

Biology

Bachelor of Science in Biology (46)

Contact Person:

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UNIVERSITY OF ARKANSAS AT LITTLE ROCK Plan No. 46

UALR Progress Report Form— Calendar year 2005

Approach:

1.1) Help place your efforts for the time period reported here in context for your reader by briefly summarizing the goals and student learning objectives of your program.

Goals:

Biology Mission Statement: An integrated understanding of biological systems and their environments is increasingly important to society. The mission of the Department of Biology at UALR is to create and disseminate knowledge through research and education. Graduate and undergraduate programs within the department advance knowledge, foster critical thinking and inquiry, and demonstrate the importance and relevance of biology to society. The research products generated by faculty, graduate and undergraduate students lead to both an improved understanding of biological systems and to solutions of complex problems. The education and research activities of the department are mutually reinforced through interactions with academic partners, professional organizations, and government agencies.

Educational goals

The Biology Department is committed to develop students that:

- (1) understand the principles underlying biology and understand current and historical biological issues and their impacts on the past, present, and future;
- (2) possess scientific critical thinking to be used to make reasoned decisions and ethical choices;
- (3) have the desire and initiative to become a lifelong learner and understand new scientific information;
- (4) are prepared for success in the numerous career choices found in the biological sciences;

Strategies to achieve these goals

- 1) Provide an environment that is highly conducive to learning in the context of the limited resources inherent at this university;
- 2) Provide instruction on the use of modern biological equipment and instrumentation;
- 3) Provide access to laboratories (both research and teaching) and classrooms which reflect modern furnishings and a pleasant physical setting;
- 4) Provide technology-based educational opportunities (i.e. WebCT);
- 5) Provide modern computer facilities for student use;
- 6) Encourage interested students to participate in independent study/research activities with faculty.

Student Learning Objectives:

1. Students should have **subject competence** in the following basic biological areas: botany, zoology, microbiology, genetics, and ecology.

(Area Concentration Achievement Test (ACAT) exam in Senior Seminar).
2. Students should exhibit critical thinking skills **as judged** from both written and oral presentations.

(Senior seminar)
3. Students should exhibit skills in scientific writing/reporting **as judged** from the presentation and reporting of scientific data.

(Senior Seminar)
4. Students should have mastered the scientific method and be able to evaluate scientific and popular media literature as to scientific merit **as judged** in seminar.

(All Courses including Senior Seminar)
5. Students should have acquired the specialized knowledge and skills (field or laboratory) to successfully compete for career goals **as judged** by survey analysis. *Note that this objective is an indirect indicator of learning and results must be analyzed accordingly.*

(“360 degree” surveys– Alumni, Graduating Students, Potential Employers, and the Biology Faculty)

1.2) Were there any significant changes since last year’s report?

No changes were made to Plan 46 last year

2.1 What methods did you use to measure the student learning outcome objective(s) assessed since last year’s report?

As shown in the student learning objective section we used our Biology 4190 senior seminar as a “capstone” vehicle to measure objectives 1 to 4.

Student Learning Objective 1 (Subject Competence)

Objective 1 has been assessed primarily through the use of the Area Concentration Achievement Test (ACAT) exam in Senior Seminar. The exam is divided into five areas: bacteriology, cell biology, ecology, genetics, and vascular botany. All of these areas except cell biology are included in the core Biology curriculum (cell biology is an elective but elements are clearly contained in the genetics and microbiology core courses).

Results are provided as follows:

- Standard scores for the Department compared to the overall comparison group
- Raw score summary for Department only
- Relationship of content areas taken by examinees to content area scores
- Self-reported characteristics of examinee group
- Relationship between content area scores and self-reported GPA
- Individual examinees= standard scores
- Individual performance in stanines

Students enrolled in Senior Seminar are given the exam on the last day of class and the exams are sent to Austin Peay University for checking. Results are returned to us within two to three months.

Student Learning Objective 2 (Critical Thinking Skills)

Objective 2 is assessed, in part, by Senior Seminar. Students are required to pick a faculty mentor and then select a research topic that is of interest to them. They are to search the literature, provide background information on the topic, and then discuss the research in a major core paper. This presentation includes the purpose, methods and materials, results, and discussion. Students are then asked to critique the research in both an oral and written format. The mentor is to guide the student in picking topics and the student's presentation, including the use of visual aids. With the successful use of the mentoring system and the rubrics for

evaluation, we have been able to quantify success of this objective. In seminar, students must attain 70% or better to pass.

