THE UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE
FACULTY SENATE

Senate Document Number 4216S
Date of Senate Approval 1/14/16

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Statement of Faculty Senate Action:

APC Document 34

Change prerequisites for CHEM 222;
Change title and description of CHEM 429;
Change description of CHEM 430

Effective Date: Fall 2016

1. **Delete:** On page 101, the prerequisite in **CHEM 222, Organic Chemistry Laboratory:**

   Prerequisites: CHEM 111, 145, 231.

   Add: On page 101, in place of deleted entry:

   Prerequisites: CHEM 111, 145, 231. Pre- or corequisite: CHEM 232.

   Impact Statement: Change is to add CHEM 232 as a required pre- or corequisite for CHEM 222. There is no faculty impact to teach CHEM 222, 231 or 232. Student credit hours are also not impacted as no student would be required to take CHEM 222 without also being required to take CHEM 231 and 232 as part of a degree program or health-professions requirement. There will be a loss in flexibility in scheduling of CHEM 222 by adding one prerequisite, however CHEM 222 is anticipated to be taught each semester, so there should be multiple opportunities for a student who requires the course for their major.

   Rationale: CHEM 231 was originally listed as the only organic chemistry prerequisite to CHEM 222, allowing for student flexibility, but that has not resulted in student success. Students enrolled in CHEM 222 without having taken or being concurrently enrolled in CHEM 232 struggle compared to co-enrolled students.

2. **Delete:** On page 104, the title and description of **CHEM 429:**

   429 Advanced Inorganic Chemistry (3)
   Covers an array of inorganic chemical concepts including stereochemistry, structure and reaction chemistry of coordination compounds and selected compounds of representative elements, ligand field theory and electronic absorption spectra of transition metal complexes, structural and mechanistic aspects of organometallic compounds, introduction to cluster chemistry, group theory, and aspects of bioinorganic chemistry. Prerequisite: CHEM 335. Spring.

Add: On page 104, in place of deleted entry:

429 Organometallic Chemistry and Catalysis (3)
An introduction to concepts in organometallic chemistry including synthesis, electron counting schemes, spectroscopic properties, common reaction mechanisms and nomenclature. The use of organometallic species in catalytic systems will be covered including specific catalytic systems, interpretation of catalytic cycles and topics of concern in polymer synthesis. The differences between homogeneous and heterogeneous catalysts will be highlighted along with typical processes that involve heterogeneous catalysts. Prerequisites: CHEM 232, 233. Spring.

Impact Statement: Over the past semesters, 1 section CHEM 429 was taught each spring semester at 3 contact hours per section. It is expected that 1 section of CHEM 429 will continue to be taught each spring semester at 3 contact hours per section by the same faculty member. (See attached staffing table.) This change will result in no impact to faculty. As a lecture course, there is no impact on Department of Chemistry budget. Since the course content and semester offered is not changing, there will be minimal impact on current students.

Rationale: CHEM 429 utilizes the same course number as in the current curriculum. While the written title and course description is changing, the course content described therein is of the same sub-discipline of chemistry with focused concepts currently being taught in this course. Thus the overall emphasis of the class is not changing. This course is taught by the same faculty member that taught CHEM 429 previously and thus still serves as an upper level advanced inorganic chemistry course, building upon one or more a foundation course(s).

3. Delete: On page 104, the description for **CHEM 430:**

430 Advanced Topics in Chemistry (3)
Designed to present current developments in a specific area of advanced chemistry. Topic areas will include analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry, or polymer chemistry. May be repeated as content varies. Prerequisite: CHEM 334. Fall and Spring.

Add: On page 104, in place of deleted entry:

430 Advanced Topics in Chemistry (3)
Course designed to present current developments in a specific area of advanced chemistry. Topic areas will include analytical chemistry, inorganic chemistry, organic chemistry, biochemistry, physical chemistry and/or polymer chemistry. May be repeated as content varies. Prerequisites: CHEM 223, 233, 323, and 331. Spring.

Impact Statement: Over the past semesters, 1 section CHEM 430 was taught each academic year in the spring semester at 3 contact hours per section. It is expected that 1 section of CHEM 430 will continue to be taught each spring semester at 3 contact hours per section. (See attached staffing table.) This change will result in no impact to faculty. As a lecture course, there is no impact on Department of Chemistry budget. Since the course offering is not changing and new pre-requisites will be part of the regular chemistry curriculum, there will be minimal impact on students.

Rationale: The major change in this course description revolves around the prerequisites necessary to enroll in CHEM 430. Several foundation level courses have been added as prerequisites, which shows the course builds upon multiple foundation courses, depending on the course content being offered in a given semester. Also, the former prerequisite, CHEM 334, will no longer be offered in the catalog.