WINONA STATE UNIVERSITY
CHECKLIST FOR CURRICULAR CHANGE PROPOSALS

This checklist enables A2C2 representatives to endorse that their departments have accurately followed the Process for Accomplishing Curricular Change. For each course or program proposal submitted to A2C2, this checklist should be completed and signed by the submitting department’s A2C2 representative. Peer review of proposals is also strongly advised, e.g., departments should discuss and vote on the proposals as submitted to A2C2, rather than on just the ideas proposed or drafts of proposals.

If a proposal fails to follow or complete any aspect of the process, the Course and Program Proposal Subcommittee will postpone consideration of the proposal and return it to the department’s A2C2 representative for completion and resubmission. Resubmitted proposals have the same status as newly submitted proposals.

Note: This form need not be completed for notifications nor should it be included in proposal copies.

1. The appropriate forms and the “Approval Form” have been completed in full for this proposal. All necessary or relevant descriptions, rationales, and notifications have been provided.
   
   Completed

2a. The “Financial and Staffing Data Sheet” has been completed and is enclosed in this proposal, if applicable.
   
   Completed  NA

2b. For departments that have claimed that “existing staff” would be teaching the course proposed, an explanation has been enclosed in this proposal as to how existing staff will do this, e.g., what enrollment limits can be accommodated by existing staff. If no such explanation is enclosed, the department’s representative is prepared to address A2C2’s questions on this matter.
   
   Completed  NA

3. Arrangements have been made so that a department representative knowledgeable of this proposal will be attending both the Course and Program Proposal Subcommittee meeting and the full A2C2 meeting at which this proposal is considered.
   
   Completed

   Name and office phone number of proposal’s representative: ____________________________

4. Reasonable attempts have been made to notify and reach agreements with all university units affected by this proposal. Units still opposing a proposal must submit their objections in writing before or during the Course and Program Proposal Subcommittee meeting at which this proposal is considered.
   
   Completed  NA

5. The course name and number is listed for each prerequisite involved in this proposal.
   
   Completed  NA

6. In this proposal for a new or revised program (major, minor, concentration, etc.), the list of prerequisites provided includes all the prerequisites of any proposed prerequisites. All such prerequisites of prerequisites are included in the total credit hour calculations. Completed  NA

7. In this proposal for a new or revised program, the following information for each required or elective course is provided:
   a) The course name and number.
   b) A brief course description.
   c) A brief statement explaining why the program should include the course.
   
   Completed  NA

8. This course or program revision proposal:
   a) Clearly identifies each proposed change.
   b) Displays the current requirements next to the proposed new requirements, for clear, easy comparison.
   
   Completed  NA

9. This course proposal provides publication dates for all works listed as course textbooks or references using a standard form of citation. Accessibility of the cited publications for use in this proposed course has been confirmed.
   
   Completed  NA

Department's A2C2 Representative  [Signature]

Date  2/1/06
## WINONA STATE UNIVERSITY
### UNIVERSITY STUDIES APPROVAL FORM

Routing form for University Studies Course approval.

<table>
<thead>
<tr>
<th>Department Recommendation</th>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ed W. Thompson</td>
<td>2/1/06</td>
<td><a href="mailto:e.thompson@winona.edu">e.thompson@winona.edu</a></td>
</tr>
<tr>
<td>Department Chair</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dean’s Recommendation</th>
<th>Approved</th>
<th>Disapproved*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Ogren</td>
<td>4/2/06</td>
<td></td>
</tr>
<tr>
<td>Dean of College</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In the case of a dean’s recommendation to disapprove a proposal, a written rationale for the recommendation to disapprove shall be provided to the University Studies Subcommittee.

<table>
<thead>
<tr>
<th>USS Recommendation</th>
<th>Approved</th>
<th>Disapproved</th>
<th>No recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Studies Director</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A2C2 Recommendation</th>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chair of A2C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Faculty Senate Recommendation</th>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>President of Faculty Senate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Academic Vice President Recommendation</th>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Vice President</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decision of President</th>
<th>Approved</th>
<th>Disapproved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>President</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please forward to Registrar.