Student Learning Objective 3 (Writing/Reporting Skills)

Objective 3 is intertwined with **Objective 2** and both can be assessed in the same manner by the activities in senior seminar. However, it should be noted that students could be successful in this objective and fail to grasp the critical thinking expected in the previous objective. Rubrics designed for general use in Senior Seminar will discern between skills and critical thinking. It is the responsibility of individual faculty to develop classroom assessment techniques to develop both skills and critical thinking and devise assessment tools to evaluate their success. In seminar, students must attain 70% or better to pass.

Many of our undergraduate students participate in research activities of our faculty. This often culminates in presentations at scientific meetings (e.g., Arkansas Undergraduate Research Forum, Arkansas Academy of Science, Southwestern Association of Naturalists, etc.) and co- authorship of published papers. The successful participation of students in these endeavors provide positive assessment of the program. UALR biology students consistently place in the top three presentations at the Arkansas Academy of Science. Further, students are encouraged to present their own research in Senior Seminar.

The standard rubrics used in seminar, which have been appended in previous reports, are attached so the reader can examine how students are being evaluated (see Attachment 1).

Student Learning Objective 4 (Use of the Scientific Method)

Objective 4 covering the scientific method is taught in some form in every science course and the Biology core courses are no exception. Students are continuously being exposed to it and are asked to demonstrate its use. In their Senior Seminar presentations students must demonstrate the use of the scientific method (e.g., see Methods section in rubric) and be able to respond properly to questions from fellow students and faculty as to its use in their research topics.

Student Learning Objective 5 (Measuring Success)

Objective 5 will be addressed via a series of surveys.

Quoting last year's report "[t]his year we planned on addressing objective 5 through a survey to alumni and their employers. After attending a workshop on telephone surveys (by the UALR Institute of Government) we decided to have them conduct such a survey and use our assessment funds to pay for the survey. We thought that this survey would be done during fall 2004, however, several other CSAM departments and the CSAM Assessment Committee wanted to also participate."

Its 2006 and we still await the results from this activity

While waiting for the official CSAM survey, the Biology Department will move ahead and send out a survey (see **attachment 2**) in its annual newsletter.

We will be using an exit exam in our seminar class (**attachment 3**)

2.2) Have there been any significant changes here? If so, please explain why.

No significant changes in the student learning objectives or methods to measure them.

2.3) What measures do you propose to use next year?

We propose the same methods with the exception of the addition of exit surveys and faculty surveys. See attachments 3 and 4

2.4) How are you addressing the reliability and validity of those measures?

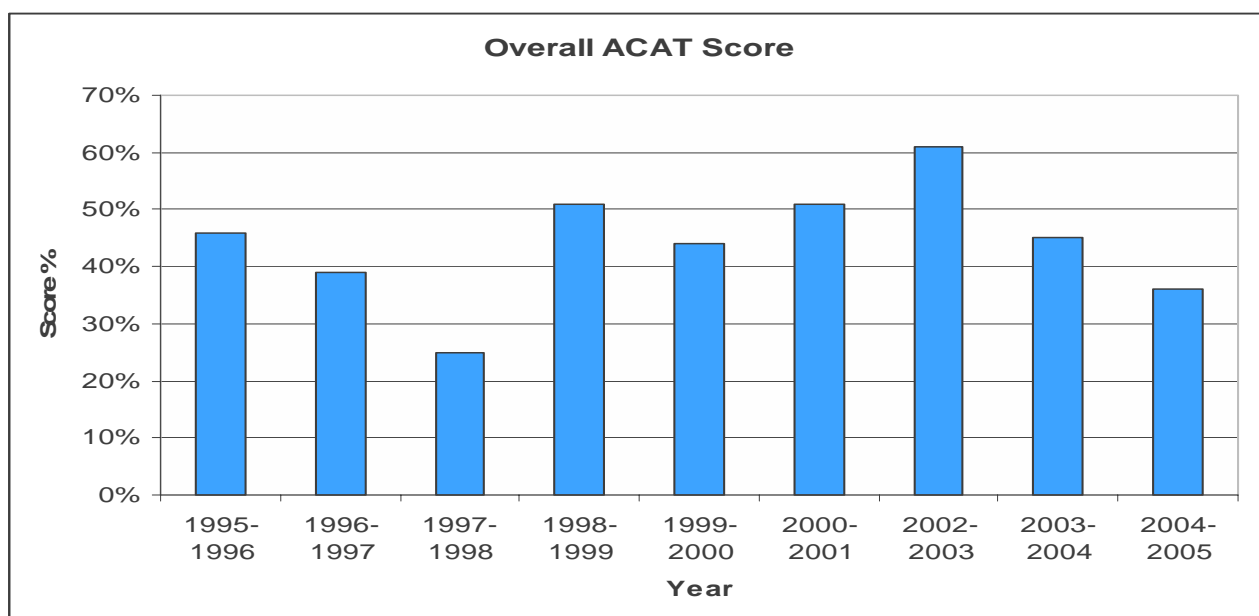
The resulting data will be carefully analyzed by all statistical methods appropriate to the structure of the information.

