Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

I. General Information:

College:	A&S	Department (Full name):	Chemistry
Major Name (full name please):	Bachelor of Science with a major in CHEMISTRY	Degree Title:	BS and BA
Formal Option(s), if any:	BS Biochemistry Option	Specialty Field w/in Formal Options, if any:	_____
Requested Effective Date:	FALL 2014, ***IF*** RECEIVED BY SENATE COUNCIL BY MONDAY, APRIL 7.		
Contact Person:	Arthur Cammers	Phone: 8593238977	Email: a.cammers@uky.edu

II. Parameters of the Graduation Composition and Communication Requirement (GCCR):

The new GCCR replaces the old Graduation Writing Requirement. It is fulfilled by a course or courses specified within a B.A./B.S. degree program. As outlined in draft Senate Rule 5.4.3.1, the GCCR stipulates that students must successfully complete this requirement after achieving sophomore status and prior to graduation. To satisfy the GCCR, students must earn an average grade of C or better on the designated Composition and Communication (C&C) intensive assignments produced in any given course designated as fulfilling some or all of the GCCR. The requirements for GCCR courses include:

- at least 4500 words of English composition (approximately 15 pages total);
- a formal oral assignment *or* a visual assignment;
- an assignment demonstrating information literacy in the discipline;
- a draft/feedback/revision process on GCCR assignments.

The program requirements for the GCCR include:

- at least one specific Program Student Learning Outcome for C&C outcomes;
- a plan for assessing both the writing and oral *or* visual components of the GCCR;
- clear goals, rubrics, and revision plans for GCCR implementation.

Upon GCCR approval, each program will have a version of the following specification listed with its Program Description in the University Bulletin:

> *"**Graduation Composition and Communication Requirement.** Students must complete the Graduation Composition and Communication Requirement as designated for this program. Please consult a college advisor or program advisor for details. See also 'Graduation Composition and Communication Requirement' on p. XX of this Bulletin."*

III. GCCR Information for this Program (by requirement):

A. *List the courses currently used to fulfill the old Graduation Writing Requirement:*

CHE 572 001 and CHE 572 002

B. *GCCR Program Outcomes and brief description:*

1. Please specify the Major/Program Student Learning Outcomes (SLOs) pertaining to Composition & Communication and the GCCR requirement. These are *program* outcomes, not *course* outcomes. Please specify the program-level SLOs for C&C in your program:

Chem.B: 5_Communication Will have demonstrated effective oral and written communication of new chemical knowledge to both professional and general audiences, and will have used the chemical literature to put that new information into context.

Cheminformatics Background: http://en.wikipedia.org/wiki/Cheminformatics Chemistry at the University of Kentucky (UK) will impart a working knowledge of how to retrieve and use scientific results from commercial databases. This is an important aspect of chemical knowledge in the age of information and a necessary skill for all chemical science employment sectors.

2. Please provide a short GCCR description for your majors (limit 1000 characters): Please explain the GCCR requirement in language appropriate for undergraduate majors to understand the specific parameters and justification of your program's GCCR implementation plan:

To be able to function as a molecular scientist on any level one has to have basic oral presentation, composition and cyber library skills for effective communication with others. These skills are highly transferrable to pre-professional careers, graduate school, or industrial research or production. In CHE 372 and CHE 472 these skills are developed with a focus on library science in CHE 372 and a focus on oral and written communication in CHE 472.

C. *Delivery and Content:*

1. Delivery specification: for your major/program, how will the GCCR be delivered? Please put an X next to the appropriate option. *(Note: it is strongly recommended that GCCR courses be housed within the degree program.)*

- ☐ a. Single required course within program
- ☒ b. multiple required or optional courses within program
- ☐ c. course or courses outside program (i.e., in another program)
- ☐ d. combination of courses inside and outside program
- ☐ e. other (please specify): _

2. Basic Course Information: Please provide the following information for course(s) used to satisfy the GCCR, either in whole or in part:

Course #1: Dept. prefix, number, and course title: CHE 372 Communication in Chemistry I

- new or existing course? new (*new courses should be accompanied by a New Course Proposal*)
  - ☒ *if a new course, check here that a New Course Proposal has been submitted for review via eCATS*
- required or optional? required
- shared or cross-listed course? no
- projected enrollment per semester: 45

Course #2 (if applicable): Dept. prefix, number, and course title: CHE 472 Communication in Chemistry II

- new or existing course? new (*new courses should be accompanied by a New Course Proposal*)
  - ☒ *if a new course, check here that a New Course Proposal has been submitted for review via eCATS*
- required or optional? required
- shared or cross-listed course? no
- projected enrollment per semester: 45

Course #3 (if applicable): Dept. prefix, number, and course title: _____

- new or existing course? _____ (*new courses should be accompanied by a New Course Proposal*)
  - ☐ *if a new course, check here that a New Course Proposal has been submitted for review via eCATS*
- required or optional? _____
- shared or cross-listed course? _____
- projected enrollment per semester: _____

3. Shared courses: If the GCCR course(s) is/are shared from *outside* the program, please specify the related department or program that will be delivering the course(s). Please provide the following:

- **Contact information of providing program:**

  NA
- **Resources:** what are the resource implications for the proposed GCCR course(s), including any projected budget or staffing needs? If multiple units/programs will collaborate in offering the GCCR course(s), please specify the resource contribution of each participating program.

