

**NEW COURSE PROPOSAL****Courses must be submitted by November 9, 2007, to make the next catalog production**DATE (*Change if modified*)

9-7-07 REV 1.16.08

PROGRAM AREA(S)

BIOLOGY

**1. Catalog Description of the Course.** *[Follow accepted catalog format.]***Prefix(es)** (Add additional prefixes if cross-listed) **BIOL Course No. 426****Title: HEMATOLOGY Units: 4**☒ Prerequisites BIOL 300☐ Corequisites☐ Consent of Instructor Required for Enrollment**Description** (Do not use any symbols ): **Study of human blood, including histological, physiological, biochemical and clinical examination of blood. Topics include blood cell differentiation, development, iron metabolism, pathology, clinical diagnostic technology. Psychological and societal impact of human blood diseases and their impact on world civilizations and economy will be also studied.****Grading Scheme:**☒ A-F Grades☐ Credit/No Credit☐ Optional (Student Choice)**Repeatability:**☐ Repeatable for a maximum of  
units

Total Completions Allowed

☐ Multiple Enrollment in Same Semester**Lab Fee Required:** ☒**Mode of Instruction/Components** (*Hours per Unit are defaulted*).

|                  | <b>Units</b> | <b>Hours<br/>per<br/>Unit</b> | <b>Benchmark<br/>Enrollment</b> | <b>Graded<br/>Component</b>         | <b>CS &amp; HEGIS #</b><br>(Filled in by the Dean) |
|------------------|--------------|-------------------------------|---------------------------------|-------------------------------------|----------------------------------------------------|
| Lecture          | 3            | 1                             | 24                              | <input checked="" type="checkbox"/> |                                                    |
| Seminar          |              |                               |                                 | <input type="checkbox"/>            |                                                    |
| Laboratory       | 1            | 3                             | 24                              | <input checked="" type="checkbox"/> |                                                    |
| Activity         |              |                               |                                 | <input type="checkbox"/>            |                                                    |
| Field<br>Studies |              |                               |                                 | <input type="checkbox"/>            |                                                    |
| Indep Study      |              |                               |                                 | <input type="checkbox"/>            |                                                    |
| Other Blank      |              |                               |                                 | <input type="checkbox"/>            |                                                    |

The following two lines will be filled out internally based on the Mode of Instruction data directly above.

Three hours lecture per week (*Use 2<sup>nd</sup> line only if necessary*)

Three hours laboratory per week

**Course Attributes:**☐ **General Education Categories:** All courses with GE categories notations (including deletions) must be processed at the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.**A (English Language, Communication, Critical Thinking)**A-1 Oral Communication ☐A-2 English Writing ☐A-3 Critical Thinking ☐**B (Mathematics, Sciences & Technology)**B-1 Physical Sciences ☐B-2 Life Sciences – Biology ☐B-3 Mathematics – Mathematics and Applications ☐B-4 Computers and Information Technology ☐**C (Fine Arts, Literature, Languages & Cultures)**C-1 Art ☐C-2 Literature Courses ☐C-3a Language ☐C-3b Multicultural ☐

- D (Social Perspectives)** ☐
- E (Human Psychological and Physiological Perspectives)** ☐
- UDIGE/INTD Interdisciplinary** ☐
- Meets University Writing Requirement** ☐
- Meets University Language Requirement** ☐

☐ American Institutions, Title V Section 40404: ☐ Government ☐ US Constitution ☐ US History  
Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>  
☐ Service Learning Course

- 3. Justification and Requirements for the Course.** (Make a brief statement to justify the need for the course)  
A. Justification: This is a required course for the Clinical Laboratory Science Emphasis within the BS in Biology program. This course is required for admission into the medical technology/clinical laboratory science programs in hospitals in order to become licensed clinical lab scientists.