3.1) Please discuss how you have used assessment findings this past year to understand, improve, and/or make decisions regarding the program. What have been your main findings? How did you analyze them? How do you interpret them?

Summary of ACAT Data from 1995 to present

National Percentile Scores by Subject Area and Total for the Examination

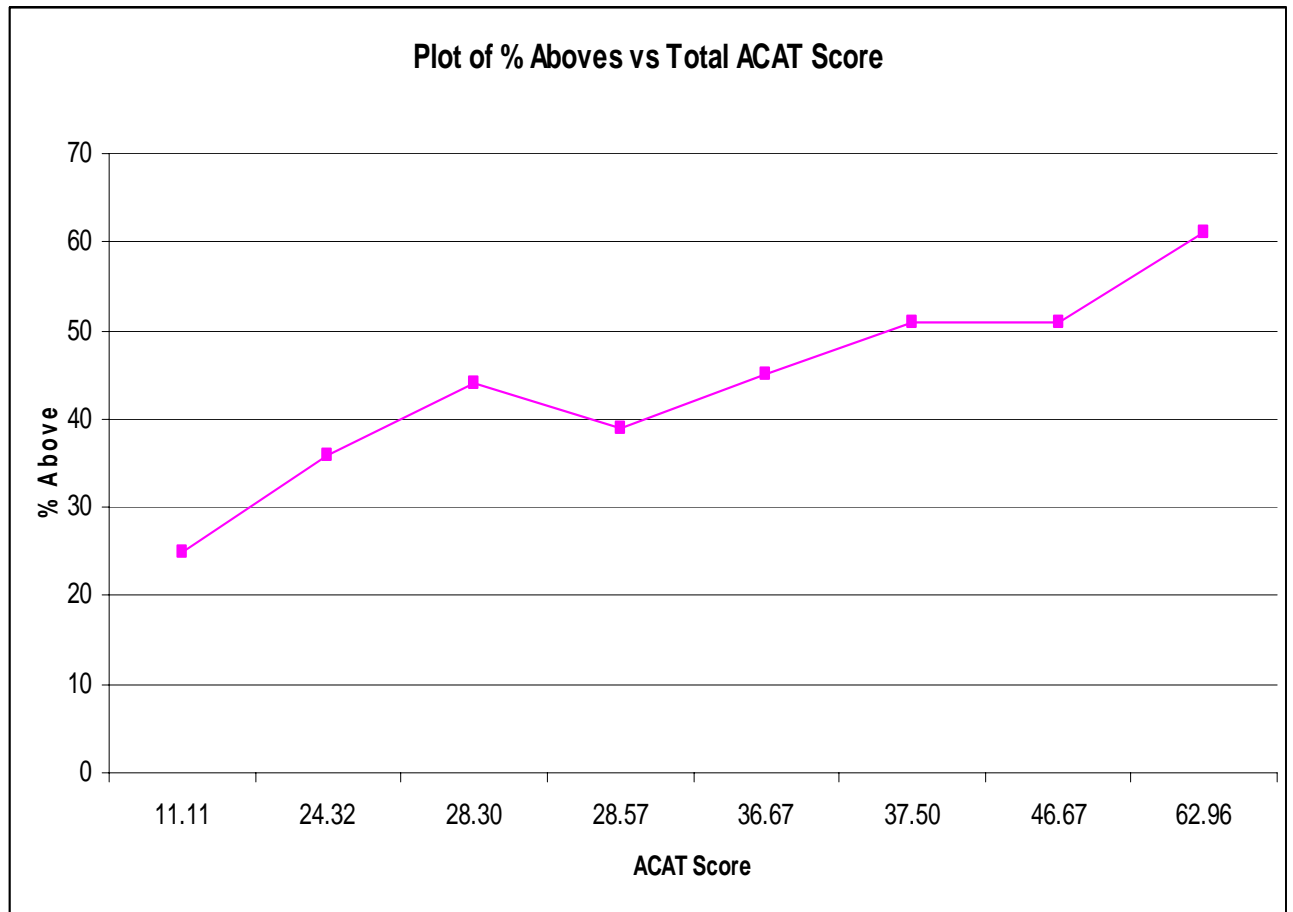
| Year | # Students | Bacteriology | Cell Biology | Ecol. | Genetics | Vascular Botany | Total |
|-----------|------------|--------------|--------------|-------|----------|-----------------|-------|
| 1995-1996 | 35 | 52% | 40% | 49% | 40% | 32% | 46% |
| 1996-1997 | 40 | 55% | 45% | 36% | 42% | 33% | 39% |
| 1997-1998 | 18 | 52% | 30% | 44% | 44% | 42% | 25% |
| 1998-1999 | 45 | 64% | 56% | 62% | 54% | 67% | 51% |
| 1999-2000 | 108 | 63% | 44% | 55% | 44% | 52% | 44% |
| 2000-2001 | 30 | 69% | 54% | 64% | 47% | 53% | 51% |
| 2002-2003 | 50 | 82% | 59% | 63% | 60% | 58% | 61% |
| 2003-2004 | 54 | 56% | 55% | 58% | 50% | 53% | 45% |
| 2004-2005 | 69 | 46% | 38% | 52% | 36% | 45.9% | 36% |



