

# Quality Curriculum

## Raising the Bar

As we enter the 2003-04 academic year, it is time—and perhaps past time—for us to consider renewal of Clemson University's curricula. Nothing is more important to a university than its curricula; owned by the faculty, shaped by the faculty, and taught by the faculty. Curriculum is the stage where all the players—teaching, research, and service—come together to define a quality institution. Indeed, the intellectual environment at Clemson University is driven by its curricula.

We cannot let tradition, inertia, or existing infrastructure define our future and that of our students. The world has changed since the 1990s when most of us reworked our departmental course offerings. Technology has opened new doors beyond our classrooms and we must now guide our students to new understandings.

Our curricula should be built around a strong core of coursework and experiences. We refer to our current “core” as General Education—a 41 credit hour requirement completed by selecting from among 367 diverse courses. As we reconsider the role and structure of this General Education core, we must ask ourselves what knowledge and capabilities we want our students to take with them when they leave Clemson University. Can we define a core of expectations and learning outcomes for ALL students? At the same time, can we create the flexibility necessary for building quality discipline-based curricula around that core? This is our challenge for 2003-04!

## GENERAL EDUCATION

Our University Curriculum Committee worked for many long hours last year to revise our General Education curriculum. The committee defined six areas of competency (see attachment for details):

- Written and Oral Communication Skills
- Reasoning, Critical Thinking, and Problem Solving
- Scientific and Technological Literacy
- Social and Cross-cultural Awareness
- Art and Humanities
- Ethical Judgement

After considering these aspects of the General Education experience, the Curriculum Committee defined a 33 credit hour core for General Education as follows:

English Composition	3 hours
Advanced Writing	3
Oral Communications	3
Social Sciences	6
Arts and Humanities	6
Mathematics	3
Laboratory Science	4
Science and Technology in Society	3
Portfolio (it is recommended that a third hour be required by the discipline)	<u>2</u>
Total	33

The Curriculum Committee also identified existing courses that could be used to fulfill these requirements (see attachment for details).

### **The Faculty Approval Process**

According to the *Faculty Manual* (Part VII, Article IV, Section 3, p. vii-6) “The Curriculum Committee may initiate curricular proposals whose effects would be university-wide, but may not act upon such proposals until all collegiate faculties have had an opportunity to review and respond to them.” However, if we return to a campus-wide discussion of General Education isolated from consideration of all other aspects of the curriculum (general education + free electives + discipline/departmental requirements) we will probably spend another long year in debate. Instead, I ask that each department and college consider General Education as part of the total curriculum picture as outlined below. We will then vote, by College, as to whether or not to accept the General Education core as outlined by the University Curriculum Committee. **I expect each College to submit its vote to the University Curriculum Committee by October 10.**

### **The Role of General Education**

I think we would all probably agree that students today must be globally aware. Many of our graduates will work for international companies in other countries or with individuals in other nations through the power of technology. Our students will not be able to read a newspaper or understand world events if they do not understand the politics, religions, cultures, and economics of Iran, Iraq, Africa, South America, China, Japan, etc. Understanding history and the relationships between industrialized and developing countries will be critical for our students’ future success.

Our students must be able to communicate. Through writing, speaking, reading, and the arts, we communicate the human experience. Our students must be able to reason, articulate their thoughts, and persuade others. We must guide our students to explore their own cultural heritage

and to appreciate the many cultures that exist in the melting pot of America. They should recognize the importance of language and understand cultural differences in a historical context.

It is also important that our students understand how science works. They need to understand why scientists can never prove something is true—science is a constant search for evidence. They need to recognize the moral, ethical, and social implications of scientific work—how unraveling the mysteries of the genome, global warming, or star wars will transform our future. Students need to understand what data are—how data are collected and how they are used. Students will need to be able to assess risk by analyzing data and they must be able to use numbers and equations to express relationships.

*Note: These thoughts represent my own musings. They are not intended to be a directive to the faculty, simply a means to begin the conversation. I expect creativity, controversy, and compromise to occur on many fronts as we discuss General Education and curriculum in general. I see our work as exciting and critical to improving the academic quality of our undergraduate experience.*

### **Designing the General Education Core**

Before assigning existing courses to the proposed General Education core, it is my hope that each College will take the initiative to ask what students majoring in the disciplines of that college should really know and be able to do. Using existing courses for the sake of convenience or tradition may not be best for accomplishing our goals. Rather, we may need to create new courses and learning experiences that integrate information and skills from a variety of disciplines. This would better reflect the circumstances of our world today.

