

027: ~~Liberal Arts & Sciences~~

Program Review Self-Study Template (Su '11 to Sp '14)

Academic unit: Biological Sciences

College: Liberal Arts & Sciences _____

Date of last review May 2013 (Su '08 to Sp '11)

Date of last accreditation report (if relevant) _____

List all degrees described in this report (add lines as necessary)

1. Departmental purpose and relationship to the University mission (refer to instructions in the WSU Program Review document for more information on completing this section).

a. University Mission:

The mission of the University of Washington is to advance the frontiers of knowledge, to educate students to the highest level of scholarship, and to serve the community.

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restored prairie land tracts that are used by many local community groups (boy and girl scouts, field trips by schools) and other researchers in the state to demonstrate environmental principles and concerns. Additionally, when weather conditions are appropriate, we host a BioBlitz at the Ninescah Reserve during which interested high school students collect and identify various animal and plant species.

MASTER OF SCIENCE GRADUATE PROGRAM - A key component of the Wildlife Center's commitment to

careers in medicine, environmental studies, education, research and health care.

(Undergraduate brochure attached in appendix)

- i. Research opportunities for undergraduate students are numerous and varied. Research students work with a mentor on a specific project and build on the skills learned in teaching.

OBJECTIVE #1: Graduate will demonstrate the ability to identify and analyze the

weaknesses of the undergraduate major utilizing a written survey instrument. (current survey attached in appendix). The results are compiled and given to the chair for discussion with the

faculty as needed.

The table below maps learner outcomes onto the learner-centered objectives with which they are most closely

associated. The learner outcomes are identified by numbers.

Learner outcomes

1. Students will be familiar with topical research questions and hypotheses in their field of biology.
2. Students will be able to interpret hypotheses, methods and results presented in primary scientific literature.
3. Students will be able to formulate testable research questions and hypotheses.
4. Students will be able to design and analyze experiments or observational studies that test research questions and hypotheses.
5. Students will acquire the ability to orally communicate scientific research in meeting-style presentations and in seminars.

Can this report end in the future... [unclear] ...

the programmatic objectives are being met.

2 Describe the quality of the... [unclear] ...

The Biology Department faculty came close to meeting the objective (programmatic objective #2) of attending

at least one national or international professional meeting per year, making presentations at 1.0, 0.82 and 1.27 national or international meetings per graduate faculty member in 2012, 2013 and 2014, respectively.

The high quality of the research programs being maintained by faculty in the Biology Department is also

illustrated by frequent requests for professional service and successful grantsmanship in a very tough environment for seeking external funding. For 2012-2014, biology faculty performed 86 peer-reviews of manuscripts for national and international journals and for books.

3. **Academic Program:** Analyze the quality of the program as assessed by its curriculum and impact on students for each program (if more than one). Attach updated program assessment plan (s) as an appendix (refer to instructions in the WSH Program Review document for more information)

a. For undergraduate programs, compare ACT scores of the majors with the University as a whole. Majors in biological sciences have an average ACT score of 24 compared to 28 for the University as a whole.

UNDERGRADUATE PROGRAM

[The table content is completely obscured by heavy black redaction bars.]

TABLE 3C. MFT EXAM WSU-BIOLOGICAL SCIENCES (WSU) COMPARED TO NATIONAL MFT EXAM RESULTS

WSU: Nat'l average	WSU:NAT'L Mean total	WSU:NAT'L Mean cell biology	WSU:NAT'L Mean molecular biology and genetics	WSU:NAT'L Mean organismal biology	WSU:NAT'L Mean population biology, evolution, and ecology
Year 1 n=18,270	155.85:153.3	55.5:53.2	54.13:53.1	56.5:53.4	54.7:52.7
Year 2 n=32,929	155.41:153.1	55.14:53.2	53.45:53.0	55.55:53.2	55.16:52.6

outcomes. It is noteworthy that when students did not feel the highest level of comfort and confidence in their attainment of learner outcomes, the reasons cited were:

comfort. The exit surveys also indicate that the students are being trained in the skills indicated by the learner outcomes in multiple ways. All respondents indicated that they were exposed to reading primary scientific literature.

d. Provide aggregate data on student majors satisfaction (e.g., exit surveys), capstone results, licensing or certification examination results (if applicable), employer surveys or other such data that indicate student satisfaction with the







portfolios, quizzes, labs, etc.) course management, instructional delivery, and content meet or exceed these issues.

on-campus sections.

