COLLEGE SENATE
CURRICULUM COMMITTEE

CURRICULUM HANDBOOK

Fall 2011
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CURRICULUM HANDBOOK

BUFFALO STATE
College Senate Curriculum Committee

The official source for curricular matters is Section IV of the Directory of Policy Statements (DOPS), http://www.buffalostate.edu/academicaffairs/x629.xml. The following information is presented as a supplement to DOPS. It answers frequently asked questions about issues brought before the College Senate Curriculum Committee (CSCC).

The CSCC is comprised of volunteer faculty and staff members who represent their constituencies. The committee works diligently to assure that all courses and programs are read and discussed thoroughly and fairly. Expertise is consulted whenever committee members do not feel empowered to pass judgment without further information. Curricular items are reviewed to ascertain their viability and validity. It is the intent of the committee to be certain that all courses and programs are consistent with the policies philosophies and research-based practices articulated by the college and its accrediting bodies. All committee members welcome inquiries from their constituents and are willing to advise the authors of course and program proposals to assure the highest quality of courses and programs at Buffalo State College.

SECTION I: NEW COURSES AND COURSE REVISIONS

A. Departments should establish their own internal procedures for reviewing course proposals. The CSCC asks that one member of each departmental curriculum committee be assigned the function of assessing course proposals for conformity to standard format and to make appropriate changes to the course document as suggested by departmental and deans’ level committees.

B. A single course proposal/revision will follow this path toward approval:

1. Courses approved by departments will be forwarded to the Dean’s office—electronic copy in Microsoft Word format, Course Approval Routing Checklist (on blue paper), and one (1) hard copy. Electronic files should be labeled according to CSCC naming conventions (see Submissions Procedures link on CSCC website).
2. Deans will follow established procedures for reviewing courses.
3. Courses rejected at the Dean’s level will be returned to the department with an explanation, and no further action will be scheduled.
4. Courses approved at the Dean’s level will be sent to the College Senate Office as follows:
   a. Electronic copy to cscc@buffalostate.edu
b. 1 hard copy  
c. Routing checklist with all appropriate signatures  
d. For course revisions, submit one electronic copy of existing course proposal.

5. Once received at the College Senate Office, a log number will be issued and the course with correct course title, number, and catalog description will be sent for inclusion in the next *College Bulletin*. The description will be edited by College Relations prior to publication. Departments should contact their associate dean if there are any problems with the editing. Once the course has been posted in the *Bulletin*, interested parties may review the course, and, if they so desire, initiate the challenge process (see *DOPS IV: 04:00*) within 15 academic days of the posting.

6. The CSCC will review the course based on its established procedures, and make a recommendation to the Senate according to Senate bylaws.

7. Courses rejected will be returned to originating departments through their associate dean with a memorandum of explanation from the CSCC Chair.

8. For courses approved pending revisions, the department originating the course will be contacted through their associate dean to make recommended changes to the electronic document or confirm changes that have been made by the CSCC. Once changes are made, the revised document and/or responses to revision requests are forwarded electronically through the associate dean to the Chair of the CSCC for final approval.

9. For courses approved with no changes, the Senate secretary will:  
   a. Post the approval in the *College Bulletin*  
   b. Log the approval date  
   c. Forward one hard copy, the routing checklist, and one electronic copy of the course document to the Office of Academic Affairs or the President’s designee for final review and approval.

10. Once a course has been approved by the President, the title and number will be published in the *College Bulletin* (by the President’s Office) and one electronic copy and one hard copy of the final course document will be sent to the following:  
   a. Chair of the originating department  
   b. Dean of the originating school  
   c. Registrar  
   d. College archivist
Prefix, Number and Name of Course:
Use the current prefix for course revisions.

New courses should be assigned numbers that are not currently in use within a prefix and make sense in the logical sequence of courses for a major or reflect the level of content appropriate to their intended audience. For example, lower-level courses should be identified as 100 or 200 level. 300 and 400 levels are for upper-division courses that meet the guidelines established by the College Senate. For numbering graduate level courses departments should consult with the Dean of the Graduate School.

The name of the course listed on the routing sheet must match the course title on all documents, and be unique within the prefix. If the name of the course is revised, show the former title in parentheses. The title should be no more than 70 characters.

Cross-listing of a course requires consultation with all chairs involved in course listing. If the cross-listed course also crosses dean areas, the appropriate deans must be consulted.

Credit Hours:
In Class Instructional Hours:  Labs:  Studio:  Field Work:

List credit hours such as “3 credits”. Instructional hours reflect time for lecture presentation each week. Lab hours should be listed only for courses with lab requirements included in the credit hours. Generally, 2-3 hours of lab equal 1 credit hour. Studio hours should be used for art and theatre courses. Generally, 4 hours of studio equal 1 credit hour. Field work pertains to supervised practica and internships (not volunteer or service learning hours) and should list the total number of hours required for the course. 3 hours per week (45 total hours for the semester) equal 1 credit hour.

Catalog Description:
Prerequisites: Do not leave blank. Write “none” if appropriate. Departments should carefully consider which prerequisites are appropriate to content and level of course.

The description should be approximately 50 words. Use sentence fragments when possible, as long as the statement concisely and clearly conveys the key concepts of the course so as to assist general readers in understanding course content. Campus guidelines for catalog preparation will be followed.

Reasons for Addition or Revision:
Describe how this course contributes to departmental programs, to the college requirements, or to the intellectual life of the campus. If this is a revision, describe how and why this revision should replace the existing course. A copy of the existing course must accompany a proposed revision.

The following is the tabular format for course outcomes, content and assessment. An explanation of each area follows the table.

<table>
<thead>
<tr>
<th>Student Learning Outcomes: Explain what students will be able to DO as a result of this course. (Use active verbs.)</th>
<th>Course Content References: For each outcome, indicate the number of the corresponding section of course content where this outcome is addressed.</th>
<th>Assessment: Describe how student learning outcomes are measured in this course. Each of the learning outcomes described must have a corresponding assessment.</th>
</tr>
</thead>
</table>

Course Content: In outline form, provide the course content, activities and procedures in this course. Cross-reference the course content with the student learning outcomes in the table above.

