

MSc Industrial Engineering and Management Study Programme 2024 - 2025						
			Course code	Course name	Q	EC
			Mandatory courses for every IEM student			
Industrial Engineering and Management			201700020	IEM research orientation	1+3	15 EC
			202400617	Data Science for Engineers	2	
			202001464	Thesis Preparation	--	
			194100060	Master Thesis IEM	--	30 EC
IEM Specialisations			Mandatory courses per Specialisation			
IEM	Production and Logistics Management (PLM) Healthcare Technology and Management (HCTM)		202300064	Simulation	1	15 EC
			201800003	OR 1: Deterministic Optimization and Heuristics	1+3	
			202300332	OR 2: Stochastic Optimization and Learning	4	
	Financial Engineering and Management (FEM)		191506103	Statistics & Probability	1	15 EC
			191860651	Micro Economics	1	
			201300060	Mathematical Finance	2	
IEM Research Orientations			Mandatory Courses per Research Orientation			
IEM	PLM	Service Logistics and Maintenance Management	201800008	After-Sales Service Logistics	2	15 EC
			201800009	Advanced Inventory Management	2	
			191852630	Reliability Eng. & Maintenance Mngt.	3	
		Supply Chain and Transportation Management	201800008	After-Sales Service Logistics	2	15 EC
			201800009	Advanced Inventory Management	2	
			201800010	Transportation and Logistics Management	3	
		Manufacturing Logistics	202400647	Warehousing	1	15 EC
			201800009	Advanced Inventory Management	2	
			201800007	Planning & Scheduling	4	
		Operations Management in Healthcare	191506103	Statistics & Probability	1	15 EC
			194121020	Optimization of Healthcare Processes	2	
			202400670	Planning & Scheduling	4	
	HCTM	Healthcare Technology and Management	201800005	Applied Statistical Learning	1	15 EC
			201700196	Advanced Discrete Event Simulation	3	
			201700197	Decision Making in HC	4	
	FEM	Valuation and Risk Management	191515101	Introduction to Risk Theory	2	15 EC
			191860181	Risk Management	3	
			201300062	Structured Products	3	
		Financial Technology	194105070	Inform.Syst f/t Fin. Services Industry	3	15 EC
			191860181	Risk Management	3	
			202100233	Reinforcement Learning with Applications	4	
Electives						
Electives*					45 EC	
Study Programme MSc IEM					120 EC	
All courses are 5 EC (except the Master Thesis). Course content can be found in the <a href="#">Course Catalogue</a>						

IEM courses  
45 EC

Specialisation  
15 EC

Research Orientation  
15 EC

Electives  
45 EC

120 EC

1. Every student **chooses a main specialisation**:  
- *Production and Logistics Management (PLM)*  
- *Healthcare Technology and Management (HCTM)*  
- *Financial Engineering and Management (FEM)*

Although the specialisations focus on specific application areas, all specialisations will give you the knowledge and skills needed to become an Industrial Engineer which is not bound to a specific application

2. Every student **chooses one research orientation** within the main specialisation. During your study, it is possible to change the research orientation and even the main specialisation (although additional work may be required).

3. It is possible to complete two specialisations. The second or **additional specialisation** will be specified on the diploma supplement (a document you receive together with your diploma). More information on additional specialisations can be found on Canvas.

The topic of your Master Thesis IEM must be related to your main specialisation.  
On completion of the study programme, you will receive a MSc degree. The diploma will specify your field of study: Industrial Engineering and Management. In addition, your main specialisation will be specified on the diploma supplement. The research orientation will not be specified on your diploma.

Important notifications

Statistics & Probability (191506103) may be mandatory for non-Dutch students in case of a deficiency.  
  
Stochastic Models for Operations Management (191530881) is:  
- **not allowed** for students with an UT IEM-BSc background;  
- **mandatory** for PLM and HCTM students who did a pre-master;  
- possibly **mandatory** for international students in case of a deficiency.  
Consult the specialisation coordinator to check what applies to your situation.

\* In principle all courses from other **engineering** MSc programmes can be taken as electives, provided there is no overlap with other courses. See canvas for an overview of recommended electives and example electives.