

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



<b>Chemistry – World Track</b>										
Matriculation Fall 2017										
Program-Specific Modules					Jacobs Track Modules (General Education)					
Type	Status <sup>1</sup>	Semester	Credits		Type	Status <sup>1</sup>	Semester	Credits		
<b>Year 1 - CHOICE</b>					<b>45</b>					<b>20</b>
<i>Take the two mandatory CHOICE modules listed below, these are a requirement for the Chemistry program.</i>										
<b>CH03-OrgChem</b>	<b>Module: Organic Chemistry</b>			<b>m</b>						<b>15</b>
CH03-400102	Organic Chemistry I	Lecture	m	1	5					
CH03-400112	Organic Chemistry I Lab	Lab	m	1	2,5					
CH03-400103	Organic Chemistry II	Lecture	m	2	5					
CH03-400113	Organic Chemistry II Lab	Lab	m	2	2,5					
<b>CH04-InorgChem</b>	<b>Module: Inorganic Chemistry and Environmental Systems</b>			<b>m</b>						<b>15</b>
CH04-210113	Introduction to Inorganic Chemistry and Earth & Environmental Sys	Lecture	m	1	5					
CH04-400111	Inorganic Chemistry I Lab	Lab	m	1	2,5					
CH04-210114	Advanced Earth & Environmental Systems and Inorganic Chemistry	Lecture	m	2	5					
CH04-210111	GeoEnvironmental Systems and their Chemistry - Field Lab	Excursion	m	2	2,5					
<b>Module: CHOICE (own selection)</b>				<b>e</b>	<b>1/2</b>		<b>15</b>			
Students take one further CHOICE module from those offered for all other study programs. <sup>2</sup>										
<b>Year 2 - CORE</b>					<b>45</b>					<b>20</b>
<i>Take all three modules or replace one with a CORE module from a different study program. <sup>2</sup></i>										
<b>CO09-InorgSuMolCh</b>	<b>Module: Inorganic and Supramolecular Chemistry</b>			<b>me</b>						<b>15</b>
CO09-420432	Supramolecular Chemistry	Lecture	m	3	5					
CO09-420434	Supramolecular Chemistry Lab	Lab	m	4	2,5					
CO09-400221	Inorganic Chemistry II	Lecture	m	4	5					
CO09-400232	Inorganic Chemistry II Lab	Lab	m	4	2,5					
<b>CO08-PhysChem</b>	<b>Module: Physical and Analytical Chemistry</b>			<b>me</b>						<b>15</b>
CO08-400121	Analytical Chemistry	Lecture	m	3	5					
CO08-400231	Analytical Chemistry Lab	Lab	m	4	2,5					
CO08-400211	Physical Chemistry	Lecture	m	4	5					
CO08-400262	Physical Chemistry Lab	Lab	m	4	2,5					
<b>CO07-ChemBiotec</b>	<b>Module: Chemical Biotechnology</b>			<b>me</b>						<b>15</b>
CO07-400104	Enzymes and Cells in Biochemical Production	Lecture	m	3	5					
CO07-400114	Biochemical Production Lab	Lab	m	3	2,5					
CO07-400105	Bioproducts and Biosystems Engineering	Lecture	m	4	5					
CO07-400115	Bioproducts and Biosystems Engineering Lab	Lab	m	3	2,5					
<b>Year 3 - CAREER</b>					<b>45</b>					<b>5</b>
<b>CA02 / CA03</b>	<b>Module: Internship / Study Abroad</b>			<b>m</b>	<b>5</b>		<b>20</b>			
<b>CA06-CHEM</b> <b>Module: Project/Thesis CHEM</b> <b>m</b> <b>15</b>										
CA06-400303	Project CHEM		m	6	5					
CA06-400304	Thesis CHEM		m	6	10					
<b>CAS-WT-CHEM</b>	<b>Module: Specialization Area CHEM</b>			<b>m</b>						<b>10</b>
Take four specialization courses (2,5 ECTS each) <sup>2</sup>				<b>me</b>	<b>5/6</b>		<b>10</b>			
<b>Total ECTS</b>										<b>180</b>
<b>JT-ME-MethodsMath</b>	<b>Module: Methods / Mathematics</b>			<b>m</b>						<b>7,5</b>
JT-ME-120106 / 120103	Take either Applied Calculus I or Calculus I	Lecture	m	1	2,5					
JT-ME-120107 / 120104	Take either Applied Calculus II or Calculus II	Lecture	m	1	2,5					
JT-ME-120101	Mathematical Concepts in the Sciences	Lecture	m	2	2,5					
<b>JT-SK-Skills</b>	<b>Module: Skills</b>			<b>m</b>						<b>2,5</b>
JT-SK-990103	Scientific and Experimental Skills	Lecture	m	1	2,5					
<b>JT-TA-TriArea</b>	<b>Module: Triangle Area</b>			<b>m</b>						<b>5</b>
Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS <sup>3</sup>						<b>me</b>	<b>1/2</b>		<b>5</b>	
<b>JT-LA-Language</b>	<b>Module: Language</b>			<b>m</b>						<b>5</b>
Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language						<b>me</b>	<b>1/2</b>		<b>5</b>	
<b>CA01-CarAdv</b>	<b>Module: Career Advising<sup>4</sup></b>									
<b>JT-ME-MethodsMath</b>	<b>Module: Methods / Mathematics</b>			<b>m</b>						<b>7,5</b>
JT-ME-120122	Foundations of Linear Algebra I	Lecture	m	4	2,5					
Take two Methods (mandatory) elective courses. (2,5 ECTS each). <sup>2</sup>						<b>me</b>	<b>3/4</b>		<b>5</b>	
<b>JT-TA-TriArea</b>	<b>Module: Triangle Area</b>			<b>m</b>						<b>7,5</b>
Take three courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS <sup>3</sup>						<b>me</b>	<b>3/4</b>		<b>7,5</b>	
<b>JT-LA-Language</b>	<b>Module: Language</b>			<b>m</b>						<b>5</b>
Take two German courses (2,5 ECTS each). Native German speakers take courses in another offered language						<b>me</b>	<b>3/4</b>		<b>5</b>	
<b>CA01-CarAdv</b>	<b>Module: Career Advising<sup>4</sup></b>									