  NA
- **Memorandum of Understanding/Letter of Agreement**: Attach formal documentation of agreement between the providing and receiving programs, specifying the delivery mechanisms and resources allocated for the specified GCCR course(s) in the respective programs (include with attachments).

  Date of agreement: NA

4. Syllabi: Please provide a sample syllabus for each course that will be designated to fulfill the GCCR. Make sure the following things are clearly indicated on the syllabi for ease of review and approval (check off each):

- the GCCR assignments are highlighted in the syllabus and course calendar;
- the GCCR assignments meet the minimum workload requirements as specified by the Senate Rules for GCCR courses (see the draft Senate GCCR rule linked here);
- the elements are specified in the syllabus that fulfill the GCCR requirement for a clear draft/feedback/revision process;

- the grade level requirements for the GCCR are specified on the syllabus (i.e., an average of C or better is required on GCCR assignments for credit);
- the course or sequence of courses are specified to be completed after the first year (i.e. to be completed after completing 30 credit hours) for GCCR credit;
- the course syllabus specifies "This course provides full/partial GCCR credit for the XXX major/program"
  - if the course provides partial GCCR credit, the fulfilled portion of the GCCR must be specified and the other components of the GCCR for the program must be specified: e.g. "This course provides partial credit for the written component of the GCCR for the XXX major/program in conjunction with Course 2"

5. Instructional plan: Summarize the instructional plan for teaching the C&C skills specified in the program SLOs and delivered in the course(s). Include the following information in **brief** statements (1000 characters or less). Information can be cut-and-pasted from the relevant sample syllabus with indications **where** on the syllabus it is found:

- overview of delivery model: summarize how the GCCR will be delivered for **all** program majors: explain how the delivery model is appropriate for the major/program and how it is offered at an appropriate level (e.g. required course(s), capstone course, skills practicum sequence of courses, etc.):

The GCCR will be fulfilled in Chemistry with two classes: CHE 372 and CHE 472. CHE 372, the first class in the sequence introduces students to library research in the molecular sciences. Often this requires specification of molecular structure or molecule - drug interaction or specific searches for certain chemical properties. These skills will be covered in two or three exercises with resources and expertise available to the Chemistry program in the Science library. CHE 372 also introduces students with a light writing assignment and a short oral presentation which afford a forum to use their new skills in library research. CHE 472 will demand more rigorous research in the library due to the more involved oral presentation and the longer written assignment. CHE 472 also interfaces with CHE 395, Independent Research in Chemistry affording students the opportunity to to develop either a paper or a thesis based on the students' research.

- assignments: overview or list of the assignments to be required for the GCCR (e.g. papers, reports, presentations, videos, etc.), with a summary of how these GCCR assignments appropriately meet the disciplinary and professional expectations of the major/program:

CHE 372 Library Search Exercise
CHE 372 Library Annotated Bibliography about a specific focused topic
CHE 372 two reports on the oral presentation mechanics of graduate level seminars from visiting speakers
CHE 372 Oral Presentation (10 min)
CHE 372 Writing assignment, 1200 words about a focused aspect of one of the seminars above.
CHE 472 Writing assignment, 3000 words, CHE 395 research based or other.
CHE 472 Oral Presentation (25 minute)
CHE 472 Writing assignment, Abstract of oral presentation 300 words.

- revision: description of the draft/feedback/revision plan for the GCCR assignments (e.g. peer review with instructor grading & feedback; essay drafting with mandatory revision; peer presentations; etc.):

Writing and revision will occur by a peer review process. Two peers will review the student's writing assignment in both CHE 372 and 472. The peer review process will be incentivized by a grade for their effort worth 5% of the total in CHE 372 and 10% of the total in CHE 472.

- other information helpful for reviewing the proposal:

The Chemistry program goes beyond the GCCR in oral presentation part of the requirement. UK Chemistry was doing this anyway in the previous two sections of CHE 572. We feel that our students need to pollish their abilities at oral communication.

D. Assessment:

In addition to providing the relevant program-level SLOs under III.B, please specify the assessment plan at the program level for the proposed course(s) and content. Provide the following:

- specify the assessment schedule (e.g., every 3 semesters; biennially):

Annually in CHE 472

- identify the internal assessment authority (e.g. curriculum committee, Undergraduate Studies Committee):

UK CHEM UPC

- if the GCCR course(s) is/are shared, specify the assessment relationship between the providing and receiving programs: explain how the assessment standards of the receiving program will be implemented for the provided course(s):

Graduation Composition and Communication Requirement (GCCR)
GCCR PROPOSAL AND CHANGE UNDERGRADUATE PROGRAM FORM

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Signature Routing Log

General Information:

GCCR Proposal Name (course prefix & number, program major & degree):	CHE 372 and 472; BS, BA
Contact Person Name:	Arthur Cammers
Phone:	office: 323.8977, cell: 859.333.9849
Email:	a.cammers@uky.edu

Instructions:

Identify the groups or individuals reviewing the proposal; record the date of review; provide a contact person for each entry. On the approval process, please note:

