

General Education Review Committee Agenda

12:30-1:30
March 30, 2012
ADM 204

I. Call to Order

Roll

() Vacant	UAB/COH	Social Sciences
() Utpal Dutta	UAB/SOE	
() Kevin Keating	UAB/Library	
() Kathryn Hollis-Buchanan	UAB	
() Vacant	UAB	
() Suzanne Forster	CAS	Humanities
() Len Smiley	CAS	Quantitative Skills
() Marcia Stratton	CAS	Oral Communication
() Walter Olivares	CAS	Fine Arts
() Robert Capuozzo	COE	
() Sandra Pence	CTC/COH/Chair	
() Kyle Hampton	CBPP	Social Sciences
() Deborah Fox	Mat-Su	Written Communication
() Hilary Davies	UAB	Ex officio/UAB Chair
() Bart Quimby	UAB	Ex officio/OAA
() Vacant	Student	

II. Approval of Agenda (pg. 1)

III. Approval of Summary (pg. 2-3)

IV. Report from Interim Vice Provost for Curriculum and Assessment Bart Quimby

V. Chair's Report – Sandra Pence

VI. Course Action Requests

Chg	CHEM A103	Survey of Chemistry (3 cr)(3+0)(pg. 4-12)
Chg	CHEM A103L	Survey of Chemistry Laboratory (1 cr)(1+0)(pg. 13-21)
Chg	CHEM A104	Introduction to Organic Chemistry and Biochemistry (3 cr)(3+0)(pg. 22-29)
Chg	CHEM A104L	Introduction to Organic Chemistry and Biochemistry Laboratory (1 cr)(0+3)(pg. 30-37)
Chg	CHEM A105	General Chemistry I (3 cr)(3+0)(pg. 38-48)
Chg	CHEM A105L	General Chemistry I Laboratory (1 cr)(0+3)(pg. 49-58)
Chg	CHEM A106	General Chemistry II (3 cr)(3+0)(pg. 59-67)
Chg	CHEM A106L	General Chemistry II Laboratory (1 cr)(0+3)(pg. 68-76)
Chg	LEGL A101	Introduction to Law (3 cr)(3+0)(pg. 77-84)

VII. Old Business

A. General Education Assessment (pg. 85-86)

VIII. New Business

IX. Informational Items and Adjournment

General Education Review Committee Summary

12:30-1:30

March 23, 2012

ADM 204

I. Call to Order

Roll

() Vacant	UAB/COH	Social Sciences
(x) Utpal Dutta	UAB/SOE	
(e) Kevin Keating	UAB/Library	
(x) Kathryn Hollis-Buchanan	UAB	
() Vacant	UAB	
(x) Suzanne Forster	CAS	Humanities
(x) Len Smiley	CAS	Quantitative Skills
(x) Marcia Stratton	CAS	Oral Communication
(e) Walter Olivares	CAS	Fine Arts
(x) Robert Capuozzo	COE	
(x) Sandra Pence	CTC/COH/Chair	
(x) Kyle Hampton	CBPP	Social Sciences
() Deborah Fox	Mat-Su	Written Communication
(x) Hilary Davies	UAB	Ex officio/UAB Chair
(x) Bart Quimby	UAB	Ex officio/OAA
() Vacant	Student	

II. Approval of Agenda (pg. 1)

Approved

III. Approval of Summary (pg. 2-3)

Approved

IV. Report from Interim Vice Provost for Curriculum and Assessment Bart Quimby

*The more organization we have the more effective your general education process is
Bart had a meeting with Utah Valley – is ahead of UAA on the GER process, but not that far ahead, they have an administrator and staff members who work on the GER process; their GER committee works under the Provost and not under a Faculty Senate; they focus on the essential learning outcomes (ELOs); Made all of their 250+ courses recertify; their GER committee consists of faculty and deans*

V. Chair's Report – Sandra Pence

*Requested that the board make a recommendation to OAA on the GER assessment process
Hanover research will conduct research on the assessment process*

VI. Course Action Requests

Add AKNS A101E Elementary Alutiiq Language I (4 cr)(4+0)(pg. 4-7)
Add AKNS A102E Elementary Alutiiq Language II (4 cr)(4+0)(pg. 8-12)

Unanimously Approved

VII. Old Business

- A. Develop recommendation for OAA regarding GER assessment process (pg. 13)
*Include information that allows the Director to work on the assessment plan over time
Task Force information is still needed
AA Assessment chair or a member from the committee should be on this task force
A member from the Academic Assessment committee should also be on the task force
Timeline should be 1 year*
- B. Review Faculty Senate Bylaws governing GERC (pg. 14)
*Discussion and changes were made to the membership of community campus
Approved as amended*

VIII. New Business

IX. Informational Items and Adjournment



Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A103	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)		
6. Complete Course Title Survey of Chemistry						
Abbreviated Title for Transcript (30 character)						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete If a change, mark appropriate boxes: <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				9. Repeat Status No # of Repeats Max Credits		
				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date semester/year From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
Impacted Program/Course		Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted		
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)			13c. Coordination with Library Liaison Date: <u>03/05/2012</u>			
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities Mark appropriate box: <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (suggested length 20 to 50 words) Survey of topics including: matter, energy, units of measurement, the periodic table, atomic and molecular structure, chemical bonding, radioactivity, oxidation-reduction reactions, solutions involving acids, bases and buffers; and an introduction to organic chemistry with units on functional groups and the chemistry of alkanes, alkenes and alkynes. Special Note: This is an introductory course designed for health science majors and assumes prior knowledge of college preparatory high school chemistry and algebra. CHEM A103L is the laboratory component of this course and requires a separate registration.						
16a. Course Prerequisite(s) (list prefix and number) (MATH A105, or MATH A107, or MATH A108, or MATH A109, or MATH A200) with minimum grade of C.		16b. Test Score(s)		16c. Co-requisite(s) (concurrent enrollment required)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (non-codable) CHEM A055 with a minimum grade of C or college preparatory high school chemistry with a minimum grade of C. If the MATH A105 prerequisite is not satisfied, appropriate scores on the SAT or ACT tests or appropriate scores on a UAA-approved placement test such as the Accuplacer Placement test.				
17. <input type="checkbox"/> Mark if course has fees			18. <input type="checkbox"/> Mark if course is a selected topic course			
19. Justification for Action Course content guide update. Prerequisite clarification.						

Initiator (faculty only)		Date	<input type="checkbox"/> Approved		
Initiator (TYPE NAME)			<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Undergraduate/Graduate Academic Board Chairperson	Date
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved	Provost or Designee	Date

CHEM A103 – Survey of Chemistry

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
Health Sciences (DPL 404, 786-6565)			
B.S. Health Sciences, BSHS Physician Assistant Track, admission requirement, p. 154		3/26/2012	Dr. John Riley
<i>School of Nursing (PSB 103, 786-4550)</i>		3/26/2012	Dr. Barbara Berner
B.S. Nursing Science, admission requirement, p. 162			
B.S. Nursing Science, major requirement, p. 162			
Registered Nurse Option, admission requirement, p. 163			
Registered Nurse Option, major requirement, p. 163			
<i>Computer Electronics (Kenai Peninsula College, 907-262-0330)</i>		3/26/2012	Rich Kochis
A.A.S. Computer Electronics, general requirement, p. 187			
<i>Dental Hygiene (AHS 160, 786-6929)</i>		3/26/2012	Robin Wahto
A.A.S. Dental Hygiene, admission requirement, p. 200			

B.S. Dental Hygiene, admission requirement, p. 200

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Nutrition, Community Nutrition Emphasis, support course, p. 203

Industrial Process Instrumentation, (Kenai Peninsula College, 907-262-0330)

3/26/2012

Henry Haney

A.A.S. Industrial Process Instrumentation, general requirement, p. 210

Medical Laboratory Technology (AHS 169, 786-4930)

3/26/2012

Heidi Mannion

A.A.S. Medical Laboratory Technology, support course, p. 215

B.S. Medical Technology, support course, p. 216

Occupational Safety and Health (KPC, University Center 118, 786-6421)

3/26/2012

Don Webber

A.A.S. Occupational Safety and Health, graduation requirement, p. 217

Process Technology (KPC, Kenai River Campus, 907-262-0300)

A.A.S. Process Technology, general requirement, p. 220 (twice)

Renewable Energy (Kodiak College, 907-486-1209)

3/26/2012

Lorraine Stewart

A.A.S. Technology, major requirement, p. 225

Chemistry Department (CPSB 101Q, 786-1238)

3/26/2012

Eric Holmberg

CHEM A103, course listing, p. 355

CHEM A103L, prerequisite, p. 356

CHEM A104, prerequisite, p. 356

CHEM A104L, prerequisite, p. 356

Medical Laboratory Technology (CTC, AHS 169, 786-4930)

3/26/2012

Heidi Mannion

MEDT A132, prerequisite, p. 436

MEDT A133, prerequisite, p. 436

MEDT A202, prerequisite, p. 436

MEDT A203, prerequisite, p. 436

MEDT A204, prerequisite, p. 437

MEDT A206, prerequisite, p. 437

MEDT A208, prerequisite, p. 437

Course Content Guide for **CHEM A103**

University of Alaska Anchorage

College of Arts & Sciences

- I. **Date of Initiation:** January 30, 2012

- II. **Course Information:**
 - A. **College:** College of Arts & Sciences
 - B. **Course Subject:** CHEM
 - C. **Course Number:** A103
 - D. **Number of Credits:** 3
 - E. **Contact Hours:** 3 + 0
 - F. **Course Title:** Survey of Chemistry
 - G. **Grading Basis:** A – F
 - H. **Implementation Date:** Fall 2012
 - I. **Course Description:** Survey of topics including: matter, energy, units of measurement, the periodic table, atomic and molecular structure, chemical bonding, radioactivity, oxidation-reduction reactions, solutions involving acids, bases and buffers; and an introduction to organic chemistry with units on functional groups and the chemistry of alkanes, alkenes and alkynes. Special Note: This is an introductory course designed for health science majors and assumes prior knowledge of college preparatory high school chemistry and algebra. CHEM A103L is the laboratory component of this course and requires a separate registration.
 - J. **Course Attributes:** UAA GER Natural Sciences Requirement
 - K. **Prerequisites:** (MATH A105, or MATH A107, or MATH A108, or MATH A109, or MATH A200) with minimum grade of C
 - L. **Test Scores:** N/A

M. **Co-requisites:** N/A

N. **Registration Restrictions:** CHEM A055 with a minimum grade of C or college preparatory high school chemistry with a minimum grade of C. If the MATH A105 prerequisite is not satisfied, appropriate scores on the SAT or ACT tests or appropriate scores on a UAA-approved placement test such as the Accuplacer Placement test.

O. **Course Fee:** No

III. **Instructional Goals and Student Learning Outcomes:**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to current topics in chemistry. The instructor will assist in the learning process through a variety of methods that may include lectures, facilitation of class discussions, and demonstrations.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for health science majors. It is intended to be a survey of general and organic chemistry with significant emphasis on health-related material. The periodic table, atomic and molecular structure, bonding, and chemical reactions, skills in measurements, balancing chemical equations and problem solving are emphasized.

The instructor will:

1. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
2. Present questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.
3. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

C. **Student Learning Outcomes:**

The student will:

1. Analyze chemical and physical events in terms of appropriate chemical vocabulary and concepts.

2. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.
3. Apply science methodology with emphasis on exploring and verifying measurements and chemical equations in health-related problems.

