Cover Sheet: Request 13727

CHM2050 Honors General Chemistry 1 for Majors

Info

Process	Course|New|Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Alexander Angerhofer ax@ufl.edu
Created	3/6/2019 6:08:49 PM
Updated	4/5/2019 7:45:33 AM
Description of request	This is a new course the Department of Chemistry wishes to create to fulfill the requirement for General Chemistry 1 for our majors with a course structure that will expose them to modern applications of Chemistry in research and society.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Chemistry 011606000	Alexander Angerhofer		3/16/2019
No document changes					
College	Conditionall Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee conditionally approves, with the following: change transcript title to include reference to Honors; 2) fix grading scale to show ranges; 3) course objection #10 should be changed to "demonstrate" or something measurable/observable.	3/27/2019
No document changes					
Department	Approved	CLAS - Chemistry 011606000	Alexander Angerhofer	changed transcript title to Hnrs Gen Chem 1 Major.; changed grading scale to show ranges; rephrased course objecties.	4/4/2019
No document changes					
College	Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane		4/5/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			4/5/2019
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					

Step	Status	Group	User	Comment	Updated
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 13727

Info

Request: CHM2050 Honors General Chemistry 1 for Majors
Description of request: This is a new course the Department of Chemistry wishes to create to fulfill the requirement for General Chemistry 1 for our majors with a course structure that will expose them to modern applications of Chemistry in research and society.
Submitter: Alexander Angerhofer ax@ufl.edu
Created: 5/5/2019 6:44:35 PM
Form version: 6

Responses

Recommended Prefix
Enter the three letter code indicating placement of course within the discipline (e.g., POS, ATR, ENC). Note that for new course proposals, the State Common Numbering System (SCNS) may assign a different prefix.

Response:
CHM

Course Level
Select the one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response:
2

Number
Enter the three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles. For new course requests, this may be XXX until SCNS assigns an appropriate number.

Response:
050

Category of Instruction
Indicate whether the course is introductory, intermediate or advanced. Introductory courses are those that require no prerequisites and are general in nature. Intermediate courses require some prior preparation in a related area. Advanced courses require specific competencies or knowledge relevant to the topic prior to enrollment.

Response:
Introductory

• 1000 and 2000 level = Introductory undergraduate
• 3000 level = Intermediate undergraduate
• 4000 level = Advanced undergraduate
• 5000 level = Introductory graduate
• 6000 level = Intermediate graduate
• 7000 level = Advanced graduate

4000/5000 and 4000/6000 levels = Joint undergraduate/graduate (these must be approved by the UCC and the Graduate Council)

Lab Code
Enter the lab code to indicate whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response:
None

Course Title
Enter the title of the course as it should appear in the Academic Catalog.

Response:
Honors General Chemistry 1 for Majors

Transcript Title
Enter the title that will appear in the transcript and the schedule of courses. Note that this must be limited to 21 characters (including spaces and punctuation).

Response:
Hnrs Gen Chem 1 Major

Degree Type
Select the type of degree program for which this course is intended.

Response:
Baccalaureate

Delivery Method(s)
Indicate all platforms through which the course is currently planned to be delivered.

Response:
On-Campus

Co-Listing
Will this course be jointly taught to undergraduate, graduate, and/or professional students?

Response:
No

Co-Listing Explanation
Please detail how coursework differs for undergraduate, graduate, and/or professional students. Additionally, please upload a copy of both the undergraduate and graduate syllabus to the request in .pdf format.

Response:
not applicable since not co-listed

Effective Term
Select the requested term that the course will first be offered. Selecting "Earliest" will allow the course to be active in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's best projection. Courses cannot be implemented retroactively, and therefore the actual effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires 2 to 6 weeks after approval of the course at UF.

Response:
Fall

Effective Year
Select the requested year that the course will first be offered. See preceding item for further information.

Response:
Earliest Available

Rotating Topic?
Select "Yes" if the course can have rotating (varying) topics. These course titles can vary by topic in the Schedule of Courses.

Response:
No

Repeatable Credit?
Select "Yes" if the course may be repeated for credit. If the course will also have rotating topics, be sure to indicate this in the question above.