Our typical response to satisfying competency requirements (see list above) is to add courses rather than integrate those competencies throughout the curriculum. Ethical judgement, writing, reading, oral communication, critical thinking, cultural awareness, technology, scientific literacy, and mathematics should be cross-cutting elements, not only within our General Education core, but throughout all curricula.

In the proposed General Education core, a total of 12 hours are devoted to social sciences, arts, and humanities. Another nine have been assigned to oral and written communication and 10 are identified as science and technology. One might think in terms of three “buckets” of curriculum, adjusting balance or emphasis within the “core” by integrating course content and competencies. By adding coursework beyond the core, faculty in each discipline can further adjust or enhance the general education experience if desired. For instance, some debate still exists as to whether the content of “Science and Technology in Society (STS)” represents a science or a social science perspective. The content of this STS course can be defined by the faculty in a discipline, department, or college as the total curriculum for that unit is reviewed. It will also be possible for the unit to augment this requirement by the addition of another science or mathematics course, expanding the general education experience.

In addition to General Education course requirements, all students will be required to develop an electronic portfolio as a means to demonstrate their proficiency using technology and

to reflect on what they have learned. The electronic portfolio will allow students to report evidence of general education outcomes, proficiency in discipline-based requirements, career aspirations, and personal information. The Pearce Center for Professional Communication and Educational Technology Services have been piloting the electronic portfolio and a university-wide task force is being established to move this project forward. It is anticipated that one hour of pass/fail portfolio credit will be earned during the freshman year. A second credit will be awarded at the end of the junior year at which time General Education outcomes can be assessed. Individual departments may want to add credit hour requirements for the portfolio to include capstone experiences and to better prepare students for post-graduate life.

### **The Charge**

Each college, unhampered by “turf guarding” should consider what the General Education core should look like. Do you approve of the 33-hour core outlined by the University Curriculum Committee? After the colleges have voted whether or not to accept the proposed core, work will begin to design core course content. Do you want to use existing courses? Which ones? Do you want to do something new? Are there hours in the core that you recommend be substituted by discipline-based courses? Are these substitutions in keeping with the integrity of the core curriculum?

I encourage you to think creatively about how you want to deliver General Education coursework. You might want to consider team teaching within disciplines and even across colleges, courses composed of three four-week modules, or even clusters of courses that represent “area studies.” Consider the use of newspapers, cultural events, technology, and other non-text venues. Most important, be flexible in developing opportunities for students to learn.

A web-site will be constructed to describe ideas and course suggestions, or to post curriculum needs as well as courses that individuals or interdisciplinary teams of faculty are interested in offering. You should make sure to use this site during your deliberations.

General Education proposals from departments and colleges will be examined to identify common courses and new course requirements. The General Education Emphasis Area faculty will be reconvened to consider the scope and relevance of proposed offerings. The task of meeting teaching needs and determining faculty responsibilities will require administrative input. We will also need to examine our rewards system as we promote the scholarship of teaching. Our new General Education Core will offer faculty opportunities for research—defining and assessing learning outcomes—and for scholarship—bringing scholarly learning and thinking into the classroom, as well as publishing.

**I expect us to complete our work in General Education by December 2003.**

### **THE REST OF THE STORY**

Once General Education core offerings are established, departmental curricula will need to be built around the core.

The most difficult part of developing the curriculum within a discipline is finding a balance between depth and breadth, and between content and application. We want to capture our students' enthusiasm and engage them as active learners. Students should have opportunities for undergraduate research, study abroad, internships, co-op experiences, and service learning. They should experience collaborative work in which they learn to be team players, to listen, lead, and communicate their ideas and needs. They should engage in distance learning—a skill that will serve them life-long. They should have to present an original piece of work, explain it to peers, and publish it in a venue that will allow their thoughts and ideas to be shared with others.

To increase the depth and rigor of our classes and to raise expectations about how our students apply what they have learned, we must provide adequate time for students to engage in learning and for faculty to engage in new ways of teaching. For this reason, we will seek to establish curricula of 120 - 124 credit hours (including portfolio hours). This should give students more time to concentrate on required courses without worrying about “just filling in hours to graduate.” In the context of “less is more,” courses should become more rigorous and meaningful. Our curriculum renewal should raise the academic bar, at the same time providing students with quality time for learning and faculty with quality time to engage in translating their scholarly work into the classroom.

