

# COLLEGE OF AGRICULTURE

2003-2005

## I. SIGNIFICANT TRENDS:

Most curricular changes for the College of Agriculture reflect course renumbering or renaming to make the offerings more understandable and attractive to students (in Horticulture, for example). The most notable trends in curricular advancement in the college involves the continued work to consolidate administrative units, share resources, and improve efficiencies in response to tighter budgets. For example, The Departments of Animal Ecology and Forestry merged to form the Department of Natural Resource Ecology and Management (NREM) on July 1, 2002. Fifteen formerly designated Animal Ecology courses were shifted to the NREM designator. Also, sixteen formerly designated Forestry courses were shifted to the NREM designator. The departments found common need and course content between these programs, and this made the consolidation possible. The changes in these courses were not included in the summary tables of this report, unless the title, number or credits changed.

More and larger consolidations in programs are anticipated in the next two years as the Departments of Zoology/Genetics, Microbiology, Biology are currently engaged in planning for such as well. This will have significant impact on the curricula of most departments in the College of Agriculture. In preparation for these changes, numerous changes were already instituted by the Department of Microbiology and are reflected in this report. Also, in response to waning enrollments and demand, one secondary major and one program administered in the Department of Agriculture Education and Studies were dropped from the upcoming catalog. In addition, the Community and Structural Insect Management option was dropped as well.

Many of the courses offered by the college continue to reflect an increased emphasis in communications-across-the-curriculum. The well-received *AgComm* program provides regular training opportunities for faculty and staff to include more communications learning experiences in coursework. In addition the college is realizing an expanding list of courses that are ethics intensive, problem solving intensive and/or critical thinking intensive learning opportunities. This expanded list offers students more opportunities to earn these required credits within the curriculum of their department or program. The lists of these learning experiences will continue to grow unless assessment efforts deem that the original intent of these learning experiences are not being realized in the abilities of our graduates by utilizing these approaches.

## II. CURRICULA, MAJORS, MINORS ADDED OR DROPPED:

AgEdS: Dropped secondary major in Agricultural Education.  
Dropped Professional Agriculture (Off-Campus B.S.) program.  
Title to: Environmental Stress Physiology.

VIII. SUMMARY OF CHANGES – Summary of Sections III, New Courses; Section IV, Courses Dropped; and Section VII, Course Number Changed, Course Credits Changed, and Course Title Changed.

	New	Dropped	Number	Credit	Title
Agricultural Education and Studies	1	0	0	2	0
Agricultural Systems Technology	1	0	0	1	1
Agronomy	1	3	0	1	3
Animal Ecology	1	0	0	1	0
Animal Science	2	0	0	0	0
Entomology	0	3	0	0	0
Forestry	0	0	0	1	0
Horticulture	6	5	4	3	6
Microbiology	2	12	1	3	2
Natural Resource Ecology and Management	3	0	0	4	7
Plant Health and Protection	0	0	0	0	0
Plant Pathology	1	1	0	1	0
Sustainable Agriculture	1	0	0	0	0
<b>Total</b>	<b>19</b>	<b>24</b>	<b>5</b>	<b>17</b>	<b>19</b>

# COLLEGE OF EDUCATION

## 2003-2005

### I. SIGNIFICANT TRENDS

#### College of Education

A significant trend for the College of Education curriculum in the 2003-2005 ISU catalog is the inclusion of the College of Education mission statement, and the mission statement and learning outcomes for each department. These outcomes not only meet and exceed standards at the state and national levels, but also are the basis for what is taught, what is learned, and what is assessed.

#### Curriculum and Instruction

Two trends are evident in the curriculum and course changes proposed by the Department of Curriculum and Instruction. First, the number of credit hours required for the Elementary Education major was reduced to 128.5. This change is significant as it allows students to complete their degree programs in four years. The second trend is that the responsibility for the teacher education portion of the secondary mathematics curriculum has shifted from the respective College of Liberal Arts and Sciences departments to the Curriculum and Instruction department. This shift allowed a M.Ed. degree program focusing on mathematics education to be designed.

