

## **Bachelor Applied Mathematics**

### **First Year**

<b>Module 1</b>	<b>Structures and Models</b>	<b>15 EC</b>
<b>201800135</b>		
	<i>Calculus I</i>	3 EC
	<i>Prooflab I</i>	1 EC
	<i>Linear Structures I</i>	6 EC
	<i>Project &amp; Programming and Modelling &amp; Intercultural workshop</i>	5EC
	<i>Coordinator: B.M.Geveling</i>	

<b>Module 2</b>	<b>Mathematical Proof Techniques</b>	<b>15 EC</b>
<b>201800136</b>		
	<i>Calculus II</i>	4 EC
	<i>Linear Structures II</i>	3 EC
	<i>Analysis</i>	3 EC
	<i>Linear Optimization</i>	2 EC
	<i>Project: Prooflab II</i>	3 EC
	<i>Coordinator: J. de Jong</i>	

<b>Module 3</b>	<b>Fields and Electromagnetism</b>	<b>15 EC</b>
<b>201800137</b>		
	<i>Vector Calculus</i>	2 EC
	<i>Prooflab III</i>	1 EC
	<i>Electromagnetism</i>	5 EC
	<i>Mathematica</i>	1 EC
	<i>Presentation Skills</i>	3 EC
	<i>Project</i>	3 EC
	<i>Coordinator: J.J.W.van der Vegt</i>	

<b>Module 4</b>	<b>Signals and Uncertainty</b>	<b>15 EC</b>
<b>201800138</b>		
	<i>Signals and Systems</i>	5 EC
	<i>Probability Theory</i>	5 EC
	<i>Project</i>	5 EC
	<i>Coordinator: A.A.Stoorvogel</i>	

### **Second Year**

<b>Module 5</b>	<b>Mathematical Statistics and Analysis</b>	<b>15 EC</b>
<b>201800139</b>		
	<i>Statistics</i>	6 EC
	<i>Analysis II</i>	5 EC
	<i>Project</i>	2 EC
	<i>Reflection</i>	2 EC
	<i>Coordinator: P.K.Mandal</i>	

<b>Module 6</b> 201800140	<b>Dynamic Models</b>	15 EC
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<i>Differential Equations and Numerical Methods</i>	4 EC
<i>Systems Theory and Numerical Methods</i>	4 EC
<i>Numerical Methods Practical</i>	4 EC
<i>Project</i>	3 EC
<i>Coordinator: H.G.E.Meijer</i>	

<b>Module 7</b> 201800141	<b>Discrete Structures and Efficient Algorithms</b>	15 EC
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<i>Discrete Structures and Algorithms</i>	5 EC
<i>Algebra &amp; Finite Automata</i>	6,5 EC
<i>Research Project: Similarity</i>	3,5 EC
<i>Coordinator: M.J.Uetz</i>	

<b>Module 8</b> 201400434	<b>Modelling and Analysis of Stochastic Processes for Math</b>	15 EC
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<i>Stochastic Models</i>	5 EC
<i>Stochastic Models Project</i>	1,5 EC
<i>Markov Chains</i>	2,5 EC
<i>Stochastic Simulation Project</i>	4 EC
<i>Multidisciplinary Project</i>	2 EC
<i>Coordinator: W.R.W.Scheinhardt</i>	

### Third Year

<b>First Semester</b>	<b>Minor Profile</b>	30 EC
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<http://www.utwente.nl/onderwijs/keuzeruimte/minor/>

<b>Module 11</b> 201500379	<b>Bachelor's Assignment &amp; Electives</b>	15 EC
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<i>Student's preference - two out of four Elective courses:</i>	
<i>Graph Theory</i>	5 EC
<i>Introduction to PDE</i>	5 EC
<i>Random Signals and Filtering</i>	5 EC
<i>Mathematical Optimization</i>	5 EC
<i>Reflection on Mathematical research I</i>	5 EC
<i>(this includes the beginning of Bachelor assignment)</i>	
<i>Coordinator: J. Timmer</i>	

<b>Module 12</b> 201500380	<b>Finalising Thesis</b>	15 EC
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<i>Complex Function Theory</i>	3 EC
<i>Reflection on Mathematical research II</i>	2 EC
<i>Bachelor Thesis</i>	10 EC
<i>Coordinator: J. Timmer</i>	