- Proposals approved by Programs and Colleges will proceed to the GCCR Advisory Committee for expedited review and approval, and then they will be sent directly to the Senate Council Office. Program Changes will then be posted on a web transmittal for final Senate approval in time for inclusion in the Fall 2014 Course Bulletin.
- New Course Proposals for the GCCR will still require review and approval by the Undergraduate Council. This review will run parallel to GCCR Program Change review.
- In cases where new GCCR courses will be under review for implementation after Fall 2014, related GCCR Program Changes can still be approved for Fall 2014 as noted "*pending approval of appropriate GCCR courses.*"

Internal College Reviews and Course Sharing and Cross-listing Reviews:

Reviewing Group	Date Reviewed	Contact Person (name/phone/email)
Home Program *review by Chair or DUS, etc.*	02/13/2014	Mark Meier, Chair / 257.3837 / meier@uky.edu
Providing Program *(if different from Home Program)*		/ /
Cross-listing Program *(if applicable)*		/ /
College Dean	4/1/15	Ruth Beatties, Associate Dean / 3-9925 / reabeat1@uky.edu
		/ /

Administrative Reviews:

Reviewing Group	Date Approved	Approval of Revision/ Pending Approval[1]
GCCR Advisory Committee	3/26/2014	

Comments:

_____

[1] *Use this space to indicate approval of revisions made subsequent to that group's review, if deemed necessary by the revising group; and/or any Program Change approvals with GCCR course approvals pending.*

CHE 372
Communication in Chemistry I
Fall Semester 2014, Wednesday 4:00 p.m. Rm. CP-137

Instructor: Arthur Cammers, CP-349, a.cammers@uky.edu. (email is best) 323•8977 Office Hours: TR 10:30 a.m.-12:00 noon, W 3:00-4:00 p.m. or e-mail for an appointment.

Course Description:

CHE 372 - Communication in Chemistry I. Reports and discussions on recent chemical research and current literature; writing and revision of scientific papers; literature searching methods; preparation of effective presentations, abstracts and visual aids. CHE 372 and CHE 472 are designed to meet the writing and communications demands of a professional chemist and fulfill the UK Graduate Composition and Communication Requirement (GCCR) for UK Chemistry BS and BA programs. Prerequisites: CHE 226 (or concurrent) or CHE 232 (or concurrent) or consent of the Chemistry Director of Undergraduate Studies

Student Learning Outcomes:

CHE 372 is designed to give the student the ability to:

1. Search the primary literature for chemical knowledge.
2. Prepare oral presentations about chemistry.
3. Write and edit text about chemical science that observes current professional standards of citation and format.
4. Appreciate the impact of chemistry on human activities as diverse as industry, medicine, health, and the environment.
5. Thoroughly edit scientific documents for clarity and accuracy.
6. Depict chemical structures, reaction mechanisms and chemical principles with software generated graphics.

Goals and Objectives:

1. Increased literacy in the chemical sciences.
2. An appreciation for how deeply one has to research a particular topic in Chemistry to explain it to others.
3. Improve comprehension of oral presentations at the university level.
4. The development of the habit of attending seminars.
5. The ability to research and synthesize knowledge from the primary chemical literature – yesterday's and tomorrow's in whatever form it may take.

Required Materials

Other than access to a computer and basic familiarity with web browsing, the student will not have to acquire additional materials for CHE 372.

Description of Course Activities and Assignments

(1) Information Literacy Activities

CHE 372 students will complete a series of exercises that show how to search primary sources for chemical information; they will also prepare a 20- to 25-item bibliography on the topic of their seminar using the format specified under **Abstracts**. Submit search reports to Ms. Jan Carver, the Chemistry-Physics Librarian, in 310d Science Library or at the checkout desk of the Science library in an envelope addressed to Ms. Carver by **Wednesday, October 9**.

(2) Seminar Date, Topics, and Titles

You will have to give a ~12 min seminar on a chemistry topic. Please come to an agreement with your instructor regarding your seminar date, title and topic by email, in office hours or by appointment. Do not choose a topic with which you have privileged information, such as a topic that directly relates to your research. You will be graded partially on how well you use the literature; students doing research in particular areas already (should) have access to the literature on their research. Have some alternate seminar topics in mind, since the first person to choose a topic gets it. Submit *in writing* (e-mail: subject line: CHE 372 Title) your name, the approved title, and the seminar date before class on **Wednesday, September 11**.

(3) Abstract

You must prepare a one-page abstract for your talk. The abstract will be graded on clarity, conciseness, appropriateness, English usage, grammar, and adherence to the required format. E-mail to your instructor the final form of your abstract in Microsoft Word, rtf or pdf format **by noon on Monday of the week of your seminar**. The abstract will be posted on the course Blackboard site in pdf. Cite 3 to 6 *key* articles that you actually consulted in preparing your talk.

(4) Videographer

One student will record another student's presentation on video. The schedule for video-recording will be made shortly after the seminar schedule is finalized. The videographer may use the departmental video camera or his/her own device (Smartphone, etc.). Please pick up the departmental camera (and instructions if you need them) from CP-125 in time to set it up *before* class starts. If you use your own device, be sure that you know how to record the video, how to transfer or upload the file, and have enough memory to store it. Please provide the file or a download link to both the presenter and instructor by 4:00 p.m. on Friday following the seminar.

