WINONA STATE UNIVERSITY
PROPOSAL FOR NEW COURSES

Department __HERS____________________________________ Date __10/27/08_____________________

Refer to Regulation 3-4, Policy for Changing the Curriculum, for complete information on submitting proposals for curricular changes.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>384</td>
<td>Advanced Nutrition</td>
<td>3</td>
</tr>
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</table>

This proposal is for a(n) 

<table>
<thead>
<tr>
<th>Undergraduate Course</th>
<th>Graduate Course</th>
</tr>
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<tbody>
<tr>
<td>X</td>
<td></td>
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Applies to: 

<table>
<thead>
<tr>
<th>Major</th>
<th>Minor</th>
<th>University Studies*</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>X</td>
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</tbody>
</table>

Not for USP: 

<table>
<thead>
<tr>
<th>Required</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
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Prerequisites 

| HERS 205 or BIOL 206, BIOL 211, 212, CHEM 210 or 212 |

Grading method: 

<table>
<thead>
<tr>
<th>Grade only</th>
<th>P/NC only</th>
<th>Grade and P/NC Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
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Frequency of offering: 

<table>
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<th>yearly</th>
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*For University Studies Program course approval, the form Proposal for University Studies Courses must also be completed and submitted according to the instructions on that form.

Provide the following information:

A. Course Description

1. Catalog description.

Advanced Nutrition introduces the student to nutritional genomics and functional foods. The course will consider issues of efficacy and health claims, identification of popular nutraceuticals and application to epigenomics and special populations. A service learning component is included.

2. Course outline of the major topics and subtopics (minimum of two-level outline).

I. Introduction to Nutritional Genomics and Epigenetics

A. Nutrients and gene expression
B. Metabolomics and health
C. Calories, obesity and longevity
D. Chemoprevention of disease
E. Special populations
F. Principles and applications of genetic testing information
G. Disease promoters from foods and/or food preparation

II. Nutraceuticals and Functional Foods

A. Definitions and purpose

B. Regulation and social policy
   1. Nutrient content claims
2. Structure and function claims
3. Dietary Guidance claims
4. Qualified Health claims
5. Health claims
6. Ethics of use
7. Ethics of marketing

C. Whole foods: Examples include fruits, vegetables, cruciferous vegetables, legumes, nuts, tea.
   1. Claims and function
   2. Chemoprevention of disease
   3. Special populations

D. Micronutrients: Examples include Major and trace minerals, Vitamins.
   1. Claims and function
   2. Chemoprevention of disease
   3. Special Populations

E. Phytochemicals: Examples include Carnitine, carotenoids, chlorophylls, choline, curcumin, flavonoids, organosulfur, compounds, reverastrol isoflavones, etc.
   1. Claims and function
   2. Chemoprevention of disease
   3. Special populations

F. Zoochemicals: Examples include conjugated linoleic and linolenic acids
   1. Claims and function
   2. Chemoprevention of disease
   3. Special populations

G. Nutraceuticals: Examples include CoenzymeQ, lignans, probiotics
   1. Claims and function
   2. Chemoprevention of disease
   3. Special populations

III. Introduction to metabolic and nutrition research

A. Purpose and scope of the metabolic kitchen
B. Special considerations of Consumer Science research

<table>
<thead>
<tr>
<th>Lecture: Auditorium</th>
<th>ITV</th>
<th>Online</th>
<th>Web Enhanced</th>
<th>Web Supplemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture: Classroom</td>
<td>X</td>
<td>Service Learning X</td>
<td>Travel Study</td>
<td>Laboratory</td>
</tr>
<tr>
<td>Other: (Please indicate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Instructional delivery methods utilized: (Please check all that apply). |
| Lecture: Classroom | X |
| Instructional delivery methods utilized: (Please check all that apply). |
| Lecture: Classroom | X |
| Instructional delivery methods utilized: (Please check all that apply). |
| Lecture: Classroom | X |
| Instructional delivery methods utilized: (Please check all that apply). |
| Lecture: Classroom | X |
| Instructional delivery methods utilized: (Please check all that apply). |
| Lecture: Classroom | X |

| 3.b. MnSCU Course media codes: (Please check all that apply). |
| No Satellite  | 3. Internet |
| 1. Satellite | 4. ITV Sending |
| 2. CD Rom | 5. Broadcast TV |
| 6. Independent Study | 7. Taped |
| 8. ITV Receiving | 9. Web Enhanced |
| 10. Web Supplemented |