D. Assessment Measures:

Various assessment tools can be used at the instructor's discretion, including but not limited to quizzes, weekly homework and exams.

IV. Course Level Justification:

This course introduces students to chemistry concepts in atomic and molecular structure and in atomic and molecular interactions. Students learn basic skills in model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a science discipline and how it pertains to the health sciences. This course serves as a preparatory course for CHEM A104.

V. Topical Course Outline:

1. Matter, Energy, and Measurement
2. Atoms
3. Chemical Bonds
4. Chemical Reactions
5. Gases, Liquids, and Solids
6. Solutions and Colloids
7. Reaction Rates and Chemical Equilibrium
8. Acids and Bases
9. Nuclear Chemistry
10. Organic Chemistry
11. Alkanes
12. Alkenes and Alkynes

VI. Suggested Texts:

Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry*. Thomson Brooks/Cole, 2009.

Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry: Student Solution Manual*. Thomson Brooks/Cole, 2009.

VII. **Bibliography:**

Abraham, M.R., *Inquiry and the learning cycle, in Chemists' Guide to Effective Teaching*. Pearson Education, 2005.

Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873-878.

Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385-388.

Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566-569.

Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24(2) p. 185-203.



Course Action Request University of Alaska Anchorage Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A103L	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 1	5b. Contact Hours (Lecture + Lab) (0+3)		
6. Complete Course Title Survey of Chemistry Laboratory <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <small>If a change, mark appropriate boxes:</small> <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input checked="" type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				9. Repeat Status No # of Repeats Max Credits		
				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date semester/year From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>	<i>Chair/Coordinator Contacted</i>		
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)				13c. Coordination with Library Liaison Date: <u>03/05/2012</u>		
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) Introductory chemistry laboratory course with experiments designed to introduce students to the basics of laboratory equipment, data collection, data analysis, and reporting; and to illustrate, augment and apply concepts covered in CHEM A103. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) CHEM A103 with minimum grade of C or concurrent enrollment		16b. Test Score(s)		16c. Co-requisite(s) (<i>concurrent enrollment required</i>)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (<i>non-codable</i>)				
17. <input checked="" type="checkbox"/> Mark if course has fees		18. <input type="checkbox"/> Mark if course is a selected topic course				
19. Justification for Action Course content guide update. Prerequisite clarification.						

<hr/>		<input type="checkbox"/> Approved	<hr/>	
Initiator (faculty only)	Date	<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<hr/>				
Initiator (TYPE NAME)				
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Undergraduate/Graduate Academic Board Chairperson
<hr/>				
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved	Provost or Designee
<hr/>				

CHEM A103L – Survey of Chemistry Laboratory

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>Health Sciences (DPL 404, 786-6565)</i>		3/26/2012	John Riley
B.S. Health Sciences, BSHS Physician Assistant Track, admission requirement, p. 154			
<i>School of Nursing (PSB 103, 786-4550)</i>		3/26/2012	Barbara Burner
B.S. Nursing Science, admission requirement, p. 162			
B.S. Nursing Science, major requirement, p. 162			
Registered Nurse Option, admission requirement, p. 163			
Registered Nurse Option, major requirement, p. 163			
<i>Computer Electronics (Kenai Peninsula College, 907-262-0330)</i>		3/26/2012	Rich Kochis
A.A.S. Computer Electronics, general requirement, p. 187			
<i>Dental Hygiene (AHS 160, 786-6929)</i>		3/26/2012	Robin Wahto
B.S. Dental Hygiene, admission requirement, p. 200, 201			

B.S. Dental Hygiene, support course, p. 201

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Nutrition, Community Nutrition Emphasis, support course, p. 203

Industrial Process Instrumentation, (Kenai Peninsula College, 907-262-0330)

3/26/2012

Henry Haney

A.A.S. Industrial Process Instrumentation, general requirement, p. 210

Medical Laboratory Technology (AHS 169, 786-4930)

A.A.S. Medical Laboratory Technology, support course, p. 215

B.S. Medical Technology, support course, p. 216

Occupational Safety and Health (KPC, University Center 118, 786-6421)

3/26/2012

Don Webber

A.A.S. Occupational Safety and Health, graduation requirement, p. 217

Process Technology (KPC, Kenai River Campus, 907-262-0300)

3/26/2012

Henry Haney

A.A.S. Process Technology, general requirement, p. 220 (twice)

Renewable Energy (Kodiak College, 907-486-1209)

3/26/2012

Lorraine Stewart

A.A.S. Technology, major requirement, p. 225

Chemistry Department (CPSB 101, 786-1238)

3/26/2012

Eric Holmberg

CHEM A103L, course listing, p. 356

CHEM A104L, will be a prerequisite once approved – currently a special note, p. 356

Medical Laboratory Technology (CTC, AHS 169, 786-4930)

3/26/2012

Heidi Mannion

MEDT A132, prerequisite, p. 436

MEDT A133, prerequisite, p. 436

MEDT A202, prerequisite, p. 436

MEDT A203, prerequisite, p. 436

MEDT A204, prerequisite, p. 437

MEDT A206, prerequisite, p. 437

MEDT A208, prerequisite, p. 437

Course Content Guide for **CHEM A103L**
University of Alaska Anchorage
College of Arts & Sciences

I. **Date of Initiation:** October 20, 2011

II. **Course Information**

- A. **College:** College of Arts & Sciences
- B. **Course Subject:** CHEM
- C. **Course Number:** A103L
- D. **Number of Credits:** 1
- E. **Contact Hours:** 0 + 3
- F. **Course Title:** Survey of Chemistry Laboratory
- G. **Grading Basis:** A-F
- H. **Implementation Date:** Fall 2012
- I. **Course Description:** Introductory chemistry laboratory course with experiments designed to introduce students to the basics of laboratory equipment, data collection, data analysis, and reporting; and to illustrate, augment and apply concepts covered in CHEM A103. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.
- J. **Course Attributes:** GER Natural Sciences Lab only
- K. **Prerequisites:** CHEM A103 with minimum grade of C or concurrent enrollment
- L. **Test Scores:** N/A
- M. **Corequisites:** N/A

N. **Registration Restrictions:** N/A

O. **Course Fee:** Yes

III. **Instructional Goals and Student Learning Outcomes**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to experimental and theoretical chemistry. Exercises and experiments provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist the learning process through a variety of methods that may include: lecture, group discussions, demonstration and/or discussions with individuals, groups or the entire class.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry and the general chemistry laboratory, specifically for health science majors. It is intended to be an introduction to the chemistry laboratory. Safety in the laboratory environment, the proper use of glassware and equipment, and an integration of chemistry concepts, mathematics, technology, problem solving and kinesthesia are emphasized.

The instructor will:

1. Provide students with a safe, supervised environment to encourage self confidence in lab.
2. Provide students with standard operating procedures for each experiment and examples of experimental setups to encourage proper lab technique.
3. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
4. Pose questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.
5. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

C. Student Learning Outcomes:

The student will:

1. Safely and correctly demonstrate previously covered hands on skills in the chemistry laboratory.
2. Conduct laboratory work systematically by physically performing procedures as outlined by the curriculum.
3. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.
4. Explore and verify science methodology through measurements and chemical equations in health-related problems.
5. Demonstrate effective communication skills for discussing, applying and verifying chemistry concepts across multiple human-health related contexts.

D. Assessment Measures:

Various assessment tools can be used, including, but not limited to quizzes, preparatory questions sets, lab reports, homework, and practical skill evaluations.

IV. Course Level Justification

This course introduces students to chemistry laboratory concepts. Students develop basic laboratory skills through model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a laboratory science discipline.

VI. Topic Course Outline

1. Laboratory Safety and Orientation
2. Mathematics in Chemistry
3. Introduction to the Chemistry Laboratory
4. The Use of Laboratory Glassware
5. Computers and Analytical Software Orientation
6. Plotting Measured Data to Generate a Graph
7. Synthesis of Potassium Dioxalato cuprate (II) Dihydrate
8. Solutions and Electrolytes
9. Determination of Concentration Using Spectrophotometry
10. Kinetics: Measuring Reaction Rates
11. Analysis of Vinegar by Titration
12. Determination of Buffer Capacity

VII. Suggested Texts

1. Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry*. Brooks/Cole, Cengage Learning, 2010.
2. Bettelheim, F.A., *Introduction to General, Organic & Biochemistry: Student Solution Manual*. Brooks/Cole, Cengage Learning, 2010.
3. Kennish, J. and Schlabaugh, A., *Survey of Chemistry Laboratory Manual*. University of Alaska Anchorage, Chemistry Department, 2011.

VIII. Bibliography

1. Abraham, M.R., *Inquiry and the learning cycle*, in *Chemists' Guide to Effective Teaching*. Pearson Education, 2005.
2. Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873 – 878.
3. Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385 – 388.
4. Farrel, J.J., R.S. Moog, and Spencer, J.N., *A Guided Inquiry General Chemistry Course*. Journal of Chemical Education, 1999. 76(4): p. 570 – 574.
5. Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566 – 569.
6. Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24 (2) p. 185 – 203.



Course Action Request University of Alaska Anchorage Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A104	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)		
6. Complete Course Title Introduction to Organic Chemistry and Biochemistry Intro to Org Chem/Biochem <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <small>If a change, mark appropriate boxes:</small>				9. Repeat Status No # of Repeats Max Credits		
<input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input checked="" type="checkbox"/> Course Description <input type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date <small>semester/year</small> From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature _____		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. <small>Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance.</small>						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>	<i>Chair/Coordinator Contacted</i>		
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)				13c. Coordination with Library Liaison Date: <u>03/05/2012</u>		
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) This is the second semester course in the sequence for health science majors. The course content includes common nomenclature of organic compounds, organic functional group reactions, biochemical processes and pathways, biological macromolecules and metabolites. Special Note: CHEM A104L is the lab component of this course and requires a separate registration.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) CHEM A103 with minimum grade of C.		16b. Test Score(s)		16c. Co-requisite(s) (<i>concurrent enrollment required</i>)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (<i>non-codable</i>)				
17. <input type="checkbox"/> Mark if course has fees			18. <input type="checkbox"/> Mark if course is a selected topic course			
19. Justification for Action Course content guide update.						
				<input type="checkbox"/> Approved		
Initiator (faculty only) _____ Date _____				<input type="checkbox"/> Disapproved Dean/Director of School/College _____ Date _____		
Initiator (TYPE NAME)				<input type="checkbox"/> Approved		
<input type="checkbox"/> Approved _____ Date _____				<input type="checkbox"/> Disapproved Undergraduate/Graduate Academic Board Chairperson _____ Date _____		
<input type="checkbox"/> Disapproved Department Chairperson _____ Date _____				<input type="checkbox"/> Disapproved		
<input type="checkbox"/> Approved				<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved Curriculum Committee Chairperson _____ Date _____				<input type="checkbox"/> Disapproved Provost or Designee _____ Date _____		

