1. Minutes: March 18, 2014	Action	#4/15/14-1	Escoto – 3 min
2. Announcements: a. Notification of Proposed Prequisites/Corequisites b. New Course Proposal c. GE Draft for 2014-15 d. IGETC & CSU GE e. Report Out from Divisions	Inform5942F2. 3T		

Submission of courses for C-ID approval and course-to-course articulation with individual colleges and universities.

~~7/11-13/13 ASCCC Curriculum Institute, Sheraton Park Hotel, Anaheim.~~
11/7-

COLLEGE CURRICULUM COMMITTEE

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Welcome

College Curriculum Committee
Meeting Minutes
Tuesday, March 18, 2014
2:00 p.m. Ð3:32 p.m.
PresidentÕs Conference Room

Item	Discussion
1. Minutes: March 4, 2014	Minutes as written M/S (Armstrong/Hartwell) Approved.
2. Announcements: a. Notification of Proposed Prequisites/Corequisites b. Curriculum Cycle Update c. Outline Updates for 2015-16 d. Report Out from Divisions	Speaker: Isaac Escoto a. Introduced the latest list of prereq uisites and corequisites. Please forward to your constituents. b. Nu–ez explained the information in the attachment of CORs still in submissions. If the intention is for the courses to be prepared for the next cycle, authors should change the effective quarter to "Summer 2015". If they are not interested in completing the ed its, the submissions should be deleted by the authors as soon as possible. c. This attachment is the list of CORs requiring update in the next curriculum cycle for the 2015-16 Catalog. d. Report out: ¥ FA: They are discussing moving their cycle to May 15th. ¥ LA: The wording of "Eligibility for ENGL 1A" in the prerequisite and corequiste sections of the CORs has changed to some standard wording: "Demonstrated proficiency in English by placement into ENGL 1A as determined by score on the English placement test or through an equivalent placement process". Starer explained that the English faculty are concerned regarding the full explanation and will continue this conversation with the intent to add better language on the web page as well as any printed documents. All instances of the "eligibility" statement in CORs now will be corrected by Nu–ez for the 2014-15 Catalog that is currently bein g prepared. ¥ BH: Working on moving their date to just the end of Spring.
3. Consent Calendar a. General Education Applications	Speaker: Isaac Escoto GE Applications for Social & Behavioral Sciences: ANNNNN8

	substantiate our prereqs/coreqs. ¥ ADTs: There are now 30 available. There were 104 applications in the first year. 18,000 unduplicated students applied for Fall 2014. The Biology TMC isbeing vetted right now. Child Development TMC will be available shortly. The State recognized that there were some system wide problems with some of the early TMCs, as there were updates issued after some colleges had prepared their applications. Colleges would then have to pull back the application and reapply with the new version. They will now only release TMCs in September and February.
5. COR Review	Speaker: Cori Nu–ez Nu–ez systematically went through a course outline to identify issuesthat she's received most often. Day suggested that perhaps at each approval level (or C3MS status), there could be designated areas for which each reviewer would be responsible therefore not every reviewer would need to look for every section.

Academic Sen

TMCs fall somewhere between these extremes, allowing flexibility in some areas but not in all. While the

Credit by Exam:

Title 5 provides regulations for community colleges regarding credit by exam (section 55050). Once again, because Education Code grant24 980.2178 0 0 24 363.7201 1394.64.04 cm BT 1 0 0 1 0 0 T24 18

approved or conducted by proper authorities of the college. Such credit may be granted

Foothill College
Content Review Process & Forms for Prerequisites and Co-requisites (ÒRequisitesÓ)

In order to ensure that limitations on enrollment are both appropriate and necessary for student success, Title 5 requires faculty to complete a rigorous content review whenever new pre- or co-requisites (ÒrequisitesÓ) are being considered for a course. Rigorous content review of requisites must also be completed during the regular Title 5 compliance review cycle. It is imperative that discipline faculty wo

FORM S: Content Review Addendum for Requisites of In-Discipline Course Sequences

Number & Title of Course with Requisite:

CHEM 1A General Chemistry

Number & Title of Requisite Course(s)*

CHEM 20 I MATTER: Introduction to Green Chemistry and the Environment

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1. Do baccalaureate institutions require a particular requisite(s) for articulation? If so, you do NOT need to complete content review, but must document this by attaching the following documentation. (Ask the Articulation Officer for assistance if necessary.)