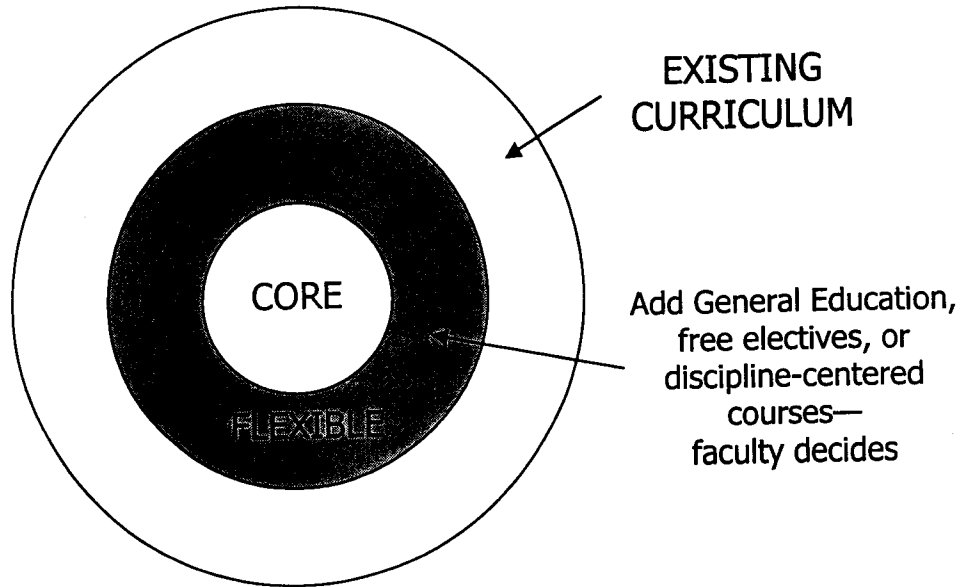
**Formerly, 10 hours of free electives were required in all curricula but this requirement will no longer be in force.** With the reduction in general education hours from 41 to 33 and the removal of 10 hours of free electives, many existing curricula will be reduced to 120 or fewer hours. Remember, however, the point of this curriculum renewal project is to examine the *entire* curriculum from the ground up—a zero-based curriculum study—asking what it is that students should know and be able to do. What are your expected learning outcomes? How can you integrate coursework and reduce repetition? How can you ensure that students write and speak more often in your courses? How can you thread writing and oral communication, mathematics, literature, or ethics throughout the curriculum so that exposure does not just occur in a single course?

A 120-124 hour curriculum can be completed in four years if students take a minimum of 15 cr/semester. Students who desire to take more than 15 cr/hr/semester will be able to take elective courses of their own choosing at no extra cost. If a department so desires, free electives can be built into a 120-124 hour curriculum. Likewise, additional general education hours could be built into the curriculum instead of free electives. These could be clustered to direct students to a variety of experiences considered important by the relevant faculty.

### **The Curriculum Model**

In the diagram on the following page, we identify the General Education core of 33 hours surrounded by the rest of the presently required curriculum (the number of hours varying by discipline). Subtracting eight hours from the current General Education requirement, 10 free elective hours, and restructuring current requirements, produces flexible hours depicted as the circle (gray) around the core. Substitution of discipline based courses for core courses (if warranted) will also impact the number of available flexible hours. These flexible hours can be

used to augment General Education, offer free electives, or create new discipline-specific offerings.



For some special groups of students (e.g., ROTC or honors students), substitutions of programmatic course offerings may be possible within the General Education curriculum so that additional credit hour requirements can be met within a 120-124 hour framework.

**I hope that curriculum work within departments can be completed by May 1, 2004.** This is a demanding schedule, but with no deadline this undertaking could go on and on. Let's get it done. Approximately 41% of our faculty will retire between now and 2010. We cannot begin to define our new hires until we know what expertise is needed to teach our courses and deliver a Clemson education.

In all of our work during the 2003-04 academic year, think QUALITY. Be creative, allow for flexibility, overcome inertia, challenge traditions, and RAISE THE ACADEMIC BAR!

## ATTACHMENT 1

### General Education Competencies February 21, 2003 modifications

On February 14 and 21, 2003, the Undergraduate Curriculum Committee modified competencies that it had adopted on February 7, 2003.

**...A goal: to foster in the undergraduate students**

Through the General Education experience at Clemson University, undergraduate students will:

#### Written & Oral Communication Skills

1. Demonstrate effective communication skills<sup>1</sup> appropriate for topic, audience, and occasion.
2. Write coherent, well-supported and carefully edited essays and reports suitable for a range of different audiences and purposes.
3. Employ the full range of the writing process from rough draft to edited product.
4. Incorporate both print and electronic resources into speeches, presentations, and written documents.

#### Reasoning, Critical Thinking, and Problem Solving

1. Summarize, analyze, and evaluate fictional and non-fictional texts.
2. Differentiate deductive and inductive reasoning processes.
3. Acquire and analyze information to determine its quality and utility
4. Recognize parallels between and among disciplines and apply knowledge, skills, or abilities learned in one discipline to another.