CHEM A104 – Introduction to Organic Chemistry and Biochemistry

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>School of Nursing (PSB 103, 786-4550)</i>		3/26/2012	Barbara Berner
B.S. Nursing Science, admission requirement, p. 162			
B.S. Nursing Science, major requirement, p. 162			
Registered Nurse Option, admission requirement, p. 163			
Registered Nurse Option, major requirement, p. 164			
<i>Dental Hygiene (AHS 160, 786-6929)</i>		3/26/2012	Robin Wahto
A.A.S. Dental Hygiene, admission requirement, p. 200			
B.S. Dental Hygiene, admission requirement, p. 200			
<i>Dietetics and Nutrition (CUDY 126, 786-4728)</i>		3/26/2012	Tim Doebler
B.S. Nutrition, Community Nutrition Emphasis, support course, p. 203			
<i>Medical Laboratory Technology (AHS 169, 786-4930)</i>		3/26/2012	Heidi Mannion

A.A.S. Medical Laboratory Technology, support course, p. 215

B.S. Medical Technology, support course, p. 216

Chemistry Department (CPSB 101, 786-1238)

3/26/2012

Eric Holmberg

CHEM A104, course listing, p. 356

CHEM A104L, prerequisite, p. 356

Dental Hygiene (AHS 160, 786-6929)

3/26/2012

Robin Wahto

DH A365, prerequisite, p. 374

Dietetics & Nutrition (CUDY 126, 786-4728)

DN A203, prerequisite, p. 376

Medical Laboratory Technology (CTC, AHS 169, 786-4930)

3/26/2012

Heidi Mannion

MEDT A202, prerequisite, p. 436

MEDT A203, prerequisite, p. 436

MEDT A204, prerequisite, p. 437

MEDT A206, prerequisite, p. 437

MEDT A208, prerequisite, p. 437

MEDT A301, prerequisite, p. 437

Nursing Sciences (CHSW, PSB 103, 786-4550)

3/26/2012

Barbara Berner

NS A216, prerequisite, p. 443

Course Content Guide for **CHEM A104**

University of Alaska Anchorage

College of Arts & Sciences

- I. **Date of Initiation:** January 30, 2012

- II. **Course Information:**
 - A. **College:** College of Arts & Sciences
 - B. **Course Subject:** CHEM
 - C. **Course Number:** A104
 - D. **Number of Credits:** 3
 - E. **Contact Hours:** 3 + 0
 - F. **Course Title:** Introduction to Organic Chemistry and Biochemistry
 - G. **Grading Basis:** A – F
 - H. **Implementation Date:** Fall 2012
 - I. **Course Description:** This is the second semester course in the sequence for health science majors. The course content includes common nomenclature of organic compounds, organic functional group reactions, biochemical processes and pathways, biological macromolecules and metabolites. Special Note: CHEM A104L is the lab component of this course and requires a separate registration.
 - J. **Course Attributes:** UAA GER Natural Sciences Requirement
 - K. **Prerequisites:** CHEM A103 with minimum grade of C
 - L. **Test Scores:** N/A
 - M. **Co-requisites:** N/A
 - N. **Registration Restrictions:** N/A

O. **Course Fee:** No

III. **Instructional Goals and Student Learning Outcomes:**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to current topics in chemistry including historical discoveries and technological advances. Activities provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist in the learning process through a variety of methods that may include lectures, facilitation of class discussions, and demonstrations.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for health science majors. It is intended to be a survey of organic and biochemistry with significant emphasis on health-related material. Concepts in applying organic compound nomenclature rules, organic functional group reactions and reactivities, biochemical processes, biological macromolecules and metabolites are emphasized.

The instructor will:

1. Present basic nomenclature rules in organic chemistry and organic functional group reactivities and biological chemical reactions for investigation and development of observational skills and conceptual foundations in chemistry.
2. Present questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.
3. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

C. **Student Learning Outcomes:**

The student will:

1. Recognize and use appropriate organic compound nomenclature.
2. Explore and solve chemical problems relevant to current health science using organic functional group reactivities.
3. Demonstrate basic skills of recognizing biochemical processes involving biological macromolecules and metabolites and applying their models and solutions to health-related problems in context of historical discoveries and technological advances.

D. Assessment Measures:

Various assessment tools can be used at the instructor's discretion, including but not limited to quizzes, weekly homework and exams.

IV. Course Level Justification:

This course introduces students to organic, and biochemistry concepts in atomic and molecular structure and in atomic and molecular interactions. Students learn basic skills in model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a science discipline and how it pertains to the health sciences.

V. Topical Course Outline:

1. Benzene and its derivatives
2. Amines
3. Aldehydes and Ketones
4. Alcohols, Ethers, Esters and Thiols
5. Carboxylic Acids
6. Carboxylic Anhydrides
7. Amides
8. Chirality and Carbohydrates
9. Lipids
10. Proteins
11. Enzymes
12. Bioenergetics
13. Biochemical Pathways

VI. Suggested Texts:

Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry*. Thomson Brooks/Cole, 2009.

Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry: Student Solution Manual*. Thomson Brooks/Cole, 2009.

VII. **Bibliography:**

Abraham, M.R., *Inquiry and the learning cycle, in Chemists' Guide to Effective Teaching*. Pearson Education, 2005.

Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873-878.

Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385-388.

Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566-569.

Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24(2) p. 185-203.



Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A104L	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 1	5b. Contact Hours (Lecture + Lab) (0+3)		
6. Complete Course Title Introduction to Organic Chemistry and Biochemistry Laboratory Intro to Org Chem/Biochem Lab Abbreviated Title for Transcript (30 character)						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete If a change, mark appropriate boxes: <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input checked="" type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)			9. Repeat Status No # of Repeats Max Credits			
			10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG			
			11. Implementation Date semester/year From: Fall/2012 To: /9999			
			12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature			
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
Impacted Program/Course		Catalog Page(s) Impacted	Date of Coordination		Chair/Coordinator Contacted	
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Coln McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)			13c. Coordination with Library Liaison Date: <u>03/05/2012</u>			
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities Mark appropriate box: <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (suggested length 20 to 50 words) Second semester introductory chemistry laboratory course. Experiments are designed to reinforce concepts students have been exposed to regarding the basics of laboratory equipment, data collection, data analysis, and reporting. This course illustrates, augments and applies concepts covered in CHEM A104. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student. Pregnant students should be aware that they will be using chemicals in this course that are teratogenic and may cause harm to unborn children.						
16a. Course Prerequisite(s) (list prefix and number) CHEM A103L with minimum grade of C and (CHEM A104 with minimum grade of C or concurrent enrollment)		16b. Test Score(s)		16c. Co-requisite(s) (concurrent enrollment required)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (non-codable)				
17. <input checked="" type="checkbox"/> Mark if course has fees			18. <input type="checkbox"/> Mark if course is a selected topic course			
19. Justification for Action This course requires pre-existing chemistry laboratory skills and knowledge of laboratory safety practices. Course content guide update. Course description update.						

Initiator (faculty only)		Date	<input type="checkbox"/> Approved		
Initiator (TYPE NAME)			<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved	Undergraduate/Graduate Academic	Date
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Board Chairperson	
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved	Provost or Designee	Date
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved		

CHEM A104L – Introduction to Organic Chemistry and Biochemistry Laboratory

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>School of Nursing (PSB 103, 786-4550)</i>		3/26/2012	Barbara Berner
B.S. Nursing Science, admission requirement, p. 162			
B.S. Nursing Science, major requirement, p. 162			
Registered Nurse Option, admission requirement, p. 163			
Registered Nurse Option, major requirement, p. 164			
<i>Dental Hygiene (AHS 160, 786-6929)</i>			
B.S. Dental Hygiene, admission requirement, p. 200, 201			
B.S. Dental Hygiene, support course, p. 201			
<i>Dietetics and Nutrition (CUDY 126, 786-4728)</i>		3/26/2012	Tim Doebler
B.S. Nutrition, Community Nutrition Emphasis, support course, p. 203			
<i>Medical Laboratory Technology (AHS 169, 786-4930)</i>		3/26/2012	Heidi Mannion
B.S. Medical Technology, support course, p. 216			

Chemistry Department (CPSB 101, 786-1238)

3/26/2012

Eric Holmberg

CHEM A104L, course listing, p. 356

Nursing Sciences (CHSW, PSB 103, 786-4550)

3/26/2012

Barbara Berner

NS A216, prerequisite, p. 443

Course Content Guide for **CHEM A104L**
University of Alaska Anchorage
College of Arts & Sciences

I. **Date of Initiation:** October 20, 2011

II. **Course Information**

- A. **College:** College of Arts & Sciences
- B. **Course Subject:** CHEM
- C. **Course Number:** A104L
- D. **Number of Credits:** 1
- E. **Contact Hours:** 0 + 3
- F. **Course Title:** Introduction to Organic and Biochemistry Laboratory
- G. **Grading Basis:** A-F
- H. **Implementation Date:** Fall 2012
- I. **Course Description:** Second semester introductory chemistry laboratory course. Experiments are designed to reinforce concepts students have been exposed to regarding the basics of laboratory equipment, data collection, data analysis, and reporting. This course illustrates, augments and applies concepts covered in CHEM A104. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student. Pregnant students should be aware that they will be using chemicals in this course that are teratogenic and may cause harm to unborn children.
- J. **Course Attributes:** GER Natural Sciences Lab only
- K. **Prerequisites:** CHEM A103L with minimum grade of C and (CHEM A104 with minimum grade of C or concurrent enrollment)

L. Test Scores:	N/A
M. Corequisites:	N/A
N. Registration Restrictions:	N/A
O. Course Fee:	Yes

III. **Instructional Goals and Student Learning Outcomes**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to experimental and theoretical chemistry. Exercises and experiments provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist the learning process through a variety of methods that may include: lecture, group discussions, demonstration and/or discussions with individuals, groups or the entire class.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry and the general chemistry laboratory, specifically for health science majors. It is intended to be an introduction to the chemistry laboratory. Safety in the laboratory environment, the proper use of glassware and equipment, and an integration of chemistry concepts, mathematics, technology, problem solving and kinesthesia are emphasized.

The instructor will:

1. Provide students with a safe, supervised environment to encourage self confidence in the lab.
2. Provide students with standard operating procedures for each experiment and examples of experimental setups to encourage proper lab technique.
3. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
4. Present questions to initiate discussion, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.

5. Provide multiple human health-related contexts for applying concepts and invite students to defend and verify their models and their solutions to problems.

C. Student Learning Outcomes:

The student will:

1. Safely and correctly demonstrate previously covered skills in the chemistry laboratory.
2. Conduct laboratory work systematically by following procedures as outlined by the curriculum.
3. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.
4. Demonstrate science methodology with emphasis on exploring and verifying measurements and chemical equations in health-related problems rather than memorizing facts and answering “algorithmic” questions.
5. Demonstrate effective communication skills for discussing, applying and verifying chemistry concepts.

D. Assessment Measures:

Various assessment tools can be used, including, but not limited to quizzes, preparatory questions sets, lab reports, homework, and comprehensive exams.

IV. Course Level Justification

This course introduces students to chemistry laboratory concepts. Students develop basic laboratory skills through model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a laboratory science discipline.

V. Topic Course Outline

1. Laboratory Safety and Orientation
2. Nomenclature
3. Identification of Alcohols and Phenols
4. Properties of Carboxylic Acids and Esters
5. Preparation of Acetylsalicylic Acid
6. Using Molecular Models to Explore the Structure of Organic Compounds
7. Stereochemistry
8. Carbohydrates
9. Isolation of Caffeine from Tea Leaves
10. Preparation and Properties of a Soap

11. Acid-Base Properties of Amino Acids
12. Quantitative Analysis of Vitamin C Contained in Foods

VI. Suggested Texts

1. Bettelheim, F.A., *Introduction to General, Organic & Biochemistry: Student Solution Manual*. Brooks/Cole, Cengage Learning, 2010.
2. Bettelheim, F.A., Brown, W.H., Campbell, M.K. and Farrell, S.O., *Introduction to General, Organic & Biochemistry*. Brooks/Cole, Cengage Learning, 2010.
3. Bettelheim, F.A. and Landesberg, J.M., *Laboratory Experiments for Introduction to General, Organic, and Biochemistry*. Brooks/Cole, Cengage Learning, 2010.