(5) Writing Assignment

Expand the topic of your seminar into a 4-page, (1,200-word) mini-review. This document will be peer-reviewed twice by fellow students and then graded by the instructor.

Your citations for the abstract and writing assignment must be formatted according to Table 14-2 in: Dodd, J. S.; Solla, L.; Bérard, P. M., Chapter 14: References. In *The ACS style guide: effective communication of scientific information*, Third ed.; Coghill, A. M.; Garson, L. R., Eds. American Chemical Society: Washington, DC, 2006; pp 287-341. Two copies are on reserve in the Science Library. Please include journal article titles. If you are using the program *Endnote*, please use the *Journal of American Chemical Society* style setting to facilitate the inclusion of bibliographic information. It integrates seamlessly with MS Word and is available free of charge for Windows or Mac at https://download.uky.edu/. Get started with *Endnote*; the Science Librarian will discuss its usage in this course.

(6) Departmental Seminar Evaluation

CHE 372 students must attend one Chemistry Departmental seminar and complete evaluation forms for the talks. The speakers must *not* be affiliated with the University of Kentucky. Students with schedule conflicts or strong interests in other areas may substitute a *chemistry-related* seminar by a non-UK speaker in Departments such as Physics, Chemical Engineering or Biochemistry. Evaluations should be submitted as soon as possible after the seminar you attend. All evaluations are due before class on **Wednesdays, October 23 and November 27**.

About Departmental Seminars. A listing of Chemistry Departmental Seminars is at http://chem.as.uky.edu/seminars. Named lectures (Dawson Lecture Series, Friday, November 1, 2013) are typically prestigious speakers presenting their work to a broad audience. You should

try to attend all department seminars in Chemistry or your major department. With some effort, you will begin to understand the seminars much better. Be patient.

(7) Class participation:

Attendance: Students are expected to attend every class punctually. Support your classmates. In a seminar class, habitual non-attendance and tardiness are rude to the presenters. Attendance will be taken. Each two unexcused absences will lower your course grade by a letter grade. Policies related to official University excused absences may be found in the *Student Rights and Responsibilities* manual. [See http://www.uky.edu/StudentAffairs/Code/, Section 5.2.4.2.] Excused absences must be discussed with and approved by your instructor as early as possible.

Discussions and question/answer sessions: Instructors will monitor participation in class discussions. Students are expected to ask at least five non-trivial questions during the semester. Please state your name clearly when asking a question of a seminar speaker.

Grading Policy

(1) Information Literacy = 35%, (2) Seminar = 20%, (3) Abstract = 5%, (4) Writing Assignment 20%, (5) Departmental Seminar Evaluations = 10%, (6) peer-editing, class participation/videography = 10%

Exams: There are no exams in this course.

Midterm: Note, undergraduate students will be provided with a Midterm Evaluation by Oct 21 of course performance based on criteria in syllabus.

Visual Aids

Computer-based (e.g., PowerPoint) presentations have become the *de facto* standard for professional presentations. You may use the Windows computer in CP-137 or your own computer. If you wish to supplement your talk with additional audio or visual aids, please make arrangements by the class meeting a week before your presentation *at the latest*. Make sure that all parts of your presentation work *before* you are in front of your audience.

Seminar Review and Conference

You will receive a video or download link of your seminar from your videographer or instructor by Friday after your seminar. View the presentation and use a student evaluation form for self-evaluation. Bring the form along with the video or link to a brief conference with your instructor, during office hours or by appointment, during the week after your seminar.

Introduction

Obtain background information from the person you are going to introduce at least one week ahead of his or her seminar. Suggestions: Welcome the audience. Give the speaker's name, home town, academic year, other interests, general plans after graduation, and the title of the seminar. The time for the introduction should be one minute or less. Introduce the speaker with the same level of professional style and care with which you would like to be introduced yourself.

Seminar Behavior, Decorum, and Civility

In addition to a scholarly demeanor and civility to all, common courtesy is expected of everyone involved in CHE 372. Avoid disruption by arriving on time with silenced cell phones.

Academic Dishonesty

The Department of Chemistry considers any type of academic dishonesty and plagiarism a very serious offense and we will follow the required university procedures. **If you have questions about what may constitute academic dishonesty in this course, please ask.**

The minimum, *required* penalty for proven academic dishonesty (cheating or plagiarism) is a grade of a zero for the assignment - for a student's first offense at the University. Additional penalties may be imposed by the instructor for a first offense depending on the degree of severity of the transgression and other factors. These can include extra work, reduced letter grade, or a failure of the course. For a penalty less severe than a failure of the course, a letter of warning for a minor offense, which is destroyed on graduation if there are no subsequent offenses, is placed in the student's official record.

The minimum penalty for an offense subsequent to a minor offense is failure of the course, which is subject to the Repeat Option. The minimum penalty for an offense subsequent to a major offense is suspension. A penalty more severe than failure of the course may be imposed for a first or second offense, subject to approval of the Department Chair and the Dean.

University rules pertinent to academic dishonesty, including rights of appeal, are available at:

- http://www.uky.edu/StudentAffairs/Code/part2.html
- http://www.uky.edu/Faculty/Senate/rules_regulations/index.htm. See Sections 6.3-6.5.

