# Senate Transmittal Academic Council for Lexington Community College April 4, 2003

Approved by Academic Council for Lexington Community College on April 4, 2003.				
Circulated for Information Only				
LEXINGTON COMMUNITY COLLEGE				
HUMANITIES AND BUSINESS TECHNOLOGIES				
CHANGE IN UNDERGRADUATE PROGRAM				
GENERAL EDUCATION, AA AND AS				
Program: General Education Program: Associate in Arts and Associate in Science degrees				
Formal Option: (if applicable) or Specialty Field: (if applicable) <u>15 in AA, 5 in AS</u>				
Department: <u>H/BT</u> College: <u>LCC</u>				
Degree title: AA and AS Bulletin pp.: p. 44				
CIP Code: UK ID No.: HEGIS CODE:				
Accrediting Agency (if applicable): <u>SACS</u>				
I. PROPOSED CHANGE(S) IN PROGRAM REQUIREMENTS				
1. Particular University Studies Requirements or Recommendations for this program				
<u>Current</u> <u>Proposed</u>				
English Writing: N/A				
Communication:				
Mathematics:				
Area I (Natural Science)				
Area II (Social Science)				
Area III (Humanities)				

Area IV (Cross-disciplinary component)

2.	2. College Depth and Breadth of Study Requirements (if applicable) (including particular courses required or recommended for this program) NOTE: To the extent that proposed changes in 2. through 6. involve additional courses offered in another program, please submit correspondence with the program(s) pertaining to the available of such courses to your students.					
	<u>Current</u>	Proposed				
	N/A					
3.	Premajor or Preprofessional Course Requirements (if ag	pplicable)				
	<u>Current</u>	Proposed				
	N/A					
Tota	tal Hours:					
4. <u>C</u>	Credit Hours Required					
(	Current: <u>60</u> Proposed: <u>60</u>					
a	a. Total Required for Graduation: <u>60</u>					
b	b. Required by level:					
100 <u>60</u> 200 300 400-500 c. Premajor or Preprofessional (if applicable) <u>N/A</u>						
						d
e						
f						
g	g. Technical or Professional Support Electives (if applicable) will not specify					
h	h. Minimum Hours of Free or Supportive Electives [Required] will not specify					
5. <u>N</u>	Major or Professional Course Requirements					
<u>(</u>	Current: Pro	<u>oposed</u>				
•	CORE TRANSFER COMPONENT  AA AS	CORE TRANSFER COMPONENT  AA AS				
	riting 6 6 A	. Basic Skills				
	NG 105 fulfills writing/accessing info  students who qualify by ACT score	1. Math (must be MA 109 or higher) 3 3 2. Written Communication 6 6				
	special exam.)	(ENG 105 fulfills the writing requirement				