B. Degree Requirement: ☒ Requirement for the Major/Minor **Note: Submit Program Modification if this course changes your program.**  
☒ Elective for the Major/Minor

**4. Learning Objectives.** (Bullets, will occur upon carriage return)

Upon completion of the course, the student will be able to:

- Identify the morphology and functions of normal blood cells;
- Describe blood cell differentiation and metabolism;
- Explain pathogenesis of hematologic diseases;
- Apply clinical diagnostic technology to identify normal and diseased blood cells;
- Identify the psychological and societal impact of epidemic blood diseases;
- Explain the impact of pandemic human blood diseases on world civilization and economy.

**5. Course Content in Outline Form.** [Be as brief as possible, but use as much space as necessary]

- I. Physiology of blood
- II. Hematopoiesis
- III. Erythropoiesis
- IV. The leukocytes
- V. The lymphocytes
- VI. The spleen
- VII. Anemias
- VIII. The etiology and genetics of hematological malignancies
- IX. Management of hematological malignancies
- X. Acute and chronic leukemias
- XI. Myelodysplasia
- XII. Lymphomas
- XIII. Myelomas
- XIV. Myeloproliferative disorders
- XV. Infectious diseases of blood cells
- XVI. Psychological and societal impact of epidemic blood diseases
- XVII. Impact of pandemic blood diseases on the world civilization and economy

Does this course overlap a course offered in your academic program? YES ☐ NO ☒  
If YES, what course(s) and provide a justification of the overlap?

Does this course overlap a course offered in another academic area? YES ☐ NO ☒  
If YES, what course(s) and provide a justification of the overlap?

Signature of Academic Chair(s) of the other academic area(s) is required on the signature sheet below.

**6. Cross-listed Courses** (Please fill out separate description in item 1 above, for each PREFIX)

A. List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).  
Prefix for cross-listed discipline(s):

B. Department responsible for staffing: Biology

7. **References.** *[Provide 3 - 5 references on which this course is based and/or support it.]*

- Essential Haematology, by Victor Hoffbrand, Paul Moss, John Pettit, Blackwell Publishing,, 5 edition (October 1, 2006, ISBN-10: 1405136499, ISBN-13: 978-1405136495
- Hematology: Clinical Principles and Applications, by Bernadette F. Rodak, George A. Fritsma, Kathryn Doig,, Publisher: Saunders; 3 edition (February 26, 2007), ISBN-10: 1416030069, ISBN-13: 978-1416030065
- Williams Hematology, by Marshall Al Lichtman, Ernest Beutler, Kenneth Kaushansky, Thomas J. Kipps, Uri Seligsohn, Josef Prchal, Publisher: McGraw-Hill Professional; 7 edition (October 14, 2005), ISBN-10: 0071435913, ISBN-13: 978-0071435918

8. **List Faculty Qualified to Teach This Course.**

- Biology faculty

9. **Effective Date**

A. First semester offered: F08

10. **New Resources Required.** YES ☐ NO ☒

If YES, list the resources needed and obtain signatures from the appropriate programs/units on the sheet below.

A. Computer (data processing), audio visual, broadcasting needs, other equipment)

B. Library needs

C. Facility/space needs

11. **Will this new course alter any degree, credential, certificate, or minor in your program?** YES ☒ NO ☐

**If, YES attach a program modification form for all programs affected.**

Catalog deadline for New Minors and Programs (including modifications): October 15, 2007, preceding year.

Catalog deadline for Course Proposals and Modifications: November 9, 2007, of preceding year.

Last day to submit any work to be considered for the academic year: April 15<sup>th</sup>.

Ching-Hua Wang  
\_\_\_\_\_  
Proposer of Course

9-7-07  
\_\_\_\_\_  
Date

**Approval Sheet**  
**Program/Course:** BIOL 426 Hematology

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| Program Chair(s) | Date |
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| Program Chair(s) | Date |
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| General Education Chair(s) | Date |
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| Curriculum Committee Chair(s) | Date |
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|-----------------|------|
| Dean of Faculty | Date |
|-----------------|------|