

**MEMORANDUM**

**TO:** Debra Jackson, Institutional Effectiveness and Assessment  
Doris R. Helms, Vice President for Academic Affairs and Provost  
James F. Barker, President

**FROM:** Janice W. Murdoch, Chair, Undergraduate Curriculum Committee *JWM*

**DATE:** October 23, 2012

**SUBJECT:** Administrative Approval of Curriculum Items

DEAN  
UNDERGRADUATE  
STUDIES

Clemson University  
E101 Martin Hall  
Box 345105  
Clemson, SC  
29634-5105

P 864-656-3942  
F 864-656-1363

---

The Undergraduate Curriculum Committee met on October 5, 2012 to approve the attached curriculum/course changes received in the Office of the Provost, October 23, 2012. The purpose of this memorandum is to respectfully request that you review this information and concur by giving final approval.

---

**APPROVED:**

*Debra B Jackson* DATE 11/8/12  
DR. DEBRA JACKSON, INSTITUTIONAL EFFECTIVENESS AND ASSESSMENT

*Doris R Helms* DATE 12/13/12  
DR. DORIS HELMS, VICE PRESIDENT FOR ACADEMIC AFFAIRS & PROVOST

*James F Barker* DATE 12/14/12  
JAMES F. BARKER, PRESIDENT CLEMSON UNIVERSITY

/rft

C: File

Attachments

**AGENDA**  
**University Undergraduate Curriculum Committee Meeting**  
**Friday—October 5, 2012—1:30 PM**  
**E304 Martin Hall**

- I. Call to order**
- II. Introductions**
- III. Consideration of September meeting minutes**
- IV. Old business**
  - A. iRoar Update – Julie Pennebaker**
  - B. QEP Update – Jan Murdoch**
- V. New business**
  - A. Suggested Revision of the Critical Thinking Competency – Bob Kosinski**
  - B. Committee Reports**
    - a. Arts & Humanities – Bruce Whisler**
    - b. Mathematical & Natural Sciences – Bob Green**
    - c. Social Science – Laura Olson**
    - d. Cross Cultural Awareness – Mike Coggeshall**
    - e. Science & Technology in Society – Pam Mack –**
    - f. Ethical Judgment – Dan Wueste**
    - g. Critical Thinking – Sarah Winslow**
    - h. Communication – Michael LeMahieu**
- VI. Curricula/course approvals - attached**
- VII. Other business**
- VIII. Adjourn**

University Undergraduate Curriculum Committee  
Minutes Meeting  
E304 Martin Hall  
September 7, 2012

**Members Present:** Jan Murdoch, chair; Michael Silvestri; Eric Touya; Mike Coggeshall; Angela Morgan; Bob Kosinski; Cheryl Ingram-Smith; Mary Beth Kurz; Brian Dominy; Bob Horton; Roxanne Amerson; Perry Austin; Jeffrey Appling; Julie Pennebaker; Cecelia Hamby; Donna Barrett; Shannon Clark; Pam Mack; Tom Oberdan; and Rhonda Todd

Murdoch convened the meeting at 1:36 PM

**Welcome and introductions**

**Approval of minutes**

The committee approved the May meeting minutes.

**New Business**

- A. iRoar Update** – Pennebaker distributed copies of Undergraduate Program Codes of Majors and Concentrations, Minor Abbreviations, Subject Codes. Pennebaker and Clark reported they worked with departments one-on-one to develop the codes. Pennebaker reviewed the handout with committee members. She gave an overview of the website: <http://www.registrar.clemson.edu/html/iROARdocs.htm> . Morgan requested information about how prerequisites will be viewed. Pennebaker stated that she would like some help from this committee to identify issues with prerequisites and co-requisites. She distributed a copy of Prerequisites, Co-requisites, and Concurrent Enrollment in iRoar. She requested that committee members take this back to their college for discussion and clarification about what they really want and mean by the terms. Pennebaker explained how iRoar will work with concurrent courses (courses with labs). Ingram-Smith had questions about course substitutions and Clark agreed to work with her to resolve the issue. Pennebaker reported there will be a mock registration on November 27, 28, 29 to test the system. She encouraged faculty to volunteer their students or class time to assist with this process. Murdoch closed by stating she will give a window for opportunity to resolve many of the problems found with prerequisites, co-requisites, etc.. She reported December will be deadline for making changes without submitting forms.
- B. QEP Update** – Murdoch reported that the QEP Steering Committee has placed a call for proposals to faculty who would like to do a Critical Thinking pilot. She reported that there will be faculty training involved before implementing the program. The committee discussed the importance of having students and faculty approval before implementing this program. Murdoch encouraged committee members to engage with their two college representatives on the QEP committee for updates and information. Committee members discussed the important aspect of student engagement and creating excitement while issuing them a challenge. Kosinski stated that there are courses currently taught on campus that really do stimulate Critical

Thinking. Committee members wanted to know what kind of deadline they were looking at. Murdoch stated that this is a five year initiative, but mid-December is the deadline for the plan to go to the printer and then to SACS for approval

**C. Committee reports**

- a. Arts & Humanities – Bruce Whisler
- b. Mathematical & Natural Sciences – Bob Green
- c. Social Science – Laura Olson
- d. Cross Cultural Awareness – Mike Coggeshall
- e. Science & Technology in Society – Pam Mack
- f. Ethical Judgment – Dan Wueste
- g. Critical Thinking – Sarah Winslow
- h. Communication – Michael LeMahieu

**D. Curriculum/course approval** – See attached. Items in grey are tabled.

**Other Business**

Coggeshall reported that Anthropology was approved by the CHE Academic Affairs and Licensing Committee and now will go to the full commission of CHE.