			for students who qualify by ACT or spe	cial e	xam.)
Oral Communication	3	3	3. Oral Communication	3	3
Heritage/Humanities/Foreign language	6	6	B. Disciplinary Requirements		
(1 course in Humanities and 1 course in	U	U	1. Natural Sciences		
Heritage a grad requirement for both A			(AS degree must include at least one	6	6
and AS degrees.)	1		science course with a lab.)	U	U
and AS degrees.)					(
			2. Social/behavioral Sciences 6		6
C . II	0	0	(At least 2 disciplines must be represent		
Social Interaction	9	9	in this area and these must differ from		
(At least 2 disciplines must be represente	ed		those in Humanities.)	_	_
in this area and these must differ from			3. Humanities	6	6
those in Heritage/Humanities/For Lang.)	)				
				3	3
	6	6	(Focus courses may be used to		
(The AS degree must include at least one	:		fulfill the requirements above.)		
science course with a lab experience.)			SUBTOTAL CORE TRANSFER COMPO	NENT	Γ
			33	•	33
Mathematics	3	3			
(The course used here must be College			II. GEN ED REQUIREMENTS BEYOND T	HE C	ORE
Algebra or a higher level MA course.					
<b>Excludes all MAH courses and MA 108R</b>	2.)		Social/behavioral science or foreign languag	e 3	
	,		Humanities or foreign language	3	
SUBTOTAL CORE TRANSFER COMP	ONE	NT	Natural sciences/math (Any MA or STA	3	9
	33	33	course-except 108R-can be used here. MAH ex	xclud	ed.
ADDITIONAL GEN ED REQUIREMEN			AS degree must include at least 4 credits in		
(Beyond the core)			Courses from the core or foreign language	6	6
Heritage/Humanities/Foreign Language	3		(Focus courses may be used to fulfill	v	Ū
Tierrage/Tramameres/Toreign Language	Ü		the Additional Gen Ed Requirements.)		
Heritage/Humanities/Foreign Language	3		the Multional Gen Eu Requirements.)		
Tierreage/Tumameres/Toreign Danguage			SUBTOTAL ADDITIONAL GEN ED	15	15
Science or Mathematics	3	9	TOTAL GENERAL EDUCATION BLOCK		48
(Any MA or STA course-except MA 108)	-	,	TOTAL GENERAL EDUCATION BEOCK	. 40	40
can be used here. Excludes MAH courses		dograce	III. OTHER DEGREE REQUIREMENTS		
must include at least 4 credits in MA or S		_	(Used as electives or to complete a focus )	12	12
MA or STA.)	91 A.)		TOTAL CREDIT HOURS:	60	60
Courses to be chosen from the core	(	(	TOTAL CREDIT HOURS:	oo	oo
Courses to be chosen from the core	6	6	AA and AC dames are arranded to students or	.l	
CUDTOTAL ADDITIONAL CENED	15	15	AA and AS degrees are awarded to students w		
SUBTOTAL ADDITIONAL GEN ED	15	15	a minimum of 60 hours, including the specif	nea g	en ea
TOTAL GEN ED BLOCK	48	48	requirements, with a GPA of at least 2.0.		
OTHER DEGREE REQUIREMENTS			A course used to fulfill one required area of	etud:	£7
Electives (Students are advised to choose	12	12	cannot be used to fulfill another. Developme		y
· ·		12	courses (numbered 001-099 or designated w		
hours to satisfy additional gen ed and pre-			"R") cannot be used to satisfy graduation r		
major requirements at the institution to which			K ) cannot be used to satisfy graduation is	equir	ements.
they transfer. Students who complete EN			(E P. 4 . C.4k . E		_
105 to satisfy the Writing requirement m	ust		(For a list of the Focus studies, see #3 "Desc		
complete 15 hours of electives.)			for LCC Catalog" on Form for Request for C		,
TOTAL OPEDITIONS	<b>60</b>	<b>C</b> 0	Undergraduate Program: Additional Informa	tion o	n
TOTAL CREDIT HOURS	60	. 60	CCS Forms.)		
AA and AS degrees are awarded to stude			ete		
a minimum of 60 hours, including the sp		d gen ed			
requirements, with a GPA of at least 2.0.					

A course used to fulfill one required area of study cannot

be used to fulfill another. Developmental courses (numbered 001-099 or designated with an "R") cannot be used to satisfy graduation requirements.

6. Minor Requirements (if applicable	6.	Minor	Req	uirements	(if a	pplicable
--------------------------------------	----	-------	-----	-----------	-------	-----------

Current:	Proposed
N/A	
Total Hours:	
7. Rationale for Change(s): (If ratio	onale involves accreditation requirements, please include specific references to those
requirements.)	

It has been seven years since any changes were made in the AA and AS requirements, so it was necessary to review and update these degrees. In the process of general education reform, LCC faculty have expressed a strong desire to align the required areas of study with the USP categories. Therefore, part of the revision has been to rename some of the categories, make adjustments in required courses, and check with CPE for compliance with their guidelines. The innovative change in this proposal comes with the offering of a number of Focuses, something LCC has never done before. A Focus is not a major or a minor. It is similar to an area of concentration, and it will allow students to focus their studies or explore an area in more depth than a general degree will. Completing a Focus does not mean that a student has fulfilled all pre-major requirements for that major at UK or another Kentucky university. Focus requirements are 12-21 hours, and each must include at least one 200 level course or one course with appropriate prerequisites. A student may still earn an AA or AS degree without a focus. The General Education Committee hopes this will make the AA and AS degrees more attractive to students and therefore increase graduation rates. Thousands of LCC students have not decided on a major, and the Committee feels that having the oppportunity to choose a Focus will move them toward making a decision or at least give them a chance to "try out" a field of study as a possible major. Students who do decide on a major after a year or so of college will be able to fulfill many or all of the pre-major requirements for that major. Those students who stop with an AA or AS and do not pursue a four-year degree may feel a greater sense of accomplishment and may in some cases be more employable. Finally, an area of emphasis approach is a more integrated course of study than one which provides complete freedom of choices. In other words, it is a curriculum in which students are more likely to make connections across disciplines. For those students who cannot decide on a major, or who desire to have freedom of choices, an AA or AS in general studies will still be available.

