

**LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK**

DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

Name of Program and Degree Award: Chemistry BS

Hegis Number: 1905

Program Code: 02663

Effective Term: Fall 2015

1. **Type of Change:** Change in Degree Requirements

2. **From:**

~~Chemistry, B.S. (76-77 Credit Major)~~

~~This major is recommended for students preparing for graduate school in chemistry or for careers in chemical research. The B.S. program is accredited by the Committee on Professional Training of the American Chemical Society (A.C.S.). The required courses and credits are distributed as follows:~~

~~Credits (76-77)~~

~~54-55 In Chemistry CHE 166-167 (or equivalent), 168-169, 232-233, 234-235, 249, 327, 342, 344, 345, 347, 442, 443 and 449, and two additional advanced CHE courses.~~

~~22 In Mathematics and physics: MAT 175, 176, MAT 226 and either PHY 166-167 or 168-169~~

~~Chemistry, B.S., with a Specialization in Biochemistry (80.5 Credit Major)~~

~~This major prepares students for (1) graduate study in chemistry, biochemistry, molecular biology, or clinical chemistry; (2) professional training in medicine, dentistry, and other health-related sciences; and (3) careers in chemistry, biochemistry or biomedicine in hospitals, medical schools, or the chemical industry. The B.S. degree in Chemistry with a specialization in Biochemistry is accredited by the Committee on Professional Training of the American Chemical Society (A.C.S.). The distribution of required courses and credits is as follows:~~

~~Credits (80.5)~~

~~50.5 In Chemistry CHE 166-167, 168-169, 232-233, 234-235, 2420-2430, 249, 342, 344-345, 442, 443, 444, 446 and 447.~~

~~12 In biological sciences, BIO 166, 167 and 420~~

22 — In Mathematics and physics: MAT 175, 176, and PHY 168-169

3. To: Chemistry, B.S. (75.5-81.5 Credit Major)

The Chemistry BS is comprised of a core of 40 credits and an area of concentration in chemistry or biochemistry. This major is recommended for those students in chemistry who are preparing for (1) graduate study in chemistry, biochemistry, molecular biology, or clinical chemistry and (2) research careers in chemistry, biochemistry or biomedicine in hospitals, medical schools, or the chemical industry. The B.S. program is accredited by the Committee on Professional Training of the American Chemical Society (A.C.S.)

Chemistry Core (required) (40 credits)

22 In chemistry: CHE 166-167, 168-169, 232-233, 234-235 and 450

18 In mathematics and physics: MAT 175 -176, and PHY 168-169

Chemistry Concentration (35.5 credits)

31.5 In chemistry: 244, 249, 342, 344, 345, 347, 442, 443, 449

4 In mathematics: MAT 226

Biochemistry Concentration (41.5 credits)

29.5 In chemistry: CHE 249, 342, 344, 345, 442, 443, 444, 446 and 447

12 In biology: BIO 166-167 and BIO 420

4. Rationale (Explain how this change will impact learning outcomes of the department and Major/Program):

We are adjusting the Chemistry BS degree to be compliant with the ACS requirements in order to keep our certification. To achieve this we are adjusting the courses that are required for each specialization – this in turn has an impact on the number of credits required.

5. Date of departmental approval:

December 8th, 2015

**LEHMAN COLLEGE
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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

Name of Program and Degree Award: Chemistry BA

Hegis Number: 1905

Program Code: 34241

Effective Term: Fall 2015

1. **Type of Change**: Change in Degree Requirements

2. **From**: Chemistry, B.A. (~~56-62 Credit Major~~)

***Approved June 2015 Chancellors University Report (CUR)**

The Chemistry BA is comprised of a core of ~~36-38~~ credits and an area of concentration in chemistry or biochemistry. This major is recommended for those students in chemistry who are preparing for (1) admission to medical, veterinary, or dental school; (2) certification as secondary school teachers of chemistry; or (3) positions in the chemical industry.