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&50%-*$)%)9.:%9%(9.$.%:&2%1.%+35)&*5.0%*5%B(.&%##%37%)9.%(./,*$*).%-%($.;$%DJKL

A. understand the scientific method and distinguish between hypotheses and scientific l
B. use dimensional analysis to set up and solve numerical problems.
C. classify matter and describe the properties of matter.
D. understand the fundamental assumptions of atomic theory and describe the structure of the atom.
E. use the periodic table to explain and predict properties of elements.
F. interpret chemical formulas, write simple compound names and recognize classes of compounds based formulas.
G. write, balance, and classify chemical equations and recognize patterns of chemical reactivity to predict products of a chemical reaction.
H. understand the meaning and uses of the mole and of Avogadro's number.
I. describe the properties of solutions and define and use molarity in calculations.
J. describe the properties of acids and bases and understand the use of the pH scale.

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The requisite course is a new course and so data is not currently available

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III. Once the content review process is complete,

Bugs? Errors? Comments?

Current Course Outline Editor

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Biological and Health Sciences

BIOL 1A PRINCIPLES OF CELL BIOLOGY

Edit Course Outline

BIOL 1A PRINCIPLES OF CELL BIOLOGY Summer 2011

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory. 6 Units

Total Contact Hours: 120 (Total of All Lecture, Lecture/Lab, and Lab hours X 12)

Total Student Learning Hours: 120 (Total of All Lecture, Lecture/Lab, Lab and Out of Class hours X 12)

Lecture Hours: 4 Lab Hours: 4 Lecture/Lab: 2 Weekly Out of Class Hours:

Note: If Lab hours are specified, the item 10. Lab Content field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active Grading: Letter Grade with P/NP option

Degree Status: Applicable Credit Status: Credit

Degree or Certificate Requirement: AS Degree

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: UC/CSU Validation: 07/01/2009; 12/10/10

Division Dean Information -

Seat Count: 48 Load Factor: .190 FOAP Code: 114000141021040100

Instruction Office Information -

FSA Code:	0340 - BIOLOGICAL SCIENCES
Distance Learning:	no
Stand Alone Designation:	no
Program Title:	Biological Sciences
Program TOPs Code:	040100
Program Unique Code:	6011

Need/Justification -

This course is a required core course for the AS degree in Biology.

1. Description -

An introduction to biological molecules, cellular structure and function, bioenergetics, the genetics of both prokaryotic and eukaryotic organisms, cell communication and signaling, the cell cycle, and elements of molecular biology. Intended for biology majors.

Prerequisite: CHEM 1A.

Co-requisite: None

Advisory: Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in its entirety.

2. Course Objectives -

The student will be able to:

A. identify and apply the steps of the scientific method to study a question.
B.

6. collecting and analyzing results
    a. methods of data display
7. drawing conclusions
8. scientific literature
    a. original research
    b. peer-review
    c. authorship

B. Themes of Biology
1. characteristics of life
2. hierarchical organization of life
    a. The Cell Theory
3. liizaie er-reerarch

2. RNA processing
3. alternative splicing vs. gene rearrangements
4. prokaryotic vs. eukaryotic

c. translation
1. mechanism
2. ribosome structure
3. tRNA structure
4. the genetic code
5. prokaryotic vs. eukaryotic

d. mutations
1. chromosomal number
2. chromosomal structure
3. point mutations
4. mutagens and mutagenesis