#### 8. List below the typical semester by semester program for a major.

<u>Current</u> <u>Proposed</u>

The following example assumes that the student needs no developmental courses or foreign language and decides on a WS area of emphasite the first semester at LCC. In this case the WS area of emphasis requires 15 hours.

First semester First semester ENG 101 ENG 101

MA 109 or equivalent

Communications

natural science

MA 109 or equivalent

Communication

natural science

social interaction social/behavioral science

Second semester Second semester

ENG 102 ENG 102 natural science social interaction cross-cultural

natural science WS 201 for humanities

heritage/humanities/foreign language WS 200 for social/behavioral science

Third semester Third semester

social interaction HIS 265 for humanities

heritage/humanities/foreign language social science (or foreign language)

heritage/humanities/foreign language natural science or math

heritage/humanities/foreign language or social interaction humanities (or foreign language)

course from the core GEO 240 or FAM 253 for course from core

Fourth semester Fourth semester

course from the core ENG 234 (or another WS choice) for course from core

elective elective elective elective elective elective elective elective elective

Electives in both models can be used to fulfill, if necessary, USP requirements of inference and foreign language. In the second model, they can also be used to fulfill pre-major requirements at the institution to which the student plans to transfer if those requirements are not fulfilled within the Focus. Technical courses may count as electives.

Will this program be printed in the Bulletin? Yes  $\boxtimes$  No  $\square$ 

# FORM FOR REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM Additional Information on CCS Forms

1. Effective Date: Fall 2004

# 2. Program Competencies:

Present

Communicate effectively

Students should be able to

Write clearly

Speak clearly

Read with comprehension

Listen with comprehension

Use symbolic language

Work cooperatively with others

Use technology to process information

Think critically

Students should be able to

Demonstrate problem solving skills

Analyze/interpret creative expressions, resources, and/or data

Integrate knowledge

Use logical thinking to draw conclusions

Learn independently

Students should be able to

Find, evaluate, and use resources effectively Apply learning Think creatively Value new ideas and differing perspectives

Examine relationships in diverse and complex environments Students should be able to

Define the relationship of self to historical and cultural context Define the relationship of self to the biological/physical environment Define the relationship of self to the global community Use mathematics to analyze physical relationships

Proposed no change

# 3. Description for LCC Catalog:

Present

p. 44 of catalog, no introductory paragraph

## Proposed

Introductory paragraph: Students may complete an AA or AS degree in general studies, which allows them a wide choice of courses and an opportunity to explore many subject areas, or they may decide to choose a Focus in order to explore one field of study in more depth. If students plan to transfer after earning their AA or AS degrees, they may fulfill a number of their pre-major requirements by choosing to have a Focus. However, obtaining a focus does not mean that a student has fulfilled all pre-major requirements for a four-year degree at the University of Kentucky or elsewhere. See "Advising note for students planning to transfer to a public university in Kentucky" and "Special advising note for UK transfers."

#### **Focus Studies**

# AA Degrees

- 1) African American Studies: ENG 264, HIS 260, HIS 261, HIS 254, and ANT 160 (15 hours)
- 2) Communication: Choose 15 hours from the following: COM 101, 181, 252, 281, 287, JOU 101, 204, and PSY 100 or PY 110 (15 hours)
- 3) English: ENG 230 required; choose one from ENG 231, 232, 233, 234; choose one from HUM 135 or ENG 264; one additional literature; one additional writing (15 hours)
- 4) Family studies: FAM 252 required, choose three from EDP 202\*, EDP 203\*, FAM 253, FAM 254/PSY 223, FAM 255 (12 hours) \*for those interested in a teaching career
- 5) History: HIS 108, 109, 104, 105 and one 200-level history course (15 hours)
- 6) Political Science: PS 101, 235, 271, and one other political science course (12 hours)
- 7) Psychology: PSY 100 or PY110, PSY 215, 216, and 223, plus one PSY elective (15 hours)
- 8) Philosophy: PHI 100, 120, 130, ANT 130 (12 hours)
- 9) Women's studies: WS 200 and 201; Choose 3 from ENG 234, HIS 265, GEO 240, FAM 253 (15 hours)

