

MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Katie Algeo
Dr. Melanie Autin
Dr. Doug Harper
Dr. Phil Lienesch
Dr. Jeremy Maddox

Dr. Andy Mienaltowski
Dr. Les Pesterfield
Dr. Huanjing Wang
Dr. Todd Willian

FROM: Kenneth Crawford, Chair

SUBJECT: Agenda for Thursday, November 30, 2017 4:00 p.m. in COHH 4123

A. OLD BUSINESS:

- I. Consideration of the minutes of the November 2, 2017 meeting.

B. NEW BUSINESS:

| Type of item | Description of Item & Contact Information |
|---------------------|--|
| Action | Proposal to Revise a Program Ref. 508, Major in Agriculture, Agriculture Mechanization Concentration Contact: Cris Scudder, cris.scudder@wku.edu , x52969 |
| Action | Proposal to Revise a Program Ref. 174, Certificate in GIS Contact: Amy Nemon, amy.nemon@wku.edu , x3082 |
| Action | Proposal to Revise a Program Ref. 576, Major in Geographic Information Systems Contact: Kevin Cary, kevin.cary@wku.edu , x52981 |

C. OTHER BUSINESS

Members Present:

Dr. Katie Algeo
Dr. Melanie Autin
Dr. Doug Harper
Dr. Phil Lienesch
Dr. Jeremy Maddox

Dr. Andy Mienaltowski
Dr. Huanjing Wang
Dr. Todd Willian

Guest Present:

Dr. Bryan Reaka

FROM: Ken Crawford, Chair

The meeting was called to order at 4:00pm.

OLD BUSINESS:

Maddox/Autin moved for approval of the minutes of the September 7, 2017 meeting. Motion passed.

NEW BUSINESS:

Consent Agenda

Autin/Wang moved to approve the Department of Geography & Geology consent items. Motion passed.

Algeo/Wang moved approve the School of Engineering & Applied Sciences consent items. Motion passed.

Action Agenda

Department of Agriculture

Mienaltowski/Maddox moved to bundle and approve Proposals to Revise a Program: Ref. 205, Associate Degree in Agriculture Tech Mgt. – General Option & Ref. 205, Associate Degree in Agriculture Tech Mgt. Turf and Golf Course Mgt. Option. Motion passed.

Autin/Mienaltowski moved to approve the Proposal to Revise a Program: Ref. 508, Major in Agriculture – Agribusiness Concentration. Motion passed with friendly amendment.

Autin/Maddox moved to approve the Proposal to Revise a Program: Ref. 508, Major in Agriculture – Agronomy Plant Science. Motion passed with friendly amendment.

School of Engineering & Applied Sciences

Willian/Maddox moved to approve Proposal to Make Multiple Revisions to a Course: CS 339, Computer Science III. Motion passed with friendly amendment.

Mienaltowski/Wang moved to approve Proposal to Revise a Program: Ref. 343, Construction Management. Motion passed with friendly amendment.

Maddox/Harper moved to approve Proposal to Revise a Program: Ref. 575, Technology Management. Motion passed with friendly amendment.

OTHER BUSINESS:

Andy Mienaltowski was elected as Vice Chair of the Ogden College Curriculum Committee.

**Ogden College of Science and Engineering
Department of Agriculture
Proposal to Revise A Program
(Action Item)**

Contact Person: Cris Scudder, cris.scudder@wku.edu, 745-2969

1. Identification of program:

- 1.1 Current program reference number: 508
- 1.2 Current program title: Major in Agriculture, Agriculture Mechanization Concentration
- 1.3 Credit hours: 50

2. Identification of the proposed program changes:

- Change the name of Agriculture Mechanization to Agriculture Systems
- Creation of Agriculture Systems concentration on ICAP

3. Detailed program description:

| Current | Proposed |
|--|--|
| <p>1. Take the following required basic agriculture courses: Select From: AGRO 110 ANSC 140 AGEC 160 AGMC 170/171 AGRI 175 AGMC 176 AGRI 291 or AGRI 491 AGRO 320 or AGRO 350 or ANSC 345 or AGMC 326 AGRI 397 AGRI 398 AGRI 494 Needs: 29 hours</p> | <p>1. Take the following required basic agriculture courses: Select From: AGRO 110 (3 credit hours) ANSC 140 (3) AGEC 160 (3) AGMC 170/171 (3) AGRI 175 (1) AGMC 176 (2) AGRI 291 or AGRI 491(3) AGRO 320 or AGRO 350 or ANSC 345 or AGMC 326 (3) AGRI 397 (1) AGRI 398 (1) AGRI 494 (3) Needs: 29 hours</p> |
| <p>2. Contact an Agriculture advisor for the Agricultural Mechanization requirements. An exception form must be filed to add courses to your iCAP report. — SELECT FROM: AGMCMAJREQ</p> | <p>2. The following courses (18 hours) are required: AGMC 172/173 (3) AGMC 377/378 (3) AGMC 373/374 (3) AGMC 425 (3) AGEC 366 (3) AMS 227 (3)</p> |

| | |
|--|--|
| | <p>3. Take 3 credit hours from the following: AGEC**, AGED**, AGMC**, AGRI**, AGRO**, ANSC**, HORT**</p> |
|--|--|