Chemistry Core (required) (~~36-38~~ credits)

~~20~~ In chemistry: CHE 166-167 (~~or equivalent~~), 168-169, 232-233, 234-235.

~~16-18~~ In mathematics and physics: MAT 175-176, and either PHY 166-167 or 168-169.

Biochemistry Concentration (~~24 credits~~)

15 In chemistry: CHE ~~334~~, 444, 446, 447, and one 3 credit elective Chemistry course at the 200 level or above, excluding 391 and 491.

8 In biology: BIO 166-167.

Chemistry Concentration (~~20-22 credits~~)

~~16-18~~ In chemistry: 249, 342, 344, 345, 347 and one 3 credit elective Chemistry course at the 200 level or above, excluding 391 and 491.

4 In mathematics: MAT 226.

3. To: Chemistry, B.A. (62-65 Credit Major)

The Chemistry BA is comprised of a core of 40 credits and an area of concentration in chemistry or biochemistry. This major is recommended for those students in chemistry who are preparing for (1) admission to medical, veterinary, or dental school; (2) certification as secondary school teachers of chemistry; or (3) positions in the chemical industry.

Chemistry Core (required) (40 credits)

22 In chemistry: CHE 166-167, 168-169, 232-233, 234-235 and 450

18 In mathematics and physics: MAT 175 -176, and either PHY 166-167 or 168-169

Chemistry Concentration (22-24 credits)

18-20 In chemistry: 249, 342, 344, 345, 347 and one 3-5 credit elective Chemistry course at the 200 level or above, excluding 391 and 491

4 In mathematics: MAT 226

Biochemistry Concentration (23-25 credits)

15-17 In chemistry: CHE 342 or 344, 444, 446, 447 and one 3-5 credit elective Chemistry course at the 200 level or above, excluding 391 and 491

8 In biology: BIO 166-167

4. Rationale (Explain how this change will impact learning outcomes of the department and Major/Program):

- The number of credits in general chemistry is changing, this changes the number of credits in the major.
- There was an error in the course offering for physical chemistry CHE 334 – this course has been replaced with either CHE 342 or 344
- The elective course credits have been expanded to include all possible combinations

5. Date of departmental approval:

December 8th, 2015

**LEHMAN COLLEGE
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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

Name of Program and Degree Award: Chemistry Minor

Hegis Number: 1905

Program Code:

Effective Term: Fall 2016

1. **Type of Change:** Change to minor requirements

2. **From:** Chemistry Minor

~~Students must complete 10 credits in organic chemistry—CHE 232-233 and 234-235— and also choose either CHE 249 (quantitative analysis, 5 credits) or CHE 332 (physical chemistry, 3 credits).~~

3. **To:** Chemistry Minor (25-27 Credits)

Students must complete 11 credits in general chemistry (CHE166 -167 and 168-169), 10 credits in organic chemistry (CHE 232-233 and 234-235), CHE 450 and also choose one elective chemistry course from the following options:

CHE 244

CHE 249

CHE 342

CHE 344

CHE 442

Any other 3 credit (or more) Chemistry course at the 200 level or above excluding CHE 391 and CHE 491 may be considered for the elective with departmental consent.

4. **Rationale (Explain how this change will impact learning outcomes of the department and Major/Program):**

The Chemistry Department wishes to make the minor more attractive to students by expanding the course options beyond organic chemistry to include a chemistry seminar course and one chemistry elective. The CHE 450 seminar course will build their science literacy and expose them to many exciting areas of scientific research, and the elective chemistry course will allow students to tailor their coursework to better match their own

interests. Together this combination of increased science literacy, exposure to scientific research and flexibility in research exposure and preparing them more effectively for their chosen post-graduate work.