#### Educational Leadership and Policy Studies

Curriculum trends reflect continued work at the doctoral level around the six core areas. Significant emphasis is being placed on student outcomes assessment and rubric, portfolio, and capstone project utilization. The 2003-2005 catalog will initiate the 5<sup>th</sup> year of our unified Ph.D. program. Our vision and mission statements and student outcomes for the Ph.D. program, as well as the student outcomes for the masters options in Counselor Education, Educational Administration, Higher Education, Organizational Learning and Human Resource Development, and Research and Evaluation, have been listed in this catalog as a basis for what is taught, what is learned, and what is assessed. The greatest change has occurred in school counseling, which has been redesigned to deliver a vibrant and innovative program at Iowa State University. This move is reflected in its mission statement: to (a) nurture the talents and strengths of counselors as educational leaders in their schools, (b) champion school counselors working in collaborative, learner-centered teams as they advocate for all students, and (c) encourage innovative and solution-focused approaches in meeting life's challenges. Counselor Education has redesigned the curriculum to exceed the standards of the Iowa Department of Education, which incorporates the National Standards for School Counseling Programs (American School Counselor Association) and the Council for Accreditation for Counseling and Related Programs (CACREP). The curriculum is organized around the three major counselor roles: counseling individuals, facilitating groups, and enhancing schools and communities. Other innovations include introducing business concepts, expanding the consultation component, and encouraging students to select an area of specialization about which they are passionate.

#### Health and Human Performance

The undergraduate curriculum in the Department of Health and Human Performance has undergone numerous changes. Major changes include implementing the Board of Regents-approved name change of the major of Exercise and Sport Science to Health and Human Performance, and the Regents-approved discontinuation of the Community Health Education major. An equally important change made by the faculty is the identification of student outcomes, which are felt to be critical to an undergraduate degree in this major. The faculty is developing methods of assessing how well the students meet these outcomes.

These changes were in response to both the department's self-assessment and the evaluation resulting from the department's external review. First, the undergraduate curriculum is now designed to meet the

aforementioned student outcomes. Second, the 'general education' section of the curriculum differs from its predecessor in that only the minimum required coursework is indicated; this change should clarify choice of electives for students. Third, the 'core' section has now been subdivided into a 'basic core' and an 'advanced core.' Given the increasing diversity of our students and the need to have coursework meet student outcomes, the new core is designed to be more flexible in the coursework required, while also being student outcomes-driven. Finally, some of the options within the Health and Human Performance major have undergone significant changes. A new Community and Public Health option is available, while the previous Exercise Science option has been re-designed and re-named the Health/Fitness Management option. Students choosing the Community and Public Health option have a broad 'wellness' orientation, while those choosing the Health/Fitness Management option are oriented specifically towards developing financially viable exercise programs. The new Exercise Science option, formerly the General Exercise and Sport Studies option, is more specifically geared towards students who plan to further their educations past the undergraduate degree. These curriculum changes will enable the department's students to have more successful, productive undergraduate careers.

### Industrial Education and Technology

The Industrial Education and Technology undergraduate curriculum remains basically unchanged. A minor with a safety focus has been added to the undergraduate curriculum. Three graduate classes have been added as part of the core curriculum in the doctoral program.

### **Teacher Education**

The call for more qualified teachers is echoing across the nation. Consequently, the most significant change in the Teacher Education section of the catalog is the inclusion of the new performance standards for all teacher education programs. Teacher candidates in every licensure area will be required to demonstrate competence with regard to each standard in order to qualify for a teaching license. There are three other notable changes to the catalog. Iowa State University will no longer offer the talented and gifted endorsement or any of the secondary social science endorsements, and speech communications will now be an additional endorsement area only.

## II. CURRICULA, MAJORS, MINORS ADDED OR DROPPED

Minors dropped: Athletic Training  
Health Studies

Minors added: Industrial Technology

Majors dropped: Community Health Education

Change of major name: Exercise and Sport Science to Health and Human Performance

VIII. SUMMARY OF CHANGES – Summary of Sections III, New Courses; Section IV, Courses Dropped; and Section VII, Course Number Changed, Course Credits Changed, and Course Title Changed.

	New	Dropped	Number	Credit	Title
Athletics	0	0	0	0	0
Counselor Education	13	12	5	0	1
Curriculum and Instruction	3	3	2	0	3
Dance	0	0	0	0	0
Exercise and Sport Science	6	9	0	3	2
Health Studies	0	1	1	1	1
Higher Education	0	2	0	0	0
Historical, Philosophical and Comparative	0	1	0	0	0
Industrial Technology	3	7	1	1	1
Organizational Learning and Human Resource Development	0	5	0	0	1
Research Evaluation	0	4	0	0	0
Special Education	1	2	0	0	0
Total	26	46	9	5	9

# COLLEGE OF ENGINEERING

2003-2005

## I. SIGNIFICANT TRENDS:

The AEEM Department has undergone extensive changes since the 2001-2003 catalog. The department name has been changed to Aerospace Engineering pending Regents approval. The mission of the department has been refocused toward Aerospace Engineering. This has resulted in significant changes to programs housed in the department. The five programs involved are:

- 1) Aerospace Engineering undergraduate program
- 2) Aerospace Engineering graduate program
- 3) Engineering Mechanics service courses
- 4) Engineering Mechanics graduate program
- 5) Engineering Science undergraduate program

In the Agricultural Engineering curriculum a new Agricultural and Environmental Systems Engineering option is offered. This new option replaces the Environmental and Natural Resources Engineering option and the Structures and Environmental Systems Engineering option. This change simplifies the curriculum and will be selected by students who want training in general agricultural engineering, but do not want to specialize in Power and Machinery Engineering.