VII. Bibliography

1. Abraham, M.R., *Inquiry and the learning cycle*, in *Chemists' Guide to Effective Teaching*. Pearson Education, 2005.
2. Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873 – 878.
3. Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385 – 388.
4. Farrel, J.J., R.S. Moog, and Spencer, J.N., *A Guided Inquiry General Chemistry Course*. Journal of Chemical Education, 1999. 76(4): p. 570 – 574.
5. Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566 – 569.
6. Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24 (2) p. 185 – 203.



Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A105	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)		
6. Complete Course Title General Chemistry I <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <i>If a change, mark appropriate boxes:</i> <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				9. Repeat Status No # of Repeats Max Credits		
				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date <small>semester/year</small> From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>		<i>Chair/Coordinator Contacted</i>	
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)				13c. Coordination with Library Liaison Date: <u>03/05/2012</u>		
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) Introduction to general chemistry for science majors which includes topics in elements and compounds, the periodic table, atomic and subatomic theory and spectroscopy, bonding, various chemical reactions, thermodynamics, atomic and molecular interactions in gases, liquids, solids and solution chemistry. Special Note: Assumes prior knowledge of college preparatory high school chemistry and algebra. CHEM A105L is the laboratory component of this course and requires a separate registration.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) (MATH A105, or MATH A107, or MATH A108, or MATH A109, or MATH A200) with minimum grade of C.		16b. Test Score(s)		16c. Co-requisite(s) (<i>concurrent enrollment required</i>)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (<i>non-codable</i>) CHEM A055 with a minimum grade of C or college preparatory high school chemistry with a minimum grade of C. If the MATH A105 prerequisite is not satisfied, appropriate scores on the SAT or ACT tests or appropriate scores on a UAA-approved placement test such as the Accuplacer Placement test.				
17. <input type="checkbox"/> Mark if course has fees		18. <input type="checkbox"/> Mark if course is a selected topic course				
19. Justification for Action Course content guide update. Prerequisite clarification.						

<hr/>		<input type="checkbox"/> Approved	<hr/>	
Initiator (faculty only)	Date	<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<hr/>				
Initiator (TYPE NAME)				
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Undergraduate/Graduate Academic Board Chairperson
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved	Provost or Designee
<hr/>		<hr/>		

CHEM A105 – General Chemistry I

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>Biological Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.A. Biology, major requirement, p. 96			
B.S. Biology, major requirement, p. 96			
<i>Chemistry (CPSB 101Q, 786-1238)</i>		3/26/2012	Eric Holmberg
B.S. Chemistry, major requirement, chemistry option, p. 99			
B.S. Chemistry, major requirement, biochemistry option, p. 99			
Chemistry, minor requirement, p. 99			
<i>Geological Sciences (CPSB 101, 786-4940)</i>		3/26/2012	LeeAnn Munk
B.S. Geological Sciences, major requirement, p. 106			
<i>Natural Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.S. Natural Sciences, major requirement, Environmental Sciences Option, p. 120			

B.S. Natural Sciences, major requirement, Pre-Health Professions Option, p. 122

B.S. Natural Sciences, major requirement, General Sciences Option, p. 123

Computer Electronics (Kenai Peninsula College, 907-262-0330)

3/26/2012

Janelle North

A.A.S. Computer Electronics, general requirement, p. 187

Construction Management (UC 130, 786-6465)

3/26/2012

Donn Ketner

B.S. Construction Management, support course, p. 193

Dental Hygiene (AHS 160, 786-6929)

3/26/2012

Robin Wahto

A.A.S. Dental Hygiene, admission requirement, p. 200

B.S. Dental Hygiene, admission requirement, p. 200

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Dietetics, support course, p. 202

B.S. Nutrition, Community Nutrition Emphasis, major requirement for RD status, p. 204

B.S. Nutrition, Nutrition Science Emphasis, support course, p. 204

Industrial Process Instrumentation, (Kenai Peninsula College, 907-262-0330)

3/26/2012

Henry Haney

A.A.S. Industrial Process Instrumentation, general requirement, p. 210

Medical Laboratory Technology (AHS 169, 786-4930)

3/26/2012

Heidi Mannion

B.S. Medical Technology, support course, p. 216

Renewable Energy (Kodiak College, 907-486-1209)

3/26/2012

Lorraine Stewart

A.A.S. Technology, major requirement, p. 225

Civil Engineering (ENGR 201, 786-1900)

3/26/2012

Ziata Lokteva

B.S. Civil Engineering, civil engineering requirements, p. 234

Engineering: Computer systems, Electrical, and Mechanical Engineering (ENGR 201, 786-1900)

3/26/2012

Janelle North

B.S. Engineering, major requirement, p. 237

Minor, Engineering, prerequisite, p. 243

Biological Sciences (CPSB 101P, 786-4770)

3/26/2012

Fred Rainey

BIOL A115, prerequisite, p. 344

BIOL A116, prerequisite, p. 344

BIOL A242, prerequisite, p. 345

BIOL A252, prerequisite, p. 345

Chemistry Department (CPSB 101, 786-1238)

3/26/2012

Eric Holmberg

CHEM A105, course listing, p. 356

CHEM A105L, prerequisite, p. 356

CHEM A106, prerequisite, p. 356

Electrical Engineering (ENGR 201, 786-1900)

3/26/2012

Janelle North

EE A441, prerequisite, p. 394

Geological Sciences (CPSB 101R, 786-4940)

3/26/2012

LeeAnn Munk

GEOL A340, prerequisite, p. 409

Medical Laboratory Technology (CTC, AHS 169, 786-4930)

3/26/2012

Heidi mannion

MEDT A132, prerequisite, p. 436

MEDT A133, prerequisite, p. 436

MEDT A202, prerequisite, p. 436

MEDT A203, prerequisite, p. 436

MEDT A204, prerequisite, p. 437

MEDT A206, prerequisite, p. 437

MEDT A208, prerequisite, p. 437

Course Content Guide for **CHEM A105**

University of Alaska Anchorage

College of Arts & Sciences

- I. **Date of Initiation:** January 30, 2012

- II. **Course Information:**
 - A. **College:** College of Arts & Sciences
 - B. **Course Subject:** CHEM
 - C. **Course Number:** A105
 - D. **Number of Credits:** 3
 - E. **Contact Hours:** 3 + 0
 - F. **Course Title:** General Chemistry I
 - G. **Grading Basis:** A – F
 - H. **Implementation Date:** Fall 2012
 - I. **Course Description:** Introduction to general chemistry for science majors which includes topics in elements and compounds, the periodic table, atomic and subatomic theory and spectroscopy, bonding, various chemical reactions, thermodynamics, atomic and molecular interactions in gases, liquids, solids and solution chemistry. Special Note: Assumes prior knowledge of college preparatory high school chemistry and algebra. CHEM A105L is the laboratory component of this course and requires a separate registration.
 - J. **Course Attributes:** UAA GER Natural Sciences Requirement.
 - K. **Prerequisites:** (MATH A105, or MATH A107, or MATH A108, or MATH A109, or MATH A200) with minimum grade of C.
 - L. **Test Scores:** N/A
 - M. **Co-requisites:** N/A

N. **Registration Restrictions:** CHEM A055 with a minimum grade of C or college preparatory high school chemistry with a minimum grade of C. If the MATH A105 prerequisite is not satisfied, appropriate scores on the SAT or ACT tests or appropriate scores on a UAA-approved placement test such as the Accuplacer placement test.

O. **Course Fee:** No

III. **Instructional Goals and Student Learning Outcomes:**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to current topics in chemistry. Activities provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist in the learning process through a variety of methods that may include lectures, facilitation of class discussions, and demonstrations.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for science and engineering majors. It involves a significantly more rigorous approach than CHEM A103/A104, and does not concentrate specifically on health related problems nor emphasize Organic or Biochemistry. Concepts in atomic and molecular structure, bonding, and chemical reactions, skills in model exploration, and hypotheses building and testing using problem solving skills are emphasized.

The instructor will:

1. Present chemical models of atomic and molecular structure, bonding and chemical reactions for investigation and develop problem solving and observational skills on problems relevant to current issues and topics in chemistry.
2. Present convergent and divergent questions to initiate discussion on the relevance of current chemical models to observe and understand natural phenomena, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.
3. Provide multiple historical, cultural and socially relevant contexts for applying concepts and quantitative skills.

C. Student Learning Outcomes:

The student will:

1. Recognize and interpret chemical models of atomic and molecular structure, bonding and chemical reactions.
2. Apply observation, investigative and problem solving skills on problems in chemistry.
3. Demonstrate skills in science methodology such as exploring and selecting appropriate models.
4. Solve problems related to current chemistry topics that pertain to broad societal issues.
5. Create, communicate, defend and verify their solutions to problems across multiple contexts.

D. Assessment Measures:

Various assessment tools can be used at the instructor's discretion, including but not limited to quizzes, weekly homework and exams.

IV. Course Level Justification:

This course introduces students to general chemistry concepts in atomic and molecular structure and in atomic and molecular interactions. Students learn basic skills in model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a science discipline. This course serves as a preparatory course for CHEM A106.

V. Topical Course Outline:

1. Chemical Foundations
2. Atoms, Molecules, and Ions
3. Stoichiometry
4. Types of Chemical Reactions and Solution Stoichiometry
5. Gases
6. Thermochemistry
7. Atomic Structure and Periodicity
8. Bonding: General Concepts
9. Covalent Bonding: Orbitals
10. Liquids and Solids
11. Properties of Solutions

VI. **Suggested Texts:**

Zumdahl, S.S. and Zumdahl, S.A., *Chemistry*. Brooks Cole, Cengage Learning, 2010.

Zumdahl, S.S. and Zumdahl, S.A., *Chemistry: Student Solution Manual*. Brooks Cole, Cengage Learning, 2010.

VII. **Bibliography:**

Abraham, M.R., *Inquiry and the learning cycle, in Chemists' Guide to Effective Teaching*. Pearson Education, 2005.

Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873-878.

Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385-388.

Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566-569.

Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24(2) p. 185-203.



Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A105L	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 1	5b. Contact Hours (Lecture + Lab) (0+3)		
6. Complete Course Title General Chemistry I Laboratory						
Abbreviated Title for Transcript (30 character)						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete				9. Repeat Status No # of Repeats Max Credits		
If a change, mark appropriate boxes:				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
<input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input checked="" type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				11. Implementation Date semester/year From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature _____		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
Impacted Program/Course		Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted		
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)				13c. Coordination with Library Liaison Date: <u>03/05/2012</u>		
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities Mark appropriate box: <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (suggested length 20 to 50 words) Introductory chemistry laboratory course with experiments designed to introduce students to the basics of laboratory equipment, data collection, data analysis, and reporting; and to illustrate, augment and apply concepts covered in CHEM A105. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.						
16a. Course Prerequisite(s) (list prefix and number) CHEM A105 with minimum grade of C or concurrent enrollment		16b. Test Score(s)		16c. Co-requisite(s) (concurrent enrollment required)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (non-codable)				
17. <input checked="" type="checkbox"/> Mark if course has fees		18. <input type="checkbox"/> Mark if course is a selected topic course				
19. Justification for Action Clarification of prerequisites. Course content guide update.						