- 10) Anthropology ANT 220, 230, & 240, one additional 200 level anthropology course (12 hours)
- 11) Geography GEO 130, GEO 172, GEO 152 or GEO 160, any 200 level geography course (12 hours)
- 12) Sociology SOC 101, two additional 100 or 200 level sociology courses, one 200 level course in the social/behavioral sciences (12 hours)
- 13) Social Work SW 124, SW 222, plus one each from the following: anthropology, economics, political science, psychology, and sociology (21 hours)
- 14) Law Enforcement LEN 101, three additional courses in law enforcement with at least one at the 200 level, one course in each of the following: political science, psychology, and sociology (21 hours)
- 15) Pre-education (elementary and middle school) EDP 202, PSY 100 or PY 110, MA 201, PHY 160, and an additional social/behavioral science course from one of the same social science disciplines taken in the USP Disciplinary Requirements.

#### **AS** Degrees

- 1) Allied Health: Choose from CHE 105, CHE 107, & CHE 115 or (CHM 105 & CHM 107); ANA 209; BIO 150, 151, 152, 153, 208, 209; BSL 110, 111, 214; CLA 131; MA 112, 123; PGY 206; PHY 211, 213; PSY 100, 223; STA 200, 291; SOC 101 (21 hours)
- 2) Math: Required MA 113, 114, 213, 214, CS 115 (18 hours)
- 3) Natural sciences: Choose from BIO 150, 151, 152, 153; CHE 105, CHE 107, & CHE 115 or (CHM 105 & CHM 107); MA 113, 123; PHY 211, 213; CHE 230, 232 (21 hours)
- 4) Chemistry: Choose from CHE 105, CHE 107, CHE 115 or (CHM 105 & CHM 107), CHE 230, CHE 231, CHE 232, CHE 233, CHE 226, MA 113, MA 114, (PHY 211 & PHY 213) or (PHY231, PHY 241, PHY 232, & PHY 242) (12 or 13 hours)
- 5) Pre-engineering: MA 113, MA 114, MA 213, PHY 231, PHY 241, CHE 105 or PHY 232 (20-21 hours)
- Changes to the above focus areas: If an area decides to change focus requirements, or if an area decides to add or remove a focus, those changes will go through Academic Council individually, on a year-by-year basis.
- 4. Summary of How the Proposed Changes Will Result in Changes in the Level or Source of Funding:

N/A

# SOCIAL SCIENCES & GRAPHIC TECHNOLOGIES/GEOGRAPHIC INFORMATION SYSTEMS

#### NEW ACADEMIC CERTIFICATE

Academic Certificate: Geographic Information Systems Technology

Program/Area: Social Sciences and Graphic Technologies (SSGT) / Geography, Law

Enforcement, Anthropology, Sociology and Social Work (GLASS) (Department Chair: Dr. David Wachtel, Area Coordinator: Leon Lane)

**Proposed Starting Date:** Fall 2003 Semester

#### II. CERTIFICATE DESCRIPTION

# 1. Curriculum

a. Describe the curriculum of the proposed certificate and indicate the semester-by-semester sequence of courses taken by a typical student to complete the certificate. Indicate the credit hours for each course. Indicate the total number of hours for each semester as well as the total for the certificate.

#### CORE COURSE DESCRIPTIONS FOR GIS CERTIFICATE PROGRAM

GIS 110 -- Spatial Data Analysis and Map Interpretation (3 hours) – This course is an introduction to spatial analysis and the interpretation of map data. The course will introduce remote sensing techniques, GPS, the interpretation of remotely sensed imagery for environmental, commercial and/or demographic purposes, and the applications of GIS in both the public and private sector. Students will receive a cursory introduction to GIS software.

GIS 120 -- Introduction to Geographic Information Systems (3 hours) – This course, a continuation of GIS 110, is a comprehensive survey of the fundamental concepts of GIS. The course will cover the basic operating systems of widely used GIS software, including (but not limited to) the use of graphic user interface, common theme operations, introductory scripts, manipulation of tables, the creation and editing of shapefiles and charts and layouts, and geocoding. This course is designed for those with little to no experience with GIS who are exploring career opportunities in the field.

<u>GIS 210 – Advanced Geographic Information Systems</u> (3 hours) – This course, a continuation of GIS 120, will explore advanced topics in GIS. The course will teach students how to import foreign databases into a GIS, advanced theme operations, extensive use with scripts, introductory programming with both Avenue and Visual Basic for GIS, and how to incorporate remotely sensed imagery into GIS.