Student Learning Outcomes: The wording of student learning outcomes will vary among departments and majors; however, course authors should research outcomes language suggested by accrediting bodies and their discipline. The intent of this section is to articulate what students will be able to DO as a result of the course. Outcomes are directly related to course content and are reflected in assessment processes. Outcomes should be measurable. Bloom’s Taxonomy, (Appendix E), provides specific language for outcomes. Remember that 300 and 400 level courses should have outcomes that address higher-order thinking and go beyond introductory information.

Course Content References: This section connects student learning outcomes with course content. The numerical code used in this section reflects the coherence of content with student learning. You should complete this section after you have outlined the course content so you can easily refer to your numerical codes in the outline.

Assessment: This section describes how student learning is measured. Assessment should be reflective of and appropriate to student learning outcomes described. Course
authors may consult with the Associate Vice-President for Curriculum and Assessment for guidance if necessary. Each learning outcome must have a corresponding assessment even if the method of assessment is repetitive.

**Course Content:** Course outlines should follow Roman numeral format. The most common error in using this format is in subdivision. Divisions require at least two subcategories to merit subdivision. Content should be representative of the major concepts to be taught by all instructors of the course, and is not meant to be a syllabus. Content must be coherent with student learning outcomes, and assessed appropriately. In other words, it should be clear to readers of your course that the course content is designed to accomplish your learning goals. Remember to cross-reference content with outcomes in the table to make the connection between content and learning goals clear for readers of the proposal. (Model Course Proposals – Appendix B)

**Resources:**

List the resources used to develop the course, and resources to be used in the teaching of the course. This listing is meant to be representative, not comprehensive, and should be 1 to 2 pages in length. Use the following categories:
- **Scholarship:** This may include both classic and current (within the last five years) articles and books. Include at least a page of references (in total).
- **Periodicals:** List titles of journals and periodicals related to the course.
- **Electronic and/or Audiovisual Resources:** List resources and/or internet addresses for materials that can be accessed through Butler Library or other available student resource support services.

Common problems with this part of the course proposal have included variable bibliographic entry styles, appropriate number of current and/or classic publication years and listings that are less than one or more than two pages long. Course authors must use a style manual appropriate to their disciplines, and be consistent throughout the resource section. All style guidelines require alphabetized entries. The Periodical Listing refers to journal and periodical titles only, not specific articles.
SECTION II: NUMBER CHANGE

A. Changes of number sequencing within a level (e.g., LIB 100 to LIB 250) do **not** require CSCC approval. A memo must be sent to Academic Affairs and copied to the Chair of the CSCC.

B. For number changes from one level to another (e.g. MAT 111 to MAT 311), use the Course Approval Routing Sheet and follow the course revision procedures. A cover memo should clearly explain changes in content that merit a level change.

SECTION III: TITLE CHANGE

A. Title changes that do **not** reflect a major shift in course content can be made by securing approval from the Dean and then sending a memo to Academic Affairs, copying the Chair of the CSCC.

B. For title changes that **do** reflect a shift in course content, use the Course Approval Routing Sheet and follow the revision procedures.

SECTION IV: ADDING, REPLACING, AND REMOVING PREREQUISITIES FROM COURSES

A. Changes in prerequisites that do **not** connote a major shift in course content can be made by a department chair securing approval from the Dean and then sending a memo to Academic Affairs, copying the Chair of the CSCC. The memo must give the rationale for the change and explain how the proposed change does **NOT** result in any increase in the total number of credits required for program completion through the addition of hidden prerequisites.

B. For prerequisite changes that **do** reflect a shift in course content, use the Course Approval Routing Sheet and follow the course revision procedures.

SECTION V: INTELLECTUAL FOUNDATIONS COURSES

The process for submitting courses for approval as part of the Intellectual Foundations Program (IF) is as follows:

A. All courses are submitted via your Dean’s office to the Senate Office which will log-in the courses for reporting purposes.

B. Please use the new curricular forms and routing sheets. They have been revised to reflect the Intellectual Foundations program. For appropriate curricular forms see the Forms and Templates link on the CSCC website.
C. The Senate Curriculum Committee refers courses to SIFOC which reviews them for appropriateness in Intellectual Foundations categories. The Senate Curriculum Committee first reviews new and revised course proposals.

D. The new routing sheet reflects this process. Please use the Intellectual Foundations Submission Narrative format to explain to the non-specialists on SIFOC, the correspondence between Intellectual Foundations learning outcomes and the course topical outline.

E. A single response is returned to departments so they are not required to engage in a three-way negotiating process.

PROCEDURES FOR APPROVAL OF IF COURSES

A. Courses which require **no changes** in order to meet IF outcomes:
   1. Complete revised Routing Sheet. Check only number 3 (Intellectual Foundations) under Type of Action, along with the Intellectual Foundations category
   2. Complete the Intellectual Foundations Course Submission Narrative
   3. Submit two hard copies of the course proposal and the narrative, as well as an electronic copy of each to the College Senate Office
   4. Once the course is logged in and received by the Senate Office, SIFOC will review the course for fit with IF outcomes. Possible actions:
      a. Approval as submitted
      b. Approval with revisions – returned to department with memo
      c. Rejected – Appeal process (Department chair sends letter to the chair of the Senate Curriculum Committee)
   5. Courses which have not been officially approved by SUNY for Trustees’ designation must submit the SUNY approval form as well.
   6. Only SIFOC will be reviewing these submissions, and once approved they will be forwarded immediately to Academic Affairs.