4. **Rationale for the proposed program change:**
- The name change mirrors what is currently being used for this subject area at other universities and reflects an increasingly broader scope of the discipline, which now includes precision agriculture technology and concepts
 - To list specific courses that satisfy the Agriculture Systems Concentration

5. **Proposed term for implementation and special provisions (if applicable):** Fall 2018.

6. **Dates of prior committee approvals:**

| | |
|------------------------------------|-------------------------|
| Department of Agriculture | November 16, 2017 _____ |
| Ogden College Curriculum Committee | _____ |
| Undergraduate Curriculum Committee | _____ |
| University Senate | _____ |

**Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise A Program
(Action Item)**

Contact Person: Amy Nemon, amy.nemon@wku.edu, 270-745-3082

1. Identification of program:

- 1.1 Current program reference number: #174
- 1.2 Current program title: Certificate in GIS
- 1.3 Credit hours: 14

2. Identification of the proposed program changes:

- Increase credit hours from 14 to 20
- Include introductory geography or geology or meteorology as a required course and GEOG 110. Currently an introductory course and GEOG 110 are a prerequisite to GISC 316.

3. Detailed program description: Numbers in () indicate credit hours.

- Proposed Changes to Undergraduate certificate in GIS

| Current Program | Revised Program |
|----------------------------------|---|
| GISC 316 (4) Fundamentals of GIS | GEOG 103 (3) or GEOL 103 (3) or GEOL 111 (3) or METR 121 (3) |
| GISC 317 (4) GIS | GEOG 110 (3) World Regional Geography |
| GISC 417 (3) GIS Analysis | GISC 316 (4) Fundamentals of GIS |
| GISC 419 (3) GIS Programming | GISC 317 (4) GIS |
| | GISC 417 (3) GIS Analysis |
| | GISC 419 (3) GIS Programming |

4. Rationale for the proposed program change:

Currently the GIS certificate program is a four-course, 14 credit hour sequence. Hidden within the program is a six-credit hour pre-requisite of an introductory GEOG, GEOL or METR course and GEOG 110. This proposed revision makes clear that all students must have a GEOG or GEOL or METR course and GEOG 110, totaling six credit hours, before taking GISC 316.

5. Proposed term for implementation and special provisions (if applicable):

- Fall 2018

6. Dates of prior committee approvals:

Geography-Geology Curriculum Committee

November 17, 2017

Ogden College Curriculum Committee

Undergraduate Curriculum Committee

University Senate

**Ogden College of Science and Engineering
Department of Geography and Geology
Proposal to Revise Program
(Action Item)**

Contact Person: **Kevin B. Cary, M.Sc., GISP** e-mail: kevin.cary@wku.edu Phone: **5-2981**

1. Identification of program:

- 1.1 Current program reference number: **576**
- 1.2 Current program title: **Major in Geographic Information Science**
- 1.3 Credit hours: **53**

2. Identification of the proposed program changes:

- Add GEOG 480 Urban Geography as an alternative to GEOG 492 in the Professional Requirements.
- Adding GEOG 350 Economic Geography as an alternative to GEOG 492 in the Professional Requirements.
- Adding AMS 163 Architectural Drafting as an alternative to CS 180 or CS 270.

3. Detailed program description:

| Current Program | Proposed Program |
|--|--|
| B.Sc. Geographic Information Science | B.Sc. Geographic Information Science |
| The major in geographic information science (reference number 576) focuses on the concepts and principles of GISystems, along with its four components: (1) input, corrections, and collection of geospatial data; (2) storage and retrieval of geospatial data; (3) manipulation and analysis of geospatial data; and (4) maps and other forms of presentation of geospatial data. The major in geographic information science (reference number 576) requires a minimum of 53 semester hours of GIS courses. | The major in geographic information science (reference number 576) focuses on the concepts and principles of GISystems, along with its four components: (1) input, corrections, and collection of geospatial data; (2) storage and retrieval of geospatial data; (3) manipulation and analysis of geospatial data; and (4) maps and other forms of presentation of geospatial data. The major in geographic information science (reference number 576) requires a minimum of 53 semester hours of GIS courses. |
| <u>Foundation Requirements (10 hours):</u> | <u>Foundation Requirements (10 hours):</u> |
| GEOG or GEOL 103 Our Dynamic Planet or GEOL 111 The Earth or METR 121 Meteorology 3 | GEOG or GEOL 103 Our Dynamic Planet or GEOL 111 The Earth or METR 121 Meteorology 3 |
| GEOG 110 World Regional 3 | GEOG 110 World Regional 3 |
| CS 170 Prob Solve & Programming 3 | CS 170 Prob Solve & Programming 3 |
| GEOG 499 Prof. Development 1 | GEOG 499 Prof. Development 1 |

