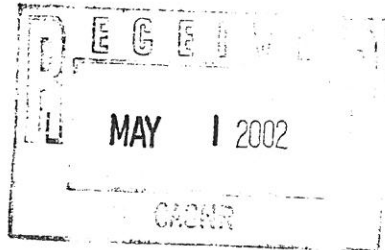


Tuesday, April 30, 2002

To: Randy Wehling
From: Dennis Brink *Dennis Brink*
Subject: AGRI/NRES 103 Subcommittee Report



Randy, attached is a copy of the report of the AGRI/NRES 103 Subcommittee. I am sure Bruce and Curt can address any questions of the curriculum committee when the report is discussed. However, if you have any questions or suggestions regarding the report please contact me.

Finally, I strongly encourage the CASNR Curriculum Committee to provide leadership for the implementation of the recommendations!

CC: Steve Waller
Bruce Johnson
Ed Peters
Curt Weller

AGRI/NRES 103 Review Subcommittee Report & Recommendations
April 26, 2002

I. Subcommittee members

Dennis Brink, Bruce Johnson, Ed Peters, Curt Weller

II. Procedures

- The sub-committee obtained the most recent version of the course objectives and designed a survey of course content, methods and relationship to other courses based on those objectives.
- All current students who had taken AGRI/NRES 103 were mailed the survey provided in the Appendix. Results of the 92 surveys returned were compiled and analyzed by the sub-committee.
- The sub-committee met with the current lecture instructors.
- A survey similar to the survey sent to students was sent to past and present faculty teaching in AGRI/NRES 103. Results of the 9 surveys returned were compiled and evaluated by the sub-committee.
- The sub-committee invited the past and present faculty teaching in AGRI/NRES to a discussion luncheon. Six recitation instructors and the two lecture instructors attended the luncheon.

II. Findings

• Students

1. Students agree the current course is meeting all the course objectives.
2. Students agree all methods except the library assignments contributed to meeting course objectives.
3. The web site for the course did not provide significant assistance for meeting the course objectives.
4. Students do not strongly agree there is a relationship of AGRI/NRES 103 to other courses.

• Lecture Instructors

1. The current lecture instructors are enthusiastic about the course and are planning numerous joint efforts in course development.
2. Lecture instructors thought course was meeting objectives.

3. Library component is "very" manageable.
 4. Lecture instructors believed many of the activities they required were "Charter course" oriented, but were not clear on all the expectations of Charter courses.
- Recitation Instructors
 1. Recitation instructors felt that they "were on their own". They indicated a desire for increased communication among themselves and lecture instructors and participation in decisions related to the course.
 2. Recitation instructors generally wanted additional standardization across recitations. They indicated the role of recitation periods in complementing lecture should be evaluated.
 3. Recitation instructors indicated time to enhance the academic aspects of the course as outlined in the course objectives, should increase and the activities related to "introducing students to the university" should decrease.
 4. Recitation instructors indicated the diversity of student backgrounds, especially of juniors and seniors who are allowed to enroll in the course hinders effective instruction of freshmen students.

III. Recommendations

1. The library assignments to meet the Comprehensive Education Program library requirements should not "stand alone". Recitation instructors should build on the requirement and use it in recitation activities. The focus should be on teaching about information access and gathering.
2. There should be a significant increase in the communication and clarification of course objectives and methods, by AGRI/NRES 103 lecture and recitation instructors, to departments in CASNR. Enhancement and increased awareness of an AGRI/NRES 103 website with information for faculty should begin immediately.
3. Department heads should be encouraged to recruit and recognize faculty for participation in AGRI/NRES 103 and encourage feedback to the department on their experiences in the course.
4. Each department should be challenged by the CASNR Curriculum Committee and supported by CASNR administration to build on the students' experiences in AGRI/NRES 103 in the department's courses and curriculum.

5. Communication and sharing of ideas among lecture and recitation instructors should increase significantly. Pre-semester meetings and development of a listserv of AGRI/NRES 103 instructors should be developed immediately. A uniform system of grading should be implemented.