B. Courses which will **require changes** in order to meet the IF outcomes, will be treated as a revision:
   1. Complete the revised Routing Sheet, Course Proposal and Intellectual Foundations Course Submission Narrative
   2. Submit two hard copies and an electronic version of each to the College Senate, along with one hard copy of the current course
   3. Once the revised course is logged in and received by the Senate Curriculum Committee, it will be reviewed by the Committee according to the usual procedures. When the course is approved by the Curriculum Committee it will be forwarded to SIFOC for approval of adherence to IF outcomes.
   4. The SUNY approval form for Trustees’ designation must be submitted as well
   5. Once approved by both the Senate Curriculum Committee and SIFOC, courses will be forwarded to Academic Affairs

C. New courses requesting IF designation will follow current procedures for new course submissions.
D. Courses should not be submitted for renewal of the Writing Intensive designation. Courses retain the “W” designation as per past practice.

SECTION VI: WRITING INTENSIVE COURSES

Courses can be designated writing intensive as part of the College’s Writing across the Curriculum program. A cover sheet for courses seeking Writing Across the Curriculum designation is available through the Forms and Templates link on the CSCC website. It is inappropriate to include the W on course revisions or new course proposals. Departments who wish a course section or multiple course sections to be designated as writing intensive should send a memo to the Dean explaining why a particular course should receive a “W” designation, following the outline for creating writing intensive courses. After receiving approval from the Dean, the memo should be forwarded to Academic Affairs for approval.

SECTION VII: TOPICS COURSES

A. Consult the Directory of Policy Statements, IV:02:01, for procedures. The CSCC does not review topic courses.

B. Each topics course approved by Academic Affairs may be offered no more than twice in a two-year period. Thereafter, it must be submitted as a new course proposal.

SECTION VIII: HONORS COURSES

Courses can be designated HON as part of the All College Honors Program. For more information contact Andrea Guiati, Director at 878-6220. Any course already approved in the respective IF cognate area may be offered as an honors section provide that it fulfills the Criteria for Honors Classes.

Criteria for Honors Classes
An Honors Class syllabus should demonstrate that the class includes all of the following criteria:

A. Independent scholarship and/or creative activities such as course/independent projects, individual activities that demand on-the-spot processing of information, and/or oral presentation.

B. Writing and/or oral presentation for outside audiences as well as for classmates and the professor.
C. Learning activities that push students out of their comfort zone, out of traditional classroom behaviors, e.g. in-class debates.

D. Higher expectations for student performance that may include higher level vocabulary and complexity of thought processes, above-average research to validate positions, creativity in the use of technology and/or artistic materials that broadens the dimensions of their abilities, and in-class and outside of class writing.

E. Critical evaluation of self that includes evaluating personal beliefs and values, habits of mind and life choices, and relationships to others.

SECTION IX: UPPER DIVISION CRITERIA

At the October 2006 College Senate meeting, voluntary guidelines for designation of upper division courses were approved. These guidelines serve to guide departments in creating course proposals for new and revised courses. The College Senate Curriculum committee will utilize these guidelines in the approval process for upper division courses at Buffalo State College. A course that has upper division designation (300 or 400) reflects evidence of at least two of the following criteria:

A. Prerequisite course, courses, or instructor permission

B. Course content, assessment, and learning outcomes demonstrating evidence of greater focus or depth in the content than lower-level, introductory or survey courses

C. Course content, assessment, and learning outcomes targeting a higher-order of critical thinking than lower-level, introductory or survey courses.
SECTION X: COURSE CHALLENGES

The curriculum review process allows departments to comment on and dispute a particular course or program. This most frequently occurs when one department submits a course that another department feels is within its purview.

A. Course challenges are administered through the CSCC.

B. Challenges must be initiated with 15 academic days after the date on which the disputed course is announced in the College Bulletin. A challenge must be forwarded by the Chair of the challenging department to the Chair of the CSCC.

C. Procedures for resolving the course challenge are listed in the Directory of Policy Statements, IV:04:00.

SECTION XI: NEW PROGRAMS AND PROGRAM REVISIONS

A. New Programs

All new program proposals should be submitted in accordance with the guidelines and principles detailed in the Handbook for the Submission of Undergraduate Academic Program Proposals and Guidelines for the Submission of Graduate Academic Program Proposals issued by SUNY and posted on the SUNY Office of the Provost website (see below).

The Letter of Intent (for graduate programs) or Program Announcement (for undergraduate programs) will serve as the basis for the CSCC review of new program proposals. Courses listed as program requirements in the Letter of Intent/Program Announcement must include the course prefix, number, and full title. The Letter of Intent/Program Announcement must be approved by the Curriculum Committee prior to its submission to SUNY.

All courses required for new programs must be approved by the Curriculum Committee at the time it reviews the Letter of Intent/Program Announcement.

Departments must discuss new program proposals with the Dean and Academic Affairs prior to submission of any documents.

SUNY Office of the Provost website:
http://www.suny.edu/provost/academic_affairs/ProgramProposalGuide.cfm

All program proposals must be submitted with the Program Approval Routing Checklist (on yellow paper) posted on the Curriculum Committee website.

B. Program Revisions
All program revisions must be in accordance with the “Guidelines for the Revision of Existing Academic Programs” posted on the SUNY Office of the Provost website. All program revisions should clearly and concisely provide, in a cover memo, the reasons for program revisions. On a separate page, provide side-by-side comparisons of the current program and the proposed program revisions with explanations of changes. Include all courses and requirements in the current and proposed programs. There can be no hidden prerequisites, list all courses that are needed to complete the program.

SECTION XII: MINORS

A. Consult the Directory of Policy Statements, IV:05:00.

B. A minor program must include all course requirements and consist of no fewer than 18 and no more than 21 credit hours. No hidden credit hours (usually found as prerequisites to required courses – these prerequisite courses are not part of the minor).

C. Minors may not require more than two lower level courses without approval of Academic Affairs.

D. Minor program requirements may not overlap more than 9 credit hours with a student’s major program requirements.

SECTION XIII: CSCC DECISIONS APPEAL PROCESS

A. If a department disagrees with a decision made by the CSCC, the Department Chair should make an appeal in writing to the Chair of the CSCC requesting a hearing.