The Civil Engineering course will highlight their environmental emphasis with a separate entry in the catalog. There are also plans afoot to change the name of the department to incorporate "environmental engineering" and longer term, the aim is to have an MS in Environmental Engineering defined. The integrated curriculum in the sophomore and junior years on communication and professional development is working well and is being expanded in the senior year design courses.

The overall thrust of Electrical Engineering and Computer Engineering catalog changes were to increase the number of allowed technical elective credits in the later years while decreasing the required core credits in the earlier years so that students may specialize in more areas or they may train more deeply in limited areas, and as a result will get more exposure to design, societal context, contemporary issues, and current industry technical tools and needs

The Department of Industrial and Manufacturing Systems Engineering is continuing an emphasis on enterprise computing and engineering management. A new information engineering and computing course, IE 148 (Information Technology for Engineers), was developed to replace the traditional programming course for freshmen, Engr 161, as a required course. Also, we have added IE 483/583 (Knowledge Discovery and Data Mining) as well as IE 588 (Information Systems for Manufacturing) in the area of enterprise computing. A required third management elective was added to the curriculum.

Several departments removed a number of courses that have not been taught for three or more years. Coupled with the dropping of Engineering Science and Engineering Applications and the refocus of Engineering Mechanics the college has more dropped courses in the new catalog than courses added.

## II. CURRICULA, MAJORS, MINORS ADDED OR DROPPED:

Dropped: Degree program in Engineering Application (pending Regents approval)

Dropped: Degree program in Engineering Science (pending Regents approval)

VIII. SUMMARY OF CHANGES – Summary of Sections III, New Courses; Section IV, Courses Dropped; and Section VII, Course Number Changed, Course Credits Changed, and Course Title Changed.

	New	Dropped	Number	Credit	Title
Aerospace Engineering	3	11	2	5	6
Agricultural Engineering	3	3	7	5	6
Chemical Engineering	9	7	0	1	1
Civil Engineering	5	16	0	2	7
Computer Engineering	2	2	2	3	8
Construction Engineering	1	1	0	1	1
Electrical Engineering	5	11	0	1	5
Engineering	2	2	0	0	1
Engineering Applications	0	5	0	0	0
Engineering Mechanics	2	21	0	1	3
Engineering Science	0	11	0	0	0
Industrial Engineering	12	5	0	0	3
Materials Engineering	0	3	0	1	2
Materials Science and Engineering	2	1	0	0	0
Mechanical Engineering	8	2	1	1	3
Total	54	101	12	21	46

## COLLEGE OF FAMILY AND CONSUMER SCIENCES

2003-2005

### I. SIGNIFICANT TRENDS:

The most significant trend in the College of Family and Consumer Sciences relates to the development and adoption of a new college core. The new core serves as a unifying focus for students, faculty, and those beyond our campus; it brings into curricular focus the central vision and mission statement of the College. The five core concepts are organized into two areas; two of the concepts (Critical Thinking and Interpersonal Communication) are interdisciplinary and link us across areas in the College and across campus. The other three concepts (Family, Human Nutrition, and Consumer Sciences) are discipline based, helping students see the linkages between their chosen major and the college's larger vision and mission. The core contains both professional and personal competencies and measurable outcome expectations. In addition to implementing the new College core, faculty in the College are working with ISUComm to infuse communication skills throughout the curriculum.

The Department of Apparel, Educational Studies, and Hospitality Management, formed as a new administrative unit in the last catalog from the Departments of Family and Consumer Sciences and Educational Studies; Hotel, Restaurant, and Institution Management; and Textiles and Clothing, was approved and curricular programs in each unit have continued to retain their program identity through their degree programs while working as one unit administratively. One M.S. and Ph.D. was renamed (Foodservice and Lodging Management) and the Ph.D. became an independent major.

The Department of Food Science and Human Nutrition wrote departmental outcomes for the undergraduate and graduate students that more fully reflect the department's goals and objectives. FSHN is one of the key departments in the creation of the new Food Safety Minor.

The Department of Human Development and Family Studies added some new Marriage and Family Therapy (MFT) courses to meet the continuing demands of the national professional organization and to meet needs in the growing MFT graduate specialization. They refined and changed the title of the undergraduate Child, Adult, and Family Services major after a total reworking in the previous catalog.