4. control of gene expression
a. constitutive genes
b. prokaryotic mechanisms
1. operon structure and function
2. negative vs. positive control

c. eukaryotic mechanisms
1. organization of the eukaryotic genome
2. chromatin structure modifications
3. transcription and post-transcriptional control

d. applications of molecular biology
1. laboratory techniques: PCR, restriction digest, gel electrophoresis
2. Human Genome Project and bioinformatics
3. ethical considerations: genetic engineering, recombinant DNA, cloning

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. One or more lecture midterm exams, which will include summative and formative questions.
B. Comprehensive lecture final exam.
C. One or more lab midterm exams OR frequent lab quizzes, which will include calculations.
D. Comprehensive laboratory practical final exam.
E. Written lecture assignments requiring application of lecture content.
F. Mastering Biology computerized homework questions, summative and formative.
G. Lab homework, including but not limited to, graphs and analysis of laboratory results with written conclusions.
H. One oral laboratory presentation of original experimental design and results.
I. One written laboratory analysis of original experimental design and results.
J. Participation in laboratory group project.
K. Participation in discussions.

7. Representative Text(s) -

Campbell, Neil, and Jane Reece. Biology. 9th Edition. with MasteringBiology, San Francisco: Pearson/Benjamin Cummings, 2011. ISBN: 0321558146
Erickson, Karen. Laboratory Exercises for Biology 1A. Foothill College, 2010.

8. Disciplines -

Biology

9. Method of Instruction -

A. Lecture presentations with individual and/or small group lecture activities
B. Laboratory experiments using the techniques and methodologies of cell and molecular biology
C. Small group discussions on specific topics in cell and molecular biology

10. Lab Content -

A. Skills
   1. apply the scientific method
   2. design an experiment to test an original hypothesis
   3. calculations, including dilutions
   4. graphical display of data
   5. use of standard curves
   6. drawing appropriate conclusions from experimental results

B. Techniques and Instrumentation
   1. measuring devices, including micropipettors
   2. microscopes
   3. spectrophotometer
      a. O.D. vs. %T
   4. PCR/thermal cycler
   5. restriction digest
   6. gel electrophoresis

C. Topics
   1. enzymology
   2. microscopic examination of cells
   3. respiration, fermentation, photosynthesis
   4. genetics
   5. molecular biology

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading Assignments
   1. College-level, lower division, biology majors text readings: approximately 40 pages weekly.
   2. Primary and secondary scientific literature.

B. Writing Assignments
   1. Lecture essay questions requiring synthesis and application of lecture content.
   2. Laboratory experimental results interpretation and analysis.

Course status:	Active
Development status:	Approved
Owner-Editor:	nunezcori@foothill.edu
Edit History:	
Comments:	
Last updated:	2012-03-13 14:00:23

BIOL 1A PRINCIPLES OF CELL BIOLOGY Edit Course Outline

Current Course Outline Editor

Return to Administration

Bugs? Errors? Comments?

Current Course Outline Editor

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Physical Sciences, Mathematics & Engineering

CHEM 1C GENERAL CHEMISTRY & QUALITATIVE ANALYSIS

Edit Course Outline

CHEM 1C GENERAL CHEMISTRY & QUALITATIVE ANALYSIS Fall 2011

3 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory. 5 Units

Total Contact Hours: 108 (Total of All Lecture, Lecture/Lab, and Lab hours X 12)

Total Student Learning Hours: 108 (Total of All Lecture, Lecture/Lab, Lab and Out of Class hours X 12)

Lecture Hours: 3 Lab Hours: 4 Lecture/Lab: 2 Weekly Out of Class Hours:

Note: If Lab hours are specified, the item 10. Lab Content field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active Grading: Letter Grade with P/NP option

Degree Status: Applicable Credit Status: Credit

Degree or Certificate Requirement: AS Degree

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: UC/CSU Validation: 07/01/2009