Response:
No

Amount of Credit
Select the number of credits awarded to the student upon successful completion, or select "Variable" if the course will be offered with variable credit and then indicate the minimum and maximum credits per section. Note that credit hours are regulated by Rule 6A-10.033, FAC. If you select "Variable" for the amount of credit, additional fields will appear in which to indicate the minimum and maximum number of total credits.

Response:
3

S/U Only?
Select "Yes" if all students should be graded as S/U in the course. Note that each course must be entered into the UF curriculum inventory as either letter-graded or S/U. A course may not have both options. However, letter-graded courses allow students to take the course S/U with instructor permission.

Response:
No

Contact Type
Select the best option to describe course contact type. This selection determines whether base hours or headcount hours will be used to determine the total contact hours per credit hour. Note that the headcount hour options are for courses that involve contact between the student and the professor on an individual basis.

Response:
Regularly Scheduled

• Regularly Scheduled [base hr]
• Thesis/Dissertation Supervision [1.0 headcount hr]
• Directed Individual Studies [0.5 headcount hr]
• Supervision of Student Interns [0.8 headcount hr]
• Supervision of Teaching/Research [0.5 headcount hr]
• Supervision of Cooperative Education [0.8 headcount hr]

Contact the Office of Institutional Planning and Research (352-392-0456) with questions regarding contact type.

Weekly Contact Hours
Indicate the number of hours instructors will have contact with students each week on average throughout the duration of the course.

Response:
4

Course Description
Provide a brief narrative description of the course content. This description will be published in the Academic Catalog and is limited to 50 words or fewer. See course description guidelines.

Response:
First semester of the CHM 2050/2045L and CHM 2051/2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria. (P)

Prerequisites
Indicate all requirements that must be satisfied prior to enrollment in the course. Prerequisites will be automatically checked for each student attempting to register for the course. The prerequisite will be published in the Academic Catalog and must be formulated so that it can be enforced in the registration system. Please note that upper division courses (i.e., intermediate or advanced level of instruction) must have proper prerequisites to target the appropriate audience for the course.

Response:
(CHM1025(C) OR ((ALEKS>=75) & NOT (CHM1025<C)))
&
(MAC1147(C) OR (MAC1140(C) & MAC1114(C)) OR MAC2XXX(C) OR MAC3XXX OR MAC4XXX)
& CHY

Completing Prerequisites on UCC forms:

• Use "&" and "or" to conjoin multiple requirements; do not used commas, semicolons, etc.
• Use parentheses to specify groupings in multiple requirements.
• Specifying a course prerequisite (without specifying a grade) assumes the required passing grade is D-. In order to specify a different grade, include the grade in parentheses immediately after the course number. For example, "MAC 2311(B)" indicates that students are required to obtain a grade of B in Calculus I. MAC2311 by itself would only require a grade of D-.

• Specify all majors or minors included (if all majors in a college are acceptable the college code is sufficient).
• "Permission of department" is always an option so it should not be included in any prerequisite or co-requisite.

Example: A grade of C in HSC 3502, passing grades in HSC 3057 or HSC 4558, and major/minor in PHHP should be written as follows:
HSC 3502(C) & (HSC 3057 or HSC 4558) & (HP college or (HS or CMS or DSC or HP or RS minor))

Co-requisites
Indicate all requirements that must be taken concurrently with the course. Co-requisites are not checked by the registration system.

Response:
CHM2045L

Rationale and Placement in Curriculum
Explain the rationale for offering the course and its place in the curriculum.

Response:
The course is equivalent in scope to CHM2045, General Chemistry 1. However, it targets chemistry and biochemistry majors who need more depth in the topics taught and who need to be exposed to modern research applications in chemistry more quickly. The course satisfies this need by taking a different structure than CHM2045, i.e., two double lecture periods per week instead of three lectures and one recitation session.

Course Objectives
Describe the core knowledge and skills that student should derive from the course. The objectives should be both observable and measurable.

Response:
Students who successfully complete this course will be able to:
(a) demonstrate understanding of basic chemical concepts at the General Chemistry I level, specifically: stoichiometry, states of matter, atomic structure, molecular structure and bonding, thermochemistry, equilibria, and kinetics;
(b) apply mathematical skills at the level of pre-calculus algebra to solve quantitative problems in the areas listed under (a);
(c) use the scientific method to define a problem in the areas listed under (a) clearly, develop testable hypotheses, design and execute experiments, analyze data using appropriate mathematical and statistical methods, and draw appropriate conclusions;
(d) explain and argue for the major scientific developments that have led to the current state-of-the-art in the field, and be able to assess impacts Chemistry has on society, science, and the environment.