Excused Absences:

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

In cases of excused absences, students will be allowed to reschedule seminars; there are no in-class exams. Class attendance of CHE x72 is important for the overall success of the class as much as it is for the student.

Verification of Absences:

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Accommodations due to disability:

If you have a documented disability that requires academic accommodations, please see your instuctor as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

CHE 372 Tentative Course Schedule

Date	EVENTS AND DEADLINES
Aug 28	Introductions and Organization Instructor Presentation, **How To Annoy Your audience with Power-point: 'recommended' Bad practices**
Sep 4	Instructor Presentation, *Guideline on* ***Choosing a Seminar Topic?***
Sep 11	***APPROVED*** **TITLES FOR SEMINARS and Writing Assignments due** **The** *Basics of Searching Online Databases*: Ms. Jan Carver, Science Library Librarian. **Science Library Computer Lab, Room 213F, M. I. King Library**
Sep 18	**Workshop and Exercise on Literature Literacy**: Ms. Jan Carver, Science Library Librarian. **Science Library Computer Lab, Room 213F, M. I. King Library**
Sep 25	Presentation by Instructor on editing documents written by others, the importance of peer review in science, the Review function in MS word.
Oct 2	**Information Literacy Exercise** Due **Student 1:** Presentation Title 1 **Student 2:** Presentation Title 2 **Student 3:** Presentation Title 3
Oct 9	**Students Submit incomplete rough drafts for peer editing** **Student n:** Presentation Title n
Oct 16	**ALL STUDENTS: SEARCH REPORTS DUE TO MS. CARVER*** **Student n:** Presentation Title n
Oct 23	**1st DEPARTMENTAL SEMINAR EVALUATION DUE TO INSTRUCTOR*** **Student n:** Presentation Title n
Oct 30	**Student n:** Presentation Title n
Nov 6	**Students Submit complete rough drafts for peer editing** **Student n:** Presentation Title n
Nov 13	**INSTRUCTOR *receives* COMMENTS ON DATABASE SEARCH from Science Librarian** **Student n:** Presentation Title n
Nov 20	**Student n:** Presentation Title n **Writing Assignments Due to Instructor**
Nov 27	**THANKSGIVING VACATION–NO MEETING**
Dec 4	**2nd DEPARTMENTAL SEMINAR EVALUATION TO INSTRUCTOR*** **Student n:** Presentation Title n
Dec 11	**Student n:** Presentation Title n

CHE 472
Communication in Chemistry II
Fall Semester 2014, Wednesday 4:00 p.m. CP Rm. CP-137

Instructor: John Selegue, CP-011, selegue@uky.edu. (email is best) 257•3484 Office Hours: TR 10:30 a.m.-12:00 noon, W 3:00-4:00 p.m. or e-mail for an appointment.

Course Description:

CHE 472 - Communication in Chemistry II. CHE 472 focuses on the preparation and delivery of effective presentations, and visual aids along with professional development. CHE 372 and CHE 472 are designed to meet the writing and communications demands of a professional chemist and fulfill the UK Graduate Composition and Communication Requirement (GCCR) for UK Chemistry BS and BA programs. Prerequisites: CHE 372 or consent of the Chemistry Director of Undergraduate Studies

Student Learning Outcomes:

CHE 472 is designed to give the student the ability to:

1. Prepare informative, compelling oral presentations about chemistry.
2. Professional development of CV and collection of skill set.
3. Plan for future employment and appreciate the varied professions and career opportunities that are accessible with a chemistry degree.
4. Write and edit text about chemical science that observes current professional standards of citation and format.
5. Thoroughly edit scientific documents for clarity and accuracy.

Goals and Objectives:

1. Increased literacy in the chemical sciences.
2. The development of chemical literacy by attending seminars.
3. Realize which careers are available to chemistry graduates.
4. Plan career-life post-graduation.

Required Materials

Other than access to a computer and basic familiarity with web browsing, the student will not have to acquire additional materials for CHE 472.

Description of Course Activities and Assignments

(1) Seminar Date, Topics, and Titles

You will have to give a 25 min. seminar on a chemistry topic—CHE 395 students are encouraged to make this topic about their research. Please come to an agreement with your instructor regarding your seminar date, title/ topic by email, in office hours or by appointment. Have some alternate seminar topics in mind, since the first person to choose a topic gets it. Submit *in writing* (e-mail: subject line: CHE 472 Title) your name, the approved title, and the seminar date before class meets on **Wednesday, September 11**.

(2) Abstract

You must prepare a one-page abstract for your talk with a picture or graphic content about your talk. The abstract will be graded on clarity, conciseness, appropriateness, English usage, grammar, and adherence to the required format. E-mail to your instructor the final form of your abstract in Microsoft Word, rtf or pdf format **by noon on Monday of the week of your seminar**. The abstract will be posted on the course Blackboard site in pdf. Cite 3 to 6 *key* articles that you actually consulted in preparing your talk.

(4) Videographer

One student will record another student's presentation on video. The schedule for video-recording will be made shortly after the seminar schedule is finalized. The videographer may use the departmental video camera or his/her own device (Smartphone, etc.). Please pick up the departmental camera (and instructions if you need them) from CP-125 in time to set it up *before* class starts. If you use your own device, be sure that you know how to record the video, how to transfer or upload the file, and have enough memory to store it. Please provide the file or a download link to both the presenter and instructor by 4:00 p.m. on Friday following the seminar.