B. If, and only if, no resolution is possible, there may be an appeal made to the full College Senate. This appeal must be addressed in writing to the Chair of the College Senate.

SECTION XIV: ROUTING SHEETS FOR COURSE AND PROGRAM PROPOSALS

Both course and program approval routing sheets can be acquired through the Forms and Templates link on the Curriculum Committee webpage.

http://www.buffalostate.edu/collegesenate/curriculumforms.xml
APPENDIX A

CATALOG GUIDELINES
General Copy-Editing Guidelines for Course/Program Descriptions

• Use single spaces between sentences
• Refer to courses by their three-letter prefixes and three-character course numbers, separated by a single space: HEW 401, SPA 101. In a series, repeat the three-letter prefix each time: HEW 401 and HEW 402 (not HEW 401 and 402).
• Use numbers (not words) with credit hours: 3 credit hours (not three credit hours)
• Use GPA (not grade point average or G.P.A.)
• Render letter grades as capitals without quotation marks: A, B, C
• List prerequisites and co-requisites before course description; use the following phraseology:
  ▪ Successful completion of English (or mathematics, or English and mathematics) basic skills competency requirement
  ▪ Minimum cumulative GPA of 2.5
  ▪ Minimum grade of C
  ▪ Instructor permission (not permission of instructor, consent of instructor)
  ▪ Consent of department chair

When naming new courses, avoid articles whenever possible. (e.g., “Introduction to Sign Language” rather than “An Introduction to Sign Language”)

Course Descriptions:
Descriptions should be concise; use sentence fragments when possible. Avoid introductions such as “This class explores…” and “This course is designed to acquaint the student with…” Craft each description as a series of noun phrases, separated by semicolons, as though each were preceded by the words “This course covers…” e.g., (This course covers) The nature and function of money; the American monetary system and the role of the banking system; the structure and functions of the Federal Reserve System…”

Use present tense, active voice whenever possible, e.g., “includes field trips: rather than “field trips will be included”, and “students plan and execute…” not “students will plan and execute…”

For further guidance, refer to the Buffalo State Editorial Style Guide at http://www.buffalostate.edu/collegerelations/x553.xml. A PDF of the guide is available for download or print at http://www.buffalostate.edu/offices/collegerelations/pdfs/edstyle.pdf.
APPENDIX B

MODEL COURSES
Prefix, Number and Name of Course: CHE 462 Advanced Inorganic Chemistry

Credit Hours: 3
In Class Instructional Hours: 2  Labs: 3  Field Work: 0

Catalog Description:
Prerequisites: CHE 202, CHE 204, CHE 305, CHE 360, and CHE 306 or concurrent.

Reasons for Addition:
The American Chemical Society recently changed their requirements for ACS certified programs. The ACS now requires that certified programs of study offer a foundation course (beyond general chemistry) in each of the 5 chemistry sub-disciplines and they must also offer an in-depth/advanced course in at least 4 of the 5 chemistry sub-disciplines. Currently our BA program does not offer a 2-course sequence in inorganic chemistry that can be used to meet these requirements. The new foundation/introductory course in inorganic chemistry (CHE 360, which is being submitted concurrently) plus this CHE 462 course makes it possible for traditional chemistry track students to receive ACS certification while studying advanced concepts in inorganic chemistry. It is noted that the new CHE 462 course includes advanced topics in symmetry, solid state chemistry, transition metal chemistry, synthetic techniques and characterization methods, which are essential for traditional chemistry majors but of less importance for biochemistry majors. The new CHE 462 course includes a 3-hour laboratory, which will replace the original CHE 460/CHE 461 sequence in the curriculum. The new CHE 462 course will be required of all BA Chemistry majors in the traditional chemistry track. (Note- The current CHE 460/461 lecture/lab sequence will be retired when currently enrolled students have had a chance to complete the current program.)

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Content Reference</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Differentiate approximations used in various theories of chemical bonding.</td>
<td>I</td>
<td>Homework, quizzes, exams</td>
</tr>
<tr>
<td>2. Apply symmetry and group theory to chemical problems.</td>
<td>II</td>
<td>Homework, quizzes, exams</td>
</tr>
<tr>
<td>3. Memorize the seven crystal system, the 14-Bravais lattices and apply symmetry concepts to the solid state. Demonstrate understanding of the 230 space groups and the basic theory of X-ray diffraction, including the phase problem.</td>
<td>III</td>
<td>Homework, quizzes, exams</td>
</tr>
<tr>
<td>4. Evaluate the most important structural prototypes of inorganic solids.</td>
<td>III</td>
<td>Homework, quizzes, exams</td>
</tr>
<tr>
<td>5. Examine crystal and ligand field</td>
<td>IV</td>
<td>Homework, quizzes, exams</td>
</tr>
<tr>
<td></td>
<td>theories and their application to coordination compounds.</td>
<td>IV</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>6.</td>
<td>Use ligand field theory to explain thermodynamic, kinetic, spectroscopic and magnetic properties of coordination compounds.</td>
<td>IV</td>
</tr>
<tr>
<td>7.</td>
<td>Demonstrate understanding of the chemistry of the d-block elements and their important role in catalysis.</td>
<td>IV</td>
</tr>
<tr>
<td>8.</td>
<td>Apply various search engines to demonstrate familiarity with chemical literature.</td>
<td>V, VI</td>
</tr>
<tr>
<td>9.</td>
<td>Develop the skills required to design and conduct chemical research.</td>
<td>V, VI, VII</td>
</tr>
<tr>
<td>10.</td>
<td>Apply air-sensitive synthetic methods and advanced separation techniques.</td>
<td>V, VII</td>
</tr>
<tr>
<td>11.</td>
<td>Show proficiency at using NMR, UV-visible and electrochemical methods for the characterization of new compounds.</td>
<td>V, VI, VII</td>
</tr>
</tbody>
</table>