Appling stated that LIB 100 has about 4500 students enrolled. He reported that this course was once taught within the Library with face to face workshops with Library personnel. After some assessment the Library determined that the face to face approach was not really reaching the goals they had intended, so they have put the together an on-line tutorial for Library skills, etc. Appling proposed changing the class from LIB 100 to CU 100. Committee members agreed that it sounded like a good idea, so Appling agreed to get the paperwork together and bring to the next meeting.

There being no further business, the meeting was adjourned at 4:05 PM.

Minutes respectfully submitted by Rhonda Todd.

Minutes for Courses/Curricula  
September 7, 2012

University Undergraduate Curriculum Committee

		Credits	Page
I.	College of Agriculture, Forestry, and Life Sciences		
II.	College of Architecture, Arts and Humanities		
	B. Communication Studies		
	COMM 430      Legal Communication - new course	3(3,0)	1
	COMM 431      Legal Communication Trial - new course	3(3,0)	3
III.	College of Engineering & Science		
	A. Electrical and Computer Engineering		
	ECE 202      Electric Circuits I - change prerequisites	3(3,0)	5
	ECE 262      Electric Circuits II - change prerequisites	3(3,0)	6
	ECE 307      Basic Electric Engineering - change prerequisites	2(2,0)	7
	ECE 320      Electronics I - change prerequisites	3(3,0)	8
	ECE 311      Elec Engr Lab III - change prerequisites	1(0,2)	9
	ECE 321      Electronics II - change prerequisites	3(3,0)	10
IV.	College of Health, Education and Human Development		
V.	College of Business and Behavioral Science		
VI.	Libraries		
	CU 201      Sustainability Leadership - new course	3(3,0)	11



## MINOR ABBREVIATIONS

Legacy Minor Code	Minor	New Minor Abbreviation
1100	Accounting	ACCT
1220	Adult Extension Education	ADEX
1225	Aerospace Studies	AS
1250	Agricultural Business Management	AGBM
1600	Agricultural Mechanization and Business	AGME
5650	American Sign Language Studies	ASLS
2125	Animal and Veterinary Sciences	AVS
1970	Anthropology	ANTH
4010	Architecture	ARCH
4120	Art	ART
2420	Athletic Leadership	AL
2150	Biochemistry	BIOC
2220	Biological Sciences	BIOS
2510	Business Administration	BUAD
2750	Chemistry	CHEM
2815	Cluster-Engineering	CLEN
2820	Cluster-Life Sciences	CLLS
2830	Cluster-Physical Sciences	CLPH
2840	Cluster-Social Sciences	CLSO
7500	Communication Studies (General)	COSG
7510	Communication Studies (Sports)	COMS
3100	Computer Science	CPSC
1700	Crop and Soil Environmental Science	CSEN
3000	Digital Production Arts	DPA
5505	East Asian Studies	EAS
3400	Economics	ECON
3410	Education	EDUC
3600	English	ENGL
3700	Entomology	ENT
3720	Entrepreneurship	ENTR
3810	Environmental Engineering	ENVE
3790	Environmental Science and Policy	ENSP
4690	Equine Business	EQUI
7756	Film Studies	FILM
3900	Financial Management	FINM
4100	Food Science	FDSC
4180	Forest Products	FORP
4200	Forest Resource Management	FORM
4210	Genetics	GEN
4300	Geography	GEOG
4400	Geology	GEOL
4950	Global Politics	GLPO
4578	Great Works	GW
4600	History	HIST
4700	Horticulture	HORT
4760	Human Resource Management	HRM



## SUBJECT CODES

Legacy Abbreviation	Subject	New Subject Code
ACCT	Accounting	ACCT
A S	Aerospace Studies	AS
AG ED	Agricultural Education	AGED
AG M	Agricultural Mechanization	AGM
AGRIC	Agriculture	AGR
AFLS	Agriculture, Forestry and Life Sciences	AFLS
A S L	American Sign Language	ASL
AVS	Animal and Veterinary Sciences	AVS
ANTH	Anthropology	ANTH
AP EC	Applied Economics	APEC
ARAB	Arabic	ARAB
ARCH	Architecture	ARCH
ART	Art	ART
A A H	Art and Architectural History	AAH
ASTR	Astronomy	ASTR
A L	Athletic Leadership	AL
AUDIO	Audio Technology	AUD
AU E	Automotive Engineering	AUE
BIOCH	Biochemistry	BCHM
BIO E	Bioengineering	BIOE
BIO SC	Biological Sciences	BIOS
BIOL	Biology	BIOL
BMOLE	Biomolecular Engineering	BMOL
B E	Biosystems Engineering	BE
B T	Biosystems Technology	BT
BUS	Business	BUS
M B A	Business Administration	MBA
CVT	Cardiovascular Technology	CVT
CTE	Career and Technology Education	CTE
CCINT	Career Center Internship Program	INT
CH E	Chemical Engineering	CHE
CH	Chemistry	CH
CHIN	Chinese	CHIN
C R P	City and Regional Planning	CRP
C E	Civil Engineering	CE
CU	Clemson University	CU
CAAH	College of Architecture, Arts and Humanities	CAAH
CES	College of Engineering and Science	CES
COMM	Communication Studies	COMM
C R D	Community and Rural Development	CRD
CP SC	Computer Science	CPSC
C S M	Construction Science and Management	CSM
CO-OP	Cooperative Education	COOP
CSENV	Crop and Soil Environmental Science	CSEN
DANCE	Dance	DANC
DSIGN	Design Studies	DSGN

