

**Academic Committee Meeting, 27 October 2015
Chemistry Minor Course Changes**

-	Changes in restriction		
CHEM 203	Survey of Physical Chemistry 3 credits		MCC-15-1
CHEM 204	Physical Chem./Biol.Sci. 1 3 credits		MCC-15-2
CHEM 281	Inorganic Chemistry 1 3 credits		MCC-15-3
CHEM 287	Intro Analytical Chemistry 2 credits		MCC-15-4
CHEM 297	Intro Analytical Chem. Lab. 1 credit		MCC-15-5
-	Changes in restriction, supplementary calendar information		
CHEM 223	Intro Phys Chem 1 2 credits		MCC-15-6
-	Changes in prerequisites		
CHEM 345	Intro to Quantum Chemistry 3 credits		MCC-15-7
CHEM 367	Instrumental Analysis 1 3 credits		MCC-15-8
CHEM 400	Independent Study in Chemistry 1 credit		MCC-15-9
-	Changes in prerequisites, supplementary calendar information		
CHEM 243	Intro Phys Chem 2 2 credits		MCC-15-10
-	Changes in description, corequisites, supplementary calendar information		
CHEM 253	Intro Phys CChem 1 Lab 1 credit		MCC-15-11

Revision for CHEM 400

Proposal Reference Number : 10528
 PRN Alias : 15-16#349
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Prerequisites**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 400 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	1 credits.					
Course Activities	<ul style="list-style-type: none"> IS - Independent Study 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Independent Study in Chemistry</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Independent Study in Chemistry.</td> </tr> </table>	Course Title on Transcript	Independent Study in Chemistry	Course Title on Calendar	Independent Study in Chemistry.	
Course Title on Transcript	Independent Study in Chemistry					
Course Title on Calendar	Independent Study in Chemistry.					
Rationale		CHEM 213 (Introductory Physical Chemistry) has been replaced with CHEM 243 (Introductory Physical Chemistry 2) CHEM 277 (Classical Methods of Analysis) has been replaced with CHEM 287 (Introductory Analytical Chemistry). The prerequisites have been modified to reflect these changes.				
Responsible Instructor						
Course Description	Supervised research.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 213, CHEM 222, CHEM 277D1/D2, CHEM 281, plus at least one course in Chemistry at 300 level or higher.	Prerequisites: CHEM 243, CHEM 222, CHEM 287, CHEM 281, plus at least one course in Chemistry at 300 level or higher. <table border="1"> <tr> <td>Web Registration Blocked? :</td> <td>N</td> </tr> </table>	Web Registration Blocked? :	N		
Web Registration Blocked? :	N					
Corequisites						
Restrictions	<ul style="list-style-type: none"> Restrictions: Registration is restricted to Honours and Major students in Chemistry and requires the approval of the Director of the Undergraduate Studies in the Department of Chemistry. 					

Supplementary Calendar Info	1. Fall, Winter	
Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201601
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

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Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
2			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
1								Submitted to Department Chair for approval Created on: Oct 7 2015

Revision for CHEM 367

Proposal Reference Number : 10527
 PRN Alias : 15-16#348
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Prerequisites**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 367 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	3 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture L - Laboratory T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Instrumental Analysis 1</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Instrumental Analysis 1.</td> </tr> </table>	Course Title on Transcript	Instrumental Analysis 1	Course Title on Calendar	Instrumental Analysis 1.	
Course Title on Transcript	Instrumental Analysis 1					
Course Title on Calendar	Instrumental Analysis 1.					
Rationale		CHEM 257 and CHEM 277 are no longer offered so we have removed them from the prerequisites.				
Responsible Instructor						
Course Description	An introduction to modern instrumental analysis emphasizing chromatography, electrochemical methods and computational data analysis. Analytical methods to be examined in detail include gas-liquid and high performance liquid chromatography, LC mass spectrometry, and advanced electro-analysis techniques					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisite: CHEM 257 or CHEM 277 or CHEM 287 and CHEM 297.	Prerequisite: CHEM 287 and CHEM 297. <table border="1"> <tr> <td>Web Registration Blocked? :</td> <td>N</td> </tr> </table>	Web Registration Blocked? :	N		
Web Registration Blocked? :	N					
Corequisites						
Restrictions						
Supplementary Calendar Info	<ol style="list-style-type: none"> Fall Each lab section is limited enrolment 					

Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

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2			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
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Revision for CHEM 345

Proposal Reference Number : 10526
 PRN Alias : 15-16#347
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Prerequisites**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 345 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	3 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro to Quantum Chemistry</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introduction to Quantum Chemistry.</td> </tr> </table>	Course Title on Transcript	Intro to Quantum Chemistry	Course Title on Calendar	Introduction to Quantum Chemistry.	
Course Title on Transcript	Intro to Quantum Chemistry					
Course Title on Calendar	Introduction to Quantum Chemistry.					
Rationale		CHEM 213 is no longer offered. Students now take CHEM 223 and CHEM 243. We have removed reference to CHEM 213 from the Restrictions. We have the capacity to accept students from other programs so we have removed this restriction as well.				
Responsible Instructor						
Course Description	An introduction to quantum chemistry covering the historical development, wave theory, methods of quantum mechanics, and applications of quantum chemistry.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 213 or CHEM 223 and CHEM 243, and PHYS 142, or permission of instructor.	Prerequisites: CHEM 223 and CHEM 243, and PHYS 142, or permission of instructor. <table border="1"> <tr> <td>Web Registration Blocked? :</td> <td>N</td> </tr> </table>	Web Registration Blocked? :	N		
Web Registration Blocked? :	N					
Corequisites						
Restrictions	<ul style="list-style-type: none"> Restriction: For Chemistry Honours and Majors only 	<ul style="list-style-type: none"> Restriction: For Chemistry Honours and Majors only 				

Supplementary Calendar Info	1. Fall	
Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

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1								Submitted to Department Chair for approval Created on: Oct 7 2015

Revision for CHEM 297

Proposal Reference Number : 10525
 PRN Alias : 15-16#346
 Version No : 3
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Restrictions**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 297 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	1 credits.					
Course Activities	<ul style="list-style-type: none"> L - Laboratory 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro Analytical Chem. Lab.</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introductory Analytical Chemistry Laboratory.</td> </tr> </table>	Course Title on Transcript	Intro Analytical Chem. Lab.	Course Title on Calendar	Introductory Analytical Chemistry Laboratory.	
Course Title on Transcript	Intro Analytical Chem. Lab.					
Course Title on Calendar	Introductory Analytical Chemistry Laboratory.					
Rationale		Since CHEM 257 and CHEM 277 are no longer offered, they have been removed from the Restrictions.				
Responsible Instructor						
Course Description	Introductory experiments in analytical chemistry emphasizing classical and instrumental methods of quantitative analysis.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 110 and CHEM 120, or CHEM 115, or equivalent.					
Corequisites						
Restrictions	<ul style="list-style-type: none"> Restriction: Not open to students who have taken CHEM 257D1/D2 or CHEM 277D1/D2. 	None				
Supplementary Calendar Info	<ol style="list-style-type: none"> Fall, Winter Pre- or Co-requisite: CHEM 287. 					
Additional Course Charges						
Campus						

Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

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Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
3			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
2								Submitted to Department Chair for approval Edited by: Josie D'Amico on: Oct 22 2015
1								Submitted to Department Chair for approval Created on: Oct 7 2015

Revision for CHEM 287

Proposal Reference Number : 10524
 PRN Alias : 15-16#345
 Version No : 3
 Submitted By : Prof Anthony Mittermaier
 Edited By : Ms Josie D'Amico

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Summary of Changes **Restrictions**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 287 <ul style="list-style-type: none"> • one term 					
Credit Weight or CEU's	2 credits.					
Course Activities	<ul style="list-style-type: none"> • A - Lecture • T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro Analytical Chemistry</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introductory Analytical Chemistry.</td> </tr> </table>	Course Title on Transcript	Intro Analytical Chemistry	Course Title on Calendar	Introductory Analytical Chemistry.	
	Course Title on Transcript	Intro Analytical Chemistry				
Course Title on Calendar	Introductory Analytical Chemistry.					
Rationale		CHEM 257 and CHEM 277 are no longer offered so they have been removed from the Restrictions.				
Responsible Instructor						
Course Description	Qualitative and quantitative analysis. A survey of methods of analysis including theory and practice of semimicro qualitative analysis and representative gravimetric, volumetric and instrumental methods.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 110 and CHEM 120, or CHEM 115, or equivalent.					
Corequisites	Corequisite: Students in CHEM 287 are required to take the laboratory, CHEM 297, either simultaneously with CHEM 287 or in the term following CHEM 287.					
Restrictions	<ul style="list-style-type: none"> • Restrictions: Not open to students who have taken CHEM 257D1/D2 or CHEM 277D1/D2. 	None				
Supplementary Calendar Info	1. Fall					
Additional Course Charges						

Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
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Approvals Summary

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3								Approved by Departmental Chair Edited by: Josie D'Amico on: Oct 27 2015
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Revision for CHEM 281

Proposal Reference Number : 10522
 PRN Alias : 15-16#343
 Version No : 3
 Submitted By : Prof Anthony Mittermaier
 Edited By : Ms Josie D'Amico

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Summary of Changes	Restrictions
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	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 281 <ul style="list-style-type: none"> • one term 					
Credit Weight or CEU's	3 credits.					
Course Activities	<ul style="list-style-type: none"> • A - Lecture • T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Inorganic Chemistry 1</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Inorganic Chemistry 1.</td> </tr> </table>	Course Title on Transcript	Inorganic Chemistry 1	Course Title on Calendar	Inorganic Chemistry 1.	
Course Title on Transcript	Inorganic Chemistry 1					
Course Title on Calendar	Inorganic Chemistry 1.					
Rationale		CHEM 201 is no longer offered so we can remove that restriction. We have the capacity to accept students from other programs, so we can remove that restriction as well.				
Responsible Instructor						
Course Description	Basic concepts of electronic structure and molecular bonding will be developed and applied to the understanding of common materials. Acid-base chemistry. Survey of the chemistry of the main group elements. Introduction to coordination and organometallic chemistry.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 110 and CHEM 120 or equivalent.					
Corequisites						
Restrictions	<ul style="list-style-type: none"> • Restriction: For Honours and Major Chemistry students • Restriction: Not open to students who have taken or plan to take CHEM 201 	None				
Supplementary Calendar Info	1. Winter					

Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201601
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

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Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
3								Approved by Departmental Chair Edited by: Josie D'Amico on: Oct 27 2015
2			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
1								Submitted to Department Chair for approval Created on: Oct 7 2015

Revision for CHEM 253

Proposal Reference : 10521
 Number
 PRN Alias : 15-16#342
 Version No : 3
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Course Description, Corequisites, Supplementary Calendar Info**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 253 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	1 credits.					
Course Activities	<ul style="list-style-type: none"> LW - Laboratory T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro Phys Chem 1 Lab</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introductory Physical Chemistry 1 Laboratory.</td> </tr> </table>	Course Title on Transcript	Intro Phys Chem 1 Lab	Course Title on Calendar	Introductory Physical Chemistry 1 Laboratory.	
Course Title on Transcript	Intro Phys Chem 1 Lab					
Course Title on Calendar	Introductory Physical Chemistry 1 Laboratory.					
Rationale		CHEM 253 is no longer the lab associated with CHEM 223 and CHEM 243 (except for Chemistry Minors and Education Majors) We would like to remove the confusing statement in the Overview. Chemistry minors formerly took CHEM 203 and now take CHEM 204. In either case, they will take CHEM 253, so CHEM 203 and CHEM 204 have been added as co-requisites. CHEM 283 is the new lab associated with CHEM 223 and CHEM 243 for CHEM Majors and Honours. This has been added as a Note.				
Responsible Instructor						
Course Description	Illustrative experiments in physical chemistry. Laboratory section of CHEM 223.	Illustrative experiments in physical chemistry.				
Teaching Dept.	0287 : Chemistry					
	SC : Faculty of Science					

Administering Faculty/Unit		
Prerequisites	Prerequisite: CHEM 110, CHEM 120 or equivalent.	
Corequisites	Corequisite: CHEM 223 or equivalent or permission of instructor.	<p>Corequisite: CHEM 203 or CHEM 204 or CHEM 223 or equivalent or permission of instructor.</p> <p>Web Registration Blocked? : <input type="checkbox"/> N</p>
Restrictions		
Supplementary Calendar Info	1. Fall	<p>1. Fall Note: For students in non-Chemistry programs and Chemistry Minors students only. Chemistry Honours and Majors must take CHEM 283.</p>
Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

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Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
3								Approved by

								Departmental Chair Edited by: Anthony Mittermaier on: Oct 27 2015
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1								Submitted to Department Chair for approval Created on: Oct 6 2015