Provide information here: NA

g. Indicate whether the program is accredited by a specialty accrediting body including the next review date and concerns from the last review.

Provide information here: NA

4. Analyze the student need and employer demand for the program. Complete for each program if appropriate.

[The following content is heavily redacted with black bars and is therefore illegible.]

Employment of Majors*

Average Salary	Employment % In state	Employment % in the field	Employment: % related to the field	Employment: % outside the field	No. pursuing graduate	Projected growth from BLS** Current year only.
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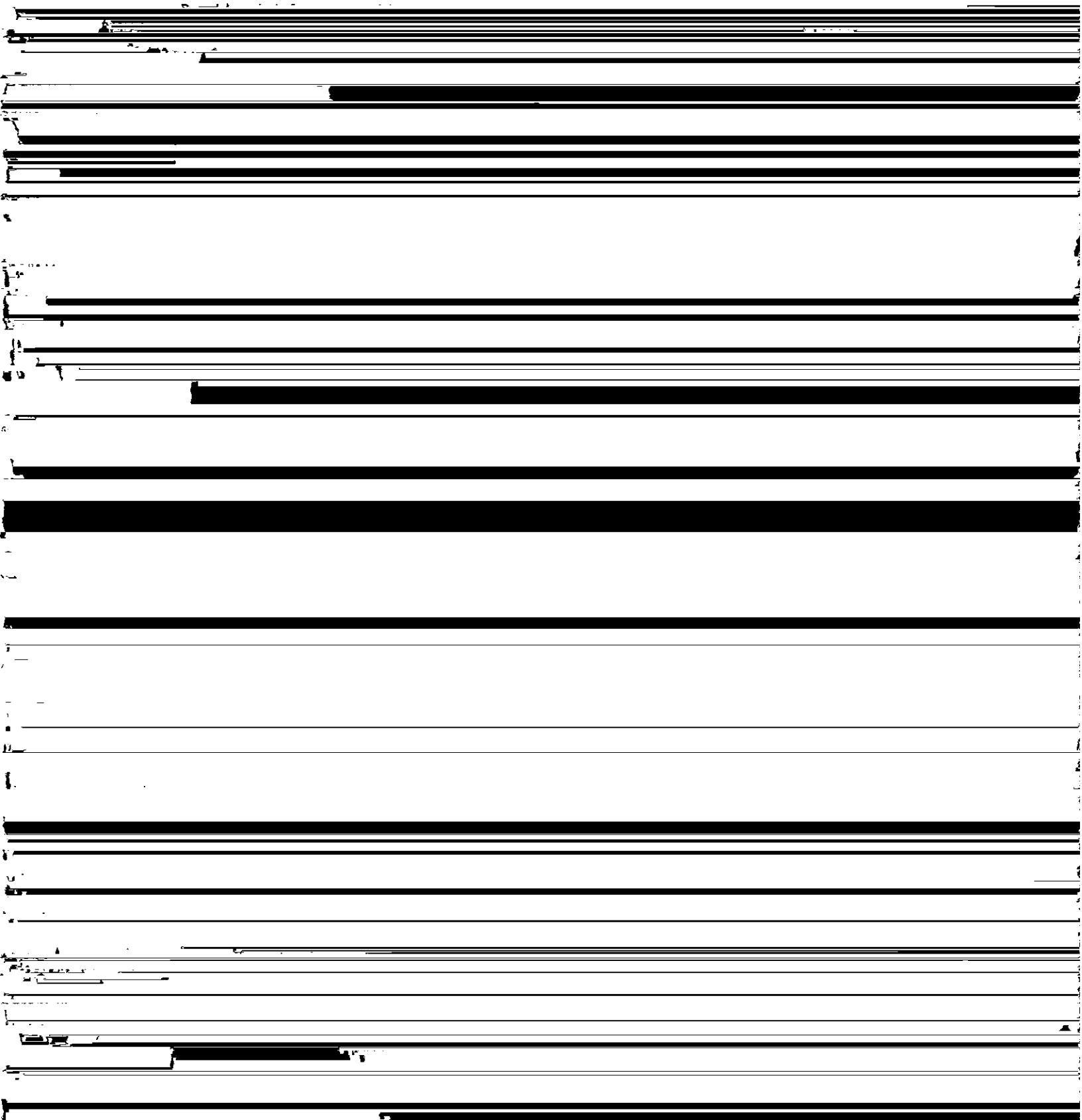
* May not be collected every year