L&IH	Language and International Health	LIH
L&IT	Language and International Trade	LIT
LATIN	Latin	LATN
LAW	Law	LAW
L S	Leisure Skills	LS
LIB	Library	LIB
EDLT	Literacy	EDLT
MGT	Management	MGT
MKT	Marketing	MKT
MS&E	Materials Science and Engineering	MSE
MTHSC	Mathematical Sciences	MTHS
M E	Mechanical Engineering	ME
MICRO	Microbiology	MICR
EDML	Middle-Level Education	EDML
M L	Military Leadership	ML
MUSIC	Music	MUSC
NPL	Nonprofit Leadership	NPL
NURS	Nursing	NURS
NUTR	Nutrition	NUTR
PKGSC	Packaging Science	PKSC
P A S	Pan African Studies	PAS
PRTM	Parks, Recreation and Tourism Management	PRTM
P A	Performing Arts	PA
PHIL	Philosophy	PHIL
PH SC	Physical Science	PHSC
PHYS	Physics	PHYS
PDBE	Planning, Design and the Built Environment	PDBE
PES	Plant and Environmental Science	PES
PL PA	Plant Pathology	PLPA
PL PH	Plant Physiology	PLPH
PO ST	Policy Studies	POST
PO SC	Political Science	POSC
PORT	Portuguese	PORT
PSYCH	Psychology	PSYC
P ADM	Public Administration	PADM
RED	Real Estate Development	RED
REL	Religion	REL
RCID	Rhetorics, Communication and Information Design	RCID
R S	Rural Sociology	RS
RUSS	Russian	RUSS
S T S	Science and Technology in Society	STS
EDSEC	Secondary Education	EDSC
SOC	Sociology	SOC
SSCS	Soils and Sustainable Crop Systems	SSCS
SPAN	Spanish	SPAN
ED SP	Special Education	EDSP
SYS E	Systems Engineering	SYSE
THEA	Theatre	THEA
VT ED	Vocational-Technical Education	VTED
W F B	Wildlife and Fisheries Biology	WFB
W S	Women's Studies	WS





## UNDERGRADUATE PROGRAM CODES MAJORS AND CONCENTRATIONS

### COLLEGE OF AGRICULTURE, FORESTRY AND LIFE SCIENCES

<b>BS-AGED-1</b>	<b>BS Agricultural Education</b>
E004	Communication Emphasis
E013	Leadership Emphasis
E022	Teaching Emphasis
<b>BS-AGME-1</b>	<b>BS Agricultural Mechanization and Business</b>
<b>BS-AVS-1</b>	<b>BS Animal and Veterinary Sciences</b>
ANAG	Animal Agribusiness Concentration
EQUI	Equine Business Concentration
PREV	Preveterinary and Science Concentration
<b>BS-BIOC-1</b>	<b>BS Biochemistry</b>
<b>BA-BIOS-1</b>	<b>BA Biological Sciences</b>
E076	Prerehabilitation Sciences Emphasis
<b>BS-BIOS-1</b>	<b>BS Biological Sciences</b>
E077	Entomology Emphasis
E078	Prepharmacy Emphasis
E079	Quantitative Biology Emphasis
E080	Toxicology Emphasis
<b>BS-ENR-1</b>	<b>BS Environmental and Natural Resources</b>
COBI	Conservation Biology Concentration
NRE	Natural Resource and Economic Policy Concentration
NRMG	Natural Resources Management Concentration
<b>BS-FDSC-1</b>	<b>BS Food Science</b>
FDST	Food Science and Technology Concentration
NUTD	Nutrition and Dietetics Concentration
<b>BS-FORM-1</b>	<b>BS Forest Resource Management</b>
E148	Land Surveying Emphasis
<b>BS-GEN-1</b>	<b>BS Genetics</b>
<b>BS-HORT-1</b>	<b>BS Horticulture</b>
<b>BS-MICR-1</b>	<b>BS Microbiology</b>
BIOM	Biomedicine Concentration

<b>BS-PKGS-1</b>	<b>BS Packaging Science</b>
E007	Distribution, Transportation and Engineering Technology Emphasis
E130	Food and Health Care Packaging Emphasis
E149	Package Design and Graphics Emphasis
E136	Materials Emphasis
<b>UD-PPFH-1</b>	<b>UD Preprofessional Health Studies</b>
<b>UD-PRPH-1</b>	<b>UD Prepharmacy</b>
<b>UD-PREH-1</b>	<b>UD Prerehabilitation Sciences</b>
<b>BS-SSCS-1</b>	<b>BS Soils and Sustainable Crop Systems</b>
AGBI	Agricultural Biotechnology Concentration
E002	Agricultural Biosystems and Technology Emphasis
E003	Agricultural Biotechnology and Global Society Emphasis
SWES	Soil and Water Environmental Science Concentration
E005	Crop Production Emphasis
E019	Soil and Water Quality Emphasis
E020	Soil Management Emphasis
E021	Soil Science Emphasis
SCRP	Sustainable Crop Production Concentration
E005	Crop Production Emphasis
E010	Integrated Pest Management Emphasis
<b>BS-TURF-1</b>	<b>BS Turfgrass</b>
<b>BS-WFB-1</b>	<b>BS Wildlife and Fisheries Biology</b>