IV. Appendix Contents

- Student Survey Results
- Summary of Meeting with Lecture Instructors
- Recitation Instructor Survey Results
- Summary of Recitation Instructor Meeting

Appendix

Student Survey Results

Student Survey For AGRI/NRES 103

Thank you for taking the time to complete this survey. Your input is very important and appreciated!!

Using the scale of 1 to 5 with 1 being strongly disagree to 5 being strongly agree, please provide a measure of the following statements about AGRI/NRES 103 from your own personal experience in the course. Number in each column represents number of responses.

I. Course Content

	Strongly Disagree to Strongly Agree				
	1	2	3	4	5
The course content contributed to meeting the following objectives:	Scale (Circle)				
a.) Classify natural resources and identify potential uses (with focus on sustainable uses).	1	2	8	53	28
b.) Discuss the intra-relationships and interrelationships of agricultural and natural resource systems.	1	4	13	51	23
c.) Identify the interdependencies among agricultural and natural resource systems and the problems that arise when conflicting values decide how to best use resources.	1	4	10	52	25
d.) Compare and contrast agricultural and natural resource systems from a local, regional, and global perspective.	2	7	14	41	28
e.) Recognize that there are different, and often conflicting, political, cultural, and economic issues surrounding natural resources and their use.	1	4	12	47	28
f.) Recognize the social, ethical, and environmental responsibilities involved in resource management.	1	7	11	52	21
g.) Explain how the earth's carrying capacity influences the supply and use of agricultural and natural resources.	2	3	7	38	41
h.) Evaluate the impact of specific resource management techniques.	1	8	15	43	24
i.) Examine issues in concert with other students, field professionals, and clientele groups.	3	17	33	27	11
j.) Apply critical thinking skills toward the analytical examination of contemporary environmental issues.	3	12	16	40	21
k.) Synthesize diverse bodies of intellectual content to look for solutions to global concerns.	1	14	25	35	17
l.) Develop analytical, logical, and critical thinking skills to solve problems.	7	16	19	37	13
m.) Develop team skills	8	22	17	31	14

II. Course Methods

	Strongly Disagree to Strongly Agree				
	1	2	3	4	5
The following aspects of the course contributed to meeting the course objectives:	Scale (Circle)				
a.) Course lectures	5	5	13	39	30
b.) Group discussions in recitations	7	8	11	38	27
c.) Student team projects	9	16	31	29	6
d.) Student presentations	10	19	22	28	12
e.) Textbook	9	16	25	32	10
f.) Library assignments	25	21	32	8	5

g.) Guest speakers	5	8	24	35	19
h.) In-class exercises	5	3	15	44	20
i.) Course Web page	15	11	34	13	10

III. Relationship to Other Courses

The following statements are true of the relationship of AGRI/NRES 103 to other courses and campus experiences	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
a.) This course provided good tools for use in my later course work	11	9	22	35	11
b.) This course has helped prepare me for follow-up courses in my major	15	14	22	26	11
c.) The interdisciplinary discussion and problem solving methods used in this course were used in other courses in my major	10	12	31	24	11
d.) This course was a valuable freshman experience for me	13	11	13	32	17

Student Responses to Questions

IV. Course Modifications:

a. **List the 3 things you think should be kept in AGRI/NRES 103 in the future.**

- Web Page, Recitation, In class exercises
- Course objectives, Guest speakers, Assignments, not soley tests
- Recitation group project, In class assignments, Diversity of places covered
- Speakers, PM instructor
- In class exercises, multiple choice tests
- Web page, Good in class exercises, lecture
- Reci + the readings, PM instructor
- Overhead notes, Recitation discussions, Previous tests in library
- Group discussion – lecture, Recitation discussions, Library 110
- Speakers
- Library 110, Group presentations, In-depth look at environmental issues
- Everything
- Issues in ag book, Recitation paper, Reviews for test
- Library 110 – good way to get it done
- Group projects – fun + built teams
- Reci, Class discuss, Teacher ???
- Student comments AM instructor asked for added much value in learning other students perspectives, Recitation & written papers helped to reinforce the class knowledge, General information that ?? you being to learn & base your own ideas off of. It allows for you to further investigate if you are truly interested
- Classes, Notes
- Tests, Group work in reci
- Lib 110, Recitation, Guest speaker
- Recitation – class discussion
- Class discussion on current issues, Night class
- Recitation, Bonus points, In class exercises
- Library 110 included
- Power Point presentations, Environmental Science Book because I still have to return mine
- In class exercises, Library 110, Recitation
- Speakers, Recitation