#### Scientific & Technological Literacy

1. Demonstrate mathematical literacy through solving problems, communicating concepts, reasoning mathematically, and using mathematical or statistical methods and multiple representations.
2. Develop an understanding of the principles and theories of a natural<sup>2</sup> science and their applications.
3. Explain and apply the methodologies of a natural science in laboratory or experimental settings.
4. Apply information technologies to intellectual and professional development.
5. Understand the role of science and technology in society.

#### Social & Cross-Cultural Awareness

1. Develop an understanding of social science methodologies.
2. Explore the causes and consequences of human actions.
3. Develop an understanding of world cultures in historical and contemporary perspectives.
4. Recognize the importance of language in cultural contexts.

#### Arts & Humanities

1. Develop an understanding of the history and cultural contexts of the arts and humanities.
2. Examine the arts and humanities as expressions of the human experience.
3. Experience and evaluate productions of the performing and visual arts.

#### Ethical Judgment

1. Analyze the ethical dimensions of human endeavors.
2. Explore the historical and cultural foundations of ethical systems.

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<sup>1</sup> Objective is primary focus on oral and written communication

<sup>2</sup> includes biological, physical

**ATTACHMENT 2**

**PROPOSED  
GENERAL EDUCATION  
May 30, 2003**

**English Composition**  
English 102 or 103

**3 Hours**

**Advanced Writing**

(One course from a list of approved 3-hour courses or a cluster of approved courses by a specific major that together provides content in writing equivalent to a three-credit hour course)

**3 Hours**

**Oral Communications**

(One course from a list of approved 3-hour courses or a cluster of approved courses by a specific major that together provides content in oral communications equivalent to a three-credit hour course)

**3 Hours**

**Portfolios**

(Two one-hour courses.) A third hour of portfolio building should be required and be supervised by the department.

**2 Hours**

**Mathematical, Scientific and Technological Literacy**

1 Mathematics course to be selected by the majors  
1 Course in a laboratory science to be selected by the majors  
1 Course in Science and Technology in Society from a list of three-hour courses (to be provided).

**3 Hours**

**4 Hours**

**3 Hours**

**Social Sciences**

AAS \*301  
ANTH \*201  
AP EC 202  
CHS H202  
COMM 365,369  
CRD 257  
ECON 200, 211, 212  
GEOG 101, \*103, 106, \*340  
HIST 101, 102, 122, \*172, \*173, \*193, 300, 301, 302, 303, 304, 305, 307, 311, 312, 313, 314, 316, 318, 321, 322, 323, 324, 325, 327, 328, 329, 330, 333, 334, 337, \*338, \*339, \*340, \*341, \*342, \*351, \*352, \*353, \*355, \*361, \*363, \*370, \*372, \*373, \*374, \*375, \*377, \*378, \*380, \*381, \*384, \*385, \*386, \*387, 390, \*391, 392, 393  
PHIL 320, 327  
PO SC 101, \*102, \*104, 301, 302, \*363  
PSYCH 201, 306  
RS 301  
SOC 201, 202

**6 Hours**

(To meet the Cross Cultural Awareness requirement of General Education, students must take one course from the list of Social Sciences and Humanities courses. These are marked with an asterisk.)

**Arts and Humanities**

**6 Hours**

**COURSES (one from this list)**

**Literature**

CHIN 201, 202  
ENGL 202, 203, 204, 205, 206, 207, 208, 209, H210  
FR 201, 202, 300\*  
GER 201, 202, 301\*, 302\*  
ITAL 201, 202, 301\*, 302\*, 400\*  
JAPN 201, 202  
PORT 202  
REL 302  
RUSS 202  
SPAN 202, 303\*, 311\*

**Other (one from this list)**

AAH (101?), 210\*  
CHIN 202  
CHIN 499\*  
CHS 203  
COMM 365, 369  
ENGL 350, 351, 353\*, 355, 356, 357, 380\*, 385, 386  
GW 301  
HUM 301, 302, 306, 309\*  
MUS 210\*, 311, 312, 313, 324\*, 317  
PHIL 101, 102, 103, 303, 304, 315, 316, 317, 318, 320,  
323, 324, 325, 326, 327, 343, 344, 345  
REL 101, 102\*, 301\*, 306\*, 307\*  
THEA 210, 315\*, 316\*, 317\*  
WS 301\*

(One course from a subset of the two areas' lists to fulfill the Cross Cultural Awareness is marked with an asterisk. The language 201 and 202 courses can only be used by B.S. majors.)

**Ethical Judgment**

Embedded in curriculum to be overseen by the Rutland Center for Ethics.

**Total**

**33 Hours**