

Appendix 1a - Mandatory Module and Examination Plan for World Track

Mathematics – World Track						Jacobs Track Modules (General Education)														
Matriculation Fall 2018																				
Program-Specific Modules	Type	Status ¹	Semester	Credits			Type	Status ¹	Semester	Credits										
Year 1 - CHOICE						Year 1 - CHOICE						45	20							
<i>Take the mandatory CHOICE module listed below, this is a requirement for the Mathematics program.</i>																				
CH07-FundMath	Module: Fundamental Mathematics	m		15		JT-ME-MethodsMath	Module: Methods / Mathematics	m		10										
CH07-100101	Analysis I	Lecture	m	1	5	JTME-120103/ 120203	Calculus I or Advanced Calculus I	Lecture	m	1	2,5									
CH07-100111	Mathematical Software Lab	Lab	m	1	2,5	JTME-120104/ 120204	Calculus II or Advanced Calculus II	Lecture	m	1	2,5									
CH07-100212	Analysis II	Lecture	m	2	5	JTME-120112	Foundations of Linear Algebra I	Lecture	m	2	2,5									
CH07-100122	Undergraduate Seminar	Lab	m	2	2,5	JTME-120113	Foundations of Linear Algebra II	Lecture	m	2	2,5									
Module: CHOICE (own selection)						JT-SK-Skills						Module: Skills	m	2,5						
						JTSTK-320111/ 350111						Students take either Programming in C I or Programming in Python	Lecture	m	1	2,5				
						JT-TA-TriArea						Module: Triangle Area	m	2,5						
												Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³	me	1/2	2,5					
						JT-LA-Language						Module: Language	m	5						
												Take two German courses (2,5 ECTS each).	Seminar	me	1/2	5				
												Native German speakers take courses in another offered language								
Year 2 - CORE						Year 2 - CORE						45	20							
<i>Take all three modules or replace one with a CORE module from a different study program. ²</i>																				
CO16-CoreMaths	Module: Core Mathematics	me		15		JT-ME-MethodsMath	Module: Methods / Mathematics	m		5										
CO16-100231	Linear Algebra	Lecture	m	3	5	JTME-120201	Elements of Probability	Lecture	m	3	2,5									
CO16-100241	Elements of Stochastic Processes	Lecture	m	3	2,5	JTME-120202	Numerical Methods I	Lecture	m	4	2,5									
CO16-100232	Introductory Real Analysis	Lecture	m	4	5	JT-SK-Skills	Module: Skills	m		2,5										
CO16-100242	Numerical Methods II	Lecture	m	4	2,5	JTSTK-320112/350112	Students take either Programming in C II or Advanced Programming in Python	Lecture	m	3/4	2,5									
CO17-CorePureMath						JT-TA-TriArea						Module: Triangle Area	m	7,5						
Module: Core Pure Mathematics						me														
CO17-100251	Introduction to Complex Analysis	Lecture	m	3	5	Take three courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³						me	3/4	7,5						
CO17-100261	Calculus on Manifolds	Lecture	m	3	5															
CO17-100252	Introduction to Algebra	Lecture	m	4	5	JT-LA-Language						Module: Language	m	5						
CO18-CoreAppMath						CO18-CoreAppMath						Module: Core Applied Mathematics						me	15	
me						me														
CO18-110221	Stochastic Methods	Lecture	m	3	5	Take two German courses (2,5 ECTS each).						Seminar	me	3/4	5					
CO18-110222	Stochastic Methods Lab	Lab	m	3	2,5	Native German speakers take courses in another offered language														
CO18-110231	Applied Dynamical Systems	Lecture	m	4	5	CA01-CarAdv						Career Advising⁴	m							
CO18-110233	Applied Dynamical Systems Lab	Lab	m	4	2,5															
Year 3 - CAREER						Year 3 - CAREER						45	5							
CA02 / CA03						Module: Internship / Study Abroad						m	5	20						
CA12-MATH						Module: Project/Thesis MATH						m		15						
												JT-TA-TriArea						Module: Triangle Area	m	5
CA12-100303						Project MATH						Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³						me	6	5
CA12-100304						Thesis MATH														
CA-S-MATH						Module: Specialization Area MATH						m		10						
												CA01-CarAdv						Career Advising⁴	m	
Take 10 ECTS of specialization courses ²						me						5/6						10		
Total ECTS											180									

¹ Status (m = mandatory, e = elective, me = mandatory elective) ² For a full listing of all CHOICE / CORE / CAREER / Jacobs Track modules please consult the CampusNet online catalogue and / or the module handbook (on our website).

