1. ACTION DESIRED: Trial Course [ ]  New Course [ X ]

2. COURSE IDENTIFICATION:

Dept.  NRM  Number 360  No. of Credits 3

Justify upper/lower division status & number of credits. If course is to be stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit.

This class has already been developed and is taught at the UAA campus as GIS 370. It has been taught by this professor for the past 4 years and was offered as a trial course to UAF students twice in the past. It was developed as an upper division course and judging from student performance and end of semester surveys is appropriate at that level.

3. CROSS LISTED? No

If yes, Dept.  No. (Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

STACKED? No  If yes, Dept.  No.

2. PROPOSED TITLE: GIS and Remote Sensing for Natural Resources

5. FREQUENCY OF OFFERING: Spring of Even Numbered Years
(Fall, Spring, Summer, As Demand Warrants)

6. DATE OF FIRST OFFERING (after approved): Spring 2010

7. COURSE FORMATS: _1_ _2_ _3_ _4_ _5_ weeks; _X_ 6 weeks to full semester

other formats: (specify)  Distance delivery via PolyCom system from UAA

8. CONTACT HOURS PER WEEK:  2.0 hrs. Lecture  3.0 hrs. Lab

other hours: (specify type)

9. BRIEF COURSE CATALOG DESCRIPTION (50 words or less, if possible):

This course introduces students to the principles and terminology of natural resources, ecosystem management and landscape ecology while developing analytical skills using spatial technologies consisting of geographic information systems (GIS), remote sensing, and global positioning systems (GPS).

10. COURSE CLASSIFICATION:  (Undergraduate courses only. Use approved criteria found on Page 10 of this manual. If justification is needed, attach on separate sheet.)  H-Humanities [ ]  n-Natural Science [ ]  s-Social Sciences [ ]

Will this course be used to fulfill a requirement for the Baccalaureate core?  Yes [ X ]  No [ ]  O-Oral Intensive [ ]  Format 6
W-Writing Intensive [ ]  Format 7  Natural Science [ ]  Format 8

11. COURSE REPEATABILITY:  Is this course repeatable for credit?  No [X]  Yes [ ]  If yes, how many times may the course be taken?  ____ Times.  (If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?  ____ credits.)
12. GRADING SYSTEM: Letter \( X \)  Pass/Fail \( [\] \)

13. PREREQUISITES: NRM 338 or equivalent.  

(REQUIRED completion before enrolling in this course)  RECOMMENDED: NRM 312  
(Strongly encouraged to complete prior to this course)

14. SPECIAL RESTRICTIONS, CONDITIONS: None

15. PROPOSED COURSE FEES: None  **Submit a memo through your dean to the Provost and VCAS for approval.**

16. PREVIOUS HISTORY (offered as trial or special topic course, etc.): Offered as a trial course in Spring 2004 and again in Spring 2006. Offered as a special topic course in 2007.

17. ESTIMATED IMPACT OF ACTION ON BUDGET, FACILITIES/SPACE, FACULTY RESOURCES: It is estimated that there will be some minor impact on the budget for this course as a teaching assistant must be provided to help students and facilitate distance delivery efforts, however materials, exercises and spatial data have already been developed or acquired as part of trial course offerings.

Estimated impacts on facilities and space are; 1) classrooms with Polycom systems are needed for lectures at both UAF and UAA, and 2) time on computers in SNRAS GIS lab must be scheduled to allow students to complete assignments.

It is estimated that there will be little or no impacts on faculty as: 1) professor will already be teaching course in Anchorage as part of UAA GIS program, and 2) faculty must travel to Fairbanks on several occasions during the semester to conduct administrative/research objectives and will teach from UAF and meet with students during those trips.

18. HAVE YOU REVIEWED WITH THE LIBRARY COLLECTION DEVELOPMENT OFFICER (PAULINE WILSON, 6069) ANY LIBRARY/MEDIA COLLECTIONS, EQUIPMENT, AND SERVICES AFFECTED BY THIS PROPOSED ACTION? Yes \( X \)  No \( [\] \)  
If no, why not?

19. WHAT PROGRAMS/DEPARTMENTS WILL BE IMPACTED BY THIS PROPOSED ACTION?  
Include information about program/department contacted (e.g. email, memo)  
All Departments in the School of Natural Resources and Agricultural Sciences (E-mails and personal conversation with Carol Lewis, Dean). UA Statewide Geography Program (E-mail and phone conversation with Dave Verbyla, member Geography Curriculum Development Committee).

20. PLEASE SPECIFY POSITIVE AND NEGATIVE IMPACTS ON OTHER COURSES, PROGRAMS AND DEPARTMENTS RESULTING FROM THE PROPOSED ACTION.

I do not anticipate there being any negative impacts from the proposed actions. Positive impacts would be an additional course teaching state-of-the-art techniques using spatial technologies and relating it to ecosystem management for any interested students. In
particular, natural resource management (NRM) students and Statewide geography students would have an additional elective from which to choose. Additionally this class as taught cross-campus (UAA and UAF) strengthens the UA system by providing a built-in mechanism to easily transfer credits between these two campuses.

21. JUSTIFICATION FOR ACTION REQUESTED (attach sheets if necessary)

The course has been well received by the students that have taken it both as a trial course at UAF and as a permanent course at UAA. I have had requests from students at UAF for the class in the years when it was not offered so that seems to indicate the demand exists. To the best of my knowledge this course deals with spatial analytical techniques that are not covered in depth by other existing courses and/or are not tied to ecological processes and functions as they exist on the landscape. The class is taught from the perspective of an ecologist and the spatial technologies are used as tools to help make informed decisions and quantify effects from management actions. Special efforts are taken to present the strengths of the technologies as well as to present the weaknesses associated with them so the end user is more aware of both and can incorporate that knowledge to make better use of the technology.

**NOTE: A COURSE SYLLABUS FOR EACH COURSE FORMAT MUST BE SUBMITTED WITH THIS REQUEST**

APPROVALS:

3. ____________________________________  ______________________  
   Chair, Program/Dept/Div of_________  Date  ______________________

4. ____________________________________  ______________________  
   Chair, College/School Curriculum   Date
   Council for__________________________

5. ____________________________________  ______________________  
   Dean, College/School of_____________  Date
   PLEASE RETURN TO CRCD EXECUTIVE DEAN'S OFFICE, CAMPUS BOX 6500, x7143, mark.beck@alaska.edu
   ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION – Offerings above the level of approved programs must be approved in advance by the Provost.
   Date
   Chair, Senate Curriculum Review Committee