Division Dean Information -

Seat Count: 28 Load Factor: .2000 FOAP Code: 141754

Instruction Office Information -

FSA Code: 0620 - CHEMISTRY

Distance Learning: no

Stand Alone Designation: no

Program Title: Chemistry

Program TOPs Code: 190500

1. Common Ion Effect
2. Acid/base equilibria: buffers
    a. How buffers work
    b. Calculating buffer pH
    c. Preparing buffers
3. Analysis of acid/base titration curves
4. Solubility equilibria:
    a. Definition of solubility product constant (Ksp)
    b. Using Ksp to predict relative solubilities
    c. Determining Ksp from solubility, determining solubility from Ksp
    d. Factors effecting solubility of slightly soluble salts: common-ion effect, pH and formation of complex ions
    e. Calculating solubility in the presence of a common ion
    f. Selective precipitation (separation) of ions
    g. Simultaneous equilibria involving slightly soluble compounds
5. Complex ion equilibria
    a. Definition of formation constant (Kf)
    b. Complex ion equilibria and calculations involving Kf values
    c. Amphoterism

B. Solutions
1. Calculation of concentrations
    a. ppm, mole fraction, molarity, molality.
2. Energy changes upon solution formation
3. Factors Effecting Solubility
    a. Nature of solute and solvent
    b. Temperature
    c. Pressure.
4. Colligative properties: vapor pressure lowering, boiling point elevation, freezing point depression and osmotic pressure
5. Colligative properties of electrolyte solutions: the van't Hoff factor

C. Electrochemistry
1. Balancing redox reactions using half reaction method
2. Definitions: oxidation, reduction, oxidizing agent, reducing agent
3. Standard Reduction Potentials: strengths of reducing and oxidizing agents
4. Voltaic and Electrolytic Cells:
    a. Determining cell emf under standard conditions (EÂ?cell)
    b. Sign of EÂ?cell, sign of delta GÂ? (Gibbs Free Energy), and spontaneity
    c. Calculating delta G and equilibrium constants (K)
5. Voltaic and Electrolytic Cell diagrams
    a. Reduction occurs at the cathode, oxidation at the anode
    b. The function of the electrolyte and the salt bridge
    c. Direction of electron flow
6. Cell emf under nonstandard conditions
    a. Using the Nernst equation to calculate cell emf
    b. Using cell emf and the Nernst equation to calculate ion concentrations (pH, Ksp)
    c

6. Nuclear fission and fusion
7. Health and safety issues involving radioactivity
    a. units of radiation exposure: rad, rem, gray

E. Coordination Compounds
1. Basic terms
    a. Complex ions, ligands, coordination numbers
2. Structures
3. Bonding
4. Electronic structure
    a. Color and magnetism

F. Modern Materials (time permitting)
1. Metals, Semiconductors and Insulators
2. Polymers
3. Materials for Electronics
4. Materials for Nanotechnology

G. Qualitative Analysis
1. Separation and identification of various ions in aqueous solutions

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Written lecture examinations on fundamental chemical principles: problem solving skills, conceptual understanding of the material and ability to integrate concepts.
B. Laboratory activities, worksheets and reports that parallel lecture topics and include: detailed analysis of buffer systems, titration curves, solubility equilibria, colligative properties, redox chemistry (voltaic and

2. quantitative investigation of the common ion effect on solubility of a slightly soluble salt

D. Aqueous Equilibria
   1. investigation of Le Chatlier's Principle; shifting equilibria via temperature changes, pH changes and complex ion formation
   2. writing net-ionic equations for observed reactions

E. Voltaic Cells
   1. use of a voltmeter
   2. constructing standard voltaic cells
      a. measurement of the cell voltage
      b. identification of the cathode, anode and overall reaction for voltaic cells
      c. comparison of measured cell voltage to literature values
   3. constructing non-standard voltaic cells
      a. measurement of cell under non-standard conditions
      b. calculation of ion concentrations using the non-standard cell voltage
      c. determination of a solubility product constant

F. Electrolytic Cells
   1. use of a DC power supply
   2.

Current Course Outline Editor

Current Course Outline Editor

Need/Justification -

This course is a support course for the AA degree and Certificate of Achievement in Music Technology.