**Course Content**

I. Atomic structure and theories of chemical bonding
   - A. Atomic structure revisited
   - B. Ionic bonding. Lattice sums and the Born-Haber Cycle
   - C. Lewis structures, the octet rule and the VSEPR model
   - D. Valence bond theory
   - E. Molecular orbital theory

II. Symmetry and group theory in chemistry
   - A. Symmetry operations and symmetry elements
   - B. Point groups
   - C. Representations
   - D. Symmetry labels
   - E. Applications to spectroscopy
   - F. Symmetry and optical activity
   - G. Projection operators and MO theory

III. Solid-state structures
   - A. The solid crystalline state
   - B. The seven crystal systems and 14 Bravais lattices
   - C. Symmetry, the 32 crystallographic point groups and 230 space groups
   - D. Important inorganic structures
   - E. X-ray crystallography
F. Introduction to band theory

IV. Transition metal chemistry
   A. Crystal field and ligand field theories
   B. Molecular orbital theory
   C. Spectroscopy of coordination compounds
   D. Magnetism
   E. Thermodynamic properties of coordination complexes
   F. Kinetics and mechanisms of ligand exchange reactions
   G. Complexes of the first-row transition metals
   H. Complexes of the second-and third-row transition metals
   I. Organometallic chemistry
   J. Catalysis
   K. Inorganic materials: zeolites, ceramics, nanotubes

V. Introduction to advanced synthetic methods
   A. Glassware
   B. High pressure gases handling
   C. Cryogens: Liquid nitrogen and dry ice
   D. Inert atmosphere methods: The vacuum line
   E. Chromatography: Thin layer, column and flash chromatography
   F. Laboratory safety

VI. Characterization methods
   A. Electronic and vibrational spectroscopies
   B. 1-D $^1$H and $^{13}$C Nuclear magnetic resonance (NMR)
   C. 2-D NMR
   D. Electrochemical methods: Cyclic and differential pulse voltammetry, chronocoulometry and bulk electrolysis

VII. Inquiry-driven research projects
   (Projects are chosen that will utilize all of the experimental methods outlined in V and VI.)

Resources

Scholarship


**Periodicals**

*Angewandte Chemie*. Published by VCH.

*Chemical Communications*. Published by the Royal Society of Chemistry, UK.

*Inorganica Chimica Acta*. Published by Elsevier.

*Inorganic Chemistry*. Published by the American Chemical Society.

*Inorganic Reactions and Methods, Vols 1-16*, Zuckerman, J. J.; Ed. Wiley-VCH.

*Journal of Bioinorganic Chemistry*. Published by Elsevier.

*Journal of Chemical Education*. Published by the American Chemical Society.

*Journal of the Royal Society of Chemistry: Dalton Transactions.*

*The European Journal of Inorganic Chemistry*. Published by VCH.

**Electronic and/or Audiovisual Resources**


Cambridge Crystallographic Data Centre. http://www.ccdc.cam.ac.uk/


Prefix, Number, and Name of Course: HIS 231: World Civilizations II

Credit Hours: 3
In Class Instructional Hours: 3  Labs: 0  Studio: 0  Field Work: 0

Catalog Description:
Prerequisites: None
A survey of the origins, cultural achievements, and interrelationships of the various civilizations of the world from approximately 1500 to 1914 (World War I). Topics include European culture and civilization from the Renaissance to World War I; Islamic civilization in Asia and the Middle East; East Asian culture and civilization in the late traditional era; African culture and politics in an era of European hegemony; colonial Latin American and the independent states of the postcolonial era; the U.S. and Canada; Western imperialism and global interactions in the modern era.

Reasons for Addition:
World Civilizations II (HIS 231) is intended to provide undergraduate students with knowledge of the broad outline of world history from 1500 C.E. to 1914 (World War I). It will present students with an opportunity to examine the origins, cultural achievements, and interrelationships of the various states and societies of the world during this later period in history. It will also provide students with a suitable elective for fulfilling the “Foundations of Civilization: Non-Western” requirement for the Intellectual Foundations Program. World Civilizations II is designed as a chronological continuation of the historical narrative presented in World Civilizations I (HIS 230). This course will provide the necessary background in global studies required by the New York State Department of Education and other accrediting agencies for students pursuing the Bachelor of Science Degree (BS) in Social Studies Education.

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<td>Students will:</td>
<td></td>
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</tr>
<tr>
<td>1. demonstrate knowledge of the broad outline of world history from approximately 1500 C.E. to 1914 (World War I).</td>
<td>I, II, III, IV, V, VI</td>
<td>Quizzes, written essays, examinations</td>
</tr>
<tr>
<td>2. recognize historical patterns in the establishment and consolidation of various states and societies in Asia, Africa, Europe, and the Americas.</td>
<td>I, II, III, IV, V, VI</td>
<td>Written essays, examinations</td>
</tr>
<tr>
<td>3. demonstrate knowledge of the major religious and philosophical traditions of the various states and societies of the world.</td>
<td>I, II, III, IV, V</td>
<td>Quizzes, written essays, class discussion, examinations</td>
</tr>
</tbody>
</table>
4. analyze the social customs and practices of the world’s major states and empires.

5. compare the origins and historical transformation of the world’s differing systems of political organization.

6. demonstrate an understanding of the historical impact of cultural, commercial, and political interaction among the various states and societies of the world.

7. integrate learning from different areas in assessing the past and applying this learning in discussions and in written assignments.