Course Textbook(s) and/or Other Assigned Reading
Enter the title, author(s) and publication date of textbooks and/or readings that will be assigned. Please provide specific examples to evaluate the course.

Response:
M. Silberberg, “Chemistry: The Molecular Nature of Matter and Change With Advanced Topics,” 8th Edition, McGraw-Hill, New York 2018, ISBN: 978-1259741098. or equivalent texts. The text is recommended. Any reasonably recent General Chemistry textbook should be fine for students to review and look up material.

Weekly Schedule of Topics
Provide a projected weekly schedule of topics. This should have sufficient detail to evaluate how the course would meet current curricular needs and the extent to which it overlaps with existing courses at UF.

Response:
Week 1: Review of chapters 1 and 2, covering Definitions, Units, and the Components of Matter
Week 2: Chapter 3, covering Stoichiometry and quantitative Chemistry
Week 3: Chapter 4, covering types of chemical reactions and reversibility.
Week 4: Chapter 5, covering the ideal gas law and kinetic gas theory.
Week 5: Chapter 6, covering Thermochemistry.
Week 7: Chapter 16: covering kinetics, rate laws, rate equations, and reaction mechanisms.
Weeks 8+9: Chapter 7, covering the quantum theory and atomic structure.
Weeks 9+10: Chapter 8, covering electron configuration and chemical periodicity.
Weeks 11 + 12: Chapter 9, covering chemical bonding modelts.
Weeks 12 + 13: Chapter 10, covering Lewis structures and the shapes of molecules.
Week 14: Chapter 11, covering theories of covalent bonding.
Weeks 15 + M - W of week 16: Chapter 12, covering intermolecular forces.

Links and Policies
Consult the syllabus policy page for a list of required and recommended links to add to the syllabus. Please list the links and any additional policies that will be added to the course syllabus.
Please see: syllabus.ufl.edu for more information

Response:
Exam Policies: Four during-term exams will be given (see schedule above). These exams will be in-class exams. Exam duration will be approximately 1.5 hours. The final exam is cumulative. You must use a non-graphing non-programmable scientific calculator on exams with log, ln, root, and exponent (scientific notation) functions. Be sure to also bring pencils, section number, and your UF ID card. No notes, papers, cell phones or other electronic devices can be in view during exams. No makeup (“do over”) progress exams will be given for any reason. If you must be absent for an exam due to a documented and approved academic or UF athletic conflict, bring the documentation to your instructor at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you. If you are absent for an exam due to an unpredicted documented medical reason, you must contact the instructor as soon as possible and you have to get your excuse verified by the Dean of Student's Office. Your missed exam score will then be replaced by your pro-rated final exam score when calculating your final grade. More information regarding this policy can be found in the General Chemistry Exam Absence Policy document found on the Chemistry Department web site: https://www.chem.ufl.edu/wp-content/uploads/sites/38/2017/05/GenChemExamAbsencePolicy-05-05-2017.pdf.
To alleviate the stress of potential issues that do not fall under officially-sanctioned absences, we have incorporated an “average/replace” policy (the lowest of the four progress exams will be replaced by the average of the four progress exams). This “average/replace” policy will help to minimize the impact of a single poor performance but it will not completely disappear. Any and all exam grade disputes must be performed within two weeks of the scheduled exam date. University examination and reading day policies can be found at: https://catalog.ufl.edu/UGRD/academic-regulations/examination-policies-reading-days/

Attendance: Requirements for attendance follow the general UF policies, see here: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/.

Reading Days Policies: This course follows UF's reading days policy as stated at: http://aa.ufl.edu/policies/reading-days-policy/ .

