

Fall 2020 Course Descriptions as of 04/05/2020 08:13 PM

Information in Browse Course Catalog is subject to change. Information is term specific. Please refer to the appropriate term when searching for course content. Key to Course Descriptions may be found at: http://rcs.registrar.arizona.edu/course_descriptions_key.

Range Management (RAM)

RAM 193: Internship (1 - 8 units)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 199: Independent Study (1 - 3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 199H: Honors Independent Study (1 - 3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

Enrollment requirement: Student must be active in the Honors College.

Honors Course: Honors Course

Honors Course: Honors Course

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 293: Internship (1 - 8 units)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 299: Independent Study (1 - 5 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 299H: Honors Independent Study (3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

Enrollment requirement: Student must be active in the Honors College.

Honors Course: Honors Course

Honors Course: Honors Course

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 340: Conservation and Agriculture in the Southwest (3 units)

Description: Agriculture and ranching have had a significant impact on the history and environment of the western United States. In popular culture, ranching is viewed both as a romantic representation of our western, pioneer heritage and as a symbol of environmental destruction. This course examines how modern agriculture and ranching fits with these perceptions by developing an understanding of what has been termed "conservation ranching." We will review how agriculture is practiced in the Southwest and the relationship between agriculture and sustainable land use. The focus is on ranching because it is the predominant land use in rural Arizona and other western states, but we will touch on sustainable farming practices throughout the semester.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Lecture Required

Also offered as: RNR 340

Course typically offered:

Main Campus: Spring

Field trip: There are three planned field trips. Students must attend at least two of these trips but they are allowed to attend all three.

Honors Course: Honors Contract

Honors Course: Honors Contract

RAM 382: Rangeland Plant Communities of the West (3 units)

Description: Structure and function of western U.S. range land plant communities focusing on vegetation dynamics and anthropogenic influences. Laboratory includes classroom and field identification of communities and plant species.

Grading basis: Student Option ABCDE/PF

Career: Undergraduate

Flat Fee: \$40

Course Components: Laboratory May Be Offered
Lecture Required

Course typically offered:

Main Campus: Spring

RAM 393: Internship (1 - 8 units)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 399: Independent Study (1 - 3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 399H: Honors Independent Study (1 - 3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

Enrollment requirement: Student must be active in the Honors College.

Honors Course: Honors Course

Honors Course: Honors Course

RAM 431A: Traditional Ecological Knowledge (3 units)

Description: An introduction to the growing literature on traditional ecological knowledge and its relationships to the ecological and social sciences.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Lecture Required

Also offered as: AIS 431A, ANTH 431A, ENVS 431A, GEOG 431A, RNR 431A, WFSC 431A, WSM 431A

Co-convened with: RAM 531A

Course typically offered:

Main Campus: Fall

Home department: American Indian Studies Committee

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 436A: Grazing Ecology and Management (2 units)

Description: This course examines the underlying ecologic and economic principles of how rangeland herbivores interact with their environment and how understanding these interactions can be applied to the management of grazing animals and the environments they inhabit. Emphasis is placed on the scientific basis for grazing management decisions of wild and domesticated ungulate herbivores that can be planned to accomplish a variety of outcomes. Focus will be on western rangelands in the U.S. but the basic ecologic and economic concepts you will learn have applicability to most arid and semi-arid rangeland ecosystems throughout the world.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Lecture Required

Co-convened with: RAM 536A

Course typically offered:

Main Campus: Fall

RAM 441A: Natural Resource Management in Native Communities (3 units)

Description: This course is a survey of basic issues and concepts in natural resource management and the environment in Native communities using integrated case studies that survey all the major varieties of environmental issues in Indian Country in the 21st century. A central theme will be developing tribally-specific solutions to rebuilding the resiliency of degraded ecosystems. We will consider particular case studies such as: tribal sovereignty, land tenure, reserved rights and Native claims; Native knowledge systems and Western science; co-management and restoration; water; fish and wildlife; agriculture and rangeland management; energy, mining and nuclear waste; and global climate change.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Lecture Required

Equivalent to: ANTH 441A, ARL 441A, RAM 441A, RNR 441A, SWES 441A, WFSC 441A, WSM 441A

Also offered as: AIS 441A, ANTH 441A, ARL 441A, ENVS 441A, RNR 441A, WFSC 441A, WSM 441A

Co-convened with: RAM 541A

Course typically offered:

Main Campus: Fall, Spring

Home department: American Indian Studies Committee

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 446: Management and Restoration of Wildland Vegetation (4 units)

Description: General techniques for managing, reclaiming, and restoring vegetation on rangelands and woodlands will be addressed with a focus on local and regional management. Students will work to develop solutions through chemical, biological, mechanical, and cultural land treatments.

