

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

Physics – World 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 two mandatory CHOICE modules listed below, these are a requirement for the Physics program.</i>											
CH06-ClassModPhys Module: Classical and Modern Physics					JT-ME-MethodsMath Module: Methods / Mathematics					10	
CH06-200104	Classical Physics	Lecture	m	1	5	JT-ME-120103	Calculus I	Lecture	m	1	2,5
CH06-200114	Classical Physics Lab	Lab	m	1	2,5	JT-ME-120104	Calculus II	Lecture	m	1	2,5
CH06-200102	Modern Physics	Lecture	m	2	5	JT-ME-120112	Foundations of Linear Algebra I	Lecture	m	2	2,5
CH06-200112	Modern Physics Lab	Lab	m	2	2,5	JT-ME-120113	Foundations of Linear Algebra II	Lecture	m	2	2,5
CH05-PrincChemPhy Module: Principles of Chemistry and Physics					JT-SK-Skills Module: Skills					2,5	
CH05-400101	General Chemistry	Lecture	m	1	5	JT-SK-990103	Scientific and Experimental Skills	Lecture	m	1	2,5
CH05-400111	General Chemistry Lab	Lab	m	1	2,5	JT-TA-TriArea Module: Triangle Area					
CH05-200102	Thermodynamics and Optics	Lecture	m	2	5	Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³					
CH05-200112	Thermodynamics and Optics Lab	Lab	m	2	2,5	JT-LA-Language Module: Language					
Module: CHOICE (own selection)					e					1/2	15
<i>Students take one further CHOICE module 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>											
CO13-StatPhys Module: Statistical Physics and Fields					JT-ME-MethodsMath Module: Methods / Mathematics					5	
CO13-200213	Electrodynamics	Lecture	m	3	5	Take two Methods (mandatory) elective courses (2,5 ECTS each). ²					
CO13-200212	Statistical Physics	Lecture	m	4	5	Lecture me 3/4 5					
CO13-200222	Statistical Physics and Fields - Advanced Lab	Lab	m	4	5	JT-TA-TriArea Module: Triangle Area					
CO14-ApplPhys Module: Applied Physics					me					15	
CO14-201231	Renewable Energy	Lecture	m	3	5	Take four courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³					
CO14-200221	Renewable Energy - Advanced Lab	Lab	m	3	5	JT-LA-Language Module: Language					
CO14-200331	Introduction to Computer Simulation Methods	Lecture	m	4	5	Take two German courses (2,5 ECTS each). Seminar me 3/4 5					
CO15-ClassDyn Module: Classical and Quantum Dynamics					me					15	
CO15-200203	Analytical Mechanics	Lecture	m	3	5	Native German speakers take courses in another offered language					
CO15-200202	Quantum Mechanics	Lecture	m	4	5	CA01-CarAdv Career Advising⁴					
CO15-200223	Quantum Mechanics - Advanced Lab	Lab	m	4	5						
Year 3 - CAREER					45					5	
CA02 / CA03 Module: Internship / Study Abroad					m					5	20
CA08-PHY Module: Project/Thesis PHY					m					15	
CA08-200303	Project PHY	m	6	5	JT-SK-Skills Module: Skills						
CA08-200304	Thesis PHY	m	6	10	Advanced Scientific and Experimental Skills						
CAS-WT-PHY Module: Specialization Area PHY					m					10	
Take 10 ECTS of specialisation 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

Physics – Campus Track											
Matriculation Fall 2018											
Program-Specific Modules	Type	Status ¹	Semester	Credits	Jacobs Track Modules (General Education)	Type	Status ¹	Semester	Credits		
Year 1 - CHOICE					45						20
<i>Take the two mandatory CHOICE modules listed below, these are a requirement for the Physics program.</i>											
CH06-ClassModPhys Module: Classical and Modern Physics		m		15	JT-ME-MethodsMath Module: Methods / Mathematics		m		10		
CH06-200104 Classical Physics	Lecture	m	1	5	JT-ME-120103 Calculus I	Lecture	m	1	2,5		
CH06-200114 Classical Physics Lab	Lab	m	1	2,5	JT-ME-120104 Calculus II	Lecture	m	1	2,5		
CH06-200102 Modern Physics	Lecture	m	2	5	JT-ME-120112 Foundations of Linear Algebra I	Lecture	m	2	2,5		
CH06-200112 Modern Physics Lab	Lab	m	2	2,5	JT-ME-120113 Foundations of Linear Algebra II	Lecture	m	2	2,5		
CH05-PrincChemPhy Module: Principles of Chemistry and Physics		m		15	JT-SK-Skills Module: Skills		m		2,5		
CH05-400101 General Chemistry	Lecture	m	1	5	JT-SK-990103 Scientific and Experimental Skills	Lecture	m	1	2,5		
CH05-400111 General Chemistry Lab	Lab	m	1	2,5	JT-TA-TriArea Module: Triangle Area		m		2,5		
CH05-200102 Thermodynamics and Optics	Lecture	m	2	5			me	1/2	2,5		
CH05-200112 Thermodynamics and Optics Lab	Lab	m	2	2,5	Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³						
Module: CHOICE (own selection)		e	1/2	15	JT-LA-Language Module: Language		m		5		
<i>Students take one further CHOICE module from those offered for all other study programs. ²</i>							me	1/2	5		
					Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language	Seminar					
					CA01-CarAdv Career Advising⁴						
Year 2 - CORE					45						20
<i>Take all three modules or replace one with a CORE module from a different study program. ²</i>											
CO13-StatPhys Module: Statistical Physics and Fields		me		15	JT-ME-MethodsMath Module: Methods / Mathematics		m		5		
CO13-200213 Electrodynamics	Lecture	m	3	5		Lecture	me	3/4	5		
CO13-200212 Statistical Physics	Lecture	m	4	5	Take two Methods (mandatory) elective courses (2,5 ECTS each). ²						
CO13-200222 Statistical Physics and Fields - Advanced Lab	Lab	m	4	5	JT-TA-TriArea Module: Triangle Area		m		10		
CO14-AppPhys Module: Applied Physics		me		15			me	3/4	10		
CO14-201231 Renewable Energy	Lecture	m	3	5	Take four courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³						
CO14-200221 Renewable Energy - Advanced Lab	Lab	m	3	5	JT-LA-Language Module: Language		m		5		
CO14-200331 Introduction to Computer Simulation Methods	Lecture	m	4	5		Seminar	me	3/4	5		
CO15-ClassDyn Module: Classical and Quantum Dynamics		me		15	Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language						
CO15-200203 Analytical Mechanics	Lecture	m	3	5	CA01-CarAdv Career Advising⁴						
CO15-200202 Quantum Mechanics	Lecture	m	4	5							
CO15-200223 Quantum Mechanics - Advanced Lab	Lab	m	4	5							
Year 3 - CAREER					45						5
COXX Module: Additional (4th) CORE module		m	5/6	15	JT-SK-Skills Module: Skills		m		2,5		
CA08-PHY Module: Project/Thesis PHY		m		15	JT-SK-990104 Advanced Scientific and Experimental Skills		m	6	2,5		
CA08-200303 Project PHY	m	5	5	JT-TA-TriArea Module: Triangle Area		m		2,5			
CA08-200304 Thesis PHY	m	6	10		me	5	2,5				
CAS-CT-PHY Module: Specialization Area PHY		m		15	Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS ³						
Take 15 ECTS of specialization courses ²		me	5/6	15	CA01-CarAdv Career Advising⁴						
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.