Revision for CHEM 243

Proposal Reference Number : 10520
 PRN Alias : 15-16#341
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Prerequisites, Supplementary Calendar Info**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 243 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	2 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro Phys Chem 2</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introductory Physical Chemistry 2.</td> </tr> </table>	Course Title on Transcript	Intro Phys Chem 2	Course Title on Calendar	Introductory Physical Chemistry 2.	
Course Title on Transcript	Intro Phys Chem 2					
Course Title on Calendar	Introductory Physical Chemistry 2.					
Rationale		CHEM 253 was formerly the lab associated with the CHEM 243 and 223 for Chemistry Majors and Honours. This has been modified such that CHEM 283 is now the lab associated with CHEM 223 and 243. Therefore CHEM 253 is no longer an prerequisite for CHEM 243, and CHEM 283 should be taken a pre- or co-requisite. This is reflected in the changes to the prerequisites and Note.				
Responsible Instructor						
Course Description	Heterogeneous equilibrium: phase rule and phase diagrams. Ideal solutions, colligative properties, solubility. Electrochemistry, Debye-Hückel Theory. Kinetics 2: Transition State Theory, complex reactions, free-radical reactions, chain reactions, catalysis, reactions at surfaces, ionic effects of reactions in solution, photochemistry.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 223 and CHEM 253.	Prerequisites: CHEM 223. <table border="1"> <tr> <td>Web Registration Blocked? :</td> <td>N</td> </tr> </table>	Web Registration Blocked? :	N		
Web Registration Blocked? :	N					

Corequisites		
Restrictions	<ul style="list-style-type: none"> Restrictions: Not open to students who have taken or are taking CHEM 203 or CHEM 204. Permission of instructor. 	
Supplementary Calendar Info	<ol style="list-style-type: none"> Winter Note: Chemistry Honours and Majors must take CHEM 243 and CHEM 263 simultaneously. 	<ol style="list-style-type: none"> Winter Note: Chemistry Honours and Majors that have not taken CHEM 283 should do so concurrently with CHEM 243.
Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201601
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

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2			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
1								Submitted to Department Chair for approval Created on: Oct 6 2015

Revision for CHEM 223

Proposal Reference Number : 10519
 PRN Alias : 15-16#340
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes	Restrictions, Supplementary Calendar Info
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	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 223 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	2 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Intro Phys Chem 1</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Introductory Physical Chemistry 1.</td> </tr> </table>	Course Title on Transcript	Intro Phys Chem 1	Course Title on Calendar	Introductory Physical Chemistry 1.	
Course Title on Transcript	Intro Phys Chem 1					
Course Title on Calendar	Introductory Physical Chemistry 1.					
Rationale		CHEM 223 goes into considerably more depth than CHEM 203. Students transferring into Chemistry with only CHEM 203 will need to take CHEM 223 in order to be prepared for later material. This exclusion needs to be removed. CHEM 253 is no longer part of the Chemistry Majors or Honours programs. It is intended only for Chemistry Minors and Education Majors. Chemistry Majors and Honours students now take CHEM 283 as part of their programs. This switch from CHEM 253 to 283 is reflected in the updated Note.				
Responsible Instructor						
Course Description	Kinetics 1: Gas laws, kinetic theory of collisions. Thermodynamics: Zeroth law of thermodynamics. First law of thermodynamics, heat capacity, enthalpy, thermochemistry, bond energies. Second law of thermodynamics; the entropy and free energy functions. Third law of thermodynamics, absolute entropies, free energies, Maxwell relations and chemical and thermodynamic equilibrium states.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					

Prerequisites	Prerequisites: CHEM 110, CHEM 120 or equivalent, PHYS 142, or permission of instructor.	
Corequisites	Corequisite: MATH 222 or equivalent.	
Restrictions	<ul style="list-style-type: none"> Restrictions: Not open to students who have taken or are taking CHEM 203 or CHEM 204. 	<ul style="list-style-type: none"> Restrictions: Not open to students who have taken or are taking CHEM 204.
Supplementary Calendar Info	<ol style="list-style-type: none"> Fall Note: Chemistry Honours and Majors must take CHEM 223 and CHEM 253 simultaneously. 	<ol style="list-style-type: none"> Fall Note: Chemistry Honours and Majors must take CHEM 283 either simultaneously or the semester following CHEM 223.
Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