## **COLLEGE OF ARCHITECTURE, ARTS AND HUMANITIES**

<b>BA-ARCH-2</b>	<b>BA Architecture</b>
<b>BA-COMM-2</b>	<b>BA Communication Studies</b>
<b>BS-CSM-2</b>	<b>BS Construction Science and Management</b>
<b>BA-ENGL-2</b>	<b>BA English</b>
E062	Literature Emphasis
E063	Writing and Publication Studies Emphasis
<b>BA-HIST-2</b>	<b>BA History</b>
E009	Public History Emphasis
<b>BLA-LARC-2</b>	<b>BLA Landscape Architecture</b>
<b>BS-LIH-2</b>	<b>BS Language and International Health</b>
E068	Chinese Emphasis
E112	Spanish Emphasis
E153	Health Administration Emphasis
E131	Community Development Emphasis
<b>BA-LIT-2</b>	<b>BA Language and International Trade</b>
AIEC	Applied International Economics – Chinese Concentration
AIEF	Applied International Economics – French Concentration
AIEG	Applied International Economics – German Concentration
AIEJ	Applied International Economics – Japanese Concentration

AIES	Applied International Economics – Spanish Concentration
INTC	International Trade – Chinese Concentration
INTF	International Trade – French Concentration
INTG	International Trade – German Concentration
INTJ	International Trade – Japanese Concentration
INTS	International Trade – Spanish Concentration
TSMC	Tourism – Chinese Concentration
TSMF	Tourism – French Concentration
TSMG	Tourism – German Concentration
TSMJ	Tourism – Japanese Concentration
TSMS	Tourism – Spanish Concentration
<b>BA-MLAN-2</b>	<b>BA Modern Languages</b>
E069	American Sign Language Emphasis
E068	Chinese Emphasis
E110	French Emphasis
E111	German Emphasis
E070	Italian Emphasis
E006	Japanese Emphasis
E112	Spanish Emphasis
<b>BA-PHIL-2</b>	<b>BA Philosophy</b>
E071	Law, Liberty and Justice Emphasis
E072	Religious Studies Emphasis
<b>BA-PERF-2</b>	<b>BA Production Studies In Performing Arts</b>
AUDI	Audio Technology Concentration
MUSI	Music Concentration
THEA	Theatre Concentration
<b>BFA-VART-2</b>	<b>BFA Visual Arts</b>

**COLLEGE OF BUSINESS AND BEHAVIORAL SCIENCE**

<b>BS-ACCT-3</b>	<b>BS Accounting</b>
<b>BA-ECON-3</b>	<b>BA Economics</b>
<b>BS-ECON-3</b>	<b>BS Economics</b>
E132	Corporate Finance Emphasis
E146	Financial Planning Emphasis
E144	Financial Services Emphasis
E140	Real Estate Emphasis
<b>BS-FINM-3</b>	<b>BS Financial Management</b>
<b>BS-GCOM-3</b>	<b>BS Graphic Communications</b>
<b>BS-MGT-3</b>	<b>BS Management</b>
E051	Entrepreneurship Emphasis
E052	Human Resources Management Emphasis
E053	International Management Emphasis
E054	Management Information Systems Emphasis
E055	Operations Management Emphasis
E056	Supply Chain Management Emphasis
E057	General Management Emphasis

<b>BS-MKT-3</b>	<b>BS Marketing</b>
E058	General Marketing Emphasis
E059	Services Marketing Emphasis
E060	Sport Marketing Emphasis
E061	Technical Marketing Emphasis
<b>BA-POSC-3</b>	<b>BA Political Science</b>
<b>BS-POSC-3</b>	<b>BS Political Science</b>
AMPO	American Politics Concentration
GLPO	Global Politics Concentration
POEC	Political Economy Concentration
PADM	Public Administration Concentration
PUPO	Public Policy Concentration
<b>UD-PREB-3</b>	<b>UD Pre-Business</b>
<b>BA-PSYC-3</b>	<b>BA Psychology</b>
<b>BS-PSYC-3</b>	<b>BS Psychology</b>
<b>BA-SOC-3</b>	<b>BA Sociology</b>
<b>BS-SOC-3</b>	<b>BS Sociology</b>

#### **COLLEGE OF ENGINEERING AND SCIENCE**

<b>BS-BIOE-4</b>	<b>BS Bioengineering</b>
BELE	Bioelectrical Concentration
BMAT	Biomaterials Concentration
<b>BS-BIEN-4</b>	<b>BS Biosystems Engineering</b>
E023	Bioprocess Engineering Emphasis
E024	Ecological Engineering Emphasis
<b>BS-CHEM-4</b>	<b>BS Chemical Engineering</b>
BMOL	Biomolecular Engineering Concentration
<b>BA-CHEM-4</b>	<b>BA Chemistry</b>
<b>BS-CHEM-4</b>	<b>BS Chemistry</b>
<b>BS-CIVE-4</b>	<b>BS Civil Engineering</b>
E141	Applied Fluid Mechanics Emphasis
E134	Construction Emphasis
E090	Environmental Engineering Emphasis
E162	Geoenvironmental Engineering Emphasis
E133	Structural Engineering Emphasis
E142	Transportation Engineering Emphasis
<b>BS-CPEN-4</b>	<b>BS Computer Engineering</b>
<b>BS-CIS-4</b>	<b>BS Computer Information Systems</b>
<b>BA-CPSC-4</b>	<b>BA Computer Science</b>
<b>BS-CPSC-4</b>	<b>BS Computer Science</b>

