

AgEc 243 Principles of Agri-Business Management

Applying management principles and functions to Agri-business firms, farms and ranches.

Major topics

include record keeping, calculating inventories and determining depreciation and investment credit.

3 credits

AgEc 253 Reservation Land Use

Course deals with the land; its uses and potentials, policies and regulations governing such things as grazing, leases, buying and selling, exploration and environmental impacts of land use on the Pine Ridge Indian Reservation and other reservations nationwide. This course meets the requirement for a Lakota Studies elective. 3 credits

AgEc 263 Farm and Ranch Management

Farm and ranch business from view point of continuous profit and efficiency. Basic principles of farm

management, applied to selection and combination of enterprises, level of production, size of business, labor efficiency and machinery efficiency. Types of farming, tenure and leasing, risk, prices, credit and starting farming, ranching business and production records, their analysis and use in budgeting and planning future operations.

3 credits

AgEc 293 Internship in Agri-Business

Supervised field experience in Agri-Business. Prerequisite: Sophomore Standing. 3 credits

AgEc 323 Agriculture Marketing and Prices

Market structure, conduct and performance factors within the tribal, domestic and global marketing areas

with specific emphasis on the farm and ranch components and agricultural input markets.

Specific attention involves governments role in marketing, market basket, price spreads, price analysis, future market Ag.Commodities and contract marketing. Basics of internet, local, private auctions will also be covered.

Prerequisites: Econ 203, Math 113 or higher, AgEc 243

3 credits

AgEc 413 Agriculture Finance

Economic theories related directly to the market for capital and associated production cost with application to the farm, ranch and agricultural sectors. Specific study deals with financial statements, financing enterprises and sources agricultural credit including private and governmental lending institutions. Prerequisites:

AgEc

243, Acct 203, Econ 203.

3 credits

AgEc 423 Agriculture Policy

The basics of agricultural production unit within the domestic, tribal and global markets with the focus on

the dynamics of the agricultural sector and economic system. Analysis focuses on traditional and current

agricultural and economic policies within the context of positive and normative economics.

Students

will gain understanding on USDA Farm Policies and procedures that focus on developing sound policy.

Prerequisites: AcEc 243, Acct 203, Econ 203.

3 credits

AgEc Agriculture Internship

Supervised field experience in Agri-Business. 3 credits

AgEc 103 Introduction to Organic Gardening

This course will introduce students to a method of food production in which the growers work in harmony

with nature instead of trying to tame her. It will explore the use of organic methods of plant production, not only for food but also for pleasure. The plant people are very important for the survival of the Lakota. This course will explore ways to improve or revive old natural ways of coexistence with the plant people.

3 credits (2 Lab, 2 Lecture)

AgEc 113 Soil Management for Organic Gardening

The course explains the basic role of soils for plant growth and cultivation. Physical, chemical and biological aspects of soils will be studied. Special attention is given to cyclic processes and the maintenance and renewal of soil fertility. Lab-classes will deal with the details of soil preparation and management. Composting procedures and methods will receive special attention.

3 credits

AgEc 124 Organic Vegetable Production and Food Preservation

The course will demonstrate the principles of organic vegetable production. An introduction in gardening

techniques such as seeding, planting, irrigation, plant nutrition, harvesting and food preservation will

provide the basis for practical experience in lab-classes. The course will emphasize the vegetable production procedures using organic gardening systems with special consideration to the ecosystems of the reservation.

A rather wide range of different vegetable crops will be discussed.

3 credits

AgEc 132 Plant Health Management in Organic Gardening

The course demonstrates health hazards of cultivated plants. It deals with competition with other plants

(weeds); damage by animals such as nematodes, mites, insects, snails, birds and mammals; diseases caused by viruses, bacteria and fungi; non-parasitic stresses by climatic factors, pollution and cultivation techniques. It will be shown, that balancing positive and negative effects of those factors is the key for successful organic plant production without regular intervention by toxic chemicals. Specific control methods for individual problems will be discussed and demonstrated, using physical, cultural and chemical intervention.

2 credits

AgEc 296 Organic Gardening Internship

This course offers the student the opportunity to gain practical experience in organic gardening.