The Master of Family and Consumer Sciences added a new specialization in Family Financial Planning, a web-based curriculum in which students receive a masters' degree at any one of the seven cooperating universities.

### II. CURRICULA, MAJORS, MINORS ADDED OR DROPPED:

Undergraduate Minor added: Food Safety

Change of Major Name: B.S. in Child, Adult, and Family Services

M.S. in Foodservice and Lodging Management

Ph.D. in Foodservice and Lodging Management

Interdepartmental Graduate Major/Minor: Biorenewable Resources



VIII. SUMMARY OF CHANGES – Summary of Sections III, New Courses; Section IV, Courses Dropped; and Section VII, Course Number Changed, Course Credits Changed, and Course Title Changed.

	New	Dropped	Number	Credit	Title
Family and Consumer Sciences Education and Studies	1	3	0	3	2
Family Financial Planning	11	0	0	0	0
Food Science and Human Nutrition	4	7	0	3	4
Hotel, Restaurant, and Institution Management	2	0	1	1	2
Human Development and Family Studies	5	2	0	0	4
Textiles and Clothing	1	0	0	2	2
Total	24	12	1	9	14

# COLLEGE OF LIBERAL ARTS AND SCIENCES

2003-2005

## I. SIGNIFICANT TRENDS:

The College of Liberal Arts and Sciences has added only one new major and one new minor during the past two academic years. The single department in the College to substantially increase its course offerings is Computer Science, which has recently added new faculty with the support of the Baker Center for Bioinformatics and Biological Statistics.

The most significant development in LAS curricula is the anticipated restructuring of its biological science departments, including Botany, Zoology/Genetics, and Biochemistry, Biophysics and Molecular Biology, in addition to an overall review of curricula for the undergraduate Biological Sciences majors. The impact of this reorganization on the current degrees and courses offered in these departments, as well as some in other colleges is potentially significant. It will be apparent in the revisions for the 2005-2007 ISU Catalog.

The requirements for the Bachelor of Liberal Studies (BLS) degree were revised to conform with similar changes made by the University of Iowa and the University of Northern Iowa. The BLS is offered cooperatively with the other Regents universities.

Finally, within the LAS College there is a continuing ongoing effort to develop courses and majors within the broad disciplinary area of communications.

## II. CURRICULA, MAJORS, MINORS ADDED OR DROPPED:

Add: B.S. in Technical Communication

Add: Minor in Chinese Studies

Rename: M.A. in Teaching English as a Second Language/Applied Linguistics (formerly an area of specialization under the M.A. in English.)

*Pending Regent's Approval:* B.A. in Classical Studies

VIII. SUMMARY OF CHANGES – Summary of Sections III, New Courses; Section IV, Courses Dropped; and Section VII, Course Number Changed, Course Credits Changed, and Course Title Changed.

	New	Dropped	Number	Credit	Title
Air Force Aerospace Studies	0	0	0	0	0
American Indian Studies	0	0	0	0	0
Anthropology	5	3	0	0	5
Astronomy	0	1	0	0	0
Biochemistry, Biophysics, and Molecular Biology	0	0	0	0	0
Biology	2	2	0	0	0
Botany	4	3	0	0	0
Chemistry	0	3	0	1	0
Chinese	3	0	0	0	1
Classical Studies	0	0	0	0	3
Communication Studies	0	1	0	0	1
Computer Science	12	6	0	1	1
Criminal Justice Studies	1	2	0	0	0
Economics	5	5	3	2	9
English	7	2	0	2	10
Foreign Languages and Literatures	0	1	0	0	0
French	5	9	5	4	7
Genetics	1	0	0	0	0
Geology	3	5	1	4	4
German	2	1	0	0	1
Greek	3	1	0	0	0
History	2	16	0	0	7
Italian	0	0	0	0	0
Journalism and Communication	0	0	2	4	2
Latin	0	1	0	0	2
Liberal Arts and Sciences Cross-Disciplinary Studies	4	2	0	0	2
Linguistics	0	0	0	0	0
Mathematics	2	2	0	0	0
Meteorology	1	0	1	1	0
Military Science	1	0	0	0	0
Music	3	6	2	1	6
Naval Science	0	0	0	0	0

Philosophy	3	2	0	0	2
	New	Dropped	Number	Credit	Title
Physics	0	2	0	0	2
Political Science	5	4	1	0	3
Portuguese	0	1	0	0	0
Psychology	0	5	0	2	0
Religious Studies	0	0	0	0	1
Russian	2	4	1	0	4
Sociology	2	6	0	0	4
Spanish	4	3	0	0	2
Speech Communication	1	0	0	0	0
Statistics	5	4	1	1	11
Women's Studies	0	0	0	0	1
Zoology	4	1	0	1	3
Total	92	104	17	24	94