Curriculum Details

Proposed By

Proposed by: leticia

Course Record ID

772

Entry Type

New (draft)

Date Created

January 4, 2013

Notes and Special Changes

Stakeholders Consulted

Natural Science Department

1. Justification

2. Course Alpha

BIOC

3. Course Number

141

4. Course Title (long)

Fundamentals of Biochemistry

5. Course Title Short
Fundamentals of Biochem

6. Course Credits
3

7. Course Credit Upper Range
0

Repeatable
Will default to 98 (this is how often someone can sign up for the course (not how many times they can apply it to a degree)

8. Course Description
Biological chemistry focusing on the integration of concepts from general, inorganic, and biochemistry and their application to living systems. Satisfies the one-semester chemistry requirement for pre-nursing and pre-dental hygiene majors.

9. Course Pre-Requisites
A grade of 'C' or better in MATH 25 or higher or instructor's consent.

10. Course Co-Requisites

11. Course Recommended Preparation

12. Contact Hours (lecture, lab, lecture/lab)
3 hours lecture

13. Department
Natural Sciences

14. Cross-Listing
15. Course Content

Dimensional Analysis, Dosage Calculations, Isotopes, The Periodic Table, Chemical Bonding, Determining Molecular Shape, Grams-to-Grams Conversion, Nutritional Energy Calculations, Equilibrium Systems, Intermolecular Forces, Osmosis, Human Acid/Base Buffer System

16. Course Competencies

17. Assessments, Tasks, and Grading

Assessment includes weekly quizzes, weekly assignments, discussion forum, reflection paper, 2 midterm exams and one final exam. Total of 800 points. Details are found in the sample syllabus.

Grading Options

Will be set to Banner default

18. Auxiliary Materials and Content

Scientific calculator

19. Additional Activities outside of class and class time

None

20. Special Costs connected to the course

21. What are the Student Learning Outcomes?

1. Utilize precise chemical language to effectively communicate biochemical and allied health-related concepts and results. 2. Analyze and apply appropriate procedures for solving biochemical and allied health-related calculations involving solids, liquids, gases, and solutions. 3. Relate the location of an element in the periodic table to its electronic structure and chemical reactivity. 4. Describe ionic and covalent bonding theories and apply them to the construction of proper Lewis structures and prediction of molecular characteristics. 5. Relate biochemical and allied health-related concepts, theories and laws to everyday phenomena.

22. Connection between the Course SLOs and the College's General Education Outcomes
GenEd: Identify information needed in a variety of situations, and access, evaluate, and use relevant information effectively and responsibly.

GenEd: Make judgments, solve problems, and reach decisions using analytical, critical, and creative thinking skills.

GenEd: Use written, visual, and oral communication to discover, develop, and communicate meaning, and to respond respectfully to the ideas of others in multiple environments.

23. How does the proposal connect to the college's strategic plan?

This course helps fulfill Strategic Outcome #2 (Educational Capital). This course can be offered in both face-to-face and online formats. This will increase student enrollment, transfer and graduation rates. Additionally, BIOC 141 helps achieve Strategic Outcome #4 (Global Competitive Workforce). Students need this course to get admission into the nursing and dental hygiene programs. This will help address workforce needs in the health areas.

24. Describe the staff that will be needed

No support staff needed

25. Describe the facilities that will be needed, including special rooms

No special facilities needed

26. Describe any other resources that will be needed

No special resources needed

27. How will the staff, facilities, and other resources for the course be secured?

Not applicable.

28. Certificates

29. Connection to the AA degree

AADP

30. Maximum Credits Towards an AA Degree
31. List any similar classes taught at outside of the UH system

32. List any similar classes taught at campuses in the UH System.

Hawaii CC, BIOC 241, Fundamentals of Biochemistry Honolulu CC, BIOC 241, Fundamentals of Biochemistry Kapiolani CC, BIOC 241, Fundamentals of Biochemistry Leeward CC, BIOC 241, Fundamentals of Biochemistry Maui College, BIOC 241, Fundamentals of Biochemistry In a system-wide meeting last Nov 29, 2012, all of these campuses agreed to change the course number from '241' to '141.'

33. How, if at all, is the course intended to count in lieu of a course taught at a four-year campus.

UH-Manoa, BIOC 241, Fundamentals of Biochemistry

34. How, if at all, is the course similar to upper-division courses in the UH System.

Not applicable

35. How does the course articulate with four-year programs (Gen Ed)?

Not applicable

36. List any articulations between this course and any four-year program.

UH-Manoa, BIOC 241, Fundamentals of Biochemistry Anatomy, Biochem & Physiology Department

End of Proposal