The

management of their own garden plot on a local field site permits learning of vegetable production with special aspects to the ecosystem in the reservation. Data will be collected to establish a vegetable production system focused on a respectful use of soil, water and energy. The student will be supervised by the instructor.

Prerequisite: Sophomore standing or permission of Instructor
6 credits

AnSc 103 Animal Science

Adaption, breeding, feeding, marketing classification, selection of market and breeding types of beef cattle, horses, sheep, swine and poultry, introduction to bison management within the ecological balance of natural resources available to a producer.

3 credits

AnSc 233 Bison Science I

A study of bison and the relationship to the Lakota culture, and the natural environment of primarily the Great Plains region. Students will gain an understanding of bison in regards to history, other wildlife, range ecology, management, production and economics.

3 credits

AnSc 303 Applied Animal Nutrition/Feeds and Feeding

Classification and nutrition characteristics of feedstuffs; methods of evaluating feedstuffs; principles of ration formulation and balancing for farm animals; preparation processing, handling and storage of feedstuffs; Function of various nutrients; digestion and metabolism of nutrients by different animals. Prerequisites:

AnSc 103 & Rang 113.

3 credits

AnSc 313 Animal Breeding

Application of animal genetics for improvement of livestock herds. Emphasis on occurrence, origin, use and control of variation in economically important traits related to improvement of livestock.

Prerequisite:

AnSc 103. 3 credits

AnSc 323 Animal Reproduction

Anatomy and Basic physiological processes of reproduction in domestic animals, factors affecting and methods of improving of improving reproductive efficiency. Prerequisite: AnSc 103

3 credits

AnSc 403 Beef Science

Feeding, breeding, health, diseases and managements principles of beef cattle production under farm and

ranch operations. Prerequisite: AnSc 103

3 credits

AnSc 413 Equine Science (Horse)

Equine industry, breeds selection, from to function, care and management, soundness, health, reproduction, and feeding. Prerequisite: AnSc 103

3 credits

AnSc 423 Animal Health & Disease

Application of basic animal health issues for improvement of livestock herds. Emphasis is on occurrence,

origin, and control of livestock diseases and their economical impact on the industry.

Prerequisite: AnSc

103.

3 credits

NaRs 103 Environmental Processes

Introductory overview of processes and cycles in our dynamic environment; land mass processes, plant

processes, weather processes, evolutionary processes. Ecosystem processes such as plant biomass

fluctuation, metabolic functions, animal population dynamics; abiotic processes such as heat flow, water

flow and weathering Water and land mass processes such as cocainism, land movements, sedimentation,

metamorphosis, erosion, running water, ocean shorelines, glaciers, deserts, groundwater, ocean currents,

atmospheric components and prevailing winds, air pressure, layering protecting against sun, cycling

distribution functions. Prerequisite: None

3 credits

NaRs 113 Watershed Principles

Watershed processes, characteristics and measurements, land use practices for proper watershed management; analysis techniques. Hydroponic cycle and components, ownership

and value of water, organizations of water managers, water quality and quantity concepts relating to range, forests, agriculture, mining and other land uses, data sources and analysis for

decision making, conservation methods, careers. 3 credits

NaRs 123 Forest Principles

Forests processes and characteristics; measurement and analysis techniques, forest uses and management

methods. Basic silviculture, forest growth, harvest regulation in forest crop production. Ecologic, climatic, hydrologic processes and characteristics. Tree growth processes and tree characteristics. Principles of measurements of trees, logs, growth and timber cruising. Silviculture practices in thinning, health control, and harvest cutting. Forest management and harvesting for products. 3 credits

NaRs 133 Dendrology (Tree Identification)

The identification and systematic classification of trees. Basic vocabulary and tree identification; the use of keys' scientific names, tree descriptions and characteristics useful in classification and identification.
3 credits

NaRs 143 Introduction to Natural Resources

Professional vocabulary, concepts, approaches, issues, information sources, and goals of natural resources management. Looks at profession education and career opportunities as well as technician opportunities identification of resources, ownership concepts and laws, organization of federal and local managements, use conflict analysis, resource characteristics, data sources and decision making approaches.
3 credits