<table>
<thead>
<tr>
<th>Course Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Islamic Empires of Asia and the Middle East</td>
</tr>
<tr>
<td>A. Ottoman Empire</td>
</tr>
<tr>
<td>1. Turkish cultural and political contributions to Islamic civilization</td>
</tr>
<tr>
<td>2. Western intrusions and crisis in the Arab Islamic heartlands</td>
</tr>
<tr>
<td>B. Safavid Empire in Persia</td>
</tr>
<tr>
<td>1. Shi’a Islam</td>
</tr>
<tr>
<td>2. cultural achievements of Persian civilization</td>
</tr>
<tr>
<td>C. Mughal Empire in India</td>
</tr>
<tr>
<td>1. apex of Islamic civilization in India</td>
</tr>
<tr>
<td>2. cultural and political fragmentation in the era of Mughal decline</td>
</tr>
<tr>
<td>D. Islamic states of Southeast Asia</td>
</tr>
<tr>
<td>1. Islamic sultanates of the Malay peninsula</td>
</tr>
<tr>
<td>2. Islamic expansion in the East Indies</td>
</tr>
</tbody>
</table>

II. East and Southeast Asian Culture and Political Systems |

A. Ming Dynasty China |
1. the imperial system and the cultural (Confucian) underpinnings of Ming society |

B. Tokugawa Japan |
1. *bakuhan* system of the Edo period |
2. Tokugawa high culture |
3. impact of the ‘Seclusion Edicts’ |

C. Manchus and Qing Dynasty China |
1. Manchu conquest and consolidation |
2. relations with the Mongols and the Great Wall frontier |
D. Choson (Yi) Dynasty Korea
1. Confucian impact on Korean society

E. Buddhist states of mainland Southeast Asia
1. Rise of Burma and Thailand
2. Influence of China on Vietnamese civilization

F. Arrival of Westerners in East and Southeast Asia
1. British, French, Dutch, and Spanish colonialism in Southeast Asia
2. ‘Canton system’ in China
3. Western attempts to open Japan

III. Cultural and Political Transformation of Europe
A. Italian and Northern Renaissance
1. Transformation of culture and commerce in the Mediterranean and northern Europe
2. Influence of Islamic civilization on states of Europe

B. The Reformation
1. Cultural and political dimensions of the rise of Protestantism

C. Development of the European State System
1. Religious wars and political conflict in premodern Europe

D. European Expansion in the Age of Exploration
1. Europe’s search for routes to the East
2. Establishment of global networks of trade by the major European powers
3. Origins of European colonialism

E. Scientific Revolution and Enlightenment
1. Empiricism in European thought
2. Enlightenment philosophy and political revolution

IV. African Society in an Era of European Hegemony
A. African States and Society in the Premodern Era
1. The cultural and political traditions of African society

B. The Impact of the West and the Atlantic Slave Trade
1. Early Portuguese trade in Africa
2. Trans-Atlantic trade and exploitation

C. Africa in the Era of European Imperialism
1. European cultural, economic, and political hegemony

V. Civilization in the Americas
A. Pre-Columbian civilization in the Americas
1. Aztec empire in Mesoamerica
2. Incas in Andean South America

B. Colonialism in South and Central America
1. Spanish conquest and the demise of native American civilization
2. Cultural and political institutions of colonial society

C. British and French Colonialism in North America
1. Colonial America
2. British and French expansionism and conflict

D. Latin American States after Independence
### I. from colonies to nations

- 2. race and culture in Latin American society

### E. Canada and the United States of America

- 1. regional and global significance of the American Revolution
- 2. origins of modern Canada

### VI. Cultural Transformation and Global Interrelations in the Nineteenth Century

- **A. Industrial Revolution and the Rise of Capitalism**
  - 1. social and cultural impact of industrialization

- **B. European imperialism**
  - 1. rise of the West and its impact on non-Western civilization
  - 2. globalization of Western science and technology

- **C. Change and Continuity in Asia**
  - 1. challenge of Western wealth and power
  - 2. reform of traditional culture and society

- **D. The Rise of Ideologies**
  - 1. the emergence of modern nationalism
  - 2. political reform and revolution
  - 3. Conservativism, Liberalism, Marxism, and Social Darwinism

### VII. Historical Writing and Research

- **A. Methods of historical research**
- **B. Critical analysis of primary and secondary sources**
- **C. The formats and techniques of historical writing**

### Resources

#### Scholarship


**Periodicals**


*The Historical Journal*. Cambridge University Press

*Journal of Asian Studies*. Association for Asian Studies
Electronic and/or Audiovisual Resources

World History Timeline. www.history.com/wt.do
Global History Sourcebook. www.fordham.edu/halsall/global/globalsbook.html
Hyper History. www.hyperhistory.com/online_n2/History_n2/a.html
History Central. www.historycentral.com
Modern History Sourcebook. www.fordham.edu/halsall/mod/modsbook.html
Prefix, Number and Name of Course: CRS/EDU 621 Curriculum Development in Gifted, Talented and Creative Education

Credit Hours: 3
In Class Instructional Hours: 3  Labs: 0  Field Work: 0

Catalog Description:
Prerequisites: CRS/EDU/EXE 509
This course is designed to facilitate development of appropriate curriculum, materials, instructional methods, and evaluation strategies for the development of creativity and the education of individuals who demonstrate gifted behavior and talents. Instructional and curricular models, differentiated teaching/learning and creative/critical thinking strategies as well as collaboration with the school community are examined.

Reasons for Revision:
Significant changes to the field of gifted, talented and creative education have occurred since the last course revision. The course is being revised to reflect the current state of knowledge in the field.

<table>
<thead>
<tr>
<th>Student Learning Outcomes:</th>
<th>Content Reference:</th>
<th>Assessment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The students will:</td>
<td>I.</td>
<td>Participation in class discussion</td>
</tr>
<tr>
<td>1. compare and contrast the various gifted education and creativity models for meeting the needs of students who learn at a pace and level that is significantly different than their classmates.</td>
<td>I.</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>2. demonstrate differentiated strategies and methods to meet the needs of diverse students who have potential for high levels of creativity, gifted behavior and talent</td>
<td>II.</td>
<td>Oral presentation</td>
</tr>
<tr>
<td>3. identify current practices, future trends and exemplary programs in gifted, talented, and creative education</td>
<td>III.</td>
<td>Participation in class discussion</td>
</tr>
<tr>
<td>4. examine the current state of creativity education and develop materials and strategies to integrate creativity into the total school curriculum.</td>
<td>IV.</td>
<td>Written project, paper, or report</td>
</tr>
<tr>
<td>5. develop a collaborative</td>
<td>V.</td>
<td>Written plan of action,</td>
</tr>
</tbody>
</table>
school/community plan based on his/her philosophy of giftedness, to meet the critical needs of individuals who demonstrate gifted, talented and creative behaviors.