4. Course requirements (papers, lab work, projects, etc.) and means of evaluation.

This course has a required Service-Learning component in which the entire class will be engaged in different facets of a community project on or off campus. The experience is intended to enhance student learning by direct application of nutrition knowledge for (numerous) projects requested by several community stakeholders.
Community projects could include work with WSU Wellness clients, Cardiac clients; HERS Cardiac Rehabilitation, Community clients; Winona Volunteer Services, Winona Public and Parochial Schools, Athletes, YMCA, etc.

Components included: nutrition assessment, education and recommendations.

Requirements and evaluation:
Exams 300 pts
Service learning projects (purpose of project, materials and methods, analytical work outline, timeline, action plan, and delivery) 200 pts
Quizzes 80 pts
Grades based on percent of total points
90-100% = A
80-90% = B
70-80% = C
60-70% = D
<60% = F

5. Course materials (textbook(s), articles, etc.).


6. Assessment of Outcomes
Outcomes are assessed through exams, quizzes, and project. Grades assigned as shown above.

7. List of references.


B. Rationale

1. Statement of the major focus and objectives of the course.

2. Describe the basics of a healthy diet for a variety of special populations.
3. Describe the relationship between functional foods and nutritional genomics.
4. To critically evaluate social policy on health claims and marketing in relationship to functional and pharmaceutical foods.
5. To design diets that meet the nutritional criteria stipulated, in terms of the energy producing nutrients, other essential nutrients and those dietary components that impact health.
6. To be able to critically evaluate food health claims based on scientific evidence.

2. Specify how this new course contributes to the departmental curriculum.
This course provides the students with the skills to navigate and evaluate the rapidly growing wealth of information on specific food components and their effects on health and disease.

3. Indicate any course(s) which may be dropped if this course is approved.
None

C. Impact of this Course on other Departments, Programs, Majors, or Minors
1. Does this course increase or decrease the total credits required by a major or minor of any other department? If so, which department(s)? NA
2. Attach letter(s) of understanding from impacted department(s).

Definitions:

01 - Satellite:

02 - CD Rom:

03 - Internet: Predominately = where all, or nearly all, course activity occurs in an online environment. One to two activities may occur face-to-face in a classroom, with the maximum being two activities.

04 – ITV Sending: a course in which students are in the classroom with the instructor, other students join via interactive television technology from other geographically separate locations

05 – Broadcast TV:

06 – Independent Study: a course in which the teacher develops specialized curriculum for the student(s) based on department guidelines in the University course catalog

07 – Taped: a course in which the teacher records the lessons for playback at a later date

08 – ITV Receiving: a course in which students are not in the classroom with the teacher, other students join via interactive television technology from other geographically separate locations

09 – Web Enhanced- Limited Seat Time: For a course in which students are geographically separate from the teacher and other students for a majority of required activities. However, some on-site attendance is required. The course includes synchronous and/or asynchronous instruction.

10 – Web Supplemented- No Reduced Seat Time: For a course utilizing the web for instructional activities. Use of this code may assist your college/university in tracking courses for “smart classrooms” and/or facility usage.

Attach a *Financial and Staffing Data Sheet*.

Attach an *Approval Form* with appropriate signatures.

Department Contact Person for this Proposal:

Name (please print) ____________________________ Phone ____________________________

__________________________________________ snelson@winona.edu

[Revised 7/5/07]
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.

Lecture will be taught by current faculty.

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.

No impact on current courses. By modifying HERS 204 capacity/section, we will be freeing up a faculty to be able to teach this course once per year.

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.

There should be minimal effect on departmental supplies (e.g. copying).