³ You are required to take six Triangle Area courses in total. Select two from each of the three triangle areas (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT).

⁴ Mandatory component of the Jacobs University's Counseling and Advising Scheme.

Appendix 1b - Mandatory Module and Examination Plan for Campus Track

Mathematics – Campus Track												
Matriculation Fall 2018												
Program-Specific Modules					Jacobs Track Modules (General Education)							
Type	Status ¹	Semester	Credits		Type	Status ¹	Semester	Credits				
Year 1 - CHOICE					45						20	
<i>Take the mandatory CHOICE module listed below, this is a requirement for the Mathematics program.</i>												
CH07-FundMath	Module: Fundamental Mathematics			m	15	JT-ME-MethodsMath	Module: Methods / Mathematics			m	10	
CH07-100101	Analysis I	Lecture	m	1	5	JTME-120103/ 120203	Calculus I or Advanced Calculus I	Lecture	m	1	2,5	
CH07-100111	Mathematical Software Lab	Lab	m	1	2,5	JTME-120104/ 120204	Calculus II or Advanced Calculus II	Lecture	m	1	2,5	
CH07-100212	Analysis II	Lecture	m	2	5	JTME-120112	Foundations of Linear Algebra I	Lecture	m	2	2,5	
CH07-100122	Undergraduate Seminar	Lab	m	2	2,5	JTME-120113	Foundations of Linear Algebra II	Lecture	m	2	2,5	
	Module: CHOICE (own selection)			e	1/2	30	JT-SK-Skills	Module: Skills			m	2,5
<i>Students take two further CHOICE modules from those offered for all other study programs. ²</i>												
Year 2 - CORE					45						20	
<i>Take all three modules or replace one with a CORE module from a different study program. ²</i>												
CO16-CoreMaths	Module: Core Mathematics			me	15	JT-ME-MethodsMath	Module: Methods / Mathematics			m	5	
CO16-100231	Linear Algebra	Lecture	m	3	5	JTME-120201	Elements of Probability	Lecture	m	3	2,5	
CO16-100241	Elements of Stochastic Processes	Lecture	m	3	2,5	JTME-120202	Numerical Methods I	Lecture	m	4	2,5	
CO16-100232	Introductory Real Analysis	Lecture	m	4	5	JT-SK-Skills	Module: Skills			m	2,5	
CO16-100242	Numerical Methods II	Lecture	m	4	2,5	JTSK-320112/350112	Students take either Programming in C II or Advanced Programming in Python	Lecture	m	3/4	2,5	
CO17-CorePureMath	Module: Core Pure Mathematics			me	15	JT-TA-TriArea	Module: Triangle Area			m	7,5	
CO17-100251	Introduction to Complex Analysis	Lecture	m	3	5		Take three courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³	me	3/4	7,5		
CO17-100261	Calculus on Manifolds	Lecture	m	3	5	JT-LA-Language	Module: Language			m	5	
CO17-100252	Introduction to Algebra	Lecture	m	4	5		Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language	Seminar	me	3/4	5	
CO18-CoreAppMath	Module: Core Applied Mathematics			me	15	CA01-CarAdv	Career Advising⁴			m		
CO18-110221	Stochastic Methods	Lecture	m	3	5							
CO18-110222	Stochastic Methods Lab	Lab	m	3	2,5							
CO18-110231	Applied Dynamical Systems	Lecture	m	4	5							
CO18-110233	Applied Dynamical Systems Lab	Lab	m	4	2,5							
Year 3 - CAREER					45						5	
COXX	Module: Additional (4th) CORE module			m	5/6	15	JT-TA-TriArea	Module: Triangle Area			m	5
								Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³	me	5	5	
CA12-MATH	Module: Project/Thesis MATH			m	15		CA01-CarAdv	Career Advising⁴			m	
CA12-100303	Project MATH		m	5	5							
CA12-100304	Thesis MATH		m	6	10							
CA-S-MATH	Module: Specialization Area MATH			m	15							
	Take 15 ECTS of specialization courses ²		me	5/6	15							
Total ECTS										180		

¹ Status (m = mandatory, e = elective, me = mandatory elective)

² For a full listing of all CHOICE / CORE / CAREER / Jacobs Track modules please consult the **CampusNet online catalogue** and / or the module handbook (on our website).

³ You are required to take six Triangle Area courses in total. Select two from each of the three triangle areas (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT).

⁴ Mandatory component of the Jacobs University's Counseling and Advising Scheme.