5. **Date of departmental approval:**

December 8th, 2015

**LEHMAN COLLEGE
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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

1. Type of Change:

Change in the *pre or corequisites, course hours and number of course credits.*

2. From:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 166
Course Title	General Chemistry I
Description	Fundamental laws and theories of chemistry
Pre/ Co Requisites	PREREQ: MAT 172 or MAT 175 or more advanced calculus course. COREQ: CHE 167.
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<p>_____ Not Applicable</p> <p>_____ Required</p> <p>_____ English Composition</p> <p>_____ Mathematics</p> <p>_____ Science</p> <p>_____ Flexible</p> <p>_____ World Cultures</p> <p>_____ US Experience in its Diversity</p> <p>_____ Creative Expression</p> <p>_____ Individual and Society</p> <p>_____ Scientific World</p>

3. To:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 166
Course Title	General Chemistry I
Description	Fundamental laws and theories of chemistry
Pre/ Co Requisites	<u>PRE or COREQ: MAT 172 or satisfaction of requirements for placement into calculus I (MAT 175)</u>
Credits	<u>4</u>
Hours	<u>4</u>
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):Pre /Co Requisite change:

The Chemistry Department does not require students who take the CHE 166 lecture to take the CHE 167 laboratory course or to have completed MAT 172 as a prerequisite, rather MAT 172 can be taken as a concurrent course. The math content needed for CHE 166 that is learned in MAT 172 can be learned concurrently with CHE 166. This math content then serves as a pre-req for the second semester of general chemistry

CHE 168. Historically, chemistry lecture and labs have been designed to reinforce one another, but in the new wave of chemistry instruction laboratory courses have become more inquiry driven. This allows them to focus on laboratory skills and process rather than entirely on chemistry content. The result in our department is that CHE167 no longer reinforces the content for CHE 166. CHE 166 however is still required for CHE 167.

Hour and Credit increase:

In order to address poor student performance in General Chemistry the Chemistry department has modified its pedagogical approach to include techniques that more actively engage students in their learning. To be truly effective this new approach requires students to be intellectually and actively engaged for four hours of structured course work every week instead of three.

One of the more successful techniques that have been used across the country to engage students is the inclusion of an additional course hour during which students engage in problem solving through peer instruction and/or group workshops. These problem-solving sessions provide a structured opportunity for students to solve typically difficult problems, in a collaborative setting. (There is tremendous research evidence to demonstrate the effectiveness of collaborative settings on student learning.)

The Chemistry department proposes to change from a three-hour traditional lecture to a four-hour classroom model that incorporates video lecture, peer instruction and group workshops into an integrated and seamless pedagogical approach. In this new sequence students will learn basic course content through the video lectures (at home) and then come to class for 4 hours a week to extend this basic knowledge to new (and often difficult) levels through structured problem-solving exercises. As a consequence, all four hours of the course will be intellectually demanding and involve the delivery of significant course content. Students should receive course credit that appropriately reflects the workload of the course.

5. Date of departmental approval:

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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

1. **Type of Change:** Change in the *course hours and number of course credits*.

2. **From:**

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 167
Course Title	General Chemistry Laboratory I
Description	Introduction to the practical aspects of chemical principles, with emphasis on quantitative measurements and analytical technique
Pre/ Co Requisites	COREQ: CHE 166
Credits	2
Hours	4 (3, lab; 1, problem-lab)
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<p>_____ Not Applicable</p> <p>_____ Required</p> <p>_____ English Composition</p> <p>_____ Mathematics</p> <p>_____ Science</p> <p>_____ Flexible</p> <p>_____ World Cultures</p> <p>_____ US Experience in its Diversity</p> <p>_____ Creative Expression</p> <p>_____ Individual and Society</p> <p>_____ Scientific World</p>

3. To:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 167
Course Title	General Chemistry Laboratory I
Description	Introduction to the practical aspects of chemical principles, with emphasis on quantitative measurements and analytical technique
Pre/ Co Requisites	<u>PRE or COREQ</u> : CHE 166
Credits	<u>1.5</u>
Hours	<u>3</u>
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):Hour and Credit decrease:

The current CHE 167 laboratory course includes a 1-hour problem solving session that has historically been used to help the students solve chemistry content problems (usually related to the CHE 166 lecture). In order to address poor student performance in General Chemistry the Chemistry department has modified its pedagogical approach

to teaching in both the lecture (CHE 166) and laboratory (CHE 167) courses to include techniques that more actively engage students in their learning. The new approach is designed to separate the lecture and laboratory courses so that the laboratory course is used exclusively to teach a combination of laboratory and data analysis skills – instead of including an hour of time to reinforce lecture content. The new approach focusses on engaging students in a 3-hour intensive and inquiry-based laboratory exercise once per week. This new approach no longer requires the 1 hour of problem solving to be attached to the laboratory course. Instead the department is submitting a separate curriculum change to attach this extra hour to the lecture course (CHE 166) where it can be used to appropriately engage students in the learning of new (and often difficult) content through structured problem-solving exercises.

5. Date of departmental approval:

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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

1. Type of Change:

Change in the *course description, pre or corequisites, course hours and number of course credits.*

2. From:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 168
Course Title	General Chemistry 2
Description	The presentation of the fundamental laws and theories of chemistry in considerable depth
Pre/ Co Requisites	PREREQ: CHE 166 [or 104 and 106] (or equivalent, as approved by the Chair). COREQ: CHE 169.
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

3. To:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 168
Course Title	General Chemistry 2
Description	<u>An in-depth introduction to thermodynamics, redox reactions, electrochemistry and chemical equilibrium.</u>
Pre/ Co Requisites	PREREQ: CHE 166
Credits	<u>4</u>
Hours	<u>4</u>
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<p> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science </p> <p> <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World </p>

4. Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):Pre /Co Requisite justification:

The Chemistry Department is removing CHE 104 and CHE 106 as pre-requisite courses because they no longer exist. In addition, we do not require students who take the CHE 168 lecture to concurrently register for the CHE 169 lab. Historically, chemistry lecture and labs have been designed to reinforce one another, but in the new wave of chemistry instruction laboratory courses have become more inquiry driven. This allows them to focus on laboratory skills and process rather than entirely on chemistry content. The result in our department is that CHE169 no longer reinforces the content for CHE 168. CHE 168 however is still required for CHE 169.

Hour and Credit increase justification:

In order to address poor student performance in General Chemistry the Chemistry department has modified its pedagogical approach to include techniques that more actively engage students in their learning. To be truly effective this new approach requires students to be intellectually and actively engaged for four hours of structured course work every week instead of three.

One of the more successful techniques that have been used across the country to engage students is the inclusion of an additional course hour during which students engage in problem solving through peer instruction and/or group workshops. These problem-solving sessions provide a structured opportunity for students to solve typically difficult problems, in a collaborative setting. (There is tremendous research evidence to demonstrate the effectiveness of collaborative settings on student learning.)

The Chemistry department proposes to change from a three-hour traditional lecture to a four-hour classroom model that incorporates video lecture, peer instruction and group workshops into an integrated and seamless pedagogical approach. In this new sequence students will learn basic course content through the video lectures (at home) and then come to class for 4 hours a week to extend this basic knowledge to new (and often difficult) levels through structured problem-solving exercises. As a consequence, all four hours of the course will be intellectually demanding and involve the delivery of significant course content. Students should receive course credit that appropriately reflects the workload of the course.

5. Date of departmental approval:

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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

1. **Type of Change:** Change in the course description, pre or corequisites, course hours and number of course credits.