** Go to the U.S. Bureau of Labor Statistics Website: http://www.bls.gov/news.release/osh/outlook_data_and_estimates.htm (If it is not available, contact the Bureau of Labor Statistics for more information.)

available from professional associations or alumni surveys, enter that data)

- Provide a brief assessment of student need and demand using the data from tables 11-15 from the Office of Planning and Analysis and from the table above. Include the most common types of positions,

5. Analyze the service the Program provides to the discipline, other programs at the University, and beyond. Complete for each program if appropriate (refer to instructions in the WSU Program Review document for more information on completing this section).



Graduate students in our MS program and graduate faculty are extensively involved in outreach

Olympiad and Kansas Junior Academy of Science annual meeting. Graduate students and faculty are also involved in

f. Report on the Program's goal (s) from the last review. List the goal (s) that the program is currently working to address.

support the goal, and the outcome. Complete for each program if appropriate (refer to instructions in the WSU Program Review document for more information on completing this section).

UNDERGRADUATE PROGRAM

(For Last 3 FYs)	Goal (s)	Assessment Data Analyzed	Outcome
	Refill the Assistant to Chair/Undergraduate Advisor position, vacant since June 2010)	NA	Ms. Maria Martino was promoted to this position as of September 2012. Reviews about advising from exit surveys are very favorable.

Provide assessment here:

- Strengths: Faculty, especially research active faculty, has world class expertise in their fields that is shared with students.
- Faculty, staff, and graduate students provide significant community outreach.
- Upper division labs taught by faculty

Diverse course offering especially given the small size of our faculty

Weaknesses:

- All core classes are not taught every semester due to the extensive teaching loads plus research

1. Maintain an active MS graduate program that consistently includes >20 MS students.

For FY2013-FY2014, the number of students in the B.S. / M.S. program is:

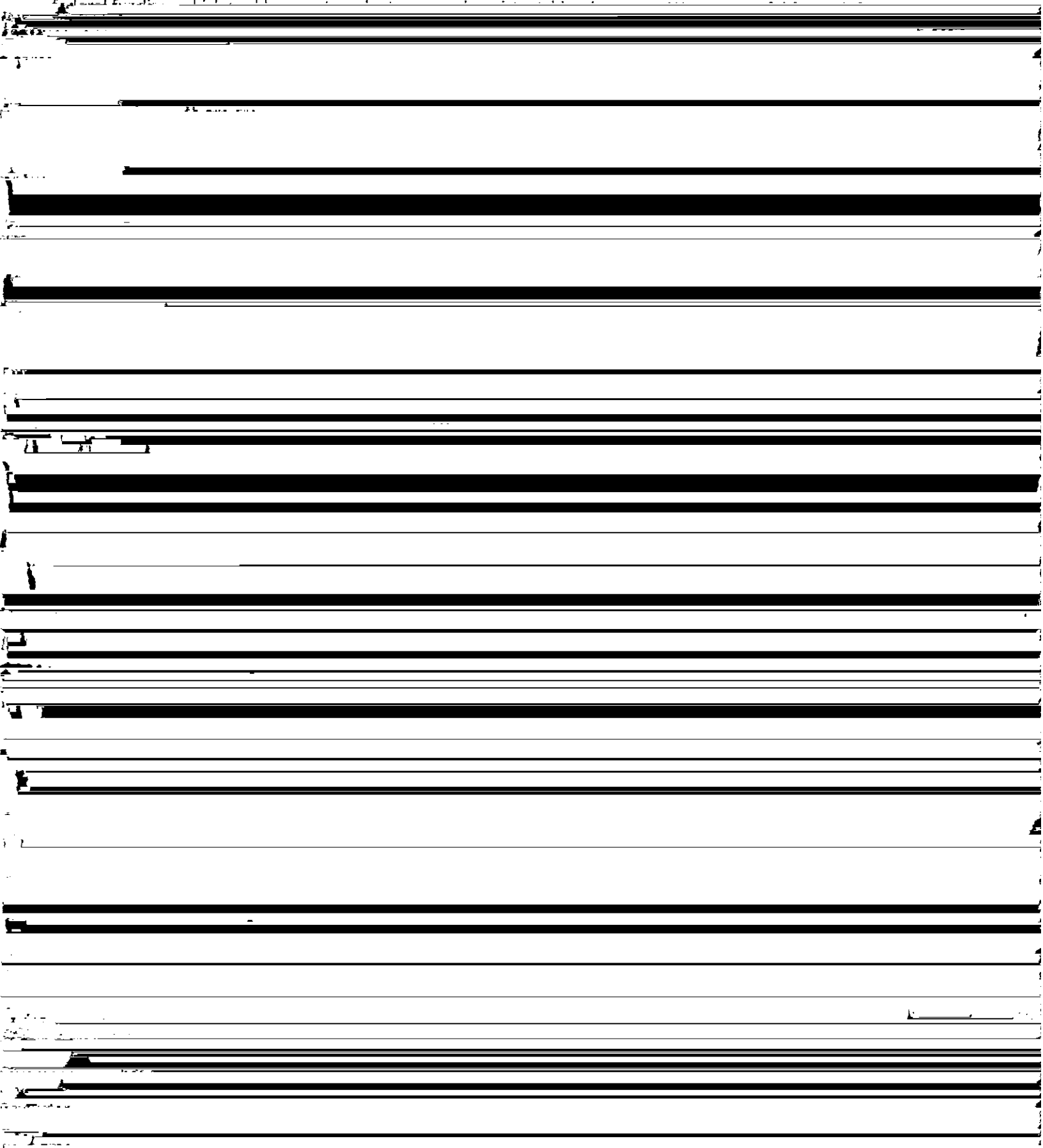
Fiscal Year	Number of Students
FY2013	[REDACTED]
FY2014	[REDACTED]
FY2015	[REDACTED]
FY2016	[REDACTED]
FY2017	[REDACTED]
FY2018	[REDACTED]
FY2019	[REDACTED]
FY2020	[REDACTED]
FY2021	[REDACTED]
FY2022	[REDACTED]
FY2023	[REDACTED]
FY2024	[REDACTED]
FY2025	[REDACTED]
FY2026	[REDACTED]
FY2027	[REDACTED]
FY2028	[REDACTED]
FY2029	[REDACTED]
FY2030	[REDACTED]
FY2031	[REDACTED]
FY2032	[REDACTED]
FY2033	[REDACTED]
FY2034	[REDACTED]
FY2035	[REDACTED]
FY2036	[REDACTED]
FY2037	[REDACTED]
FY2038	[REDACTED]
FY2039	[REDACTED]
FY2040	[REDACTED]
FY2041	[REDACTED]
FY2042	[REDACTED]
FY2043	[REDACTED]
FY2044	[REDACTED]
FY2045	[REDACTED]
FY2046	[REDACTED]
FY2047	[REDACTED]
FY2048	[REDACTED]
FY2049	[REDACTED]
FY2050	[REDACTED]