<table>
<thead>
<tr>
<th>Registrar</th>
<th>Date entered</th>
<th>Please notify department chair via e-mail that curricular change has been recorded.</th>
</tr>
</thead>
</table>
WINONA STATE UNIVERSITY
PROPOSAL FOR REVISED COURSES

Department: BIOLOGY

Date: August 22, 2005

If proposed course change requires A2C2 and/or graduate Council approval, i.e., not considered a notification, complete and submit this form with the appropriate number of copies. Refer to Regulation 3-4, Policy for Changing the Curriculum, for complete information on submitting proposals for curricular changes.

A. Current Course Information

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 323</td>
<td>GENERAL PHYSIOLOGY</td>
<td>5</td>
</tr>
</tbody>
</table>

This Proposal is for a(n)  

X Undergraduate Course

Graduate Course

Applies to:

X Major

Minor

Elective

Required

Elective

Required

Not for USP

University Studies

Prerequisites: BIOL 241, 242 and BIOL 201 and CHEM 208, 209 or 212, 213

Grading:

Grade only

P/NC only

X Grade and P/NC Option

Frequency of offering: ANNUALLY (FALL)

Proposed Course Information. (Please indicate only proposed changes below.)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

This Proposal is for a(n)  

Undergraduate Course

Graduate Course

Applies to:

Major

Minor

Elective

Required

Elective

Required

Not for USP

University Studies

Prerequisites: BIOL 241, 242 and BIOL 201 and CHEM 212, 213

Grading:

Grade only

P/NC only

Grade and P/NC Option

Frequency of offering:

B. If the proposal requests any changes in the course description as listed below, please list both the present description and the proposed change.

1. Catalog description.
2. Course outline of the major topics and subtopics.
3. Basic instructional plan and methods utilized.
4. Course requirements (papers, lab work, projects, etc.) and means of evaluation.

C. Rationale for the changes proposed.
D. Description of any impact of this proposal on other departments, programs, majors, or minors.
E. Description any impact that this proposal may have on the University Studies Program.

Attach an Approval form.

Department Contact Person for this Proposal:

Dr. Frances R. Ragsdale

5462

fragsdale@winona.edu

Name (please print)

Phone

e-mail address
Catalog Description:

Current:
Lectures, demonstrations and laboratory exercises are designed to provide the basis for understanding physiological mechanisms and the functional organization of body systems. Topics may include muscle, nervous, cardiovascular, respiratory, urinary, digestive, endocrine, immune and reproductive systems.
Prerequisites: BIOL 241, BIOL 242, BIOL 201, and CHEM 208, CHEM 209 or CHEM 212 and CHEM 213. Offered yearly.

Proposed:
Lectures, demonstrations and discussions are designed to provide the basis for understanding physiological mechanisms and the functional organization of body systems. This is an introduction examining how the human body works.
Prerequisites: BIOL 241, BIOL 242, BIOL 201, and CHEM 208, CHEM 209 or CHEM 212 and CHEM 213. Offered yearly.
Course Outline:

I. Introduction to Physiology
   A. Definition of Physiology relative to Biology
   B. Central Themes

II. Why Chemistry is important in Physiology
    A. Case study – e.g., green tea and antioxidants
    B. Overview of chemistry

III. Membrane Dynamics and Cellular Communication
     A. Cell membrane – Historical perspective and overview
     B. Crossing the physical barrier of the cell membrane
     C. Case study – e.g., cholesterol and cell membrane

IV. Cellular and Systemic Communication
    A. Cellular mechanisms for communication
       1. Case study – e.g., cancer and metastasis
    B. Systemic Mechanism – overview
       1. Endocrine System
       2. Nervous System

V. Endocrine System
    A. Overview of chemical communication – blood borne particles
       1. plasma-soluble hormones (peptides, amines)
       2. plasma-insoluble hormones (steroids)
    B. Hypothalamus/pituitary axis
       1. pituitary hormones (LH, FSH, GH, Prolactin, TSH, ACTH) and feedback mechanisms
       2. Case study – e.g., GH
    C. Thyroid Gland – 1 in 5 women will have problems with this gland.
       1. Overview of hormones
       2. Case Study – e.g., Grave’s Disease
    D. Adrenal Gland
       1. Overview of hormones
       2. Case Study – e.g., cortisone
    E. Reproductive System
       1. Overview of hormones
       2. Case Study – e.g., Androgen insensitivity
    F. Other hormones