<hr/>		<input type="checkbox"/> Approved	<hr/>	
Initiator (faculty only)	Date	<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<hr/>				
Initiator (TYPE NAME)				
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Undergraduate/Graduate Academic Board Chairperson
<input type="checkbox"/> Approved	<hr/>		<input type="checkbox"/> Approved	<hr/>
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved	Provost or Designee
<hr/>		<hr/>		

CHEM A105L – General Chemistry I Laboratory

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>Biological Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.A. Biology, major requirement, p. 96			
B.S. Biology, major requirement, p. 96			
<i>Chemistry (CPSB 101Q, 786-1238)</i>		3/26/2012	Eric Holmberg
B.S. Chemistry, major requirement, chemistry option, p. 99			
B.S. Chemistry, major requirement, biochemistry option, p. 99			
Chemistry, minor requirement, p. 99			
<i>Geological Sciences (CPSB 101, 786-4940)</i>		3/26/2012	LeeAnn Munk
B.S. Geological Sciences, major requirement, p. 106			
<i>Natural Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.S. Natural Sciences, major requirement, Environmental Sciences Option, p. 120			

B.S. Natural Sciences, major requirement, Pre-Health Professions Option, p. 122

B.S. Natural Sciences, major requirement, General Sciences Option, p. 123

Computer Electronics (Kenai Peninsula College, 907-262-0330)

3/26/2012

Rich Kochis

A.A.S. Computer Electronics, general requirement, p. 187

Construction Management (UC 130, 786-6465)

3/26/2012

Don Ketner

B.S. Construction Management, support course, p. 193

Dental Hygiene (AHS 160, 786-6929)

3/26/2012

Robin Wahto

B.S. Dental Hygiene, admission requirement, p. 200, 201

B.S. Dental Hygiene, support course, p. 201

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Dietetics, support course, p. 202

B.S. Nutrition, Community Nutrition Emphasis, major requirement for RD status, p. 204

B.S. Nutrition, Nutrition Science Emphasis, support course, p. 204

Industrial Process Instrumentation, (Kenai Peninsula College, 907-262-0330)

3/26/2012

Henry Haney

A.A.S. Industrial Process Instrumentation, general requirement, p. 210

Medical Laboratory Technology (AHS 169, 786-4930)

3/26/2012

Heidi Mannion

B.S. Medical Technology, support course, p. 216

Renewable Energy (Kodiak College, 907-486-1209)

3/26/2012

Lorraine Stewart

A.A.S. Technology, major requirement, p. 225

Civil Engineering (ENGR 201, 786-1900)

3/26/2012

Ziata Lokteva

B.S. Civil Engineering, civil engineering requirements, p. 234

Engineering: Computer systems, Electrical, and Mechanical Engineering (ENGR 201, 786-1900)

3/26/2012

Janelle North

B.S. Engineering, major requirement, p. 237

Biological Sciences (CPSB 101P, 786-4770)

3/26/2012

Fred Rainey

BIOL A115, prerequisite, p. 344

BIOL A116, prerequisite, p. 344

BIOL A242, prerequisite, p. 345

BIOL A252, prerequisite, p. 345

Chemistry Department (CPSB 101Q, 786-1238)

3/26/2012

Eric Holmberg

CHEM A105L, course listing, p. 356

CHEM A106L, prerequisite, p. 356

Medical Laboratory Technology (CTC, AHS 169, 786-4930)

3/26/2012

Heidi Mannion

MEDT A132, prerequisite, p. 436

MEDT A133, prerequisite, p. 436

MEDT A202, prerequisite, p. 436

MEDT A203, prerequisite, p. 436

MEDT A204, prerequisite, p. 437

MEDT A206, prerequisite, p. 437

MEDT A208, prerequisite, p. 437

Course Content Guide for **CHEM A105L**
University of Alaska Anchorage
College of Arts & Sciences

I. **Date of Initiation:** October 20, 2011

II. **Course Information**

A. **College:** College of Arts & Sciences

B. **Course Subject:** CHEM

C. **Course Number:** A105L

D. **Number of Credits:** 1

E. **Contact Hours:** 0 + 3

F. **Course Title:** General Chemistry I Laboratory

G. **Grading Basis:** A-F

H. **Implementation Date:** Fall 2012

I. **Course Description:** Introductory chemistry laboratory course with experiments designed to introduce students to the basics of laboratory equipment, data collection, data analysis, and reporting; and to illustrate, augment and apply concepts covered in CHEM A105. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.

J. **Course Attributes:** GER Natural Sciences Lab only

K. Prerequisites:	CHEM A105 with minimum grade of C or concurrent enrollment
L. Test Scores:	N/A
M. Corequisites:	N/A
N. Registration Restrictions:	N/A
O. Course Fee:	Yes

III. Instructional Goals and Student Learning Outcomes

A. Course Activities:

Students will explore concepts and solve problems relevant to experimental and theoretical chemistry. Exercises and experiments provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist the learning process through a variety of methods that may include lecture, group discussions, demonstration and/or discussions with individuals, groups or the entire class.

B. Instructional Goals:

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry and the general chemistry laboratory. It is intended to be an introduction to the chemistry laboratory. Safety in the laboratory environment, the proper use of glassware and equipment, and an integration of chemistry concepts, mathematics, technology, problem solving and kinesthesia are emphasized.

The instructor will:

1. Provide students with a safe, supervised environment.
2. Supply students with standard operating procedures for each experiment and examples of experimental setups to instruct proper lab technique.
3. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.

4. Present questions to initiate discussion, help students integrate chemistry concepts, and explain models and solutions.

C. Student Learning Outcomes:

The student will:

1. Safely and correctly repeat previously covered skills in the chemistry laboratory.
2. Conduct laboratory work systematically by following procedures as outlined by the curriculum.
3. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.
4. Demonstrate science methodology with emphasis on exploring and verifying measurements and chemical.
5. Demonstrate effective communication skills for discussing, applying and verifying chemistry concepts.

D. Assessment Measures:

Various assessment tools can be used, including, but not limited to quizzes, preparatory questions sets, lab reports, homework, and practical skill evaluations.

IV. Course Level Justification

This course introduces students to chemistry laboratory concepts. Students develop basic laboratory skills through model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a laboratory science discipline.

V. Topic Course Outline

1. Laboratory Safety and Orientation
2. Mathematics in Chemistry
3. Introduction to the Chemistry Laboratory
4. The Use of Laboratory Glassware
5. Computers and Analytical Software Orientation
6. Solution Preparation and pH
7. Determination of Concentration Using Spectrophotometry
8. Determination of the Molar Volume of H₂ Gas
9. Solutions, Electrolytes and Conductivity
10. Hardware Models: Limiting Reactant and Theoretical Yield
11. Synthesis of Potassium Dioxalato cuprate (II) Dihydrate
12. Calorimetry and the Enthalpies of Neutralization

VI. Suggested Texts

1. Kennish, J. and Schlabaugh, A., *General Chemistry I Laboratory Manual*. University of Alaska Anchorage, Chemistry Department, 2011.
2. Zumdahl, S.S. and Zumdahl, S.A., *Chemistry*. Brooks/Cole, Cengage Learning, 2010.
3. Zumdahl, S.S. and Zumdahl, S.A., *Chemistry: Student Solution Manual*. Brooks/Cole, Cengage Learning, 2010.

VII. Bibliography

1. Abraham, M.R., *Inquiry and the learning cycle*, in *Chemists' Guide to Effective Teaching*. Pearson Education, 2005.
2. Bodner, G.M., *Constructivism: A Theory of Knowledge*. *Journal of Chemical Education*, 1986. 63(10): p. 873 – 878.
3. Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. *Journal of Chemical Education*, 1991. 68: p. 385 – 388.
4. Farrel, J.J., R.S. Moog, and Spencer, J.N., *A Guided Inquiry General Chemistry Course*. *Journal of Chemical Education*, 1999. 76(4): p. 570 – 574.
5. Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. *Journal of Chemical Education*, 1999. 76(4): p. 566 – 569.
6. Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. *International Journal of Science Education*, 2002. 24 (2) p. 185 – 203.



Course Action Request

University of Alaska Anchorage

Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A106	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)		
6. Complete Course Title General Chemistry II <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <i>If a change, mark appropriate boxes:</i> <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input type="checkbox"/> Course Description <input type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				9. Repeat Status No # of Repeats Max Credits		
				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date semester/year From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>		<i>Chair/Coordinator Contacted</i>	
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)			13c. Coordination with Library Liaison Date: <u>03/05/2012</u>			
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) The second semester in the general chemistry sequence for science majors. Topics include kinetics, equilibrium chemistry, acid-base chemistry, oxidation-reduction reactions, electrochemical cell chemistry, thermodynamics, nuclear chemistry, and chemical analysis methods. Special Note: CHEM A106L is the laboratory component of this course and requires a separate registration.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) CHEM A105 with minimum grade of C.		16b. Test Score(s)		16c. Co-requisite(s) (<i>concurrent enrollment required</i>)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (<i>non-codable</i>)				
17. <input type="checkbox"/> Mark if course has fees			18. <input type="checkbox"/> Mark if course is a selected topic course			
19. Justification for Action Course content guide update.						
Initiator (faculty only) _____ Date _____				<input type="checkbox"/> Approved		
Initiator (TYPE NAME)				<input type="checkbox"/> Disapproved Dean/Director of School/College Date _____		
<input type="checkbox"/> Approved				<input type="checkbox"/> Approved Undergraduate/Graduate Academic Date _____		
<input type="checkbox"/> Disapproved Department Chairperson Date _____				<input type="checkbox"/> Disapproved Board Chairperson		
<input type="checkbox"/> Approved				<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved Curriculum Committee Chairperson Date _____				<input type="checkbox"/> Disapproved Provost or Designee Date _____		

CHEM A106 – General Chemistry II

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>Biological Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.A. Biology, major requirement, p. 96			
B.S. Biology, major requirement, p. 96			
<i>Chemistry (CPSB 101Q, 786-1238)</i>		3/26/2012	Eric Holmberg
B.S. Chemistry, major requirement, chemistry option, p. 99			
B.S. Chemistry, major requirement, biochemistry option, p. 99			
Chemistry, minor requirement, p. 99			
<i>Geological Sciences (CPSB 101, 786-4940)</i>			
B.S. Geological Sciences, major requirement, p. 106			
<i>Natural Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.S. Natural Sciences, major requirement, Environmental Sciences Option, p. 120			
B.S. Natural Sciences, major requirement, Pre-Health Professions Option, p. 122			

B.S. Natural Sciences, major requirement, General Sciences Option, p. 123

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Dietetics, support course, p. 202

B.S. Nutrition, Community Nutrition Emphasis, major requirement for RD status, p. 204

B.S. Nutrition, Nutrition Science Emphasis, support course, p. 204

Medical Laboratory Technology (AHS 169, 786-4930)

3/26/2012

Heidi Mannion

B.S. Medical Technology, support course, p. 216

Civil Engineering (ENGR 201, 786-1900)

3/26/2012

Ziata Lokteva

B.S. Civil Engineering, civil engineering requirements, p. 234

Engineering: Computer systems, Electrical, and Mechanical Engineering (ENGR 201, 786-1900)