philosophy paper

Course Content:

I. Models
   A. Enrichment Models
      1. Renzulli School Wide Enrichment Model
      2. Purdue 3 Stage Enrichment Model and Purdue Secondary Model
      3. Treffinger Individualized Program Model
   B. Acceleration Models
      1. Stanley Model of Talent Development
      2. Advanced Placement
      3. International Baccalaureate
   C. Curriculum Models
      1. Parallel Curriculum Model
      2. VanTassel-Baska Integrated Curriculum
      3. Betts Autonomous Learner Model
      4. Meeker Matrix
      5. Kaplan Grid
      6. Torrance Incubation Model

II. Strategies and Methods for Differentiating the Curriculum
   A. Expert/apprentice
   B. Future studies
   C. Differentiation
   D. Cooperative
   E. Problem solving
   F. Questioning
   G. Literature based
   H. Brain based
   I. Technology
   J. Research
   K. Cognitive, thinking skills
   L. Independent studies
   M. Compacting

III. Current Practices and Exemplary Programs
   A. Types of Current Programs
      1. In school
      2. After school
      3. Home school
      4. Summer/vacation program
5. Individualized learning/lessons
   B. Best Practices
   C. Future Trends

IV. Current State of Creativity Education
   A. Creative personality, characteristics, styles and skills
   B. Creative processes, frameworks and programs
   C. Creativity in the physical and psychological environment
   D. Creative products, development and assessment
   E. Integration of Four Areas of Creativity for Total School Program

V. Personal Philosophy and Collaborative School/Community Plan
   A. School and community resources
   B. Philosophies of gifted education
   C. Critical needs and gaps

Resources

Scholarship


Periodicals

*Creativity Research Journal*
Exceptional Child
Gifted and Talented International
Gifted Child Today
Gifted Child Quarterly
Journal of Creative Behavior
Journal of Secondary Gifted Education
Roeper Review

Electronic and/or Audiovisual Resources

(Search) CBIR (Creativity Based Information Resources). An on-line database of annotated literature on creativity.  www.buffalostate.edu/orgs/cbir

The National Research Center on the Gifted and Talented
www.gifted.uconn.edu/nrcgt.html

National Association of Gifted Children.  www.nagc.org


World Council for the Gifted  www.worldgifted.ca
APPENDIX C

DIRECTORY OF POLICY STATEMENTS (DOPS) REGARDING CURRICULUM
DIRECTORY OF POLICY STATEMENTS (DOPS) REGARDING CURRICULUM

Policy Number: IV:01:00  Program Proposals and Review
  Procedures for submitting new proposals and program revisions

Policy Number IV:01:00  Academic Program Elimination
  Process and procedures for eliminating academic programs

Policy Number IV:02:00  New and Revised Course Proposals
  See page 3 of Curriculum Handbook

Policy Number IV:02:01  Proposals for Topic Courses
  Guidelines and process for developing topic courses

Policy Number IV:02:02  Proposals for Internship Courses
  Guidelines and process for developing internship programs

Policy Number IV:02:03  Proposals for Special Graduate Courses
  Guidelines and process for developing Special Courses

Policy Number IV:02:04  Proposals for Special Undergraduate Courses
  Guidelines and process for developing Special Courses

Policy Number IV:03:00  Course Offering Frequency
  Frequency of offerings to maintain an active curriculum

Policy Number IV:04:00  Challenging Offering Frequency
  Procedures and process for challenging new courses

Policy Number IV:05:00  Proposals for Minors
  Guidelines and procedures for proposed minors

Policy Number IV:06:00  Proposals for Graduate Certificates
  Guidelines for proposed graduate certificate programs
APPENDIX D

COMMON COURSE NUMBERS
COMMON COURSE NUMBERS

I. UNDERGRADUATE COURSES

189/389  Topics Courses
488     Internship
495     Project
498     Honors Research (some departments use 496 as Honors I)
499     Independent Study

II. GRADUATE COURSES

554     Workshop
596     Conference
597     Special Course
598     Micro-course
590     Independent Study
690     Master’s Project
695     Master’s Thesis
APPENDIX E

BLOOM’S TAXONOMY
Following the 1948 Convention of the American Psychological Association, Benjamin Bloom took a lead in formulating a classification of the “goals of the educational process”. Three “domains” of educational activities were identified. The first of these, named the Cognitive Domain, involves knowledge and the development of intellectual attitudes and skills.

Eventually Bloom and his colleagues established a hierarchy of educational objectives, which is generally referred to as Bloom’s Taxonomy, and which attempts to divide cognitive objectives into subdivisions ranging from the simplest behavior (knowledge) to the most complex (evaluation).

Cognitive Learning is demonstrated by knowledge recall and the intellectual skills: comprehending information, organizing ideas, analyzing and synthesizing data, applying knowledge, choosing among alternatives in problem-solving, and evaluating ideas or actions. This domain on the acquisition and use of knowledge is predominant in the majority of courses. Bloom identified six levels with the cognitive domain, from the simple recall or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation. Verb examples that represent intellectual activity on each level are listed here.

**Knowledge**
Defined as the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required is the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.

**Learning objectives at this level call for students to:**
- know common terms
- know specific facts, e.g., dates, events, places
- know methods and procedures
- know basic concepts and major ideas
- know principles
- observe and recall information
- master subject matter

**Question & Activity Cues:** list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, arrange, duplicate, memorize, order, recognize, relate, recall repeat, reproduce, state, and name.

**Comprehension**
Defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting
consequences or effects). These learning outcomes go one step beyond the simple remembering of material, and represent the lowest level of understanding.