VI. Neurophysiology
    A. Membrane Potential
    B. Overview of organization
       1. CNS and PNS
       2. Parasympathetic and Sympathetic NS
       3. Sensory Organs

VII. Movement and Muscle Physiology
     A. Membranes as excitable tissues and Neuromuscular Junction
     B. Sliding filament theory and skeletal muscles
     C. Case study – e.g., muscular dystrophy
     D. Overview of all muscle types (skeletal, smooth and vascular)

VIII. Cardiovascular Physiology
      A. Blood and vascular considerations
      B. Heart structure and function
         1. generation of heart beat
         2. Case study – e.g., truncus arteriosus
      C. Pressure and how feedback works
         1. angiotensin and controlling pressure
2. case study – e.g., hypertension and drugs

IX. Respiratory Physiology
   A. Ventilation – refreshing air in lungs
   B. Structural features that facilitate air transfer across lung-blood interface
      1. lung membrane
      2. hemoglobin and O₂ transport
      3. Case study – e.g., sickle cell anemia
   C. Systemic control of breathing
      1. origin of signal to breath
      2. feedback pathways
      3. Case study – e.g., hypoxia

X. Renal Physiology and Acid/Base Regulation
   A. Kidneys and their structure
   B. Nephrons and how they work
      1. countercurrent multiplier
      2. hormonal control
   C. Case study – e.g., high protein diets

XI. Reproductive Biology
   A. Structure and general function
   B. Hormones and their role in adult function
   C. Pregnancy
   D. Case studies
Course Requirements:
The course will require several papers (at least 3 developed case studies) that illustrate not only the body system of interest, but also how the system is controlled and how it influences other body systems. A worksheet will be developed that will detail the specifics of this requirement.

Students will also be responsible for reading their text and there will be weekly quizzes.

Students will also have exams during the course of the semester. The final will be comprehensive and will focus not only on the factual information the students have learned, but also on the critical thinking they have developed.

Grades will be determined as a percentage of the total points available and a standard grading scale will be followed.

Rationale for Change:
Historically this was a two quarter course that was cut to one semester. In doing that conversion, the course became a 5 credit hour class. This is very labor intensive for students majoring in Biology (specifically the Allied Health Major). At this time, I believe students are better served by separating the lecture from the lab. This will allow for greater scheduling flexibility scheduling for the students. Both the lecture and lab will be required for the Allied Health Major. This will not change the number of total credit hours, but will decrease the number of elective hours.

Impact on Other Departments, Programs, Majors or Minors:
Presently there should be no deleterious impact on other departments, programs or major/minors. Lecture and laboratory sections will still be offered on a yearly basis. The total number of hours for the Allied Health Major will not change, but the number of elective credits will be dropped by 1 to accommodate both the lecture and laboratory classes.

Impact on University Studies Program:
The original course was a writing Flag course. The focus was on preparation of scientific reports. This will no longer be the case for this course. Instead there is a concurrent University Studies Proposal for this course to continue as a writing flagged course; but instead of working on laboratory reports, students will focus on case studies.
Include a Financial and Staffing Data Sheet with any proposal for a new course, new program, or revised program.

Please answer the following questions completely. Provide supporting data.

1. Would this course or program be taught with existing staff or with new or additional staff? If this course would be taught by adjunct faculty, include a rationale.

   Revision of existing course. Will be taught with existing staff.

2. What impact would approval of this course/program have on current course offerings? Please discuss number of sections of current offerings, dropping of courses, etc.

   Revision of existing course. Will not affect current course offerings.

3. What effect would approval of this course/program have on the department supplies? Include data to support expenditures for staffing, equipment, supplies, instructional resources, etc.

   Revision of existing course. By separating lab from this course (Lab = new course, Biol 324), the relevant costs for laboratory supplies will be shifted to that course.