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| For Registrar’s Use only |

Code # AG14

**New Minor Proposal-Bulletin Change Transmittal Form**

**Undergraduate Curriculum Council** - Print 1 copy for signatures and save 1 electronic copy.

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| **New Certificate or Degree Program** (The following critical elements are taken directly from the Arkansas Department of Higher Education’s “Criteria and Procedures for Preparing Proposals for New Programs”.) Please complete the following and attach a copy of the catalogue page(s) showing what changes are necessary. |

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (If applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

**1. Proposed Program Title**

**Minor in Spatial Technologies and Geographic Information Systems**

**2. CIP Code Requested**

45.0702 – Geographic Information Science and Cartography

**3. Contact Person** (Name, Email Address, Phone Number)

Dr. Timothy Burcham, [tburcham@astate.edu](mailto:tburcham@astate.edu), 2085

**4. Proposed Starting Date**

8/1/2014

**From the most current electronic version of the bulletin, copy all bulletin pages that this proposal affects and paste it to the end of this proposal.**

**To copy from the bulletin:**

1. Minimize this form.
2. Go to <http://registrar.astate.edu/bulletin.htm> and choose either undergraduate or graduate.
3. This will take you to a list of the bulletins by year, please open the most current bulletin.
4. Find the page(s) you wish to copy, click on the “select” button and highlight the pages you want to copy.
5. Right-click on the highlighted area.
6. Click on “copy”.
7. Minimize the bulletin and maximize this page.
8. Right-click immediately below this area and choose “paste”.
9. For additions to the bulletin, please change font color and make the font size larger than the surrounding text. Make it noticeable.
10. For deletions, strike through the text, change the font color, and enlarge the font size. Make it noticeable.

**Agricultural Programs Minors**

**Minor in Horticulture**

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| **Required Courses:** | **Sem. Hrs.** |
| Horticulture Electives | 6 |
| Upper-level Horticulture electives | 12 |
| **Total Required Hours:** | **18** |

**Minor in Plant Science**

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| **Required Courses:** | **Sem. Hrs.** |
| Plant Science Electives | 6 |
| Upper-level Plant Science Electives | 12 |
| **Total Required Hours:** | **18** |

**Minor in Spatial Technologies and Geographic Information Systems**

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| **Required Courses: Students must achieve a “C” or better in all courses within the minor and an overall GPA of 3.0 for the minor**. | **Sem. Hrs.** |
| **AGRI 3543 – Fudamentals of GIS and GPS** | **3** |
| **AGRI 4773 – Remote Sensing** | **3** |
| **PSSC 3503 – Spatial Technology I** | **3** |
| **PSSC 3513 – Spatial Technology II** | **3** |
| **PSSC 4543 - Advanced GIS for Agri. & Natural Res.** | **3** |
| **PSSC 4813 – Soil Fertility and Fertilizers** | **3** |
| **Total Required Hours:** | **18** |

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**LETTER OF NOTIFICATION  
NEW MINOR**(Maximum 18 semester credit hours of new theory courses and 6 credit hours of new practicum courses)

1. Institution submitting request:

Arkansas State University

2. Contact person/title:

Dr. Timothy Burcham, Dean of the College of Agriculture and Technology

3. Phone number/e-mail address:

870-972-2085, tburcham@astate.edu

4. Proposed effective date:

8/1/2014

5. Title of minor:

**Spatial Technologies and Geographic Information Systems**

6. Reason for proposed action:

Spatial Technologies, Geographic Information Systems (GIS), and related technologies are integral and essential in modern agricultural production and natural resources management disciplines. The Arkansas State University (A-State) Spatial Technologies and Geographic Information Systems (ST&GIS) minor provides an opportunity for students to complete a complementary group of academic courses to gain additional proficiency in geospatial systems.  This minor provides additional career advancement opportunities for students majoring in agriculture, engineering, geosciences, natural resources management, technology, social sciences, and other related degree programs. The ST&GIS minor provides academic and experiential knowledge necessary to demonstrate proficiency in the principles and practices of geospatial technologies. Individuals completing the ST&GIS minor can market their advanced GIS training to prospective employers and the program is an excellent platform for graduate studies that incorporate geospatial technologies.

7. New minor objective:

To prepare students for a career associated with Spatial Technologies and Geographic Information Systems using a series of upper division courses that provide conceptual and practical knowledge necessary to be competent in this field of endeavor.

**8. Provide the following:**

a. Curriculum outline - List of required courses

AGRI 3543 – Fundamentals of GIS and GPS (3 hours)

AGRI 4773 – Remote Sensing (3 hours)

PSSC 3503 – Spatial Technology I (3 hours)

PSSC 3513 – Spatial Technology II (3 hours)

PSSC 4543 - Advanced GIS for Agri. & Natural Res. (3 hours)

PSSC 4813 – Soil Fertility and Fertilizers (3 hours)

b. New course descriptions

No new courses.

c. Program goals and objectives

1. To prepare students for a career associated with Spatial Technologies and Geographic Information Systems using a series of upper division courses that provide conceptual and practical knowledge necessary to be competent in this field of endeavor.

2. To provide students with educational and experiential knowledge that better prepares them for graduate and professional schools.

3. To meet industry and government agencies need for graduates with skills in the area of Spatial Technologies and Geographic Information Systems.

d. Expected student learning outcomes

The student will learn how to gather information from the internet and collect geospatial data and integrate them using state-of-the-art technology. Students will demonstrate depth in a specialty area to support their professional goals. Specific objectives of the minor include: The student will be able to use geospatial technologies to solve practical problems. The student will acquire and demonstrate the ability to collect and present GPS/GIS data and results in an informative and professional manner as it applies to agriculture and natural resources. The student will understand the environmental implications of spatial technologies on agricultural, environmental and natural resource issues.

9. Will the new option be offered via distance delivery?

No

10. Mode of delivery to be used:

Classroom-based Lecture and Laboratory

11. Explain in detail the distance delivery procedures to be used:

Not Applicable

12. List courses in minor. Include course descriptions for new courses:

AGRI 3543 – Fundamentals of GIS and GPS (3 hours)   
AGRI 4773 – Remote Sensing (3 hours)

PSSC 3503 – Spatial Technology I (3 hours)   
PSSC 3513 – Spatial Technology II (3 hours)   
PSSC 4543 - Advanced GIS for Agri. & Natural Res. (3 hours)  
PSSC 4813 – Soil Fertility and Fertilizers (3 hours)

13. Specify the amount of the additional costs required, the source of funds, and how funds will be used.

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| **President/Chancellor Approval Date:** Enter date... | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |
| **Board of Trustees Notification Date:**  Enter date... |