<b>BS-ELEN-4</b>	<b>BS Electrical Engineering</b>
<b>BS-ENVE-4</b>	<b>BS Environmental Engineering</b>
<b>UD-GENG-4</b>	<b>UD General Engineering</b>
<b>BA-GEOL-4</b>	<b>BA Geology</b>
<b>BS-GEOL-4</b>	<b>BS Geology</b>
ENSC	Environmental Science Concentration
HYDR	Hydrogeology Concentration
<b>BS-INEN-4</b>	<b>BS Industrial Engineering</b>
<b>BS-MSE-4</b>	<b>BS Materials Science and Engineering</b>
INOR	Inorganic Materials Concentration
POLM	Polymeric Materials Concentration
<b>BA-MTHS-4</b>	<b>BA Mathematical Sciences</b>
<b>BS-MTHS-4</b>	<b>BS Mathematical Sciences</b>
E081	Abstract Mathematics Emphasis
E082	Actuarial Science/Financial Mathematics Emphasis
E083	Applied and Computational Mathematics Emphasis
BIOL	Biology Concentration
E088	Computer Science Emphasis
E085	Operations Research/Management Science Emphasis
E086	Statistics Emphasis
<b>BS-ME-4</b>	<b>BS Mechanical Engineering</b>
<b>BA-PHYS-4</b>	<b>BA Physics</b>
<b>BS-PHYS-4</b>	<b>BS Physics</b>
BPHY	Biophysics Concentration
E087	Chemistry Emphasis
E088	Computer Science Emphasis
E089	Engineering Emphasis
E090	Environmental Engineering Emphasis
E091	Geology Emphasis
E092	Mathematical Sciences Emphasis
E093	Physics and Astronomy Emphasis

## COLLEGE OF HEALTH, EDUCATION AND HUMAN DEVELOPMENT

<b>BA-ECHE-5</b>	<b>BA Early Childhood Education</b>
<b>BA-ELED-5</b>	<b>BA Elementary Education</b>
E048	Literacy, Culture and Diversity Emphasis
E049	Mathematics and Science Emphasis
<b>BS-HLTH-5</b>	<b>BS Health Science</b>
CAIM	Cardiovascular Imaging Leadership Concentration
HPED	Health Promotion and Education Concentration
HSAD	Health Services Administration Concentration
PPHL	Preprofessional Health Studies Concentration
<b>BS-MTCH-5</b>	<b>BS Mathematics Teaching</b>
<b>BS-NURS-5</b>	<b>BS Nursing</b>
<b>BS-PRTM-5</b>	<b>BS Parks, Recreation and Tourism Management</b>
CRSC	Community Recreation, Sport and Camp Management Concentration
PCAM	Parks and Conservation Area Management Concentration
PGM	Professional Golf Management Concentration
TR	Therapeutic Recreation Concentration
TT	Travel and Tourism Concentration
<b>BA-STCH-5</b>	<b>BA Science Teaching</b>
E098	Biological Sciences Emphasis
E099	Chemistry Emphasis
E008	Physics Emphasis
<b>BS-STCH-5</b>	<b>BS Science Teaching</b>
E098	Biological Sciences Emphasis
E102	Physical Sciences Emphasis
<b>BA-SECE-5</b>	<b>BA Secondary Education</b>
E050	English Emphasis
E101	Mathematics Emphasis
E108	Social Studies (History) Emphasis
<b>BA-SPED-5</b>	<b>BA Special Education</b>

## CERTIFICATE PROGRAMS

CERTU-ASLE-2	CERTU American Sign Language-English Education Interpreting
CERTU-ASLH-2	CERTU American Sign Language for Health Care Practitioners
CERTU-LEAD-5	CERTU Leadership
CERTU-PSEN-4	CERTU Power Systems Engineering
CERTU-PUBH-5	CERTU Public Health
CERTU-RENE-4	CERTU Renewable Energy
CERTU-SALE-3	CERTU Sales
CERTU-SIXS-4	CERTU Six Sigma
CERTU-SPMO-5	CERTU Sports Psychology and Motivation
CERTU-SCCD-5	CERTU Sports Coaching and Character Development
CERTU-SFAC-5	CERTU Sports First Aid and Conditioning
CERTU-SUBA-3	CERTU Substance Abuse

## Prerequisites, Corequisites, and Concurrent Enrollment in iROAR

- Prerequisites will not be enforced for the first year. Reports will be provided to show what will happen with enforcement, which will begin after one year.
- iROAR (Banner) can enforce almost all of Clemson's current prerequisites, corequisites and concurrent enrollment requirements.
- "Enforced" means the system will not allow students to register for the course if they don't meet the requirement(s).
- Some of these requirements are enforced via iROAR's prerequisite and corequisite functions; others are managed by placing restrictions on courses.
- Please review the attached spreadsheet, paying particular attention to the notes and column of things for departments to review (esp. corequisites vs. concurrent enrollment, and consent of instructor phrases).
- There will be a "grace period" until the December 2012 UCC meeting, during which departments may provide clarification to preqs/coreqs/concurrent enrollment without following the usual course approval process. Beginning January 2013, any changes to prerequisites or corequisites must be approved by the Undergraduate or Graduate Curriculum Committee.
- Prerequisites that cannot be enforced (such as "basic swimming skills"), can still be published in the catalog.
- It will be VERY important for departments to carefully review preqs/coreqs/concurrent enrollment courses when iROAR is live. Much course information has been entered in manually. In addition to the potential for human error, many of these requirements are vague and open to interpretation.
- Important note: "Consent of instructor" and "...and consent of instructor" mean that NO STUDENT will be able to register for a course without receiving an override.
- Instructors will always have the ability to provide an override to a student who does not meet a prerequisite or other enrollment restriction.
- Prerequisites and enrollment restrictions cannot be enforced if they are not published.