2. Graduate a minimum of 55 students from the B.S. / M.S. program.

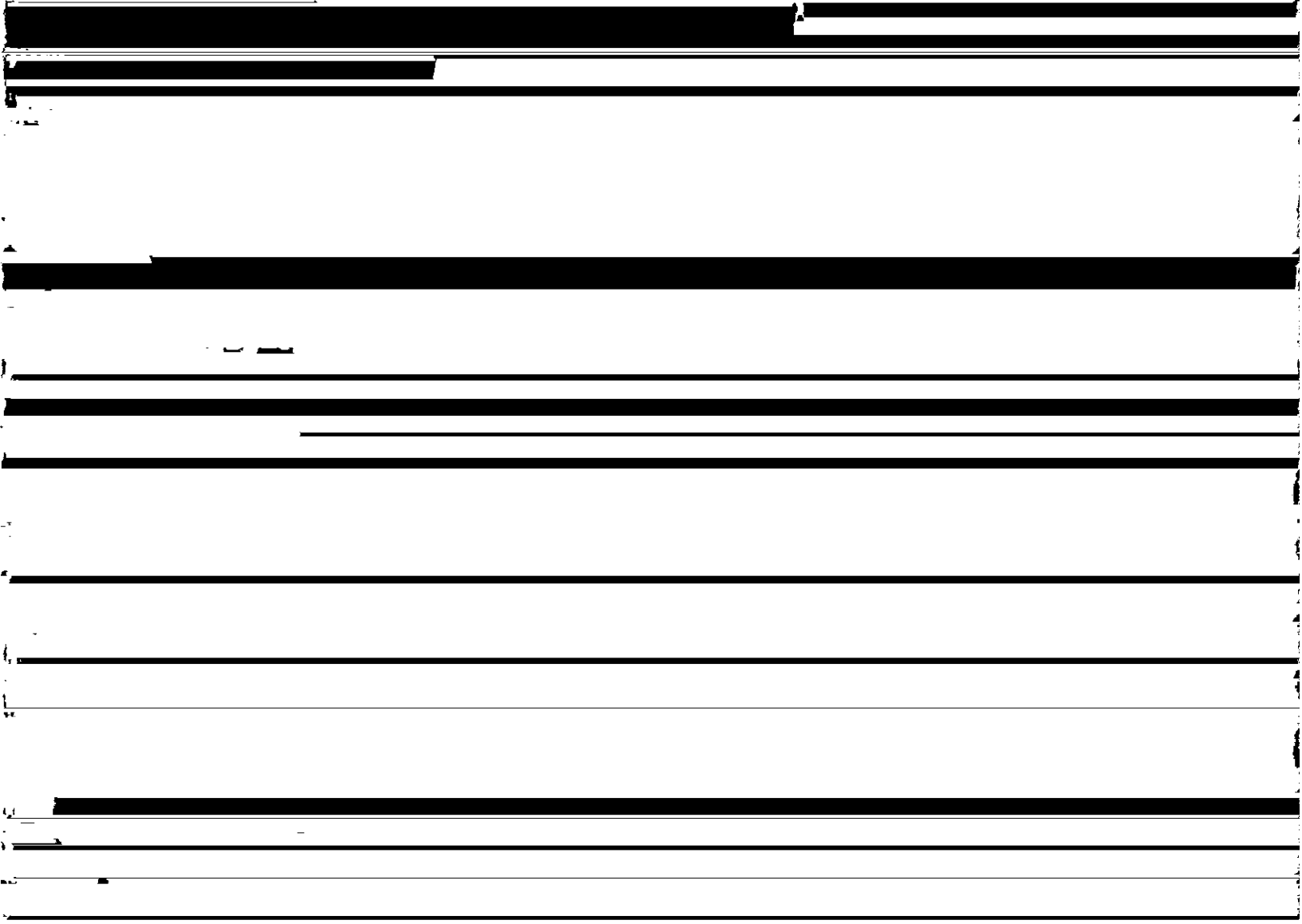
FY2013 1

FY2014	[REDACTED]
FY2015	[REDACTED]
FY2016	[REDACTED]
FY2017	[REDACTED]
FY2018	[REDACTED]
FY2019	[REDACTED]
FY2020	[REDACTED]
FY2021	[REDACTED]
FY2022	[REDACTED]
FY2023	[REDACTED]
FY2024	[REDACTED]
FY2025	[REDACTED]
FY2026	[REDACTED]
FY2027	[REDACTED]
FY2028	[REDACTED]
FY2029	[REDACTED]
FY2030	[REDACTED]
FY2031	[REDACTED]
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FY2035	[REDACTED]
FY2036	[REDACTED]
FY2037	[REDACTED]
FY2038	[REDACTED]
FY2039	[REDACTED]
FY2040	[REDACTED]
FY2041	[REDACTED]
FY2042	[REDACTED]
FY2043	[REDACTED]
FY2044	[REDACTED]
FY2045	[REDACTED]
FY2046	[REDACTED]
FY2047	[REDACTED]
FY2048	[REDACTED]
FY2049	[REDACTED]
FY2050	[REDACTED]