<sup>1</sup> Status (m = mandatory, e = elective, me = mandatory elective) <sup>2</sup> 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).

<sup>3</sup> 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).

<sup>4</sup> Mandatory component of the Jacobs University's Counseling and Advising Scheme.

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

### Chemistry – Campus Track

Matriculation Fall 2017

Program-Specific Modules	Type	Status <sup>1</sup>	Semester	Credits	Jacobs Track Modules (General Education)	Type	Status <sup>1</sup>	Semester	Credits			
<b>Year 1 - CHOICE</b>					<b>45</b>	<b>Year 1 - CHOICE</b>					<b>20</b>	
<i>Take the two mandatory CHOICE modules listed below, these are a requirement for the Chemistry program.</i>												
<b>CH03-OrgChem</b>	<b>Module: Organic Chemistry</b>			<b>m</b>	<b>15</b>	<b>JT-ME-MethodsMath</b>	<b>Module: Methods / Mathematics</b>			<b>m</b>	<b>7,5</b>	
CH03-400102	Organic Chemistry I	Lecture	m	1	5	JT-ME 120106 / 120103	Take either Applied Calculus I or Calculus I	Lecture	m	1	2,5	
CH03-400112	Organic Chemistry I Lab	Lab	m	1	2,5	JT-ME 120107 / 120104	Take either Applied Calculus II or Calculus II	Lecture	m	1	2,5	
CH03-400103	Organic Chemistry II	Lecture	m	2	5	JT-ME-120101	Mathematical Concepts in the Sciences	Lecture	m	2	2,5	
CH03-400113	Organic Chemistry II Lab	Lab	m	2	2,5	<b>JT-SK-Skills</b>	<b>Module: Skills</b>			<b>m</b>	<b>2,5</b>	
<b>CH04-InorgChem</b>	<b>Module: Inorganic Chemistry and Environmental Systems</b>			<b>m</b>	<b>15</b>	JT-SK-990103	Scientific and Experimental Skills	Lecture	m	1	2,5	
CH04-210113	Introduction to Inorganic Chemistry and Earth & Environmental Sys	Lecture	m	1	5	<b>JT-TA-TriArea</b>	<b>Module: Triangle Area</b>			<b>m</b>	<b>5</b>	
CH04-400111	Inorganic Chemistry I Lab	Lab	m	1	2,5		Take two courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS <sup>3</sup>	me		1/2	5	
CH04-210114	Advanced Earth & Environmental Systems and Inorganic Chemistry	Lecture	m	2	5	<b>JT-LA-Language</b>	<b>Module: Language</b>			<b>m</b>	<b>5</b>	
CH04-210111	GeoEnvironmental Systems and their Chemistry - Field Lab	Excursion	m	2	2,5		Take two German courses (2,5 ECTS each).	Seminar	me	1/2	5	
	<b>Module: CHOICE (own selection)</b>			<b>e</b>	<b>1/2</b>	<b>15</b>		Native German speakers take courses in another offered language				
Students take one further CHOICE module from those offered for all other study programs. <sup>2</sup>										<b>CA01-CarAdv</b>	<b>Career Advising<sup>4</sup></b>	
<b>Year 2 - CORE</b>					<b>45</b>	<b>Year 2 - CORE</b>					<b>20</b>	
<i>Take all three modules or replace one with a CORE module from a different study program.<sup>2</sup></i>												
<b>CO09-InorgSuMolCh</b>	<b>Module: Inorganic and Supramolecular Chemistry</b>			<b>me</b>	<b>15</b>	<b>JT-ME-MethodsMath</b>	<b>Module: Methods / Mathematics</b>			<b>m</b>	<b>7,5</b>	