3/26/2012

Janelle North

B.S. Engineering, major requirement, p. 237

B.S. Engineering, Mechanical Engineering specialization required course, p. 238

Minor, Engineering, prerequisite, p. 243

<i>Biological Sciences (CPSB 101P, 786-4770)</i>	3/26/2012	Fred Rainey
BIOL A116, prerequisite, p. 344		
BIOL A327, prerequisite, p. 345		
<i>Civil Engineering (ENGR 201, 786-1900)</i>	3/26/2012	Ziata Lokteva
CE A441, prerequisite, p. 352		
<i>Chemistry Department (CPSB 101, 786-1238)</i>	3/26/2012	Eric Holmberg
CHEM A106, course listing, p. 356		
CHEM A106L, prerequisite, p. 356		
CHEM A212, prerequisite, p. 356		
CHEM A253, prerequisite, p. 356		
CHEM A321, prerequisite, p. 356		
CHEM A331, prerequisite, p. 357		
<i>Engineering Science (ENGR 201, 786-1900)</i>	3/26/2012	Ziata Lokteva
ES A346, prerequisite, p. 394		
<i>Geological Sciences (CPSB 101R, 786-4940)</i>	3/26/2012	LeeAnn Munk

GEOL A360, prerequisite, p. 409

GEOL A450, prerequisite, p. 409

GEOL A465, prerequisite, p. 410

GEOL A665, prerequisite, p. 410

Mechanical Engineering (ENGR 201, 786-1973)

3/26/2012

Janelle North

ME A334, prerequisite, p. 435

Course Content Guide for **CHEM A106**

University of Alaska Anchorage

College of Arts & Sciences

- I. **Date of Initiation:** January 30, 2012

- II. **Course Information:**
 - A. **College:** College of Arts & Sciences
 - B. **Course Subject:** CHEM
 - C. **Course Number:** A106
 - D. **Number of Credits:** 3
 - E. **Contact Hours:** 3 + 0
 - F. **Course Title:** General Chemistry II
 - G. **Grading Basis:** A – F
 - H. **Implementation Date:** Fall 2012
 - I. **Course Description:** The second semester in the general chemistry sequence for science majors. Topics include kinetics, equilibrium chemistry, acid-base chemistry, oxidation-reduction reactions, electrochemical cell chemistry, thermodynamics, nuclear chemistry, and chemical analysis methods. Special Note: CHEM A106L is the laboratory component of this course and requires a separate registration.
 - J. **Course Attributes:** UAA GER Natural Sciences Requirement.
 - K. **Prerequisites:** CHEM A105 with minimum grade of C.
 - L. **Test Scores:** N/A
 - M. **Co-requisites:** N/A
 - N. **Registration Restrictions:** N/A

O. **Course Fee:** No

III. **Instructional Goals and Student Learning Outcomes:**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to current topics in chemistry. Activities provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist in the learning process through a variety of methods that may include lectures, facilitation of class discussions, and demonstrations.

B. **Instructional Goals:**

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry specifically for science and engineering majors. It involves a significantly more rigorous approach than CHEM A103/A104, and does not concentrate specifically on health related problems nor emphasize Organic or Biochemistry. Concepts in various types of chemical interactions and dynamics, development of chemical analysis methods, skills in model exploration, and hypotheses building and testing using problem solving skills are emphasized.

The instructor will:

1. Present chemical models of atomic and molecular structure, bonding and chemical reactions for investigation and develop problem solving and observational skills on problems relevant to current issues and topics in chemistry.
2. Present convergent and divergent questions to initiate discussion on the relevance of current chemical models to observe and understand natural phenomena, help students differentiate, link and integrate ideas and develop their own concepts, to articulate their thinking and explain models and solutions.
3. Provide multiple historical and culturally relevant contexts for applying concepts and quantitative skills.

C. **Student Learning Outcomes:**

The student will:

1. Recognize and interpret chemical models of atomic and molecular structure, bonding and chemical reactions.
2. Apply observation, investigative and problem solving skills to problems in chemistry.

3. Demonstrate skills in science methodology such as exploring and selecting appropriate models.
4. Solve problems on current chemistry topics.
5. Create, communicate, defend and verify their solutions to problems across multiple contexts.

D. Assessment Measures:

Various assessment tools can be used at the instructor's discretion, including but not limited to quizzes, weekly homework and exams.

IV. Course Level Justification:

This course introduces students to general chemistry concepts in molecular interactions, reaction dynamics and methods of analysis. Students learn basic skills in model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a science discipline.

V. Topical Course Outline:

1. Chemical Kinetics
2. Chemical Equilibrium
3. Acids and Bases
4. Acid-Base Equilibria
5. Solubility and Complex Ion Equilibria
6. Spontaneity, Entropy, and Free Energy
7. Electrochemistry
8. The Nucleus: A Chemist's View
9. Transition Metals and Coordination Chemistry

VI. Suggested Texts:

Zumdahl, S.S. and Zumdahl, S.A., *Chemistry*. Brooks Cole, 2010.

Zumdahl, S.S. and Zumdahl, S.A., *Chemistry: Student Solution Manual*. Brooks Cole, 2010.

VII. **Bibliography:**

Abraham, M.R., *Inquiry and the learning cycle, in Chemists' Guide to Effective Teaching*. Pearson Education, 2005.

Bodner, G.M., *Constructivism: A Theory of Knowledge*. Journal of Chemical Education, 1986. 63(10): p. 873-878.

Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. Journal of Chemical Education, 1991. 68: p. 385-388.

Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. Journal of Chemical Education, 1999. 76(4): p. 566-569.

Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. International Journal of Science Education, 2002. 24(2) p. 185-203.



Course Action Request University of Alaska Anchorage Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College AS CAS		1b. Division AMSC Division of Math Science			1c. Department CHEMISTRY	
2. Course Prefix CHEM	3. Course Number A106L	4. Previous Course Prefix & Number N/A	5a. Credits/CEUs 1	5b. Contact Hours (Lecture + Lab) (0+3)		
6. Complete Course Title General Chemistry II Laboratory General Chem II Lab <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <i>If a change, mark appropriate boxes:</i> <input type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input type="checkbox"/> Course Description <input checked="" type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other CCG (please specify)				9. Repeat Status No # of Repeats Max Credits		
				10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG		
				11. Implementation Date <small>semester/year</small> From: Fall/2012 To: /9999		
				12. <input type="checkbox"/> Cross Listed with _____ <input type="checkbox"/> Stacked with _____ Cross-Listed Coordination Signature		
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>		<i>Chair/Coordinator Contacted</i>	
1. See attached table						
2.						
3.						
Initiator Name (typed): <u>Colin McGill</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>03/05/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)			13c. Coordination with Library Liaison Date: <u>03/05/2012</u>			
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input type="checkbox"/> Social Sciences <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) The second semester of this introductory chemistry laboratory course sequence. Experiments are designed to reinforce concepts students have been exposed to regarding the basics of laboratory equipment, data collection, data analysis, and reporting. This course illustrates, augments and applies concepts covered in CHEM A106. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) CHEM A105L with minimum grade of C and (CHEM A106 with minimum grade of C or concurrent enrollment)		16b. Test Score(s)		16c. Co-requisite(s) (<i>concurrent enrollment required</i>)		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level		16e. Registration Restriction(s) (<i>non-codable</i>)				
17. <input checked="" type="checkbox"/> Mark if course has fees		18. <input type="checkbox"/> Mark if course is a selected topic course				
19. Justification for Action Clarification of prerequisites. Course content guide update.						

Initiator (faculty only)		Date	<input type="checkbox"/> Approved		
Initiator (TYPE NAME)			<input type="checkbox"/> Disapproved	Dean/Director of School/College	Date
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved	Department Chairperson	Date	<input type="checkbox"/> Disapproved	Undergraduate/Graduate Academic Board Chairperson	Date
<input type="checkbox"/> Approved			<input type="checkbox"/> Approved		
<input type="checkbox"/> Disapproved	Curriculum Committee Chairperson	Date	<input type="checkbox"/> Disapproved	Provost or Designee	Date

CHEM A106L – General Chemistry II Laboratory

Impacted Program/Course	Catalog Page(s) Impacted	Date of Coordination	Chair/Coordinator Contacted
GER, natural sciences, p. 84		3/05/2012	
CAS requirement, B.S. degree, natural sciences, p. 87		3/05/2012	
<i>Biological Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.A. Biology, major requirement, p. 96			
B.S. Biology, major requirement, p. 96			
<i>Chemistry (CPSB 101Q, 786-1238)</i>		3/26/2012	Eric Holmberg
B.S. Chemistry, major requirement, chemistry option, p. 99			
B.S. Chemistry, major requirement, biochemistry option, p. 99			
Chemistry, minor requirement, p. 99			
<i>Geological Sciences (CPSB 101, 786-4940)</i>		3/26/2012	LeeAnn Munk
B.S. Geological Sciences, major requirement, p. 106			
<i>Natural Sciences (CPSB 101P, 786-4770)</i>		3/26/2012	Fred Rainey
B.S. Natural Sciences, major requirement, Environmental Sciences Option, p. 120			

B.S. Natural Sciences, major requirement, Pre-Health Professions Option, p. 122

B.S. Natural Sciences, major requirement, General Sciences Option, p. 123

Dietetics and Nutrition (CUDY 126, 786-4728)

3/26/2012

Tim Doebler

B.S. Dietetics, support course, p. 202

B.S. Nutrition, Community Nutrition Emphasis, major requirement for RD status, p. 204

B.S. Nutrition, Nutrition Science Emphasis, support course, p. 204

Medical Laboratory Technology (AHS 169, 786-4930)

3/26/2012

Heidi Mannion

B.S. Medical Technology, support course, p. 216

Civil Engineering (ENGR 201, 786-1900)

3/26/2012

Ziata Lokteva

B.S. Civil Engineering, civil engineering requirements, p. 234

Engineering: Computer systems, Electrical, and Mechanical Engineering (ENGR 201, 786-1900)

3/26/2012

janelle North

B.S. Engineering, Mechanical Engineering specialization required course, p. 238

Biological Sciences (CPSB 101P, 786-4770)

3/26/2012

Fred Rainey

BIOL A116, prerequisite, p. 344

BIOL A327, prerequisite, p. 345

Civil Engineering (ENGR 201, 786-1900)

3/26/2012

Ziata Lokteva

CE A441, prerequisite, p. 352

Chemistry Department (CPSB 101, 786-1238)

3/26/2012

Eric Holmberg

CHEM A106L, course listing, p. 356

CHEM A212, prerequisite, p. 356

CHEM A321, prerequisite, p. 356 (removed as a prerequisite if approved)

CHEM A331, prerequisite, p. 357

Course Content Guide for **CHEM A106L**
University of Alaska Anchorage
College of Arts & Sciences

I. **Date of Initiation:** October 20, 2011

II. **Course Information**

A. **College:** College of Arts & Sciences

B. **Course Subject:** CHEM

C. **Course Number:** A106L

D. **Number of Credits:** 1

E. **Contact Hours:** 0 + 3

F. **Course Title:** General Chemistry II Laboratory

G. **Grading Basis:** A-F

H. **Implementation Date:** Fall 2012

I. **Course Description:** The second semester of this introductory chemistry laboratory course sequence. Experiments are designed to reinforce concepts students have been exposed to regarding the basics of laboratory equipment, data collection, data analysis, and reporting. This course illustrates, augments and applies concepts covered in CHEM A106. Special Note: Students who do not meet the prerequisites for this course may be administratively dropped at the discretion of the faculty. Attendance is mandatory for all chemistry laboratory courses the first week of class. Unless prior arrangements are made with the instructor, any student who does not attend the first scheduled meeting for this lab may be administratively dropped and a student on a waiting list will be added in their place. Any fees resulting from either of these drop procedures or any late registration procedure will be the responsibility of the student.