In class exercises, Library 110, Keep the review guides and notes on the Internet
Guest speaker, Video related to Nebraska
AM instructor great teacher
Discussion in recitation, Student projects and presentations
PM instructor!!!, Course on city campus, Guest lecturers
In class exercises, Same text
Offered as night class, In class exercises
I felt that the individual debates in recitation were challenging but a good experience
Everything is fine
Library 110 via the web, In class exercises
Speakers, Videos, Lectures
Course material

Discussion of topics
Videos, Recitation discussions
Book for recitation discussions
Professor, In class discussion, Library 110
Guest speakers, Recitation
Recitation was good—although I thought it to be a waste of time at the moment—you actually
heard true things and got to set the record straight for those who have no clue about ag
General library assignments, Class discussion/recitation
Population, Problem
“Taking sides”, Emphasis on global issues, Environmental concerns
Library, Recitation, Group discussion
Basic lecture material, Group exercises, Review sheets off the web—very helpful
This class is common sense to most students that have grew up on a farm and is only a good
course to get students used to the college atmosphere
Recitation, Global issues, Group presentations
In class exercises in groups – critical thinking
Dr. Miner, Recitation, Class length
In class exercises, Recitation discussions, Student presentation in recitation
The general overview
The books
Recitation

b. **List the three things you should be added to AGRI/NRES 103 in the future.**

More content, Development of own ideas, Not for right ones spoon fed to us, Flexibility
Physical examples of things recycled or not
Meaningful course content on something of substance
Group discussion
How does this effect my life (personal experiences), Help students who are introverts to speak
out and get involved in class discussion, Make notes available via blackboard
More informative speakers, More in-depth discussion of farm/ranches relationship to AGRI
More guest lecturers
More emphasis in natural resources, Field trip to library to get a better feel, Possible voluntary
or optional field trips for hands-on experience
Some type of lab, Smaller class size
More in-depth look at ag sector
Discuss more of the ag sides of things instead of cities
More in class workings, More discussion in lecture, Worksheets
Videos, Speakers, Field experiences
More emphasis on the sustainable limits of agriculture & natural resources, Take each major &
reinforce how the knowledge is applicable to the specific major
Packet with notes
More on biotechnology (guest speakers would be good)
More group work in lecture, More talk about ag issues

More in class exercises, Web site creation, Short essay
 Better tests that apply to lectures, More guest speakers
 More class speakers, Provide better examples to correspond to everyday life, Have a short research paper about natural resources or agriculture
 More interaction, Maybe some class activities
 Apply more everyday life experiences in lecture, More speakers on the different issues that was discussed in lecture
 Writing one or two reports in a group
 More speakers talking about environmental issues facing agriculture
 Group projects, Field trip
 Everyone should read "Silent Spring"
 More international focus, More sections for a smaller class size
 Maybe some work of project to get the students some experience with the resources
 Library skills was helpful but not for this class; make more use of them in class, More guest lecturers, More problem solving methods and skills
 Take home tests, More recitation, More speakers
 Interaction, Speakers, Group projects
 Group project
 More guest speakers
 More things in recitation—discussion group, Examine issues with outside professionals, More local issues discussed
 More critical thinking
 Need teacher who has actually farmed who know what actually goes on instead of what the Book says. Not that my teacher didn't teach well from the text. We just don't need to create any more tree huggers in the world that don't know what actually goes on.
 More guest speakers on related topics, Printed notes available for purchase!!!
 Guest speakers, Videos from around the world (different area as ag & natural resources)
 More guest speakers, Emphasis on news-making issues
 More visual things, Continue with interesting facts
 I think students should be able to test out of it—there could be a Agri 203 that is more detailed or in greater depth than Agri 103
 More facts proving global warming is wrong (they are out there, contrary, to what Meyers might think)
 More discussion on local issues, Make the class more related to agriculture
 Different presentation techniques for students
 Paper written every week, Library 100—what is the reason for this course anyway?
 Smaller classes, More organized, Notes on p.p. in book
 New text book—or a lecture more reliant on the text book
 A lab for hands on experience

c. **List the three things you think should be deleted from AGRI/NRES 103 in the future.**