Grading basis: Regular Grades

Career: Undergraduate

Flat Fee: \$70

Course Components:	Laboratory	May Be Offered
	Lecture	Required

Co-convened with: RAM 546

Course typically offered:

Main Campus: Spring

RAM 456A: Rangeland Inventory and Monitoring (4 units)

Description: Techniques of mapping and measuring attributes of vegetation and soils for inventory and monitoring of range lands. Interpretation of data with respect to range condition and trend, watershed protection, value for livestock and wildlife habitat.

Grading basis: Regular Grades

Career: Undergraduate

Flat Fee: \$75

Course Components:	Laboratory	May Be Offered
	Lecture	Required

Co-convened with: RAM 556A

Course typically offered:

Main Campus: Fall

Recommendations and additional information: RNR 230, RA M382, RNR 321, RNR 316 or equivalent; satisfaction of the upper-division writing proficiency requirement.

Writing Emphasis: Writing Emphasis Course

RAM 487: Rangeland Management Plan (2 units)

Description: [Taught odd-numbered years] Conduct a field inventory, develop management alternatives, and provide environmental and economic analyses of alternative management proposals in a written plan. 6L. All-day field trips.

Grading basis: Regular Grades

Career: Undergraduate

Course Components:	Laboratory	Required
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Co-convened with: RAM 587

Course typically offered:

Main Campus: Spring (odd years only)

Writing Emphasis: Writing Emphasis Course

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 493: Internship (1 - 8 units)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 494R: Research (3 units)

Description: Mentored field or laboratory research experience in the Rangeland Ecology and Management program.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 2 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

Recommendations and additional information: ENGL 101, ABE 120; consent of instructor.

RAM 498: Senior Capstone (1 - 3 units)

Description: A culminating experience for majors involving a substantive project that demonstrates a synthesis of learning accumulated in the major, including broadly comprehensive knowledge of the discipline and its methodologies. Senior standing required.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Course typically offered:

Main Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 498H: Honors Thesis (3 units)

Description: An honors thesis is required of all the students graduating with honors. Students ordinarily sign up for this course as a two-semester sequence. The first semester the student performs research under the supervision of a faculty member; the second semester the student writes an honors thesis.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated for a maximum of 9 units.

Course typically offered:

Main Campus: Fall, Spring, Summer

Enrollment requirement: Student must be active in the Honors College.

Honors Course: Honors Course

Honors Course: Honors Course

RAM 499: Independent Study (1 - 5 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Alternative Grading: S, P, F

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 499H: Honors Independent Study (3 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work.

Grading basis: Regular Grades

Career: Undergraduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

Enrollment requirement: Student must be active in the Honors College.

Honors Course: Honors Course

Honors Course: Honors Course

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 531A: Traditional Ecological Knowledge (3 units)

Description: An introduction to the growing literature on traditional ecological knowledge and its relationships to the ecological and social sciences. Graduate-level requirements include preparing for and leading a class discussion on a specific topic.

Grading basis: Regular Grades

Career: Graduate

Course Components:	Lecture	Required
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Also offered as: AIS 531A, ANTH 531A, ENVS 531A, GEOG 531A, RNR 531A, WFSC 531A, WSM 531A

Co-convened with: RAM 431A

Course typically offered:

Main Campus: Fall

Home department: American Indian Studies Committee

RAM 536A: Grazing Ecology and Management (2 units)

Description: This course examines the underlying ecologic and economic principles of how rangeland herbivores interact with their environment and how understanding these interactions can be applied to the management of grazing animals and the environments they inhabit. Emphasis is placed on the scientific basis for grazing management decisions of wild and domesticated ungulate herbivores that can be planned to accomplish a variety of outcomes. Focus will be on western rangelands in the U.S. but the basic ecologic and economic concepts you will learn have applicability to most arid and semi-arid rangeland ecosystems throughout the world. Graduate students will develop and present one PowerPoint lecture that summarizes a topic concerning "Integrated Rangeland Ecology and Management."