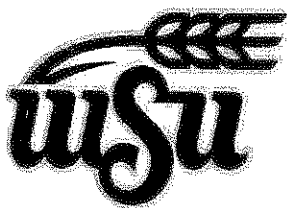
Graduate teaching assistantships are a critical resource for maintaining a dynamic MS program when



5. For the ecology/evolution/organismal component of our MS program, begin faculty/student



and research productivity from our two relatively new natural areas, the Gerber and Sellers Reserves, and maintain rates of research productivity from our established Ninnescah Reserve.



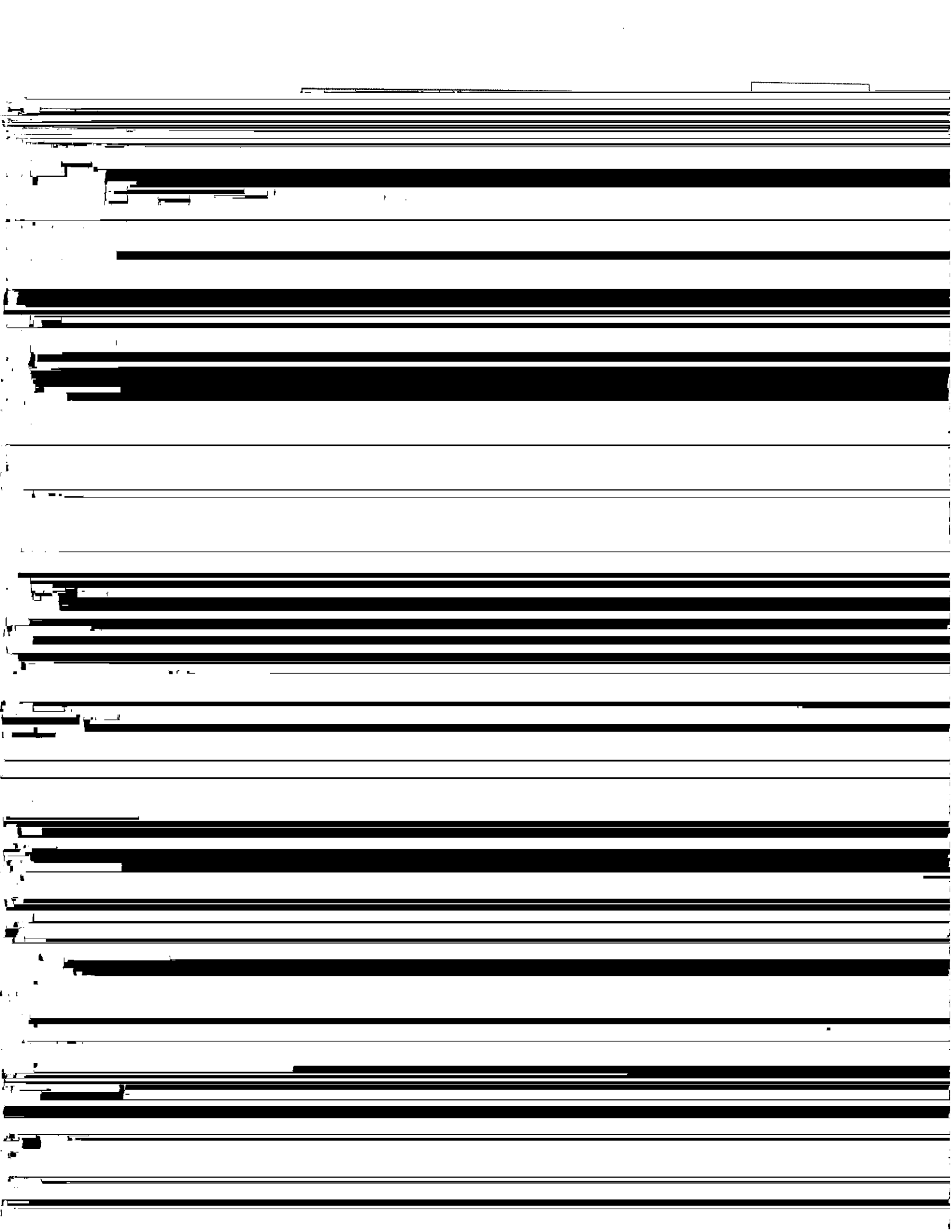
WICHITA STATE
UNIVERSITY
FAIRMOUNT COLLEGE OF