One class w/so many people, Debates in recitation
 Out of date teaching techniques, Busy work
 Focused way too much on ag
 PM instructor, The library class – keep it a separate class entirely
 Guest lecturers on GPS systems in combines and edible wild plants
 Lecturers
 Recitation
 Consider the bias in the book
 Group projects
 Recitation
 No presentation in Reci, 1 day of lecture so hours match, Can't think of anything else
 Different text, Library 110, Unrelated web sites
 There is not anything I can think of that needs to be deleted.
 Recitation
 Lecture with overheads

In class exercises
Course web page, Recitation, Library course with it, take library separate
Library course
Library 110
Tests
Recitation, Recitation, Recitation
Recitation
Papers in recitation, Any material not to do with agriculture or natural resources
Get rid of the recitation papers, I really didn't get anything out of it
Presentation in reci course
Library 110
Library 101
PM instructor should not teach this class, Delete library 110 as part of the course, The text
was outdated and impractical
Recitation, Recitation, Recitation
Recitation delete, Recitation overall
The class exercises did not seem very effective
Group presentations
Text, Recitation, Opinionated and subjective instructors
Recitation, Recitation!, Recitation!!
The teacher!
Less objectives
Specific library assignments
Scars students away
Textbook really wasn't much help, Tests were long and pointless
Recitation--this was my main complaint-- My advisor and I have carefully scheduled my classes
to make sure I never get him again for any class. He along with other reci instructors that I
knew of were very pushy of their views. I wanted facts out of the class--not some
teacher's opinion
Not as much focus on global issues
Presentations in recitation
Library 110, The current text, Recitation papers
Library 100 class, Guest speakers, Group presentations in recitation
Recitations
Library

d. Additional comments and/or suggestions.

More exposure to variety of University faculty
Enjoyed class, everyone should be required to take one similar to it
Good class
The course was taken about a year ago. I have since forgotten specifics and/or
cannot properly separate it from my other courses.
The class exists solely to satisfy political and public relations issue between the state, university
and general public, has nothing to do with educating and it was a waste of my time and
money
AM instructor is a great teacher and I hope he continues
The movie day was great
I didn't get anything out of this course
The course seemed a little biased toward the environmentalist but that's not a bad thing most
people need to be exposed to this to think outside
Some of the stuff we talked about opened my eyes to things, however, growing up a ranch,
some of the views that the book (reci. & lecture) look on things offended me. Sometimes
it came across that it was all the farmer/rancher fault for polluting.
I liked that class
I loved the way AM instructor taught the class
AM instructor was a great teacher & really helped to implement the ideas into the learning
area

Recitation was a waste of time, it didn't pertain to the class at all

This class was informative but at this point in time it isn't very relevant to my course work

I enjoyed this course

I think that Library 110 should be deleted from the entire university. I was able to pass the course without ever stepping foot in the library. Needless to say, I didn't learn much (and most people I know don't)

I don't think tests helped in this class. It was more opinionated than most classes – essays would be better suited

A lot of the time, it was assumed that all of the students had an agricultural background, making it more difficult for those who didn't have an understanding of terms/methods in lecture and recitation.

This class was in no way beneficial to me for my major, it just served as a GPA booster and the recitation was pointless

This course didn't help me much and I didn't learn very much

I really enjoyed this class and learned a lot from the class

Never had a teacher that could keep a large scale lecture interesting

AM instructor was an EXCEPTIONAL instructor

I enjoyed being able to take the Library 110 course over the web but I think students also need to tour the library while taking it. The first time I stepped into Love to do some research was overwhelming and I would have liked to have gotten better acquainted with the actual building first.