(5) Writing Assignment

CHE 395 students are encouraged to write a paper that describes the background and findings for their research. Other students should attend a Chemistry Departmental seminar and expand a chemistry sub-topic from this seminar to write an informative document (minimum 3000 words, ~10 pages). This document will be target for peer readers and will be peer-reviewed twice by fellow students and then graded. Only sources from the primary literature are permissible.

Your citations for the abstract and writing assignment must be formatted according to Table 14-2 in: Dodd, J. S.; Solla, L.; Bérard, P. M., Chapter 14: References. In *The ACS style guide: effective communication of scientific information*, Third ed.; Coghill, A. M.; Garson, L. R., Eds. American Chemical Society: Washington, DC, 2006; pp 287-341. Two copies are on reserve in the Science Library. Please include journal article titles. If you are using the program *Endnote*, please use the *Journal of American Chemical Society* style setting to facilitate the inclusion of bibliographic information. It integrates seamlessly with MS Word and is available free of charge for Windows or Mac at https://download.uky.edu/. Get started with *Endnote*; the Science Librarian will discuss its usage in this course.

About Departmental Seminars. A listing of Chemistry Departmental Seminars is at http://chem.as.uky.edu/seminars. Named lectures (Dawson Lecture Series, Friday, November 1, 2013) are typically prestigious speakers presenting their work to a broad audience. You should try to attend all department seminars in Chemistry or your major department. Seminars often present the latest knowledge about a particular subject. Attendance will teach you something, show you how much you don't know about a particular field, and allow you to mark your development as you learn. With some effort, you will begin to understand the seminars much better. Be patient. You will be able to think back to when you didn't understand the content very well. At some point you might do some Chemistry research. A history of seminar attendance will help you in making the right choice of research topic. Seminar attendance now will make you a better educator if you go into teaching or more scientifically literate in any profession you choose.

(6) Department Seminar Evaluation:

CHE 472 students must attend one Chemistry Departmental seminar and complete evaluation forms for the talk. The speakers must *not* be affiliated with the University of Kentucky. Students with schedule conflicts or strong interests in other areas may substitute a *chemistry-related* seminar by a non-UK speaker in Departments such as Physics, Chemical Engineering or Biochemistry. Evaluations should be submitted as soon as possible after the seminar you attend. All evaluations are due before class on **Wednesdays, October 23 and November 27**.

About Departmental Seminars. A listing of Chemistry Departmental Seminars is at http://chem.as.uky.edu/seminars. Named lectures (Dawson Lecture Series, Friday, November 1,

2013) are typically prestigious speakers presenting their work to a broad audience. You should try to attend all department seminars in Chemistry or your major department. With some effort, you will begin to understand the seminars much better. Be patient.

(7) Class participation:

Attendance: Students are expected to attend every class punctually. Support your classmates. In a seminar class, habitual non-attendance and tardiness are rude to the presenters. Attendance will be taken. Each two unexcused absences will lower your course grade by a letter. Policies related to official University excused absences may be found in the *Student Rights and Responsibilities* manual. [See http://www.uky.edu/StudentAffairs/Code/, Section 5.2.4.2.] Excused absences must be discussed with and approved by your instructor as early as possible. Tardiness will also be penalized.

Discussions and question/answer sessions: Instructors will monitor participation in class discussions. Students are expected to ask at least five non-trivial questions during the semester. Please state your name clearly when asking a question of a seminar speaker.

Grading Policy

(1) Seminar and Abstract = 35%, (2) Peer-editing 10%, (3) Writing Assignment 50%, (4) Department Seminar Evaluation = 5%.

Exams: There are no exams in this course.

Midterm: Note, undergraduate students will be provided with a Midterm Evaluation by Oct 21 of course performance based on criteria in syllabus.

Visual Aids

Computer-based (e.g., PowerPoint) presentations have become the *de facto* standard for professional presentations. You may use the Windows computer in CP-137 or your own computer. If you wish to supplement your talk with additional audio or visual aids, please make arrangements by the class meeting a week before your presentation *at the latest*. Make sure that all parts of your presentation work *before* you are in front of your audience.

Seminar Review and Conference

You will receive a video or download link of your seminar from your videographer or instructor by Friday after your seminar. View the presentation and use a student evaluation form for self-evaluation. Bring the form along with the video or link to a brief conference with your instructor, during office hours or by appointment, during the week after our seminar.

Introduction of Peers before Seminar

Obtain background information from the person you are going to introduce at least one week ahead of his or her seminar. Suggestions: Welcome the audience. Give the speaker's name, home town, academic year, other interests, general plans after graduation, and the title of the seminar. The time for the introduction should be one minute or less. Introduce the speaker with the same level of professional style and care with which you would like to be introduced yourself.

Seminar Behavior, Decorum, and Civility

In addition to a scholarly demeanor and civility to all, common courtesy is expected of everyone involved in CHE 472. Please arrive on time with your cell phone in silent mode.