- J. **Course Attributes:** GER Natural Sciences Lab only
- K. **Prerequisites:** CHEM 105L with minimum grade of C and (CHEM A106 with minimum grade of C or concurrent enrollment)
- L. **Test Scores:** N/A
- M. **Corequisites:** N/A
- N. **Registration Restrictions:** N/A
- O. **Course Fee:** Yes

III. **Instructional Goals and Student Learning Outcomes**

A. **Course Activities:**

Students will explore concepts and solve problems relevant to experimental and theoretical chemistry. Exercises and experiments provide students with chemical models and/or chemical data followed by questions to guide them through the learning cycle, building conceptual understanding in a process emulating the scientific method. The instructor will assist the learning process through a variety of methods that may include: lecture, group discussions, demonstration and/or discussions with individuals, groups or the entire class.

B. **Instructional Goals:**

Instructional Goals:

This course is designed to fulfill the needs of general education requirements and to provide a foundation in general chemistry and the general chemistry laboratory. It is intended to be an introduction to the chemistry laboratory. Safety in the laboratory environment, the proper use of glassware and equipment, and an integration of chemistry concepts, mathematics, technology, problem solving and kinesthesis are emphasized.

The instructor will:

1. Provide students with a safe, supervised environment.
2. Supply students with standard operating procedures for each experiment and examples of experimental setups to instruct proper lab technique.

3. Present models of the periodic table, atomic and molecular structure, chemical bonding and reactions for development of observational skills and conceptual foundations in chemistry.
4. Present questions to initiate discussion, help students integrate chemistry concepts, and explain models and solutions.

C. Student Learning Outcomes:

The student will:

1. Safely and correctly repeat previously covered skills in the chemistry laboratory.
2. Conduct laboratory work systematically by following procedures as outlined by the curriculum.
3. Recognize and interpret chemical models of the periodic table, atomic and molecular structure, bonding and chemical reactions.
4. Demonstrate science methodology with emphasis on exploring and verifying measurements and chemical.
5. Demonstrate effective communication skills for discussing, applying and verifying chemistry concepts.

D. Assessment Measures:

Various assessment tools can be used, including, but not limited to quizzes, preparatory questions sets, lab reports, homework, and comprehensive exams.

IV. Course Level Justification

This course introduces students to chemistry laboratory concepts. Students develop basic laboratory skills through model exploration and verification for comprehension and retention of concepts and become acquainted with chemistry as a laboratory science discipline.

V. Topic Course Outline

1. Laboratory Safety and Orientation
2. Mathematics and Computers in Chemistry
3. Chemical Equilibrium and the Equilibrium Constant
4. Determination of the Empirical Formula of a Coordination Complex using Job's Method
5. Determination of a K_{sp} Using Spectrophotometry
6. Analysis of Vinegar by Titration
7. Determination of Buffer Capacity
8. Spectrophotometric Determination of the pK_a of Bromothymol Blue

9. Determination of Oxalate by Titration
10. Dependence of Cell Potential on Concentration: The Nernst Equation
11. Simultaneous Spectrophotometric Quantitation
12. Chemical Kinetics: Measuring Reaction Rates

VI. Suggested Texts

1. Kennish, J. and Schlabaugh, A., *General Chemistry I Laboratory Manual*. University of Alaska Anchorage, Chemistry Department, 2011.
2. Zumdahl, S.S. and Zumdahl, S.A., *Chemistry*. Brooks/Cole, Cengage Learning, 2010.
3. Zumdahl, S.S. and Zumdahl, S.A., *Chemistry: Student Solution Manual*. Brooks/Cole, Cengage Learning, 2010.

VII. Bibliography

1. Abraham, M.R., *Inquiry and the learning cycle*, in *Chemists' Guide to Effective Teaching*. Pearson Education, 2005.
2. Bodner, G.M., *Constructivism: A Theory of Knowledge*. *Journal of Chemical Education*, 1986. 63(10): p. 873 – 878.
3. Bodner, G.M., *I have found you an argument: The conceptual knowledge of beginning chemistry graduate students*. *Journal of Chemical Education*, 1991. 68: p. 385 – 388.
4. Farrel, J.J., Moog, R.S., and Spencer, J.N., *A Guided Inquiry General Chemistry Course*. *Journal of Chemical Education*, 1999. 76(4): p. 570 – 574.
5. Spencer, J.N., *New Directions in Teaching Chemistry: A Philosophical and Pedagogical Basis*. *Journal of Chemical Education*, 1999. 76(4): p. 566 – 569.
6. Zoller, U., *Algorithmic, LOCS and HOCS (chemistry) exam questions: performance and attitudes of college students*. *International Journal of Science Education*, 2002. 24 (2) p. 185 – 203.



Course Action Request University of Alaska Anchorage Proposal to Initiate, Add, Change, or Delete a Course

1a. School or College CH College of Health		1b. Division AJUS Division of Justice			1c. Department Justice Center	
2. Course Prefix LEGL	3. Course Number A101	4. Previous Course Prefix & Number PARL A101	5a. Credits/CEUs 3	5b. Contact Hours (Lecture + Lab) (3+0)		
6. Complete Course Title Introduction to Law <small>Abbreviated Title for Transcript (30 character)</small>						
7. Type of Course <input checked="" type="checkbox"/> Academic <input type="checkbox"/> Preparatory/Development <input type="checkbox"/> Non-credit <input type="checkbox"/> CEU <input type="checkbox"/> Professional Development						
8. Type of Action: <input type="checkbox"/> Add or <input checked="" type="checkbox"/> Change or <input type="checkbox"/> Delete <small>If a change, mark appropriate boxes:</small>			9. Repeat Status No # of Repeats Max Credits			
<input checked="" type="checkbox"/> Prefix <input type="checkbox"/> Course Number <input type="checkbox"/> Credits <input type="checkbox"/> Contact Hours <input type="checkbox"/> Title <input type="checkbox"/> Repeat Status <input type="checkbox"/> Grading Basis <input type="checkbox"/> Cross-Listed/Stacked <input checked="" type="checkbox"/> Course Description <input type="checkbox"/> Course Prerequisites <input type="checkbox"/> Test Score Prerequisites <input type="checkbox"/> Co-requisites <input type="checkbox"/> Other Restrictions <input type="checkbox"/> Registration Restrictions <input type="checkbox"/> Class <input type="checkbox"/> Level <input type="checkbox"/> College <input type="checkbox"/> Major <input checked="" type="checkbox"/> Other Update CCG (please specify)			10. Grading Basis <input checked="" type="checkbox"/> A-F <input type="checkbox"/> P/NP <input type="checkbox"/> NG 11. Implementation Date <small>semester/year</small> From: Fall/2012 To: /9999 12. <input type="checkbox"/> Cross Listed with N/A <input type="checkbox"/> Stacked with N/A _____ <small>Cross-Listed Coordination Signature</small>			
13a. Impacted Courses or Programs: List any programs or college requirements that require this course. Please type into fields provided in table. If more than three entries, submit a separate table. A template is available at www.uaa.alaska.edu/governance .						
<i>Impacted Program/Course</i>		<i>Catalog Page(s) Impacted</i>	<i>Date of Coordination</i>		<i>Chair/Coordinator Contacted</i>	
1. see separate table						
2.						
3.						
Initiator Name (typed): <u>Deborah Periman</u> Initiator Signed Initials: _____ Date: _____						
13b. Coordination Email Date: <u>1/31/2012</u> submitted to Faculty Listserv: (uaa-faculty@lists.uaa.alaska.edu)			13c. Coordination with Library Liaison Date: <u>1/31/2012</u>			
14. General Education Requirement <input type="checkbox"/> Oral Communication <input type="checkbox"/> Written Communication <input type="checkbox"/> Quantitative Skills <input type="checkbox"/> Humanities <i>Mark appropriate box:</i> <input type="checkbox"/> Fine Arts <input checked="" type="checkbox"/> Social Sciences <input type="checkbox"/> Natural Sciences <input type="checkbox"/> Integrative Capstone						
15. Course Description (<i>suggested length 20 to 50 words</i>) Introduces legal processes in a democratic society. Emphasis on legal terminology, federal and state court systems and judicial decision making. Introduction to basic concepts of contracts, torts, criminal law, family law, and administrative law. Includes skills for conducting basic legal analysis.						
16a. Course Prerequisite(s) (<i>list prefix and number</i>) N/A		16b. Test Score(s) N/A		16c. Co-requisite(s) (<i>concurrent enrollment required</i>) N/A		
16d. Other Restriction(s) <input type="checkbox"/> College <input type="checkbox"/> Major <input type="checkbox"/> Class <input type="checkbox"/> Level			16e. Registration Restriction(s) (<i>non-codable</i>) N/A			
17. <input type="checkbox"/> Mark if course has fees			18. <input type="checkbox"/> Mark if course is a selected topic course			
19. Justification for Action Change prefix to correspond to new program description. Update texts and bibliography.						
Initiator (faculty only) <u>Deborah Periman</u> Date _____				<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved _____ <small>Dean/Director of School/College</small> Date _____		
Initiator (TYPE NAME) <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved _____ Department Chairperson Date _____				<input type="checkbox"/> Approved _____ <input type="checkbox"/> Disapproved _____ <small>Undergraduate/Graduate Academic Board Chairperson</small> Date _____		
<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved _____ <small>Curriculum Committee Chairperson</small> Date _____				<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved _____ <small>Provost or Designee</small> Date _____		

Course Being Changed: PARL A101 to LEGL A101

Impacted Program or Course	Type of Impact (course or program)		Catalog Page	Type/Date of Notification	Chair/Coordinator Contacted (not listerve)
	Course Impacts <i>examples:</i> prerequisite, corequisite, recommended	Program Impacts <i>examples:</i> requirement, selective, program credit total			
Post-Baccalaureate Certificate, Paralegal Studies		requirement	158-159	1/31/12	Deborah Periman
Certificate, Legal Nurse Consultant Paralegal		requirement	158-159	1/31/12	Deborah Periman
Minor, Legal Studies		requirement	158-159	1/31/12	Deborah Periman
Bachelor of Arts, Legal Studies		requirement	158-159	1/31/12	Deborah Periman
Associate of Applied Science, Paralegal Studies		requirement	158-159	1/31/12	Deborah Periman

**University of Alaska Anchorage
College of Health
Course Content Guide**

- I. Date of Initiation:** February 2012
- II. Curriculum Action Request**
- A. School: College of Health
 - B. Course Subject: LEGL
 - C. Course Number: A101
 - D. Number of Credits: 3
 - E. Contact Hours: 3+0
 - F. Course Program: AAS, Paralegal Studies; Post-Baccalaureate Certificate, Paralegal Studies; BA Legal Studies; Minor, Legal Studies; Certificate, Legal Nurse Consultant Paralegal
 - G. Course Title: Introduction to Law
 - H. Grading Basis: A-F
 - I. Implementation Date: Fall/2012
 - J. Cross-listed/Stacked: N/A
 - K. Course Description: Introduces legal processes in a democratic society. Emphasis on legal terminology, federal and state court systems and judicial decision making. Introduction to basic concepts of contracts, torts, criminal law, family law, and administrative law. Includes skills for conducting basic legal analysis.
 - L. Course Prerequisites: N/A
 - M. Course Co-requisites: N/A
 - N. Other Restrictions: N/A
 - O. Registration Restrictions: N/A
 - P. Course Fees: No
 - Q. Course Attributes: General Education Requirement, Social Sciences
- III. Instructional Goals and Student Learning Outcomes**
- A. The instructor will:
1. Promote students' understanding of law as a means of regulating conduct and defining social norms in a democratic society.
 2. Develop students' awareness of structure of the federal and state court systems, and the role courts play in resolving disputes and maintaining social order.
 3. Assist students in differentiating between civil and criminal laws and remedies.
 4. Provide students with fundamental concepts pertaining to contract, tort, administrative, family, and criminal law.