NaRs 203 Environmental Conservation

Ecological approach to conservation man's present and past impact on world environments; wise use of natural resources, including soil, water, air, forest, rangelands, energy, wildlife and fisheries.
3 credits

NaRs 233 Bison Science I

A study of bison and the relationship to the Lakota culture, and the natural environment of primarily the Great Plains region. Students will gain an understanding of bison in regards to history, other wildlife, range ecology, management, production and economics. 3 credits

NaRs 263 Natural Resource Practicum I

Practical experience with local, state, and federal agencies who deal with the utilization and preservation on natural resources. These experiences will be done in the format of field trips, workshops, etc. where hands on learning can place. Examples of experiences are as follows: timber evaluation; wildlife preservation techniques; safe mining techniques; reforestation; range improvement; erosion control; pollution; etc. This course should be take at the same time as Natural Resource Practicum II. Prerequisite: Sophomore Standing
3 credits

NaRs 273 Natural Resource Practicum II

A continuation of practical experience with local, state and federal agencies who deal with the utilization and preservation of natural resources. These experiences will be done in the format of field trips, workshops, etc. where hands on learning can take place. Examples of experiences are as follows: range evaluation contests; landscape improvement techniques; record keeping techniques and analysis; waste management regulations; fisheries management; wetland preservation; etc. This course should be taken at the same time as Natural Resource Practicum I. Prerequisite: Sophomore Standing/Natural Resource Practicum I at the same time. 3 credits

NaRs 290 Natural Resources Special Training

Special training in natural resource quantification or interpretation at another campus, by visiting experts,

or at field site. Prerequisite: NaRs 103, NaRs 143

1-3 credits

NaRs 293 Natural Resource Field Experience

Students will take part in field experiences as evaluation or monitoring of range and forest conditions at the local, state or federal level. Other field experience as updating soil survey maps; insect monitoring; water development; water monitoring for pollution; land use planning; harvesting and production of timber; and other related field experiences, as they become available to the department for students, will be provided.

3 credits

NaRs 323 Natural Resource Measurements

Basic vocabulary, concepts, tools, procedures and report forms for measuring natural resources. Emphasis

is on concepts of sampling, degree of accuracy and on interpretation of data collected.

Prerequisites: NaRs 103 & NaRs 143. 3 credits

NaRs 353 Introduction to Appropriate Technology

Introduction to appropriate technology in housing, foods, and energy self-sufficiency as well as production manufacturing potentials with limited natural resources. Appropriate technology "fits" the situation and culture. Development takes on a localized meaning and methodology and ranges in level from subsistence to industrialization. Prerequisites: NaRs 103 & NaRs 143

3 credits

NaRs 403 Introduction to Tourism

Introduction to the art, science, and business of attracting and transporting visitors to local natural resource sites. Look at local accommodations and ways to graciously cater to their needs and wants. Explore what makes tourism possible and how tourism can become an important factor in the wealth of any nation.

Prerequisites: NaRs 103 & NaRs 143

3 credits

AgEc 483 Tiospaye Practicum (Holistic Management)

Capstone course. Goal setting, managing of soil, water, plant, animal, and human resources emphasized.

Appropriate technology concepts related to land use planning and business management.

Allows for group interaction, organization and decision making. Prerequisite: Senior Standing

3 credits

BACHELOR OF SCIENCE IN GENERAL AGRICULTURE

1. CORE (34 credits) Where Taken Date Grade

CoSu 103 College Success 3 _____
Engl 103* Freshman English I 3 _____
Engl 113* Freshman English II 3 _____
SpCm 103 Speech Communication 3 _____
Math 134* Intermediate Algebra or above 4 _____
Natural Science Elective (Option B req. Bio 223) 3 _____
Psy 103 General Psychology 3 _____
Social Science Electives (Option C Economics suggested) 3 _____
MIS 113 Applied Information Processing 3 _____
Literature Elective 3 _____
Humanities course 3 _____

2. LAKOTA STUDIES (15 credits)

Lak 103 Lakota Language I 3 _____
LSoc 103 Lakota Culture (or LHist 203, LHist 213) 3 _____
Lakota Studies Electives at 300 level or above 3 _____
Lakota Electives: 6 credits 3 _____
3 _____