Academic Dishonesty

The Department of Chemistry considers any type of academic dishonesty and plagiarism a very serious offense and we will follow the required university procedures. **If you have questions about what may constitute academic dishonesty in this course, please ask.** The minimum, *required* penalty for proven academic dishonesty (cheating or plagiarism) is a grade of a zero for the assignment - for a student's first offense at the University. Additional penalties may be imposed by the instructor for a first offense depending on the degree of severity of the transgression and other factors. These can include extra work, reduced letter grade, or a failure of the course. For a penalty less severe than a failure of the course, a letter of warning for a minor offense, which is destroyed on graduation if there are no subsequent offenses, is placed in the student's official record.
The minimum penalty for an offense subsequent to a minor offense is failure of the course, which is subject to the Repeat Option. The minimum penalty for an offense subsequent to a major offense is suspension. A penalty more severe than failure of the course may be imposed for a first or second offense, subject to approval of the Department Chair and the Dean.
University rules pertinent to academic dishonesty, including rights of appeal, are available at:

- http://www.uky.edu/StudentAffairs/Code/part2.html
- http://www.uky.edu/Faculty/Senate/rules_regulations/index.htm. See Sections 6.3-6.5.

Excused Absences:

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

In cases of excused absences, students will be allowed to reschedule seminars; there are no in-class exams. Class attendance of CHE x72 is important for the overall success of the class as much as it is for the student.

Verification of Absences:

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Accommodations due to disability:

If you have a documented disability that requires academic accommodations, please see your instuctor as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

CHE 472 Tentative Course Schedule

Date	EVENTS AND DEADLINES
Aug 28	Introductions and Organization Workshop on the use of Endnote, MS Word, and Chemical Structure-Drawing Software
Sep 4	**Approved Seminar Topics Due** Instructor Presentation on Reading the Literature and Using Databases (review) and notes on the elements of good presentations, setting the level for the target audience and the elements of good abstracts.
Sep 11	Presentation by Instructor on editing documents written by others, the importance of peer review in science, the Review function in MS word.
Sep 18	**No Meeting**
Sep 25	**Students Submit incomplete rough drafts for peer editing** Workshop on Peer Editing; **you need to come to this class session with significant progress made on your writing assignment.**
Oct 2	**Student 1:** Presentation Title 1 **Student 2:** Presentation Title 2
Oct 9	**Student n:** Presentation Title n
Oct 16	**Student n:** Presentation Title n
Oct 23	**Student n:** Presentation Title n
Oct 30	**Student n:** Presentation Title n
Nov 6	**DEPARTMENTAL SEMINAR EVALUATION DUE TO INSTRUCTOR** **Students Submit ~complete rough drafts for peer editing** **Student n:** Presentation Title n
Nov 13	**Student n:** Presentation Title n
Nov 20	**Student n:** Presentation Title n **Writing Assignments Due to Instructor**
Nov 27	**THANKSGIVING VACATION–NO MEETING**
Dec 4	**Student n:** Presentation Title n
Dec 11	**Student n:** Presentation Title n

This is a Chemistry GCCR Addendum to address questions raised regarding content of the proposed new courses: CHE 372 and CHE 472:

Date: Thursday, March 13, 2014, Prepared by Arthur Cammers, CHE DUS

CHE 372 and CHE 472 are reincarnations of two sections of CHE 572 previously offered by the Chemistry department for many years. The content of the courses is not as important as the creative activity involved in generating the content. We are teaching students to communicate chemistry concepts, but we are not so much restricting their choices about which concepts to communicate. The content generated by the students and the instructors of CHE 372 and 472 will be reflective of content generated in past semesters in CHE 572 by students and instructors. Below is a list of the presentations given in CHE 572 001 and 002 in Fall 2013:

CHE 572-001 – COMMUNICATION IN CHEMISTRY 2013 FALL SEMESTER SCHEDULE
Wednesdays, 4:00–4:50 p.m., Chemistry-Physics 137 Instructor: Dr. Arthur Cammers