CO09-420432	Supramolecular Chemistry	Lecture	m	3	5	JT-ME-120122	Foundations of Linear Algebra I	Lecture	m	4	2,5	
CO09-420434	Supramolecular Chemistry Lab	Lab	m	4	2,5		Take two Methods (mandatory) elective courses. (2,5 ECTS each). <sup>2</sup>	Lecture	me	3/4	5	
CO09-400221	Inorganic Chemistry II	Lecture	m	4	5	<b>JT-TA-TriArea</b>	<b>Module: Triangle Area</b>			<b>m</b>	<b>7,5</b>	
CO09-400232	Inorganic Chemistry II Lab	Lab	m	4	2,5		Take three courses from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS <sup>3</sup>	me		3/4	7,5	
<b>CO08-PhysChem</b>	<b>Module: Physical and Analytical Chemistry</b>			<b>me</b>	<b>15</b>	<b>JT-LA-Language</b>	<b>Module: Language</b>			<b>m</b>	<b>5</b>	
CO08-400121	Analytical Chemistry	Lecture	m	3	5		Take two German courses (2,5 ECTS each).	Seminar	me	3/4	5	
CO08-400231	Analytical Chemistry Lab	Lab	m	4	2,5		Native German speakers take courses in another offered language					
CO08-400211	Physical Chemistry	Lecture	m	4	5	<b>CA01-CarAdv</b>	<b>Career Advising<sup>4</sup></b>					
CO08-400262	Physical Chemistry Lab	Lab	m	4	2,5							
<b>CO07-ChemBiotec</b>	<b>Module: Chemical Biotechnology</b>			<b>me</b>	<b>15</b>							
CO07-400104	Enzymes and Cells in Biochemical Production	Lecture	m	3	5							
CO07-400114	Biochemical Production Lab	Lab	m	3	2,5							
CO07-400105	Bioproducts and Biosystems Engineering	Lecture	m	4	5							
CO07-400115	Bioproducts and Biosystems Engineering Lab	Lab	m	3	2,5							
<b>Year 3 - CAREER</b>					<b>45</b>	<b>Year 3 - CAREER</b>					<b>5</b>	
<b>COXX</b>	<b>Module: Additional (4th) CORE module</b>			<b>m</b>	<b>5/6</b>	<b>15</b>	<b>JT-SK-Skills</b>	<b>Module: Skills</b>			<b>m</b>	<b>2,5</b>
							JT-SK-990104	Advanced Scientific and Experimental Skills	Lecture	m	6	2,5
<b>CA06-CHEM</b>	<b>Module: Project/Thesis CHEM</b>			<b>m</b>	<b>15</b>	<b>JT-TA-TriArea</b>	<b>Module: Triangle Area</b>			<b>m</b>	<b>2,5</b>	
CA06-400303	Project CHEM		m	5	5		Take one course from the triangle (BUSINESS, TECHNOLOGY & INNOVATION, SOCIETAL CONTEXT) area. Each counts 2,5 ECTS <sup>3</sup>	me		5	2,5	
CA06-400304	Thesis CHEM		m	6	10	<b>CA01-CarAdv</b>	<b>Career Advising<sup>4</sup></b>					
<b>CAS-CT-CHEM</b>	<b>Module: Specialization Area CHEM</b>			<b>m</b>	<b>15</b>							
	Take six specialization courses (2,5 ECTS each) <sup>2</sup>			<b>me</b>	<b>5/6</b>	<b>15</b>						
<b>Total ECTS</b>										<b>180</b>		

<sup>1</sup> Status (m = mandatory, e = elective, me = mandatory elective)

<sup>2</sup> 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).

<sup>3</sup> 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).

<sup>4</sup> Mandatory component of the Jacobs University's Counseling and Advising Scheme.