Grades and Grading Policies: This course follows the general UF grades and grading policies, see here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

Evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester. Announcements will be made to students about the specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

Students with Disabilities: Students requiring special accommodations should register with the Dean of Students Office (http://www.dso.ufl.edu/, 352-392-1261) and the Disability Resource Center (DRC, https://www.dso.ufl.edu/drc, 352-392-8565, email: accessUF@dso.ufl.edu), and present documentation from that office to the instructor.
Calculators: You must have your own scientific calculator. Calculators may be used on homework and exams but may not be shared. You may not use graphing calculators or any calculators that are capable of communication on any exam. Simple inexpensive scientific calculators such as the TI-30 series or the Casio fx-260 are acceptable and sufficient for any problem encountered on exams.

Counseling Services: The University of Florida provides counseling services for students, staff, and faculty. See http://www.counseling.ufl.edu/cwc/. If you or a friend are in distress, call (352) 392-1575 (available 24/7), email umatter@ufl.edu, or walk in for an emergency consultation during regular service hours (8:00am – 5:00pm) at the Radio Road Site, 3190 Radio Rd., or the Peabody Hall Site, on the 4th floor of Peabody Hall, adjacent to Criser Hall. For other hours or weekends, call the Alachua County Crisis Center, (352) 264-6789. For sexual assault recovery services call the Student Health Care Center at (352) 392-1161. For life-threatening emergencies always call 911.

Emergency Numbers and Web Sites:
• UFPD (UF Police Department): In case of emergency dial 911. The UF campus police non-emergency number is (352) 392-1111. Their web site: http://www.police.ufl.edu/,
• UF Emergency management: (352) 273-2100. https://emergency.ufl.edu/,
• Infirmary (student health center): (352) 392-1161, http://shcc.ufl.edu/.
• EH&S (Environmental Health & Safety): (352) 392-1591, http://www.ehs.ufl.edu/.
Other Academic Resources: UF provides several other resources for students, such as
• Library Support can be obtained here: http://cms.uflib.ufl.edu/ask, where you can find various ways to receive assistance with respect to using the libraries or finding resources.
• The Career Resource Center is located on level One in the Reitz Union, (352) 392-1601, and provides career assistance and counseling. Refer to http://www.crc.ufl.edu/ for further info.
• The Teaching Center is located in Broward Hall, main phone (352) 392-2010 or appointment phone (352) 392-6420, and provides students with tutoring services and counseling regarding general study skills. Refer to http://teachingcenter.ufl.edu/ for further info. It may also provide employment opportunities as tutors for well qualified students.
• The Writing Studio is located at 302, Tigert Hall, (352) 846-1138, and provides help with brainstorming, formatting, and writing papers, see: https://writing.ufl.edu/writing-studio/.
• The Ombuds Office is located at 31 Tigert Hall, (352) 392-1308, and provides students assistance in resolving problems and conflicts that arise in the course of interacting with the University of Florida. By considering problems in an unbiased way, the Ombuds works to achieve a fair resolution and works to protect the rights of all parties involved. For further information go to http://www.ombuds.ufl.edu/ or refer to the official complaints policy here: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

Honor Code: This class will operate under the policies of the student honor code which can be found at: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/. The students, instructor, and TAs are honor-bound to comply with the Honors Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks. Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the

University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/.

Grading Scheme

List the types of assessments, assignments and other activities that will be used to determine the course grade, and the percentage contribution from each. This list should have sufficient detail to evaluate the course rigor and grade integrity. Include details about the grading rubric and percentage breakdowns for determining grades.

Response:
Summary of course elements that determine the course grade:
4 progress exams @ 15% each, for 60% total.
1 cumulative final exam @ 23%.
10 homework sets @ 1% each, for 10% total.
Daily in-class participation grade (learning catalytics) @ 5% total.
1 ALEKS prep, due online Sept. 10 @ 2% total.
Total earnable points are 100%.
Grading Scale being used:
A: 90.0% and higher
A-: 86.0% - 89.9%
B+: 83.0% - 85.9%
B: 80.0% - 82.9%
B-: 77.0% - 79.9%
C+: 73.0% - 76.9%
C: 69.0% - 72.9%
D+: 66.0% - 68.9%
D: 63.0% - 65.9%
D-: 60.0% - 62.9%
E: 0% - 59.9%.

Instructor(s)

Enter the name of the planned instructor or instructors, or "to be determined" if instructors are not yet identified.

Response:
Dr. Alexander Angerhofer (initially). The plan is to have research-active faculty teach this course on a regular basis.