

IAM preparatory packages elective package

TU/e

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UNIVERSITY OF
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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 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	Quarter	Timeslot
2MBA10	Sets, Logic and Mathematical language	1	D
2MBA40	Analysis 1	2	B
2MBS10	Probability and Modeling	4	E

ELECTIVE PACKAGE IAM STEP 2A: PREPARING FOR IAM-CM (PROFILE CONTINUOUS MATHEMATICS)

Course code	Course name	Quarter	Timeslot
2MBA70	Measure and probability theory	1	E
	Two of the following courses		
2MBC80	Continuous optimization	1	E
2WAF0	Functional analysis	4	D
2MBC60	Complex analysis	2	A
2MBC10	Introduction to numerical analysis	3	B
2MBC30	Numerical linear algebra	1	C
2MBA80	Function and Random Variable Transformations	2	E
2MBC70	Differential geometry	3	B

ELECTIVE PACKAGE IAM STEP 2B: PREPARING FOR IAM-DM (PROFILE DISCRETE MATHEMATICS)

Course code	Course name	Quarter	Timeslot
2MBD20	Algebraic structures	2	C
	Two of the following courses		
2MBD10	Graph theory and applications	3	A
2MBD30	Applied number theory and algebra	3	C
2MBD60	Introduction to cryptology	2	A
2WO20	Linear optimization	1	C
2MBD70	Combinatorics and applications	3	D

ELECTIVE PACKAGE IAM STEP 2C: PREPARING FOR IAM-STO (PROFILE STOCHASTICS)

Course code	Course name	Quarter	Timeslot
2MBS20	Foundations of statistics	1	B
	Two of the following courses		
2MBS90	Risk Reliability Resilience	3	A
2MBS40	Stochastic simulation and modeling	3	A
2MBS50	Regression models and applications	4	A
2MBS80	Complex networks	1	B
2MBA80	Function and Random Variable Transformations	2	E
2MBC60	Complex analysis	2	A

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). Note that the courses listed here cannot be replaced by similar courses aimed at non-mathematics students.

The logo for TU/e, consisting of the letters 'TU/e' in a bold, red, sans-serif font.

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