Type	Example(s)	Notes	What departments need to do and/or consider
Preq: Course(s)	<b>BIOS 2220 Human Anatomy and Physiology I</b> <i>Preq: BIOL 1030/1050 or 1100; CH 1010 and 1020, or 1050 and 1060.</i>  <b>BIOS 3010 Molecular Biochemistry</b> <i>Preq: BIOL 1100 and CH 2230 with C or better.</i>	A certain amount of interpretation/assumption was necessary.	Right now, nothing. However, it will be very important for departments to carefully review preqs prior to iROAR going live
Preq: Test Score(s)	<b>MTHS 1150 Contemporary Mathematics for Elementary School Teachers I</b> <i>Preq: MTHS 1040 or satisfactory score on the <u>Clemson Mathematics Placement Test</u>.</i>	iROAR can check test scores, but only if a minimum passing grade and highest possible grade are entered.  iROAR can check only test scores that are in a system that integrates with Banner, such as the CMPT. A test given the first day of class isn't the same thing. The following type of preq. cannot be checked:  <b>CPSC 2100 Programming Methodology</b> <i>Preq: CPSC 1110 or equivalent; satisfactory performance on a pretest.</i>	If you want test score(s) to be checked, we need: <ol style="list-style-type: none"> <li>(1) The official name of the test</li> <li>(2) The minimum <b>PASSING</b> grade</li> <li>(3) The highest possible grade</li> </ol>
Preq: Class Standing	<b>ANTH 4230, 6230 Women in the Developing World</b> <i>Preq: Sophomore standing.</i>	Unless clearly stated otherwise, we have assumed that "Sophomore standing" means the student must AT LEAST be a sophomore, but could be a junior or senior. If this is not the case for a course, please let us know. (An example: <b>HORT 1020 Experience Horticulture</b> Preq: <u>Freshman or sophomore standing in Horticulture or Turfgrass</u> . It is clear that only freshmen and sophomores are allowed to enroll. This class will be restricted so only freshmen and sophomores can register.	Review all courses with a class standing preq, and let us know if you do NOT mean the student must be at least the level stated.
Preq: Class Standing with "Graduate standing" in preq (pertains to graduate level courses)	<b>BIOE 8130 Industrial Bioengineering</b> <i>Preq: Consent of instructor; graduate standing</i>	Prerequisites that say "Graduate standing" are unnecessary. iROAR automatically restricts undergrad students from registering for graduate level courses unless they are given an override by the instructor or appropriate person.	
Preq: Class Standing with "Graduating senior" in preq	<b>ARCH 4010 Architectural Portfolio</b> <i>Preq: ARCH 1010. Coreq: ARCH 4520, 4530; Graduating Senior standing.</i>	Cannot enforce a graduating senior standing. You can leave the wording, so students are aware, but only <i>senior standing can be enforced.</i>	



<p>Preq: Major, Minor, Concentration, Emphasis Area</p>	<p><b>AGED 1020 Agricultural Education Freshman Seminar</b> Preq: Agricultural Education major.</p> <p><b>DPA 4000, 6000 Technical Foundations of Digital Production I</b> Preq: Consent of instructor. Not open to Computer Science, Computer Engineering, or Computer Information Systems majors.</p>	<p>Courses can be restricted so students in a certain major, minor, concentration or emphasis area can be allowed OR disallowed from registering for the course. Each of these is called a "field of study" in iROAR.</p> <p>A specific field or fields of study must be specified. Prerequisites such as "Admission to a Teacher Education Program" or "Junior standing in engineering or science" cannot be enforced as such. However, if departments can provide a list of all fields of study that qualify, it can be enforced.</p>	<p>Review prerequisites that are not specific and provide a list of fields of study that meet the qualification. For example, if the preq states students must be in an engineering or science program, simply list all fields of study that meet this requirement: Civil Engineering, Mechanical Engineering, Chemistry, etc.</p>
<p>Preq: Minimum Grade</p> <p>Preq: "Consent of Instructor" (or advisor, department, department chair, mentor, dean, director, committee chair, etc.</p> <p>Preq: "...and consent of instructor"</p>	<p><b>ACCT 3400 Internal Auditing Theory</b> Preq: ACCT 3110 with a C or better.</p> <p><b>ARCH 4260, 6260 Architectural Color Graphics</b> Preq: Consent of instructor.</p> <p><b>AGM 3710 Agricultural Mechanization Practicum</b> Preq: Consent of department.</p> <p><b>POSC 3960 Junior Honors Research</b> Preq: Junior standing, membership in Calhoun Honors College, and consent of instructor.</p>	<p>Minimum grades are enforced in Banner.</p> <p>For prerequisites that state "Consent of instructor" or "...and consent of instructor," a course attribute of "CONS—Consent of Instructor" will be assigned. Course attributes will show up in the catalog in iROAR when students search for courses. In addition, departmental Registration Coordinators will apply the restriction on each section of the course. Please note: <b>NO STUDENTS WILL BE ABLE TO REGISTER FOR THE COURSE WITHOUT THE APPROPRIATE PERSON PROVIDING AN OVERRIDE.</b></p>	<p>Review all courses with a preq of "consent of instructor" or "...and consent of instructor" and decide if you really want it to require consent (which consists of providing an override) for the course.</p>
<p>Preq: "...or consent of instructor"</p>	<p><b>BE 4280, 6280 Biochemical Engineering</b> Preq: BE 4100 or CHE 3300 or consent of instructor.</p>	<p>That consent may be granted if an instructor (or another authorized person) deems it appropriate is a given. So "or consent" is assumed. Preqs will no longer include "or consent of instructor."</p>	