Good course overall

Library is worthless although it's nice it's with the class so we don't have to pay. The text is just a bunch of scientific crap we will never use in the real world. Over class was o.k.–I figure I already knew everything that was taught only on a more realistic, explainable level.

Needs more

??? is an awful horrible recitation leader, Make lecture classes smaller

Overall, it's a worthwhile and beneficial class

I thought that it was waste of money to pay \$300 for the course—in which most of the information I already knew

I did not read the text (waste money)—studied past exams and received an A for the course. It was not a very challenging course and I feel that the fault lies in the instructor/course curriculum. This class did not broaden any of my pervious knowledge and was a waste of time

I have heard it is basically impossible to pass now, change it back

Maybe some of the college professors should switch every other semester

Summary of
Meeting With
Lecture
Instructors

AGRI/NRES 103

February 18, 2002 Meeting with Lecture Instructors Summary

1. Things should be kept in 103 (not in priority order)
 - Strong emphasis on development of written/oral communication skills
 - Emphasis on current issues and discussion of multiple “sides” to issues
 - Keep big picture approach and point/counter-point discussion of natural resource issues.
 - Objective to improve critical thinking skills
2. Things that should be enhanced
 - Use “professional” techniques to teach/prepare students in their development of critical thinking
 - More consistency within lecture sections (good progress)
 - Use more web-resources
 1. Textbook linked
 2. More “engagement” of students via electronic discussion groups (but cannot overload students)
 - Recitation
 1. More interaction/coordination of lecture instructors and recitation instructors (use e-mail)
 2. Clear explanation to students of purpose of recitation and how it is related to lecture by lecture instructors
 - Lecture and recitation instructors emphasize more the relevance of AGRI/NRES 103 to other courses, students’ majors, and careers
3. Things to be deleted from 103
 - Lectures in “lecture” section – more active learning activities
4. Comments regarding recitation
 - Should not be dropped. It is where students work on presentations
 - There is variation of grading and expectations of students among recitation instructors. The question of how much structure is needed in order to provide the best learning experience should be discussed.
5. Other issues
 - Lecture instructors thought course was meeting objectives
 - Library component is “very” manageable
 - Lecture instructors believed many of the activities they required were “charter course” oriented, but were not clear on all the expectations of Charter courses.

Recitation
Instructor
Survey Results

Faculty Survey For AGRI/NRES 103

Thank you for taking the time to complete this survey. Your input is very important and appreciated!!
 Using the scale of 1 to 5 with 1 being strongly disagree to 5 being strongly agree, please provide a measure of the following statements about AGRI/NRES 103 from your own personal experience with and perspective of the course. Please circle a number for each item! If you are unable to rate a statement, please circle the NA response.

I. Course Content

The course content contributed to meeting the following objectives:	Ave.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
a.) Classify natural resources and identify potential uses (with focus on sustainable uses).	4.14	0	0	1	4	2
b.) Discuss the intra-relationships and interrelationships of agricultural and natural resource systems.	4.38	0	0	1	3	4
c.) Identify the interdependencies among agricultural and natural resource systems and the problems that arise when conflicting values decide how to best use resources.	4.25	0	0	2	2	4
d.) Compare and contrast agricultural and natural resource systems from a local, regional, and global perspective.	3.50	0	2	0	6	0
e.) Recognize that there are different, and often conflicting, political, cultural, and economic issues surrounding natural resources and their use.	4.50	0	0	0	4	4
f.) Recognize the social, ethical, and environmental responsibilities involved in resource management.	3.88	1	0	1	3	3
g.) Explain how the earth's carrying capacity influences the supply and use of agricultural and natural resources.	3.57	0	2	1	2	2
h.) Evaluate the impact of specific resource management techniques.	3.43	0	1	2	4	0
i.) Examine issues on concert with other students, field professionals, and clientele groups.	3.00	1	1	1	3	0
j.) Apply critical thinking skills toward the analytical examination of contemporary environmental issues.	3.75	1	0	2	2	3
k.) Synthesize diverse bodies of intellectual content to look for solutions to global concerns.	3.38	0	1	3	4	0
l.) Develop analytical, logical, and critical thinking skills to solve problems.	3.50	0	1	4	1	2
m.) Develop team skills	3.00	0	3	3	1	1