Students must take a minimum of six (6) hours of General Education courses in order to receive a certificate in GIS Technology from Lexington Community College, unless otherwise noted on their academic transcript(s). Students must also complete one of the following related field course pairings listed below. The student may not complete the requirement by selecting courses from different pairs.

# Eligible Course Pairings for GIS Technology Certificate

- 1. Earth's Physical Environment (GEO 130) and/or Pollution, Natural Hazards and Environmental Management (GEO 210) and/or Introduction to Planning (GEO 285)
- 2. Hydrological Geology (EST 160) *and* Solid and Hazardous Waste Management (EST 250)
- 3. Visual Basic I (CIS 148) and Visual Basic II (CIS 248)
- 4. Introduction to Computer-Aided Design (CAD 100) and Intermediate Computer-Aided Design (CAD 200)

5. Introduction to Surveying (CE 211) *and* Intermediate Surveying (CET 220)

# Fall Semester I (9 credit hours)

- GIS 110 (3)
- CIS 105 (3)
- Any General Education Course (3)

## Spring Semester I (9 credit hours)

- GIS 120 (3)
- Any General Education Course (3)
- Related Field (see above list) (3)

#### <u>Fall Semester II</u> (6 credit hours)

- GIS 210 Advanced Topics in GIS
- Related Field (see above list) (3)

#### **TOTAL CREDIT HOURS: 24**

b. Designate which courses are general education courses

The student may fulfill the six (6) hour General Education Requirement for the GIS Technology Certificate with any General Education that fulfills requirements for their respective Associate's and/or technical degree program in which the student is concurrently enrolled.

c. Designate which courses will be new courses.

There are no new courses to be added to the Lexington Community College curriculum; all courses in the GIS Technology Certificate are already cataloged Lexington Community College courses

# FORM FOR REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM

Program: General Education Program			
Formal Option: (if applicable) or Specialty Field: (if applicable)			
Department: <u>H/BT</u> College: <u>LCC</u>			
Degree title: AA and AS Bulletin pp.: 40-44			
CIP Code: UK ID No.: HEGIS CODE:			
Accrediting Agency (if applicable): <u>SACS</u>			

1.	1. Particular University Studies Requirements or Recommendations for this program				
		<u>Current</u>	<b>Proposed</b>		
En	glish Writing:	N/A			
Co	mmunication:				
Ma	thematics:				
Ar	ea I (Natural Science)				
Ar	ea II (Social Science)				
Ar	ea III (Humanities)				
Ar	ea IV (Cross-disciplinar	y component)			
Ar	ea V (Non-western cultu	ral component)			
2.	2. College Depth and Breadth of Study Requirements (if applicable) (including particular courses require or recommended for this program) NOTE: To the extent that proposed changes in 2. through 6. involvadditional courses offered in another program, please submit correspondence with the program(s) pertaining to the availability of such courses to your students.				
	<u>Current</u>		<b>Proposed</b>		
	N/A				
3.	3. Premajor or Preprofessional Course Requirements (if applicable)				
	<u>Current</u>		<b>Proposed</b>		
	N/A				
To	tal Hours:				
4.	Credit Hours Required				
	Current: <u>N/A</u> Pro	posed:			
a. Total Required for Graduation: <u>N/A</u>					
	b. Required by level:				
	100 <u>N/A</u> 200	<u> </u>			
	300 400-5	00			
	c. Premajor or Preprof	essional (if applicable) <u>N/A</u>			

d. Field of Concentration (if applicable)  $\underline{N/A}$ 

g. Technical or Professional Support Electives (if applicable) N/A				
	Minimum Hours of Free or Supportive Electives [Required] N/A			
5.	Major or Professional Course Requirements			
	Current:	Proposed		
	I. Writing II. Oral Communication III. Mathematics IV. Science V. Social Interaction VI. Heritage/Humanities/Foreign Language Additional Requirements	<ul> <li>I. Basic Skills</li> <li>A. Math</li> <li>B. Written Communication</li> <li>C. Oral Communication</li> <li>II. Disciplinary Requirements</li> <li>A. Natural Sciences</li> <li>B. Social/Behavioral Sciences</li> <li>C. Humanities</li> <li>III. Cross-Cultural</li> <li>Additional Requirements</li> </ul>		
6.	Minor Requirements (if applicable)			
	Current:	Proposed		
	N/A			
To	otal Hours:			
7.	Rationale for Change(s): (If rationale involves ac references to those requirements.)	creditation requirements, please include specific		
US	th the University Studies Program categories, in ac	that the present categories be changed to align more closely cordance with the wishes of the faculty. Consistency with ating was necessary since LCC still used the categories efore it became KCTCS.		
8. List below the typical semester by semester program for a major.				
	<u>Current</u>	Proposed		
	N/A			
W	fill this program be printed in the <u>Bulletin</u> ? Yes	☑ No □		