**Learning objectives at this level call for students to:**

- understand facts, information and principles
- interpret information e.g., verbal material, charts and graphs
- compare and contrast
- translate knowledge into new context, e.g., verbal material to mathematical formulae
- estimate the future consequences implied in data
- justify methods and procedures
- order, group, and infer causes

**Question & Activity Cues:** summarize, describe, interpret, compare, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend, classify, explain, express, identify, indicate, locate, recognize, report, restate, review, select, and translate.

**Application**

Refers to the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.

**Learning objectives at this level call for students to:**

- use methods, concepts, theories in new situations
- apply concepts and principles to new situations
- apply laws and theories to practical situations
- solve mathematical problems
- construct graphs and charts
- demonstrate the correct usage of a method or procedure
- solve problems using required skills or knowledge

**Question & Activity Cues:** apply, demonstrate, calculate, complete, illustrate, show, solve, examine, relate, change, classify, experiment, discover, choose, dramatize, employ, interpret, operate, schedule, sketch, use, write.

**Analysis**

Refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of parts, analysis of the relationship between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because they require an understanding of both the content and the structural form of the material.
Learning objectives at this level call for students to:

- recognize unstated assumptions
- recognize logical fallacies in reasoning
- distinguish between facts and inferences
- evaluate the relevancy of data
- analyze the organizational structure of a work (art, music, writing)
- recognize patterns
- identify components and their organization
- recognize hidden meanings

**Question & Activity Cues:** analyze, separate, order, explain, connect, classify/categorize, arrange, divide, compare, contrast, select, explain, infer, appraise, calculate, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.

**Synthesis**

Refers to the ability to put parts together to form a new whole. This may involve the production of a unique communication (theme or speech), a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structure.

Learning objectives at this level call for students to:

- write a well organized theme
- deliver a well organized speech
- write a creative short story (or poem or music)
- propose a plan for an experiment
- integrate learning from different areas into a plan for solving a problem
- formulate a new scheme for classifying objects (or events, or ideas)
- use old ideas to create new ones
- generalize from given facts
- relate knowledge from several areas
- predict, draw conclusions

**Question & Activity Cues:** combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare generalize, rewrite, compose, construct, develop, manage/organize, plan, propose, set up.

**Evaluation**

Refers to the ability to judge the value of material (statement, novel, poem, research report) for a given purpose. The judgments are to be based on definite criteria. These may be internal criteria (organization) or external criteria (relevance to the purpose) and the student may determine the criteria or be given them. Learning
outcomes in this area are the highest in the cognitive hierarchy because they contain elements of all the other categories, plus conscious value judgments based on clearly defined criteria.

**Learning objectives at this level call for students to:**

- judge the logical consistency of written material
- judge the adequacy with which conclusions are supported by data
- judge the value of a work (art, music, writing) by the use of internal criteria
- judge the value of a work (art, music, writing) by use of external standards of excellence
- compare and discriminate between ideas
- assess value of theories, presentations
- make choices based on reasoned argument
- verify value of evidence
- recognize subjectivity

**Question & Activity Cues:** assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize, appraise, argue, defend, rate, select, support, value, evaluate.

**Bloom’s Three “Domains” of Education**

**Cognitive Learning** is demonstrated by knowledge recall and the intellectual skills: comprehending information, organizing ideas, analyzing and synthesizing data, applying knowledge, choosing among alternatives in problem-solving, and evaluating ideas or actions. This domain on the acquisition and use of knowledge is predominant in the majority of courses. Bloom identified six levels within the cognitive domain, from the simple recall or recognition of facts, as the lowest level, through increasingly more complex and abstract mental levels, to the highest order, which is classified as evaluation. Verb examples that represent intellectual on each level are listed here.
APPENDIX F

COMMON ERRORS
Common errors frequently found in submissions to the Senate Curriculum Committee include the following:

**Reasons for Addition or Reasons for Revision:** Reason for Addition refers to a new course; Reason for Revision refers to a course that is being revised – choose one or the other.

**Student Learning Outcomes:** This is often the greatest stumbling block with new or revised courses. "To Learn" is not a measurable outcome. "to demonstrate an understanding" is appropriate for introductory courses but for upper division courses the committee expects a more complex form of intellectual skills. Faculty submitting new or revised courses sometime look at only the initial levels of *Bloom’s Taxonomy* (Appendix E) and apply it to their courses, rather than fully examining the different cognitive levels which might be more appropriate.

**Assessment:** The same assessment tools are repeated for all of the Student Learning outcomes. Whereas this may indeed be the case – “written assignments, exams” – consider the possibility that certain assessment tools are more appropriate for certain Student Learning Outcomes and less appropriate for others. Also try to include more authentic and less traditional assessment techniques relevant to your field.

**Course Content:** Generally speaking the course content should not look like a course syllabus. Assuming more than one faculty member is able to teach the course, the course should reflect that. Also the length of the course content will often seem inappropriately long or short for the level of the course. Finally, formatting is often in error and not following the proscribed Roman numeral format.

**Resources:** The committee is no longer asking for a separation of Classic and Current Scholarship. However, it is asked that a major portion (if possible) be books or articles written within the last five years. This listing is meant to be representational. Inclusion of electronic resources is critical for many courses, as well.

**Other:** Proposed curricular items should not be submitted in the track changes view.
APPENDIX G

INTELLECTUAL FOUNDATIONS COURSE SUBMISSION NARRATIVE
### Intellectual Foundations

**Course Submission Narrative**

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>Course Name:</th>
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<tbody>
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</table>

**Intellectual Foundation Category:**

<table>
<thead>
<tr>
<th>Intellectual Foundations Learning Outcome (in full):</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Cell content]</td>
</tr>
</tbody>
</table>

**Course Content References: (For each outcome, indicate the number of the corresponding section of course content where this outcome is addressed.):**

<table>
<thead>
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**Briefly explain how the item from the course topical outline fulfills the Intellectual Foundations learning outcome:**

<table>
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<td>Briefly explain how the item from the course topical outline fulfills the Intellectual Foundations learning outcome:</td>
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