II. Course Methods

The following aspects contributed to meeting course objectives:	Ave.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
a.) Course lectures	4.00	0	0	0	5	0
b.) Group discussions in recitations	4.44	0	0	1	3	5
c.) Student team projects	3.71	0	1	2	2	2
d.) Student presentations	3.88	1	0	1	3	3
e.) Textbook	4.13	0	0	2	3	3
f.) Library assignments	3.60	0	0	2	3	0
g.) Guest speakers	3.75	0	0	1	3	0
h.) In-class exercises	3.83	0	0	1	5	0
i.) Course Web page	3.20	0	2	1	1	1

III. Relationship to Other Courses

The following statements are true of the relationship of AGRI/NRES 103 to other courses and campus experiences	Ave.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
a.) This course provides good tools for use in later course work of students	3.33	0	3	1	4	1
b.) This course helps prepare students for follow-up courses in their major	3.11	0	3	2	4	0
c.) The interdisciplinary discussion and problem-solving methods used in this course are used in other courses in the major(s) of my department/unit	3.67	0	2	1	4	2
d.) This course is a valuable freshman experience for students	3.88	0	0	3	3	2

IV. Course Modifications

- A. List the 3 things you think should be kept in AGRI/NRES 103 in the future. (see attached)
- B. List the 3 things you think should be added to AGRI/NRES 103 in the future. (see attached)
- C. List the 3 things you think should be deleted from AGRI/NRES 103 in the future. (see attached)
- D. Additional comments and/or suggestions. (see attached)

V. About You

- A. My department/unit is:
 - Agricultural Economics (2)
 - Agronomy and Horticulture (2)
 - Plant Pathology (1)
 - Entomology (1)
 - Veterinary and Biomedical Sciences (1)
 - School of Natural Resource Sciences (2)
- B. I am currently a:
 - Lecturer (1)
 - Associate Professor (4)
 - Professor (2)
 - Emeriti (2)
- C. I was involved with AGRI/NRES 103 for:
 - One semester (4)
 - Two semesters (1)
 - Three semesters (1)
 - Five or more semesters (3)

AGRI/NRES 103 Survey

- A. List the 3 things you think should be kept in AGRI/NRES 103 in the future.
- Recitations; Resource classification; Global issues.
 - Writing (IS) component in recitation; Text(s) which give both sides of current/controversial issues; ACE recitations and Honors recitation.
 - Natural Resource focus; Environmental Impact focus; Population Issues.
 - Recitations; Three lectures - probably limited outside lectures; Emphasis on writing/discussion in recitations.
 - Recitation
 - Writing
 - Recitation experience - smaller groups, interactive; Strong emphasis on interaction of Agriculture & Natural Resources
 - Discussion focus on recitation; Interplay of Ag & Natl Res.
- B. List the 3 things you think should be added to AGRI/NRES 103 in the future.
- More systems approach; More social and economic sciences; More tying to future courses.
 - Ethical issues in agr and NR; Impact on Nebraskans
 - Course needs more content; Course needs much more vigor (These relate to most of my "2" ratings; Standardization of recitations - my impression was that some confirmed these as "foundation" type things.
 - IF we're going to do this and IF its important then spend the resources and do it right!
 - Semantics of formal systems analysis.
 - Better Text book for lecture and recitation if possible; More opportunity for group/team work.
- C. List the 3 things you think should be deleted from AGRI/NRES 103 in the future.
- Emphasis on production agr, Compartmentalization of topics, Certainty of statements by presenters.
 - Boehners "lecture" set is a waste of time and poorly taught.
 - Large lecture sections - have too many students in the fall semester anyway.
 - Page length requirements on graded material in recitation.
- D. Additional comments and/or suggestions
- This course is ideal for a problem solving, integrated systems course with or emphasis on active learning and team work. The emphasis should be on what the

student does not know at the end rather than what they know.