| | | | |
|---|-----------|---|-----------|
| <u>Technique Requirements (15 hours):</u> | | <u>Technique Requirements (15 hours):</u> | |
| GEOG 300 Writing Geosciences | 3 | GEOG 300 Writing Geosciences | 3 |
| GISC 316 Foundations of GIS | 4 | GISC 316 Foundations of GIS | 4 |
| GISC 317 GIS | 4 | GISC 317 GIS | 4 |
| GEOG 391 Spatial Data Analysis | 4 | GEOG 391 Spatial Data Analysis | 4 |
| <u>Professional Requirements (28 hours):</u> | | <u>Professional Requirements (28 hours):</u> | |
| GISC 414 Remote Sensing | 4 | GISC 414 Remote Sensing | 4 |
| GISC 417 GIS Analysis & Model | 3 | GISC 417 GIS Analysis & Model | 3 |
| GISC 418 Internet GIS | 3 | GISC 418 Internet GIS | 3 |
| GISC 419 GIS Programming | 3 | GISC 419 GIS Programming | 3 |
| GISC 443 GIS Databases | 3 | GISC 443 GIS Databases | 3 |
| GISC 477 GIS Special Topics | 3 | GISC 477 GIS Special Topics | 3 |
| or GISC 423 Geoprocessing & GIS Applications | | or GISC 423 Geoprocessing & GIS Applications | |
| GEOG 492 Advanced Spatial GIS | 3 | GEOG 492 Advanced Spatial GIS | 3 |
| | | OR GEOG 480 Urban Geography | |
| | | OR GEOG 350 Economic Geog. | |
| GEOG 475 or 495 (Practicum and/or Internship) | 6 | GEOG 475 or 495 (Practicum and/or Internship) | 6 |
| <u>PROGRAM TOTAL</u> | <u>53</u> | <u>PROGRAM TOTAL</u> | <u>53</u> |
| <u>Required Support Courses (16 –17) (not part of the major program hours):</u> | | <u>Required Support Courses (16 –17) (not part of the major program hours):</u> | |
| CE 160/161 Surveying | 4 | CE 160/161 Surveying | 4 |
| CS 180 Computer Science I | 3 – 4 | CS 180 Computer Science I | 3 – 4 |
| OR CS 270 Intro. to Web Prog | | OR CS 270 Intro. to Web Prog. | |
| | | OR AMS 163 Architectural Draft | |
| MATH 116 Algebra | 3 | MATH 116 Algebra | 3 |
| MATH 117 Trig. | 3 | MATH 117 Trig. | 3 |
| MATH 183 Intro to Statistics | 3 | MATH 183 Intro to Statistics | 3 |

4. Rationale for the proposed program change:

- **AMS 163** introduces computer-aided drafting design (or CAD(D)) software that is still in use today as part of the software used by GIS Professionals. Students use CADD software to exhibit orthographic projection, isometric projection, sections, dimensioning, auxiliary views, developments, 3D modeling, and professional technical drawing sets. CADD is widely used by GIS professionals. CADD and GIS have long been complementary technologies in the professional world of GIS.
- **GEOG 350** introduces the spatial variation of human activities and the relationship of economic conditions to the production and distribution of raw materials to the manufacturer and finally a product. Students will have an understanding of the geographical distribution of trade and industry, distribution centers, and the spatial arrangement of economic centers across the world. GIS is an increasingly useful tool in economic development for effective decision-making about where to locate new businesses and where to grow existing businesses, as well as aiding in economic recovery and growth. GIS

in business is becoming a part of mainstream economic management at the local, national, and global scales.

- **GEOG 480** introduces a solid understanding of the core concepts in location and space as well as spatial patterns and processes in urban areas. The student will be able to interpret patterns that make up the urban landscape, explain why urban patterns occur where they do, predict future spatial patterns and activities. Planners are now utilizing Big Data with GIS as part of the decision-making process and GIS is providing solutions to common problems such as traffic congestion, networking, and routing.

5. Proposed term for implementation and special provisions (if applicable):

- **Term:** Fall 2018

6. Dates of prior committee approvals:

Department of Geography and Geology
Ogden College Curriculum Committee
University Curriculum Committee
University Senate

November 17, 2017