e. Division of Hours Between Major Subject and Related Field (if applicable) N/A

f. Hours Needed for a Particular Option or Specialization (if applicable) N/A

# FORM FOR REQUEST FOR CHANGE IN UNDERGRADUATE PROGRAM Additional Information on CCS Forms

1. Effective Date: Fall 2004

# 2. Program Competencies:

Present

Communicate effectively Students should be able to

Write clearly

Speak clearly

Read with comprehension

Listen with comprehension

Use symbolic language

Work cooperatively with others

Use technology to process information

#### Think critically

Students should be able to

Demonstrate problem solving skills

Analyze/interpret creative expressions, resources, and/or data

Integrate knowledge

Use logical thinking to draw conclusions

#### Learn independently

Students should be able to

Find, evaluate, and use resources effectively

Apply learning

Think creatively

Value new ideas and differing perspectives

# Examine relationships in diverse and complex environments

Students should be able to

Define the relationship of self to historical and cultural context

Define the relationship of self to the biological/physical environment

Define the relationship of self to the global community

Use mathematics to analyze physical relationships

Proposed

no change

\*

# 3. Description for LCC Catalog:

Present

(p. 39 of catalog) General Education Learning Outcomes

An institution of higher learning must do more than prepare for a job or career. The overall goal of education must be to help students become productive people who are aware of the ideas and aspirations which motivate human thought and action, and who can successfully use their understanding of the world, themselves, and their roles in society. Education is a shared responsibility among college students, faculty, and administration. Since lifelong learning is necessary for living in a constantly changing society, the general education core exposes students to a variety of learning experiences.

There must be sufficient breadth and depth in the curriculum to meet the needs, interest, and abilities of all students. a general education core curriculum will ensure that Lexington Community College graduates well-educated men and women who are intellectually flexible, articulate, creative, and prepared for continuous growth. For all students, this implies some understanding of their own abilities, interests, and needs. The general education core curriculum will also help students to develop their own values, to pursue goals, and to contribute to the political, moral, social, and cultural enrichment of society.

Upon completion of an associate degree program (AA, AS, AAS), the graduate can: (outcomes listed here)

#### BEHAVIORAL SCIENCE AND INFORMATION SYSTEMS TECHNOLOGY

#### CHANGE IN EXISTING COURSE

EC 260 PRACTICUM IN EARLY CHILDHOOD EDUCATION (3)

#### Change in Description and Prerequisites:

Students will, under supervision, develop practical skills in teaching children from birth through eight years of age or complete a field experience in the following area(s): administration, home visitation or resource/referral. Emphasis will be placed on the preparation, implementation and evaluation of activities based on specific needs of the program. Student and instructor observations and analysis of performance occurring in the program day will be included. Lecture: 1 hr., Laboratory: 10 hrs. Prerequisites: completion of EC 120, EC 130, EC 170, EC 200, and EC 220 or concurrent; or consent of program coordinator.

#### SOCIAL SCIENCES AND GRAPHIC TECHNOLOGY

GIS 110 (Spatial Data Analysis and Remote Sensing Techniques (3)

#### Change to:

This course is an introduction to spatial analysis and the interpretation of map data. The course will introduce remote sensing techniques, GPS, the interpretation of remotely sensed imagery for environmental, commercial and/or demographic purposes, and the applications of GIS in both the public and private sector. Students will receive a cursory introduction to GIS software. Lecture, 2 hrs., Lab, 1 hr.

# GIS 120 Introduction to Geographic Information Systems (3)

# Change to:

This course, a continuation of GIS 110, is a comprehensive survey of the fundamental concepts of GIS. The course will cover the basic operating systems of widely used GIS software, including (but not limited to) the use of graphic user interface, common theme operations, introductory scripts, manipulation of tables, the creation and editing of shapefiles and charts and layouts, and geocoding. This course is designed for those with little or no experience with GIS who are exploring career opportunities in the field. Prerequisite: GIS 110.

# DISTANCE EDUCATION

The following courses were approved by LCC Academic Council to be delivered via A specific distance format and are being forwarded for notification.

**COM 101** Introduction to Communications (Web)

NFS 101 Human Nutrition and Wellness (Web)