- ACE recitations should be reserved only for ACE participants; having other students detracts from the experience.
- Keep course! Introduce even more systems perspectives!
- The course is way too lax to accomplish desired objectives. Critical thinking and analytical thinking need to be driven by facts, theories, and current events.
- This course has been retooled too many times it should be revamped.
- I was only involved with recitation. I cannot respond first hand to many of these questions since they focus on lecture. My perceptions are attached.

Concerns and Suggestions Regarding AGRI/NRES 103 (J. Skopp)

This class suffers from a number of problems, yet has potential for being an important class. My concerns can be summarized in the following categories:

1. Organizational
2. Content
3. Learning Objectives

1. Organizational.

A. Consistency is needed across lecture sections. This includes a single textbook and common exams.

B. Coordination of the recitation sections is nonexistent. A preclass meeting is needed each week as well prior to the start of the semester. Common issues and goals for the recitation could be discussed. This means the lecture instructor must communicate to the recitation instructors on a regular basis. Common grading practices for recitation should be encouraged.

C. I believe oversight of the class should be provided by a committee. This will encourage relevance of the content to all majors (by providing a source of independent feedback) and consistency as instructors change.

2. Content.

A. The content of the recitation is more on feeling about science rather than formal reasoning. I believe a closer connection to the lecture is needed as well as greater emphasis on formal reasoning and the scientific method.

B. I believe this course should provide the semantics of "systems analysis". Note that systems analysis is a formal discipline and provides a systematic means of looking at multidisciplinary subjects. Systems analysis has been used as a means of teaching formal reasoning and it would seem to be appropriate in this class.

C. An introduction to ecological principles seems to be core to learning how to manage ecosystems. The text is weak in this area. For example one might start to look at energy, carbon, and nitrogen (and maybe phosphorus) budgets. A second theme looks at describing growth of organisms and predators in more detail. The text (Environmental Science) has some good points on interacting populations but few examples in an Agricultural context, particularly from the point of view of controlling weeds, or either plant or animal diseases.

3. Learning Objectives.

A. No learning objectives have been communicated to the recitation section instructors. It is not clear (on a week to week basis) what is the goal of the recitation section. In particular, what points need to be made on each weeks readings.

B. The usefulness of the recitation sections as support for the lecture section is weak. This is partly due to different texts and exam schedules for the lecture sections. I believe improving this is tied to developing alternative activities for the recitation section (i.e., not just discussion of papers which may or may not relate to lecture). While writing and oral communication skills are important, they need to be carried in the context of the lecture content.

Summary of Recitation Instructor Meeting

AGRI/NRES 103

March 12, 2002 Meeting with Recitation Instructors

Summary

Attending: Jack Schinstock, Steve Danielson, Joe Skopp, Jim Partridge, Norm Schneider, Chuck Francis, Rick Waldren, Patty Bohner, Ed Peters, Bruce Johnson, Curt Weller

1. Things that should be kept in 103 (not in priority order)

- ✓ Component of writing on which instructor provides feedback
- ✓ Emphasis on building oral and interpersonal communication skills
- ✓ Textbook titled *Taking Sides*
- ✓ Recitation sections
- ✓ Big picture view on current issues (e.g. risk, energy) within food, agricultural and natural resource systems

2. Things that should be enhanced

- ✓ Standardization of scope, expectations and methodology among recitation sections
- ✓ Communication among recitation instructors, and between instructors and lecturers
- ✓ Oversight and objectives for all parts of the course
- ✓ Archive of past activities
- ✓ Setting minimum levels of students per recitation sections and leveling (not only number but also by grade level, Honors and ACES) across sections
- ✓ Better integration of library component

3. Things that should be deleted from 103

- ✓ Great number of days recitation instruction left up to instructor discretion
- ✓ Introduction to college objective of the course

4. Other issues

- ✓ Concern expressed if the 1 credit for recitation and 2 credits for lecture were the correct balance
- ✓ Texts for required reading besides the primary text might include those by R. Carson, B. McClintock, S. Perkins, etc.
- ✓ Might it be possible for 103 to put together its own book of issues