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Revision for CHEM 204

Proposal Reference Number : 10515
 PRN Alias : 15-16#336
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

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Summary of Changes **Restrictions**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 204 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	3 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture T - Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Physical Chem./Biol.Sci. 1</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Physical Chemistry/Biological Sciences 1.</td> </tr> </table>	Course Title on Transcript	Physical Chem./Biol.Sci. 1	Course Title on Calendar	Physical Chemistry/Biological Sciences 1.	
Course Title on Transcript	Physical Chem./Biol.Sci. 1					
Course Title on Calendar	Physical Chemistry/Biological Sciences 1.					
Rationale		CHEM 213 is no longer offered therefore we should remove the reference to this course from the restrictions.				
Responsible Instructor						
Course Description	Similar to CHEM 223/CHEM 243. Emphasis on the use of biological examples to illustrate the principles of physical chemistry. The relevance of physical chemistry to biology is stressed.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 110 and CHEM 120 or equivalent and one full course in calculus					
Corequisites						
Restrictions	<ul style="list-style-type: none"> Restriction: Not open to students who have taken or are taking CHEM 203 or CHEM 213 or CHEM 223 and CHEM 243. 	<ul style="list-style-type: none"> Restriction: Not open to students who have taken or are taking CHEM 203 or CHEM 223 and CHEM 243. 				
Supplementary Calendar Info	1. Fall, Winter					
Additional Course Charges						

Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201601
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

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Version No.	Departmental Curriculum Committee	Departmental Meeting	Departmental Chair	Other Faculty	Curric/Academic Committee	Faculty	SCTP	Version Status
2			Approved Masad J Damha Meeting Date: Oct 26 2015 Approval Date: Oct 26 2015 View Comments					Approved by Departmental Chair Edited by: Anthony Mittermaier on: Oct 26 2015
1								Submitted to Department Chair for approval Created on: Oct 1 2015

Revision for CHEM 203

Proposal Reference Number : 10514
 PRN Alias : 15-16#335
 Version No : 2
 Submitted By : Prof Anthony Mittermaier
 Edited By : Prof Anthony Mittermaier

[Display Printable PDF](#)

Summary of Changes **Restrictions**

	Current Data	New Data				
Program Affected?		N				
Program Change Form Submitted?						
Subject/Course/Term	CHEM 203 <ul style="list-style-type: none"> one term 					
Credit Weight or CEU's	3 credits.					
Course Activities	<ul style="list-style-type: none"> A - Lecture OT - Optional Tutorial 					
Course Title	<table border="1"> <tr> <td>Course Title on Transcript</td> <td>Survey of Physical Chemistry</td> </tr> <tr> <td>Course Title on Calendar</td> <td>Survey of Physical Chemistry.</td> </tr> </table>	Course Title on Transcript	Survey of Physical Chemistry	Course Title on Calendar	Survey of Physical Chemistry.	
Course Title on Transcript	Survey of Physical Chemistry					
Course Title on Calendar	Survey of Physical Chemistry.					
Rationale		CHEM 213 is no longer offered therefore we should remove the reference to this course in the restrictions.				
Responsible Instructor						
Course Description	The fundamentals of thermodynamics and chemical kinetics with applications to biomolecular systems. Thermodynamic and kinetic control of biological processes.					
Teaching Dept.	0287 : Chemistry					
Administering Faculty/Unit	SC : Faculty of Science					
Prerequisites	Prerequisites: CHEM 110 and CHEM 120 or equivalent.					
Corequisites						
Restrictions	<ul style="list-style-type: none"> Restrictions: Intended for students in biological science programs requiring only one course in physical chemistry. Not open to students who have taken or are taking CHEM 204 or CHEM 213 or CHEM 223 and CHEM 243. 	<ul style="list-style-type: none"> Restrictions: Intended for students in biological science programs requiring only one course in physical chemistry. Not open to students who have taken or are taking CHEM 204 or CHEM 223 and CHEM 243. 				
Supplementary Calendar Info	1. Fall					

Additional Course Charges		
Campus		
Projected Enrollment		
Requires Resources Not Currently Available		
Explanation for Required Resources		
Consultation Reports Attached?		
Effective Term of Implementation		201609
File Attachments		No attachments have been saved yet.
To be completed by the Faculty		
For Continuing Studies Use		

Approvals Summary

Show all comments

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