1. Description -

Introduction to the tools and techniques used to create and perform electronic music in a variety of styles. Programming of virtual analog and digital synthesizers, developing techniques for recording unique instruments and sounds, creating custom single and multi-sample patches using software samplers, using algorithmic composition tools and techniques, building interactive performance systems using object-oriented programming environments, and adapting hardware and software for live performance.

Prerequisite: None

Co-requisite: None

Advisory: None

2. Course Objectives -

The student will be able to:

A. Program virtual analog and digital synthesizers.
B. Record and implement sound elements using samplers.
C. Understand fundamental principles of algorithmic composition.
D. Design interactive performance systems.
E. Create an original electronic music production with synthesizers and samplers.
F. Adapt hardware and software for live performance.

3. Special Facilities and/or Equipment -

A. When taught on campus:
    1. 30 Macintosh computers, MIDI keyboards and MIDI interfaces.
    2. Video projector and screen.
    3. Digital audio workstation software with appropriate virtual instrument plug-ins.
B. When taught via Foothill Global Access:
    1. On-going access to computer with Email software and capabilities.
    2. An Email address.
    3. Java-script enabled internet browsing software.

4. Course Content (Body of knowledge) -

A. Fundamentals of Synthesis
    1. Virtual Analog Synthesis (Lec, L-L, Lab)
    2. Digital Synthesis (Lec, L-L, Lab)
B. Working with Samplers
    1. Sample Recording Techniques (Lec, L-L, Lab)
    2. Creating Single and Multi-Sample Patches (Lec, L-L, Lab)
C. Working with Drum Machines
    1. Basic Drum Programming (Lec, L-L, Lab)
    2. Arranging with Drum Patterns (Lec, L-L, Lab)
    3. The Virtual Drummer (Lec, L-L, Lab)
D. Principles of Algorithmic Composition
    1. Mathematical Models (Lec, L-L, Lab)
    2. Generative Music (Lec, L-L, Lab)
E. Interactive Performance Systems
    1. Music Programming Languages (Lec, L-L, Lab)
    2. Object-Oriented Programming Environments (Lec, L-L, Lab)
F. Live Electronic Music
    1. Software Tools (Lec, L-L, Lab)
    2. Alternate Controllers (Lec, L-L, Lab)

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Graded lab assignments in the operation of virtual synthesizers, samplers, and drum machines.
B. Quizzes on electronic music concepts and terminology.
C. Composition projects requiring application of concepts presented in each module.
D. A graded final project that demonstrates acquired skill in producing and performing electronic music.

7. Representative Text(s) -

Written materials provided by the instructor may include: lecture handouts, hardware and software user guides, guided listening worksheets, and musical scores.

8. Disciplines -

Commercial Music
Music

9. Method of Instruction -

A. Lecture presentations and classroom discussion of the techniques for composing and producing electronic music.
B. In-class listening to historically significant electronic music compositions followed by instructor-guided interpretation and analysis.
C. Presentations of major composition and production projects followed by in-class discussion and evaluation.

10. Lab Content -

A. Synthesis with Virtual Instruments
    1. Virtual Analog
    2. Digital (FM, Physical Modeling, Granular, Spectral)
B. Sampling with Virtual Instruments
    1. Sound Acquisition
    2. Creating Patches
C. Drum Programming with Virtual Instruments
    1. Designing Beats
    2. Working with Patterns
D. Preparing for Live Performance
    1. Mixing to Stems
    2. Creating a Set

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Written critiques and analyses of audio production projects including albums, soundtracks, television, video games and Internet multi-media.
B. Written summaries documenting technical and artistic elements for corresponding submitted assignments and audio projects.
C. Written proposals, session logs, learning outcomes and reflections supporting submitted musical works and