical sequence and integrating them in a phased-out planning with milestones (DMAIC or DMADV); - drawing up a quality plan; - determining the costs and income; - creating an OBS, PBS and WBS; - creating an RACI model; - making a stakeholder analysis; - performing a risk analysis;creating a project monitor; - performing an earned value analysis; - drawing up a labour capacity plan; - plotting a Gant chart; - working out legal issues relevant to the project; - drawing up a budget and monitoring it; - drawing up terms and conditions.
Educational activities offered	Not applicable