DEPARTMENT OF BIOLOGICAL SCIENCES
Fairmount College of Liberal Arts and Sciences
Wichita State University

UNDERGRADUATE DEGREE OPTIONS
For Students Entering Fall 2002 or Later

Bachelor of Sciences (BS) or Bachelor of Arts (BA) with Biological/Biomedical Emphasis

2B)
is for
(5)
;
(5)



University – Fairmount College of Liberal Arts and Sciences
Biological Sciences www.wichita.edu/biology

Major of Science (BS) (Biology) A12T
(Chemistry) A13T

Minimum 2.0 overall GPA, a 2.0 WSU GPA, and a 2.0 GPA in the major.
General Education.

In a biology or chemistry Advisor upon declaration of major.

Math I (5)
Math II (5)
Chem I (5)
Chem II (5)
Biology (4)

Laboratory (3)
Biochemistry (3)
Chemistry (2) (two enrollments)
Physics I (4)
Physics II (4)

Computer (4)

Calculus I (3)
Calculus II (3)
Statistics (5) (or equivalent)
Physics I (5)
Physics II (5)

Electives and the BS graduation requirements in Fairmount College of Liberal Arts and Sciences. Twenty-one (21) hours.

Electives:
General Education (3)
Electives of Chemical Analysis (4)
Electives I (3)
Electives II (3)
Electives III (3)
Electives IV (3)
Electives V (5)
Electives VI (3) and Laboratory (2)
Electives VII (4)

Electives VIII (4)
Electives IX (3)

REQUIREMENTS FOR AN APPOINTMENT 316-978-6081, 537 HUBBARD
APPOINTMENT FOR AN APPOINTMENT 316-978-3120, 206 MCKINLEY

Dr. David Eichhorn, Chair
Department of Chemistry
206 McKinley Hall, 316-978-3120

Fall 1994 to present

Name _____

WSU ID _____

Major _____

Advisor _____ Date _____

BA _____ BS _____ BGS _____ Catalog Year _____

Faculty Research Interests

James R. Raab, Assistant Professor; Ph.D., University of Kentucky, 1981. Research interests:

and evolution; species delimitation and evolutionary patterns in grasses exhibiting

polyploidy and/or asexuality; patterns of genetic variation at range edges; North American plant biogeography; herbarium curation.

George Bousfield, Professor; Ph.D., Indiana University, 1981. Reproductive endocrinology: glycoprotein hormones; mechanism of gonadotropic action; carbohydrate biochemistry.

Donald A. Distler, Assistant Professor; Ph.D., University of Kentucky, 1981. Research interests:

environmental microbiology microbiologists ...

GRADUATING SENIOR QUESTIONNAIRE
Biological Sciences

MS Graduate Student Exit Survey

Thank you for taking the time to complete this survey. Your comments will be very helpful.

evaluate our success in teaching skills that are important to succeeding in careers in biology or being an informed consumer of scientific information.

Part 1: Demographic Data

Gender : _____

4. In what forms did you receive instruction in reading and interpreting primary scientific literature during the MS program? (Please circle multiple answers if appropriate)

- A. classes
- B. lab discussion groups
- C. interactions with your advisor
- D. other (please identify)

4. How would you rate your ability to design and present scientific oral presentations?

B. There are one or two important aspects of scientific writing (outlined in answer A) that I

struggle with, but other aspects of scientific writing that I find easier to write.

12. Because knowledge of the educational/professional activities of our graduates is helpful to us in understanding how well the training that we give students prepares them for careers, would you please

provide us with contact information (address and e-mail) where we can find you?

Name:

E-mail Address:

