



THE FACULTY SENATE

October 15, 2002

MEMORANDUM

TO: President Robert M. Gates

SUBJECT: Certificate Program - Rangeland Management and Watershed Certificates (**FS.20.50**)

At its regular meeting on October 14, 2002, the Faculty Senate approved the following item from the University Curriculum Committee and submits it for your approval. Attached is a copy of the material sent to our Senators.

**Certificate Program
College of Agriculture and Life Sciences
Department of Rangeland Ecology and Management
Certificate in Rangeland Management
Watershed Certificate**

Thank you for your time and consideration. Please inform me of your action on this matter.

Robert H. Strawser
Speaker, 2002-2003

Attachment

cc: Dr. David Prior
Dr. Karan Watson
Dr. Edward Hiler

Approved:

Robert M. Gates, President

9-23-03

Date

I approve only the Watershed Certificate Program and the Rangeland Management Certificate Program has been withdrawn.



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June 28, 2002

To: Karen Kubena *Karen Kubena*
Associate Dean, College of Agriculture and Life Sciences

David Appel *Robert Whitson*
Chair, College of Agriculture and Life Sciences
Undergraduate Program Council

From: Robert E. Whitson *Robert E. Whitson*
Head, Rangeland Ecology and Management

Subject: Watershed Certificate

The Department of Rangeland Ecology and Management would like to request approval of a Watershed Certificate. The goal of the watershed certificate is to provide a rigorous and high quality program that will produce graduates capable of working as a professional in watershed or hydrology fields, but with very solid scientific and ecological foundation. Graduates will be qualified to work in government or consulting or if they choose, be prepared to pursue graduate training in any watershed/hydrology science program. Training will be built on a solid foundation in watershed management and hydrology.

Watershed Certificate
18 credit hours required

Required Courses (12 hrs required)¹

1. RLEM 305: Watershed Analysis and Planning
2. AGSM 335: Water and Soil Mgmt
3. AGRO 445: Soil Physics
4. GEOL 410: Hydrogeology

Suggested Electives: (Select 6 hrs)

1. AGEN 350 Hydrologic Principles in Agriculture²
2. AGEN: 469: Water Quality Engineering²
3. AGSM 337: Tech. For Environ. & Nat. Resources Eng.
3. ATMO 201: Atmospheric Science or ATMO 465 Agriculture Meteorology
4. BESC 403: Sampling and Environ. Monitoring
5. GEOG 324: Global Climate Regions
6. GEOG 370: Coastal Processes

7. GEOG 400: Arid Lands Geomorphology
8. GEOG 431: Geomorphology
9. GEOG 434: Hydrology and Environment
10. GEOL 420: Environ. Geology
11. RENR 444: Remote Sensing or GEOG 398: Interpretation of Aerial Photographs
12. RENR 470: Environmental Impact Assessment
13. WFSC 489: Wetland Ecosystems
14. WFSC 414: Limnology

¹ Students are required to take RLEM 301, AGRO 301 and PHYS 201 (science elective) as part of the degree in Rangeland Ecology and Management. Students not majoring in Rangeland Ecology and Management would be required to complete these courses.

² Requires MATH 151, 152, 251, 308, ENGR 111, 112, 211, 212 (ENGR 211 and 212 restricted to ENGR majors only)