5. Enhance students’ ability to critically evaluate legal issues presented in current events, mainstream, and alternative media.

B. Upon completion of this course, the student will be able to:

Note: All student outcomes are related to GER Outcome 5: “Investigate the complexity of human institutions and behavior to better understand interpersonal, group, political, economic, and/or cultural dynamics.”

Outcomes and Assessment Measures	
Outcomes	Measures
1. Comprehend the way in which law regulates conduct and defines social norms in a democratic society.	Essay assignments, class discussion, examinations.
2. Identify the functions of the federal and state court systems and the role courts play in resolving disputes and maintaining social order.	Essay assignments, class discussion, examinations.
3. Describe the distinction between civil and criminal laws and remedies.	Examinations, class discussion, essay assignments.
4. Recognize vocabulary and concepts related to fundamental principles of contract, tort, administrative, family, and criminal law.	Examinations.
5. Relate current events presented in mainstream and alternative media to principles of law presented in the course.	Essay assignments, class discussion.

IV. Course Level Justification

The course provides students with foundational knowledge regarding state and federal legal systems. It emphasizes legal terminology, legal process, and core concepts in a broad array of substantive law areas. The course introduces students to critical thinking skills necessary to conduct basic legal analysis and to write clearly about legal issues. The course material is appropriate for students who have had no prior instruction in legal theory.

V. Topical Course Outline

1. Primary Sources Of Law
 - 1.1 Constitutions
 - 1.1.1 Federal
 - 1.1.2 State
 - 1.2 Statutes
 - 1.2.1 Constitutional Basis
 - 1.2.2 Legislative Process
 - 1.2.2.1 Federal
 - 1.2.2.2 State
 - 1.2.3 Separation Of Powers / Checks And Balances

- 1.2.4 Methods Of Challenge
- 1.2.5 Statutory Interpretation
- 1.3 Regulations
 - 1.3.1 Constitutional Basis
 - 1.3.2 Administrative Agencies
 - 1.3.3 Methods Of Adoption
 - 1.3.4 Methods Of Challenge
- 1.4 Judicial Decisions
 - 1.4.1 Judicial Review
 - 1.4.2 Applying Law To Facts
 - 1.4.3 Role Of Judiciary
 - 1.4.4 Due Process
- 1.5 Federalism
 - 1.5.1 10th Amendment
 - 1.5.2 Pre-Emption Doctrine
- 2. Judicial Systems
 - 2.1 Federal Courts
 - 2.1.1 Structure Of Federal Court System
 - 2.1.2 The Independent Judiciary
 - 2.1.2.1 Article III Limitations
 - 2.1.2.2 Politics And Federal Courts
 - 2.2 State Courts
 - 2.2.1 Structure Of The Alaska Court System
 - 2.2.1.1 Original, General, And Limited Jurisdiction
 - 2.2.1.2 Appellate Jurisdiction
 - 2.2.1.2.1 Appeals Of Right
 - 2.2.1.2.2 Discretionary Appeals
 - 2.2.2 Judicial Selection And Retention
 - 2.2.2.1 Alaska Judicial Council
 - 2.2.2.2 Retention By Ballot
- 3. Development Of Law Through Judicial Decisions
 - 3.1 Case Briefing And Analysis
 - 3.2 Precedents
 - 3.2.1 Stare Decisis
 - 3.2.2 Reported Vs. Unreported Decisions
 - 3.2.3 Binding And Persuasive Authorities
 - 3.3 The Role Of Constitutional Theory In Decisions
 - 3.3.1 Originalism
 - 3.3.2 Living Law Interpretations
 - 3.3.3 Critical Theory Approaches
 - 3.4 Limitations On Judicial Relief
 - 3.4.1 Standing
 - 3.4.2 Mootness
 - 3.4.3 Advisory Opinions
 - 3.4.4 Political Questions

- 4. Civil Procedure
 - 4.1 Procedural Due Process
 - 4.2 Pleadings
 - 4.3 Discovery
 - 4.4 Motions Practice
 - 4.4.1 Issues Of Fact
 - 4.4.2 Issues Of Law
 - 4.5 Trial
 - 4.5.1 Order Of Proceedings
 - 4.5.2 Evidence
 - 4.5.2.1 The Role Of Experts
 - 4.5.2.2 Testimonial Evidence
 - 4.5.2.3 Documentary Evidence
 - 4.5.2.4 Demonstrable Evidence
 - 4.5.3 Fact Finder
 - 4.5.4 Remedies
 - 4.5.4.1 Legal Remedies
 - 4.5.4.2 Equitable Remedies
 - 4.5.5 Post-Judgment Motions
 - 4.5.6 Appeal Rights
- 5. Substantive Law Topics
 - 5.1 Contracts
 - 5.1.1 Formation
 - 5.1.2 Differentiating Forms Of Contracts
 - 5.1.2.1 Unilateral And Bilateral
 - 5.1.2.2 Executory And Non-Executory
 - 5.1.2.3 Illusory Contracts
 - 5.1.3 Breach
 - 5.1.3.1 Performance Excused
 - 5.1.3.2 Justified Non-Performance
 - 5.1.4 Remedies
 - 5.1.4.1 Damages: Measuring Expectancy
 - 5.1.4.2 Specific Performance
 - 5.2 Torts
 - 5.2.1 Intentional Torts
 - 5.2.2 Negligence
 - 5.2.2.1 Foreseeability
 - 5.2.2.2 Proximate Cause
 - 5.2.2.3 Duties
 - 5.2.3 Strict Liability
 - 5.3 Family Law
 - 5.3.1 Marriage
 - 5.3.1.1 Eligibility
 - 5.3.1.2 Requirements
 - 5.3.2 Child Custody
 - 5.3.2.1 “Best Interests Of The Child”

- 5.3.2.2 Presumptions
- 5.3.2.3 Factors
- 5.3.3 Child Support
- 5.3.4 Divorce And Dissolution
 - 5.3.4.1 Equitable Distribution
 - 5.3.4.2 Differentiation
- 5.4 Administrative Law
 - 5.4.1 Administrative Procedures Acts
 - 5.4.2 Delegation Of Authority
 - 5.4.3 Ultra Vires
 - 5.4.4 Administrative Rule Making
 - 5.4.5 Administrative Adjudications
 - 5.4.6 Judicial Review
- 5.5 Criminal Law And Procedure
 - 5.5.1 Arrest
 - 5.5.2 Grand Jury
 - 5.5.3 Custodial Interrogations
 - 5.5.4 Constitutional Rights
 - 5.5.5 Search And Seizure
 - 5.5.6 Exclusionary Rule
 - 5.5.7 Criminal Trials

VI. Suggested Texts

Currier, K., & Eimermann, T. (2009). *Introduction to law: A critical thinking approach* (4th ed.). New York, NY: Aspen.

Feinman, J. (2010). *Law 101: Everything you need to know about the American legal system*. New York, NY: Oxford University Press.

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Dunham, B. W. (2011). *Introduction to law* (6th ed.). Florence, KY: Cengage Learning.

Farnsworth, E. A., & Sheppard, S. (2010) *An introduction to the legal system of the United States* (4th ed.). Oxford, NY: Oxford University Press.

Golding, M. P. (1966). *The nature of law: Readings in legal philosophy*. New York, NY: Random House.¹

Hart, H. L. A. (2012). *The concept of law* (3rd ed.). Oxford, NY: Oxford University Press.

Katsh, M. E., & Rose, W. (2010). *Taking sides: Clashing views on controversial legal issues* (14th ed.). Guilford, CT: McGraw-Hill/Dushkin.

¹ Classic work.

Scheb, J. M., & Scheb, J. M., II. (2010). *An introduction to the American legal system* (2nd ed.). New York, NY: Aspen.

Schubert, F. A. (2011). *Introduction to law and the legal system*. Boston, MA: Wadsworth.

GER Assessment Recommendations

In response to a request from the Office of Academic Affairs to the Faculty Senate for a suggested structure and funding for General Education Assessment:

A. *The General Education Review Committee (GERC) recommends formation of a one-year General Education Requirements Assessment Task Force (GER Task Force). This task force will be funded through the Office of Academic Affairs. The composition should be of the same nature as the GERC (refer to Faculty Senate Bylaws), but also include the Chair of the Associate of Arts Assessment Committee, a member of the Faculty Senate Academic Assessment Committee, and the Director of General Education (see below). Members of GERC may also serve on the GER Task Force as GER discipline area representatives or unit representatives.*

The task force's charge is to work with faculty involved in general education to develop an assessment plan for General Education Requirements at UAA. The assessment plan should include use of a Director of General Education as the primary facilitator of general education assessment. The task force should consider close alignment with the Associate of Arts degree assessment plan as an option to conserve university resources.

B. *The General Education Review Committee recommends formation of a "Center for General Education" that would report to a Vice-Provost in the Office of Academic Affairs. The Center for General Education would include a position for a Director of General Education and any necessary support staff. The director position should be established and filled prior to formation of the GER Task Force, and should receive at least a half-time course release on his/her faculty workload. The director should become an ex-officio member of the GERC and should be a member of the GER Task Force. Depending on the plan adopted by the task force, the role of the Director of General Education could be as follows:*

1. Serve on the GER Task Force as primary investigator/researcher.
2. Lead the development of a General Education Assessment Plan using faculty collaboration.
3. Implement the assessment plan developed by the GER Task Force.
4. Collect, analyze, and interpret data, identifying deficient areas. This task may be delegated as needed to the Office of Institutional Research.
5. Consult with faculty in each category to determine recommendations for program improvement.
6. Generate assessment report.
7. Present report to GERC for approval or further refinement and subsequent approval.
8. Facilitate implementation of corrective actions recommended in the assessment report.
9. Work with faculty governance (GERC) to refine and update assessment plan as needed.
10. Facilitate regular faculty review of GER Classifications including the nine GER outcomes and the outcomes of each of the eight classifications.
11. Ensure continuity between the nine General Education outcomes, the outcomes for each of the eight classifications, the seven Associate of Arts program outcomes, and the five Institutional Learning Outcomes. Representative faculty in each classification must approve outcomes for their respective classification.

GER Assessment Recommendations

Qualifications for the position of Director of General Education should include:

Required:

Qualified for appointment as a member of the UAA Faculty

Preferred:

Substantial/significant experience in General Education

Substantial/significant experience in Institutional Accreditation

Substantial/significant experience in Curriculum Development

Substantial/significant experience in Assessment