3. GENERAL AGRICULTURE/NATURAL RESOURCE REQUIREMENTS (30 credits)

Chemistry at 100 level or above 3 _____
NaRs 143 Introduction to Natural Resources 3 _____
NaRs 103 Environmental Processes 3 _____
AnSc 103 Animal Science 3 _____
PSc 103 Crop Production 3 _____
Rang 113* Range Principles 3 _____
Rang 103 Range Plants Identification 3 _____
PSc 233* Weed Science 3 _____
PSc 213 Soils 3 _____
AgEc 263 Farm & Ranch Management 3 _____

4. PROFESSIONAL REQUIREMENTS (33-36 credits)

Option A - General Agriculture in Farm & Ranch Management
AnSc 233 Bison Science I 3 _____
AnSc 303 Animal Nutrition/Feeds & Feeding 3 _____
AnSc 313 Animal Breeding 3 _____
AnSc 323 Animal Reproduction 3 _____
PSc 303 Forage Production 3 _____
AnSc 403 Beef Science 3 _____
AnSc 413 Equine (Horse) Science 3 _____
AnSc 423 Animal Health & Disease 3 _____
Rang 413 Range Improvement (SDSU Rang 415) 3 _____
Bio 473 Range Ecology 3 _____
AgEc 483 Tiospaye Practicum (Holistic Management) 3 _____
Option B - Natural Resource Management
AgEc 253 Reservation Land Use Planning 3 _____
NaRs 113 Watershed Principles 3 _____
NaRs 123 Forest Principles 3 _____
NaRs 203 Environmental Conservation 3 _____
NaRs 233 Bison Science I (same as AnSc 233) 3 _____
NaRs 323 Natural Resource Measurements (SDSU Rang 325) 3 _____
NaRs 353 Introduction to Appropriate Technology 3 _____
EnS 333* Introduction to GIS/GPS 3 _____
Bio 443 Range Ecology 3 _____
NaRs 403 Introduction to Tourism 3 _____
AgEc 483 Tiospaye Practicum (Holistic Management) 3 _____
Wildlife course at 300 level or above 3 _____

Option C - Agriculture/Business Management

- Acct 213* Principles of Accounting II 3 _____
- AcEc 243 Principles of Agri-Business Management 3 _____
- AgEc 253 Reservation Land Use Planning 3 _____
- AgEc 323* Agriculture Marketing and Prices 3 _____
- BAd 133 Introduction to Business 3 _____
- BAd 333 Business Letter & Report Writing **or** 3 _____
- BAd 373* Grant Proposal Writing & Management 3 _____
- BAd 363 Business Finance I 3 _____
- AgEc 413* Agriculture Finance 3 _____
- AgEc 423* Agriculture Policy 3 _____
- AgEc 483* Tiospaye Practicum (Holistic Management) 3 _____
- AgEc 493* Ag. Business Internship 3 _____

5. FREE ELECTIVES (15-18 credits)

- Free Electives at 300 level or above 9 _____
- Free Electives 9 _____

(Any Agriculture, business, Natural Resource, Science, Lakota Studies, or Human Services courses are recommended)

TOTAL: 129 CREDITS

ASSOCIATE OF ARTS IN AGRICULTURE

(Transfer Degree)

1. CORE (24 credits) Where Taken Date Grade

- CoSu 103* College Success 3 _____
- Engl 103* Freshman English I 3 _____
- Engl 113* Freshman English II 3 _____
- SpCm 103 Speech Communication 3 _____
- Math Any Math 100 level or above 3 _____
- Science any Science core 3 _____
- Humanities course 3 _____
- Social Science (any economics course recommended) 3 _____

2. LAKOTA STUDIES (9 credits)

- Lak 103 Lakota Language I 3 _____
- LSoc 103 Lakota Culture (or LHist 203, LHist 213) 3 _____
- Lakota Studies Electives 3 _____
- AgEc 253 Reservation Land Use Planning (recommended) _____