<p>Corequisites and Concurrent Enrollment</p>	<p>Corequisite example:  <b>BE 2100 Introduction to Biosystems Engineering</b>  <i>Coreq:</i> ENGR 1300, MTHSC 106.</p> <p>Concurrent Enrollment example:  <b>CH 3400 Physical Chemistry Laboratory</b>  <i>Preq:</i> Concurrent enrollment in CH 3320.</p>	<p>Corequisites and Concurrent Enrollment are not the same thing in iROAR.</p> <p>Corequisites are courses that always and forever MUST be taken at together—most commonly lecture/lab combinations, but sometimes “cohort” classes. So the in the first example to the left, students must take BE 2100 and ENGR 1300 during the same term. Corequisites also “go both ways” – they are mutual. So if CH 1020 is a coreq of CH 1021, then CH1021 will also be a coreq of CH 1020.</p> <p>Concurrent Enrollment refers to courses that are designed to be taken together; however, students may take one course prior to the other course, may take both at the same time, or may be registered for one of the courses in a future term. In the second example to the left, students could take CH 3322 before taking CH 3400 or they could take it during the same term, or they could be registered for CH 3320 in an upcoming term.</p> <p>Only honors students will be able to register for such courses.</p>	<p>Given these definitions, it seems that what is called a “coreq” currently is in fact meant to be “concurrent enrollment” situation. It is highly recommended that departments carefully review all courses that reference a coreq and a concurrent enrollment and clarify what is truly meant.</p> <p>NOTE: All formerly attached “L” labs are considered corequisites of the lecture.</p>
<p>Preqs related to Calhoun Honors College.</p>	<p><b>BUS 2910 Honors Seminar in International Business</b>  <i>Preq:</i> Membership in Calhoun Honors College.</p>		
<p><b>ISSUES</b></p>			
<p>Coreqs with “or”</p>	<p><b>BIOL 1200 Biological Inquiry Laboratory</b>  <i>Coreq:</i> BIOL 1210, 1220, 1230, <u>or</u> 1240.</p>	<p>Because Corequisites are “always and forever,” there cannot be an “or.”</p> <p>In the example to the left, it seems likely that concurrent enrollment is meant, which can include “or.”</p>	<p>Review all courses that use “or” with coreqs and determine if concurrent enrollment is meant. If it is not meant, the coreqs simply cannot be enforced in iROAR.</p>
<p>Different coreqs for the same course.</p>	<p><b>ENGR 1410 Programming and Problem Solving</b>  <i>Preq:</i> CES 102; <i>Coreq:</i> MTHS 1060 or 1070. <i>Coreq for honors students:</i> MTHS 1080.</p>	<p>Cannot be enforced. (Unless there is an entire section only for honors students in a given term, then enforcement can take place at the section level.) Can still publish it so honors students are aware of the requirement.</p>	
<p>Coreqs containing “...or consent of instructor”</p>	<p><b>AGM 2060 Machinery Management</b>  <i>Coreq:</i> MTHS 1020 and PHYS 2070 or consent of instructor.</p>	<p>Consent in this case is implied, as with preqs.</p>	
<p>Preqs that merit departmental honors program.</p>	<p><b>BE 3000 Biosystems Engineering Honors Sem.</b>  <i>Preq:</i> Junior standing in departmental honors program.</p>	<p>This cannot be enforced.</p>	

<p>Preq: "...or equivalent"</p>	<p><b>B E 3000 Biosystems Engineering Honors Sem</b>  <i>Preq:</i> Junior standing in departmental honors program.</p>	<p>This cannot be enforced. Really isn't necessary as it is generally true of any course and students can ask for consent from instructor. Huh?</p>	<p>Review all courses will non-specific courses and provide a list of all courses that meet the requirement.</p>
<p>Preqs or coreqs that name a type of course, but not a specific course.</p>	<p><b>AGM 4190 Agribusiness Innovation and Entrepreneurship</b>  <i>Preq:</i> Introductory Agribusiness Management course.</p> <p><b>FNR 2040 Soil Information Systems 4(3,3)</b>  <i>Preq:</i> General chemistry sequence.</p> <p><b>BCHM 4310 Physical Approach to Biochemistry</b>  <i>Preq:</i> BJOCH 301 with a C or better or consent of instructor. <i>Coreq:</i> Physical chemistry.</p>	<p>These cannot be enforced unless specific courses are named. For example, if all courses that qualify as "sophomore literature" are provided, they can be entered into the system and checked at registration.</p> <p>NOTE: It is not possible to enforce preqs such as, "Six credits in Spanish at the 300 level, including at least one course in literature or culture" or "All required non-nursing courses and electives" or "All required industrial engineering courses in the Industrial Engineering curriculum." But, they can still be published.</p>	
<p>Preqs with minimum GPR</p>	<p><b>PRTM 3010 Recreation and Society</b>  <i>Preq:</i> 2.0 cumulative grade-point ratio.</p>	<p>Cannot be enforced. Can still be published so students are aware of the requirement.</p>	
<p>Preqs that are not related to courses, programs, standing, etc.</p>	<p><b>LS 1650 Inland Kayak Touring</b>  <i>Preq:</i> Demonstrated swimming competence.</p> <p><b>GC 2070 Graphic Communications II</b>  <i>Preq:</i> GC 1010, 1020, 1040, typewriter/computer keyboarding skills of 20 net words per minute.</p> <p><b>GEOG 4210 GIS Applications in Geology</b>  <i>Preq:</i> Senior standing, strong computer skills.</p> <p><b>MUSC 3210 Principles of Piano Performance I</b>  <i>Preq:</i> By audition.</p>	<p>Cannot be enforced. Can still be published so students are aware of the requirement.</p>	

## **Suggested Revision of the Critical Thinking Competency**

Robert Kosinski  
Biological Sciences

During the summer of 2012, I volunteered to participate in the faculty evaluation of ePortfolios. The students in question had already graduated, so our evaluation was for programmatic assessment only. I was struck by several problems with the Critical Thinking evaluation: the competency as written could not be satisfied with just one artifact, and there was a disconnect between the competency and the rubric used to score it. I would like to suggest some changes to the critical thinking competency that will make the requirements clearer.