Grading basis: Regular Grades

Career: Graduate

Course Components: Lecture Required

Co-convened with: RAM 436A

Course typically offered:

Main Campus: Fall

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

Description: This course is a survey of basic issues and concepts in natural resource management and the environment in Native communities using integrated case studies that survey all the major varieties of environmental issues in Indian Country in the 21st century. A central theme will be developing tribally-specific solutions to rebuilding the resiliency of degraded ecosystems. We will consider particular case studies such as: tribal sovereignty, land tenure, reserved rights and Native claims; Native knowledge systems and Western science; co-management and restoration; water; fish and wildlife; agriculture and rangeland management; energy, mining and nuclear waste; and global climate change. Graduate-level requirements include Increased length of writing assignments.

Career: Graduate

Equivalent to: ARL 541A, RAM 541A, RNR 541A, SWES 541A, WFSC 541A, WSM 541A

Co-convened with: RAM 441A

Course typically offered:

Main Campus: Fall, Spring

Home department: American Indian Studies Committee

Description: General techniques for managing, reclaiming, and restoring vegetation on rangelands and woodlands will be addressed with a focus on local and regional management. Students will work to develop solutions through chemical, biological, mechanical, and cultural land treatments. Graduate-level requirements include a research paper on an aspect of range land improvements.

Career: Graduate

Flat Fee: \$70

Course Components:	Laboratory Lecture	May Be Offered Required
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Co-convened with: RAM 446

Course typically offered:

Main Campus: Spring

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

Description: Techniques of mapping and measuring attributes of vegetation and soils for inventory and monitoring of range lands. Interpretation of data with respect to range condition and trend, watershed protection, value for livestock and wildlife habitat. Graduate-level requirements include completion of additional readings and an independent research project and report.

Career: Graduate

Flat Fee: \$75

Course Components:	Laboratory	May Be Offered
	Lecture	Required

Co-convened with: RAM 456A

Course typically offered:

Main Campus: Fall

Description: [Taught odd-numbered years] Conduct a field inventory, develop management alternatives, and provide environmental and economic analyses of alternative management proposals in a written plan. 6L. All-day field trips. Graduate-level requirements include development of additional management alternatives and environmental and economic analyses.

Career: Graduate

Course Components: Laboratory Required

Co-convener with: RAM 487

Course typically offered:

Main Campus: Spring (odd years only)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 599: Independent Study (1 - 5 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 619: Ecology of Savannas, Shrublands, and Woodlands (3 units)

Description: [Taught Spring semester in even-numbered years] The functional ecology and dynamics of biogeographically diverse savanna, shrubland and woodland ecosystems will be examined. Interactions among co-occurring life forms and growth forms will be emphasized with in the context of climate, soils and disturbance.

Grading basis: Regular Grades

Career: Graduate

Course Components: Lecture Required

Equivalent to: ARL 619, ECOL 619, GEOG 619, SWES 619

Also offered as: ARL 619, ECOL 619, ENVS 619, GEOG 619

Course typically offered:

Main Campus: Spring (even years only)

Recommendations and additional information: Upper-division ecology course.

RAM 693: Internship (1 - 8 units)

Description: Specialized work on an individual basis, consisting of training and practice in actual service in a technical, business, or governmental establishment.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 696A: Rangeland Management (1 unit)

Description: The development and exchange of scholarly information, in a small group setting, on selected topics in Rangeland science and management. Course registrants exchange results of research through discussions, reports, and/or papers.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Seminar Required

Repeatable: Course can be repeated a maximum of 2 times.

Course typically offered:

Main Campus: Fall, Spring

RAM 699: Independent Study (1 - 5 units)

Description: Qualified students working on an individual basis with professors who have agreed to supervise such work. Graduate students doing independent work which cannot be classified as actual research will register for credit under course number 599, 699, or 799.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 900: Research (1 - 8 units)

Description: Individual research, not related to thesis or dissertation preparation, by graduate students.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 909: Master's Report (1 - 3 units)

Description: Individual study or special project or formal report thereof submitted in lieu of thesis for certain master's degrees.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

RAM 910: Thesis (1 - 8 units)

Description: Research for the master's thesis (whether library research, laboratory or field observation or research, artistic creation, or thesis writing). Maximum total credit permitted varies with the major department.

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

RAM 920: Dissertation (1 - 9 units)

Description: Research for the doctoral dissertation (whether library research, laboratory or field observation or research, artistic creation, or dissertation writing).

Grading basis: Alternative Grading: S, P, F

Career: Graduate

Course Components: Independent Study Required

Repeatable: Course can be repeated a maximum of 99 times.

Course typically offered:

Main Campus: Fall, Spring, Summer

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

May Be Offered Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.