3. GENERAL BUSINESS REQUIREMENTS (24 credits)

- Chem Any Chemistry 100 level or above 3 _____
- NaRs 103 Environmental Processes 3 _____
- AnSc 103 Animal Science 3 _____
- PSc 103 Crop Production 3 _____
- Rang 103 Range Plant ID 3 _____
- Rang 113* Range Principles 3 _____
- PSc 213 Soils 3 _____
- PSc 233 Weeds 3 _____
- NaRs 113* Watershed Principles 3 _____

4. Free Electives in Agriculture, Natural Resources, Business or Science Fields (9 credits)

- 3 _____
- 3 _____
- 3 _____

TOTAL: 66 credits

ASSOCIATE OF ARTS IN NATURAL RESOURCES MANAGEMENT (Transfer Degree)

1. CORE (24 credits) Where Taken Date Grade

CoSu 103 College Success 3 _____
Engl 103* Freshman English I 3 _____
Engl 113* Freshman English II 3 _____
SpCm 103 Speech Communication 3 _____
Math Any Math 100 level or above 3 _____
Science Any Science core 3 _____
Humanities course 3 _____
Econ 203 Principles of Microeconomics 3 _____

2. LAKOTA STUDIES (9 credits)

Lak 103 Lakota Language I 3 _____
LSoc 103 Lakota Culture (or LHist 203, LHist 213) 3 _____
Lakota Studies Electives 3 _____
AgEc 253 Reservation Land Use Planning (recommended) _____

3. GENERAL BUSINESS REQUIREMENTS (24 credits)

Chem Any Chemistry 100 level or above 3 _____
NaRs 103 Environmental Processes 3 _____
NaRs 143 Introduction to Natural Resources 3 _____
NaRs 133 Dendrology OR Rang 103, Range Plant ID 3 _____
Rang 113* Range Principles 3 _____
NaRs 123 Forest Principles 3 _____
NaRs 113 Watershed Principles 3 _____
PSc 213 Soils 3 _____

4. Free Electives in Natural Resource, Agriculture, Business or Science Fields (9 credits)

3 _____
3 _____
3 _____

ASSOCIATE OF APPLIED SCIENCE IN AGRI-BUSINESS

1. CORE (18 credits) Where Taken Date Grade

Engl 103* Freshman English I 3 _____
Engl 113* Freshman English II 3 _____
SpCm 103 Speech Communication 3 _____
Math 103 Elementary Algebra (or higher) 3 _____
Social Science (Econ 203) 3 _____
CoSu 103 College Success 3 _____

2. LAKOTA STUDIES (9 credits)

Lak 103 Lakota Language I 3 _____
LSoc 103 Lakota Culture 3 _____
LPol 233 Tribal Laws, Treaties & Government or 3 _____
AgEc 253 Reservation Land-Use Planning or
Econ 233 Reservation Economics 3 _____

3. PROFESSIONAL REQUIREMENTS (36 credits)

MIS 113 Applied Information Processing 3 _____
Bio 113*, NaRs 103 or NaRs 143 3 _____
AnSc 103 Animal Science 3 _____
PSc 103 Crop Production 3 _____
BMath 153 Business Math 3 _____
AgEc 243 Principles of Agri-Business Management 3 _____
AgEc 263 Farm & Ranch Management 3 _____
Acct 203* Principles of Accounting I 3 _____

AgEc 323* Ag. Marketing & Prices 3 _____
Econ 203* Principles of Micro-economics 3 _____
BAd 133 Introduction to Business 3 _____
Free business elective at 300 level or higher 3 _____
4. INTERNSHIP (3 credits)
AgEc 293* Internship in Agri-Business 3 _____

ASSOCIATE OF APPLIED SCIENCE IN ORGANIC AGRICULTURE

1. CORE REQUIREMENTS (21 credits) Where Taken Date Grade

Engl 103* Freshman English I 3 _____
Engl 113* Freshman English II 3 _____
SpCm 103 Speech Communication 3 _____
Math 103 Elementary Algebra (or higher) 3 _____
CoSu 103* College Success 3 _____
Social Science (Econ 203) 3 _____
MIS 113 Applied Information Processing 3 _____

2. LAKOTA STUDIES (9 credits)

Lak 103 Lakota Language I 3 _____
LSoc 103 Lakota Culture 3 _____
LPol 233 Tribal Laws, Treaties & Government or 3 _____
AgEc 253 Reservation Land-Use Plng. or Econ 233 Res.Econ.