Date	EVENTS AND DEADLINES
Aug 28	**CHE 572-001, 002:** Introductions and Organization Dr. Selegue, **How To Annoy Your audience with Power-point: 'recommended' Bad practices**
Sep 4	***Choosing a topic?***
Sep 11	***APPROVED* TITLES FOR 572-001 SEMINARS DUE TO DR. CAMMERS*** **CHE 572-001:** *Basics of Searching Online Databases*: Ms. Jan Carver, Science Library Librarian. **Science Library Computer Lab, Room 213F, M. I. King Library**
Sep 18	Attend section 2 seminar
Sep 25	Sam Beavin (Biochemical Activity of Cisplatin and Related Drugs) Roberto Tapia (Computationally Guided Drug Discovery of Human Prostate Specific Membrane Antigen (PSMA) Inhibitors)
Oct 2	Stephanie Carpenter (*Fireworks: an explosion of chemistry*) Byron Hempel (Brown recluse spider (Loxosceles reclusa) venom phospholipase D (PLD) generates lysophosphatidic acid (LPA))
Oct 9	Dylan Tighe (The Uses and Synthesis of Xylitol: The Natural Sweetener) Jessime Kirk "Protein Folding: Difficulties and Rewards"
Oct 16	**ALL STUDENTS: SEARCH REPORTS DUE TO MS. CARVER*** Stephen Bodnar (*Sarin: behind chemical warfare*) Morgan Sizemore (*Understanding Composite Fillings*) Steven Shofner (*Medicinal Applications of Toxins: Tetrodotoxin and Epibatidine*)
Oct 23	**1st DEPARTMENTAL SEMINAR EVALUATION DUE TO SECTION INSTRUCTOR*** Kim Tram (*Methylparaben Promoted DNA Damage Mediated by Sunlight and Esterase*) Anthony Bates (*Vision through the Eyes of Chemistry*) Kyle Maynard, (Emergency Stroke Treatment with Tissue Plasminogenic Activators) Jack Moore (Lipid Metabolism in Humans)
Oct 30	Joe Papp "Membranes of the Future." Sarah Negaard, (*Hydraulic Fracturing Fluid: The Chemistry Behind Wellbore Fracturing for Hydrocarbon Extraction*) Cara Coleman, (The Chemistry Behind Self Tanning Products) Matt Hudzinski (The Basics of Listerine)
Nov 6	Travis W. Johnson (*The Chemistry and Use of Photochromic Lenses*) Rob Camm "*Understanding PAHs as Carcinogens*" Matt Williams (*Taurine in Energy Drinks: A Body Enhancer or A Suicide Cocktail?*)
Nov 13	**COMMENTS ON DATABASE SEARCH DUE TO SECTION INSTRUCTOR*** Niranjana Warrier, (The Inhibitory Effects of Aspirin on Prostaglandin Synthesis)

	Kyle Cornell (*Oxycodone: The Chemistry of Use and Abuse*) Robert Louis (*Methamphetamine: Chemically and Culturally*) Susannah Hubler (Of Corse Loosing Weight is Hard...It's Chemistry)
Nov 20	Daniel Earle, (Organic Gunshot Residue Detection using Solid Phase Microextraction and GC-MS) Maks Gold (Understanding Anabolic Steroids: The Chemical Reality) Kyle Donovan (Tetrahydrogestrinone: Usage and Abuse) An Ho (A Microscopic Look at the Effects of Chloroquine on Malaria)
Nov 27	**THANKSGIVING VACATION–NO MEETING**
Dec 4	**2nd DEPARTMENTAL SEMINAR EVALUATION TO SECTION INSTRUCTOR*** Postponed seminars?
Dec 11	No meeting

CHE 572-002 – COMMUNICATION IN CHEMISTRY 2013 FALL SEMESTER SCHEDULE
Wednesdays, 4:00–4:50 p.m., Chemistry-Physics 183 Instructors: Dr. John P. Selegue

Date	EVENTS AND DEADLINES
Aug 28	**CHE 572-001, 002:** Introductions and Organization Dr. Selegue, **How To Annoy Your audience with Power-point: 'recommended' Bad practices**
Sep 4	***Advanced Online Searches: Ms. Jan Carver, Science Librarian.*** ***Science Library Computer Lab, Room 213F, M. I. King Library***
Sep 11	***TENTATIVE Topics FOR 572-002 SEMINARS DUE**** ***Reba L. Carroll, Career Center, Résumé Workshop, CP-137***
Sep 18	APPROVED Topics FOR 572-002 SEMINARS DUE* Optional question-answer session about topics, format, PowerPoint, etc.
Sep 25	Bryan Ingoglia, Photolabile protecting groups in organic synthesis
Oct 2	Rescheduled: Reba L. Carroll, Career Center, Résumé Workshop, CP-183
Oct 9	SEARCH REPORTS DUE TO MS. CARVER* Alex Feiertag, Chemistry of Artificial Sweeteners Dusten Dussex, Fossil Fuels-And Their Uses and Effects in the United States
Oct 16	**Danielle Edwards, Huntington's Disease: A Pathway to Progression**
Oct 23	**1st DEPARTMENTAL SEMINAR EVALUATION DUE*** **Leah Neeley, Method of Removal of Heavy Metals from the Body** **George Nguyen, Bose-Einstein Condensates**
Oct 30	Jessica M. Phelps, Diabetic neuropathy: biochemistry of errors in glycolysis pathways Nicole Mugeni, The chemistry of hallucinogenic drugs
Nov 6	RÉSUMÉS DUE * Suhas Bharadwaj, Oxidative Modification of Brain Proteins in Alzheimer's Disease Jesse L. Reed, Dangers of Chemical Warfare Agents and How to Destroy Them
Nov 13	**COMMENTS ON DATABASE SEARCH DUE*** **Andrew Rudnick, Effects and harmful side-effects of epinephrine on the body** **Derrick Lewis, Potential Dangers of Mixing Adderall with Other Medications**
Nov 20	Departmental Assessment assignment distributed Matthew Wolfe, Toward a Lithium - "Air" Battery: The Effect of CO2 on the Chemistry of a Lithium-Oxygen Cell Piper Glaab, Ambien: synthesis, history, and approval of zolpidem tartate
Nov 27	**THANKSGIVING VACATION–NO MEETING**
Dec 4	2nd DEPARTMENTAL SEMINAR EVALUATION DUE* Jamie Carty, Ibogaine therapy for drug withdrawal Michael Sudkamp, Antibiotics and general mechanism of action
Dec 11	Departmental Assessment