2. **From:**

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 169
Course Title	General Chemistry Laboratory II
Description	Continuation of CHE 167 or 107 . Emphasis will be on inorganic preparation, ionic separation, and qualitative analysis
Pre/ Co Requisites	COREQ: CHE 168
Credits	2
Hours	4 (3, lab; 1, problem-lab)
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

3. To:

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 169
Course Title	General Chemistry Laboratory II
Description	Continuation of CHE 167 or 407. Emphasis will be on inorganic preparation, ionic separation, and qualitative analysis
Pre/ Co Requisites	<u>PRE or COREQ: CHE 168</u> <u>PREREQ: CHE 167</u>
Credits	<u>1.5</u>
Hours	<u>3</u>
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):Prerequisite addition:

The CHE 169 laboratory course is designed to be a continuation of the CHE 167 laboratory course. Because the CHE 166 lecture course can now be completed without the completion of the CHE 167 lab it is important to ensure that students who register for CHE 169 have already completed the CHE 167 laboratory course.

Hour and Credit decrease:

The current CHE 169 laboratory course includes a 1-hour problem solving session that has historically been used to help the students solve chemistry content problems (usually related to the CHE 168 lecture). In order to address poor student performance in General Chemistry the Chemistry department has modified its pedagogical approach to teaching in both the lecture (CHE 168) and laboratory (CHE 169) courses to include techniques that more actively engage students in their learning. The new approach is designed to separate the lecture and laboratory courses so that the laboratory course is used exclusively to teach a combination of laboratory and data analysis skills – instead of including an hour of time to reinforce lecture content. The new approach focusses on engaging students in a 3-hour intensive and inquiry-based laboratory exercise once per week. This new approach no longer requires the 1 hour of problem solving to be attached to the laboratory course. Instead the department is submitting a separate curriculum change to attach this extra hour to the lecture course (CHE 168) where it can be used to appropriately engage students in the learning of new (and often difficult) content through structured problem-solving exercises.

5. Date of departmental approval:

December 8th, 2015

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DEPARTMENT OF CHEMISTRY

CURRICULUM CHANGE

1. **Type of Change:** Change in the *pre or corequisites*

2. **From:**

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 114
Course Title	Essentials of General Chemistry - Lecture
Description	Essentials of chemistry and their applications to inorganic chemistry.
Pre/ Co Requisites	Completion of the College's Requirement in Mathematics. A student may not receive credit for CHE 114 until they have completed CHE 115
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

3. **To:** Underline the changes

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 114
Course Title	Essentials of General Chemistry - Lecture
Description	Essentials of chemistry and their applications to inorganic chemistry.
Pre/ Co Requisites	<u>PRE or COREQ: MAT 104 or satisfaction of requirements for placement into precalculus (MAT 172)</u>
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. **Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):**

The Chemistry Department would like students to receive credit for the CHE114 lecture course upon completion of the course. This is independent of completion of the CHE 115 Laboratory course.

5. **Date of departmental approval:**

December 8th, 2015

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CURRICULUM CHANGE

1. **Type of Change:** Change in the *pre or corequisites*

2. **From:**

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/> ·] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/> ·] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 120
Course Title	Essentials of Organic Chemistry Lecture I
Description	Essentials of organic chemistry and their applications to biochemistry.
Pre/ Co Requisites	PREREQ: CHE 114 and CHE 115.
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

3. **To:** Underline the changes

Department(s)	CHEMISTRY
Career	[<input checked="" type="checkbox"/>] Undergraduate [] Graduate
Academic Level	[<input checked="" type="checkbox"/>] Regular [] Compensatory [] Developmental [] Remedial
Subject Area	Chemistry
Course Prefix & Number	CHE 120
Course Title	Essentials of Organic Chemistry Lecture I
Description	Essentials of organic chemistry and their applications to biochemistry.
Pre/ Co Requisites	<u>PREREQ: CHE 114</u>
Credits	3
Hours	3
Liberal Arts	[<input checked="" type="checkbox"/>] Yes [] No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. **Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):**

The Chemistry Department does not require students who take the CHE 120 lecture course to have completed the CHE 115 Laboratory course. The CHE 114 lecture provides sufficient content knowledge for the completion of CHE 120.

5. **Date of departmental approval:**

December 8th, 2015