3. PROFESSIONAL REQUIREMENTS (27 credits)

AgEc 103 Introduction to Organic Gardening 3 _____
AgEc 113 Soil Management for Organic Gardening 3 _____
AgEc 124 Vegetable Production/Food Preservation 3 _____
AgEc 132 Plant Health Management Organic Grdng. 3 _____
AgEc 296* Organic Gardening Internship 6 _____
Chem 113* Environmental Chemistry or Chem 104 Gen. Chem. 3-4 _____
PSc 233* Weed Science 3 _____
PSc 213 Soils 3 _____

4. PROFESSIONAL ELECTIVES (9 credits) Any of the following classes:

Rang 103 Range Plant Identification 3 _____
NaRs 133 Dendrology (Tree Identification) 3 _____
PSc 103 Crop Production 3 _____
AnSc 103 Animal Science 3 _____
AgEc 263 Farm & Ranch Management 3 _____
NaRs 103 Environmental Processes 3 _____
NaRs 113 Watershed Principles 3 _____
NaRs 123 Forest Principles 3 _____
NaRs 143 Introduction to Natural Resources 3 _____
Ag.Ec 323 Ag. Marketing and Prices 3 _____
BMath 213 Business Math I 3 _____
AgEc 243 Principles of Agri-Business Management 3 _____
AgEc 253 Reservation Land-Use Planning 3 _____

ORGANIC GARDENING CERTIFICATE

1. CORE (9 credits) Where Taken Date Grade

Engl 103* Freshman English I 3 _____
Mathematics (100 level) 3 _____
CoSu 103* College Success 3 _____

2. LAKOTA STUDIES (6 credits)

Lak 103 Lakota Language I 3 _____

Lakota Studies Elective 3 _____

3. PROFESSIONAL REQUIREMENTS (18 credits)

AgEc 113 Soil Management for Organic Gardening 3 _____

AgEc 124 Vegetable Production/Food Preservation 4 _____

AgEc 132 Plant Health Mgt. Organic Gardening 2 _____

AgEc 103 Introduction to Organic Gardening 3 _____

AgEc 296* Organic Gardening Internship 6 _____

ASSOCIATE OF ARTS (A.A.)

CHEMICAL DEPENDENCY COUNSELING

A. Core (24 credits) Where taken Date Grade

SpCm 103 Speech Communications 3 _____

Engl 103 Freshman English I 3 _____

Engl 113 Freshman English II 3 _____

Math 103 Applied Mathematics 3 _____

Computing MIS 113 3 _____

Science (Bio 103 recommended) 3 _____

CoSu 103 College Success 3 _____

Soc 103 Intro to Sociology 3 _____

B. Lakota Studies Core (9 credits)

Lak 103 Lakota Language I 3 _____

LSoc 103 Lakota Culture (or LHist 203) 3 _____

Elective (suggest LPol 223 or LPol 313) 3 _____

C. Social Science Requirements (6 credits, C or better required)

Psy 103 General Psychology 3 _____

Any History course 3 _____

D. Professional Requirements (15 credits, C or better required)

CD 103 Introduction to Alcoholism 3 _____

Sowk 203 Foundations of Social Work 3 _____

Sowk 333 Human Behavior in the Social Environment 3 _____

Sowk 313 Social Work Methods I 3 _____

CD 213 Specialty Internship I 3 _____

E. Certified Chemical Dependency Counselor I (CCDC I) (15 credits with Grade C or better)

The following courses meet the academic requirements for CCDC level I set by the state of South Dakota. 2000 hours or 1 year work experience under a level II or III counselor are required in addition to this coursework to

be eligible for taking the counselor I examination.

CD 113 Introduction to Drug Abuse 3 _____

CD 203 Family Counseling and Chemical Dependency 3 _____

CD 223 Native American Substance Abuse 3 _____

CD 313 Ethical & Legal Issue for CD Professionals 3 _____

CD 343 Methods of Group Counseling 3 _____

Total credits for the A.A. degree: 69