### **Problems with the Present Critical Thinking Competency**

The present Critical Thinking competency is, "Demonstrate the ability to critically analyze the quality and utility of knowledge gained throughout the undergraduate experience and apply this knowledge to a wide range of problems." As written, this would require a whole ePortfolio, probably consisting of artifacts from multiple fields, and collected over the course of the student's college career. Nevertheless, we want the student to submit *one* artifact that best demonstrates critical thinking.

The present rubric is another problem. It has three parts, and asks if the artifact a) demonstrates knowledge within the major, b) demonstrates knowledge outside the major, and c) shows the ability to apply knowledge and make evaluative judgments. The student will probably never see this rubric, and the definite requirements for showing knowledge both inside and outside the major are not clear from the wording of the competency.

### **Suggested Changes to the Competency and Rubric**

A group of ePortfolio evaluators from CAFLS and CoES suggested the following wording of the competency:

"Demonstrate the ability to assemble evidence relevant to a significant and complex issue, evaluate the quality and utility of the evidence, and use this evidence to come to a logical conclusion about the issue."

This not only could apply to a broad range of disciplines, but it suggests its own rubric. This rubric would ask the reviewer to determine if the student:

1. Assembles relevant evidence.
2. Assesses the quality and utility of the evidence.
3. Analyzes the evidence to reach a logical conclusion or solution.

Approved Courses/Curricula

October 5, 2012

University Undergraduate Curriculum Committee

<b>LIB 100</b>	Clemson Connect - change to CU 100	0(0,0)	1
<b>I. College of Agriculture, Forestry, and Life Sciences</b>			
<b>A. Agricultural Mechanization and Business</b>			
<b>AGM 419</b>	AG Entrepreneurship -add a crosslisting ELE-419	3(3,0)	2
<b>II College of Architecture, Arts and Humanities</b>			
<b>A. Construction Science &amp; Management</b>			
<b>CSM 498</b>	Current Topics in Construction - change prerequisite	1-3	7
<b>B. English</b>			
	Minor in Film Studies - change requirement		8
<b>C. Communication Studies</b>			
	Sports Communication - New major		9
	Sports Communication - General Education Checklist		13
<b>COMM 324</b>	Communication, Sport, & Society - new course	3(3,0)	15
<b>COMM 325</b>	Sports Communication - change course description	3(3,0)	17
<b>COMM 426</b>	Social Media & Sports Communication - new course	3(3,0)	19
<b>COMM 427</b>	Communication in Sports Organizations - new course	3(3,0)	21
<b>COMM 428</b>	Interpersonal/Family Comm & Sports	3(3,0)	23
<b>D. Philosophy and Religion</b>			
	Religious Studies - New Major - edited		25
	Religious Studies - General Education Checklist-edited		28
<b>REL 300</b>	Studying Religion: Theories and Methods		30
<b>REL 305</b>	Constructing Scripture - new course	3(3,0)	32
<b>REL 399</b>	Junior Research Colloquium - new course	3(3,0)	34
<b>REL 490</b>	Senior Seminar - new course	3(3,0)	36
<b>REL 404</b>	Early Christianity - change course number, add crosslisting	3(3,0)	38
<b>REL 310</b>	Religion in the US - change catalog title, add crosslisting	3(3,0)	40
<b>HIST 373</b>	Prot Reformation - add crosslisting with REL 310	3(3,0)	42
<b>HIST 351</b>	Ancient Near East - add crosslisting with REL 351	3(3,0)	44
	Women's Leadership - New Major		46
	Women's Leadership - General Education Checklist		50
<b>WS 230</b>	Women and Leadership - new course	3(3,0)	52
<b>WS 401</b>	Senior Seminar- new course	3(3,0)	54
<b>WS 490</b>	Creative Inquiry - new course	1-3	56
<b>WS 495</b>	Independent Study - new course	1-1(1-3)	58
<b>III College of Engineering &amp; Science</b>			
<b>A. Chemical and Biomolecular Engineering</b>			
	Chemical Engineering (BS) - change concentration		60
	Chemical Engineering (BS) with Biomolecular Concentration - change curriculum requirements		62
<b>IV College of Business and Behavioral Science</b>			
<b>A. Political Science</b>			
<b>POSC 103/H</b>	Introduction to Political Theory - new course	3(3,0)	64
<b>POSC 449</b>	Political Theory Capitalism - change prerequisites	3(3,0)	74
<b>POSC 450</b>	Political Theory - change catalog descpt., prerequisites, course modifier	3(3,0)	76
<b>POSC 453</b>	Amer Pol Thought - change prerequisite	3(3,0)	82
<b>POSC 455</b>	POL THGHT AM FNDRS - change prerequisites	3(3,0)	84
	Political Science (BA) - change curriculum requirements - edited		86

	Political Science (BS) - change curriculum requirements - edited		90
	Political Science - change minor requirements		99
<b>B.</b>	<b>Management</b>		
	<b>MGT 411</b>	Project Management - change prerequisites	3(3,0) 101
	<b>MGT 307/H</b>	Human Resource Mgt. - change prerequisites	3(3,0) 103