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ATTACHMENT A

PROPOSAL FOR COURSE CHANGE

To: Curriculum Committee

From: Department of Physical Sciences

Date submitted: September 23, 2008

Request for: Course change_____Course deletion_____Course addition ✓
(Excluding course credit hour changes)

Submitted by: Gavin D. Jones, Ph.D.

Approved by: Department Head: Jeff Robertson, Ph.D. Jeff W. Robertson

Dean of School: Richard Cohoon, Ed.D. R Cohoon

Reviewed by: Registrar: Tammy Rhodes Tammy Rhodes

Vice President: John Watson, Ed.D. _____

I. Catalog description:

Number: CHEM 3423

Title for Catalog: Descriptive Inorganic Chemistry

***Title for Course Inventory (24 characters):** Descriptive Inorganic Chemistry

Description: Prerequisite: CHEM 3264. Basic descriptive inorganic chemistry dealing in a systematic way with the elements and the structures, properties and reactions of their inorganic compounds. Topics range from coordination chemistry to organometallic chemistry to bioinorganic chemistry. Three hours of lecture.

12-10-08

Effective date or term: Fall 2009 catalog

***Course fees:** none

II. Justification and feasibility of course:

A. **What is the need for this course? Who will take it?** With the addition of this course both the biochemistry and general options in chemistry will now be ACS (American Chemical Society) approved. According to the Spring 2008 ACS Guidelines and Evaluation Procedures for Bachelor's Degree Programs, "certified majors must have instruction *equivalent* to a one-semester course of at least three semester credit hours in each of the five major areas of chemistry: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry" (Section 5.3) Arkansas Tech Dept of Physical Sciences

app CC 11/14/08
app FS 12/3/08

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currently fulfills this requirement with the exception of the inorganic course. Furthermore, this course will be required for both options and it can be used as an upper level elective for biology and ACS option chemistry majors.

B. How does it relate to other work being offered by your department? Is there an overlap with other courses in the department? This course will close the gap between what is taught in General chemistry I & II (2000 level) and Advanced Inorganic chemistry (4000 level).

C. Is this course part of any general plan of development within your department?
Explain. The goal for this is to have all chemistry degree options now ACS approved. This will not only attract good students to the department but in turn the more advanced students will now be attracted to Arkansas Tech University.

D. How often will the course be offered? The plan is to offer the course in the fall semesters of every year.

E. How will the course be staffed? The course will be taught by the department's inorganic faculty member. Currently, that is Gavin D. Jones, Ph.D.

F. When applicable, state with which departments you have specifically coordinated this change? (If unable to identify coordinating departments that change affects, Academic Affairs can offer assistance in identifying course use.) This change should not affect any other department(s) only department of physical sciences.

List Department Head/ Program Director Consulted: (Add to list as needed)	Indicate Support for Proposal (yes/no)	Date:
1. Jeff Robertson, Ph.D. JWR	Yes	2008 Sept 24
2.		
3.		
4.		
5.		

If no, please attach explanation from responding Department Head indicating why they do not support the proposal.

***Note: Each new course proposal must include a short explanation describing how the new course integrates with the assessment process of the department in which the course will be taught.**

*Updated 8/1/04
**Updated 9/1/05

Chem 3423 – Descriptive Inorganic Chemistry
Sample Syllabus

Contact Info
To be completed my faculty...

Catalog Description
Prerequisite: CHEM 3264. Basic descriptive inorganic chemistry dealing in a systematic way with the elements and the structures, properties and reactions of their inorganic compounds. Topics range from coordination chemistry to organometallic chemistry to bioinorganic chemistry. Three hours of lecture.

Textbook(s) and Supplemental Materials
Shriver & Atkins Inorganic Chemistry by Atkins, Overton, etc.; 4th edition. W.H. Freeman and Company, New York: 2006. (ISBN 0-7167-4878-9)
This same textbook will be used again for CHEM 4424

Rationale for this course
The justifications of this course are:
(1) To give the student a broad, yet thorough, understanding of inorganic chemistry.
(2) To value the scientific issues and the role of chemistry in the world today.
(3) To further develop critical thinking and problem solving skills necessary for competent scientists.

Objectives
Descriptive inorganic chemistry is considered an intermediate inorganic chemistry course such that it brings together both general chemistries I & II with advanced inorganic chemistry. The following topics will be covered: Hydrogen, Group 1 elements, Group 2 elements, Group 13 elements, Group 14 elements, Group 15 elements, Group 16 elements, Group 17 elements, Group 18 elements, *d*-block metals, and *f*-block metals. This will provide students with a thorough understanding of the entire periodic table. Moreover, the students will learn many industrial processes applicable to each group of elements.

Grading
The points for the course are earned as shown below:

Exams (3-4 total)
Final (Comprehensive)
Homework (10 assignments)

90 – 100 %	A
80 – 89 %	B
70 – 79 %	C
60 – 69 %	D
0 – 59 %	F

Yes I do round up. There will be ***NO*** extra credit so **don't** ask. However, I reserve the right to lower the minimum number of points for each letter grade.

Tests will be announced at least one week early. I will do my best to have the tests graded and back to you by the next class meeting.

Policies
Absences: It is in your best interest to attend all lectures. There are NO makeup exams. This class is accelerated and we will cover copious material quickly.
Academic Misconduct & Dishonesty: In accordance with the faculty and student handbooks, academic misconduct and dishonesty will NOT be tolerated under any circumstance.

Practice Problems
I do not assign homework but there are numerous practice problems throughout the chapters and at the end of the chapters. I ***HIGHLY*** suggest you practice as many as possible.

Email Notice
I will notify you via your Tech email (and/or Blackboard) about anything class related.

Note
This syllabus is subject to change.