IAM preparatory packages	
Offered by	Department of Mathematics
Language	English
Primarily interesting for	All students, but most relevant for non-mathematics students wishing to pursue with the Master Industrial and Applied Mathematics
Prerequisites	Required courses: Depends on courses Recommended courses: Depends on courses
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Content and composition

The following elective packages are intended for bachelor students who do not study Applied Mathematics. The courses are meant to find out if you really like mathematics and whether you have the necessary skills to enroll into a mathematics program. They can serve as a premaster program for the Master's program Industrial and Applied Mathematics (IAM).

Students study Elective package IAM step 1 and choose one of the follow-up packages (Steps 2a, 2b or 2c). These latter packages prepare for the various specific profiles in IAM, see below.

Course code	Course name	Level classification
2WF40	Set theory and algebra	-
2WA30	Analysis 1	-
2WS20	Probability theory	-

Elective package IAM Step 2a: preparing for IAM-CSE (profile Computational Science and Engineering).
Choose three out of the following courses:

Course code	Course name	Level classification
2WA90	Partial differential equations	-
2WAF0	Functional analysis	-
2WAG0	Measure, integration and probability theory	-
2WN20	Introduction to numerical analysis	-
2WN40	Numerical linear algebra	-

Elective package IAM Step 2b: preparing for IAM-DMA (profile Discrete Mathematics and Applications)

Course code	Course name	Level classification
2WF50	Algebra and discrete mathematics	-
Two of the following courses		
2WF60	Graph theory and combinatorics	-
2WF70	Algorithmic algebra and number theory	-
2WF80	Introduction to cryptology	-
2WO20	Linear optimization	-

Elective package IAM Step 2c: preparing for IAM-SPOR (profile Statistics, Probability and Operations Research) or IAM-DSE (Data Science in Engineering)

Course code	Course name	Level classification
2WS30	Mathematical statistics	-
Two of the following courses		
2WB40	Queueing systems	-
2WB50	Stochastic simulation	-
2WS40	Linear statistical models	-
2WS60	Extreme values and other catastrophes	-
2WS70	Advanced statistical models	

Course description

Descriptions of the various courses can be found in Osiris. The elective package IAM Step 1 introduces students to three different branches of mathematics in a rigorous way, typical for mathematics. The follow-up packages give the flavor of various directions in mathematics corresponding to the profiles in the master program Industrial and Applied Mathematics (IAM)