The ACAT data shown seems to show a **downward** trend. The assumption is that the student populations are similar. However upon further analysis when you look at numbers of students in each yearly cohort who were equal or above the 80th percentile and the numbers of students equal to or below the 30th percentile, conclusions of any trend must be reanalyzed. **The student populations were NOT similar.** See below

| Students below or equal to 30% | Students above or equal to 80% | % Above 80 | ACAT Total | Year |
|--------------------------------|--------------------------------|-------------|--------------------|-----------|
| 15 | 6 | 28.57 | 39 | 1996-1997 |
| 8 | 1 | 11.11 | 25 | 1997-1998 |
| 8 | 7 | 46.67 | 51 | 1998-1999 |
| 38 | 15 | 28.30 | 44 | 1999-2000 |
| 5 | 3 | 37.50 | 51 | 2000-2001 |
| 10 | 17 | 62.96 | 61 | 2002-2003 |
| 19 | 11 | 36.67 | 45 | 2003-2004 |
| 28 | 9 | 24.32 | 36 | 2004-2005 |
| | | 0.96 | Correlation | |

Using the Stat of the % of “Aboves” to the total number of “Aboves and Belows” we see a correlation of 0.96 between that and the total ACAT score



We are now left with the **new hypothesis** that the year-to-year differences in the ACAT Total Scores are due to difference in the student populations taking the test.

Factors to predict this beforehand may include ACT scores, GPA; time to complete the degree program, etc.

This then leads us to look at each subject area to see if in fact their scores are correlated to the “% aboves” stat. Shown below is such an analysis. Clearly all areas have a high correlation value but note the Ecology and Botany areas as being correlated to a lower degree (*).

Correlations of “% Aboves” to Yearly Area ACAT Scores

| Year | Bacteriology | Cell Biology | Ecology. | Genetics | Vascular Botany |
|--------------------|--------------|--------------|--------------|-------------|-----------------|
| 1996-1997 | 52.00 | 30.00 | 44.00 | 44.00 | 42.00 |
| 1997-1998 | 46.40 | 38.40 | 52.40 | 35.90 | 45.90 |
| 1998-1999 | 63.00 | 44.00 | 55.00 | 44.00 | 52.00 |
| 1999-2000 | 55.00 | 45.00 | 36.00 | 42.00 | 33.00 |
| 2000-2001 | 56.00 | 55.00 | 58.00 | 50.00 | 53.00 |
| 2002-2003 | 69.00 | 54.00 | 64.00 | 47.00 | 53.00 |
| 2003-2004 | 64.00 | 56.00 | 62.00 | 54.00 | 67.00 |
| 2004-2005 | 82.00 | 59.00 | 63.00 | 60.00 | 58.00 |
| | | | | | |
| Correlation | 0.85 | 0.92 | 0.69* | 0.85 | 0.68* |

ACAT Analysis

Conclusion one: All trend analysis must be done in light of the student population taking the test.

Conclusion two: There is no evidence that suggests our program is not performing at any level other than above average since 1995. Clearly with the right cohort of students our program can score in the 60% percentile rank as compared to the other schools taking this test (see 2002-2003 year). This tends to support the conclusion that program performance on the ACAT is somewhat dependent upon the student population.

Conclusion three: While all subject areas are highly correlated, there are differences among the ACAT area concentrations scores.

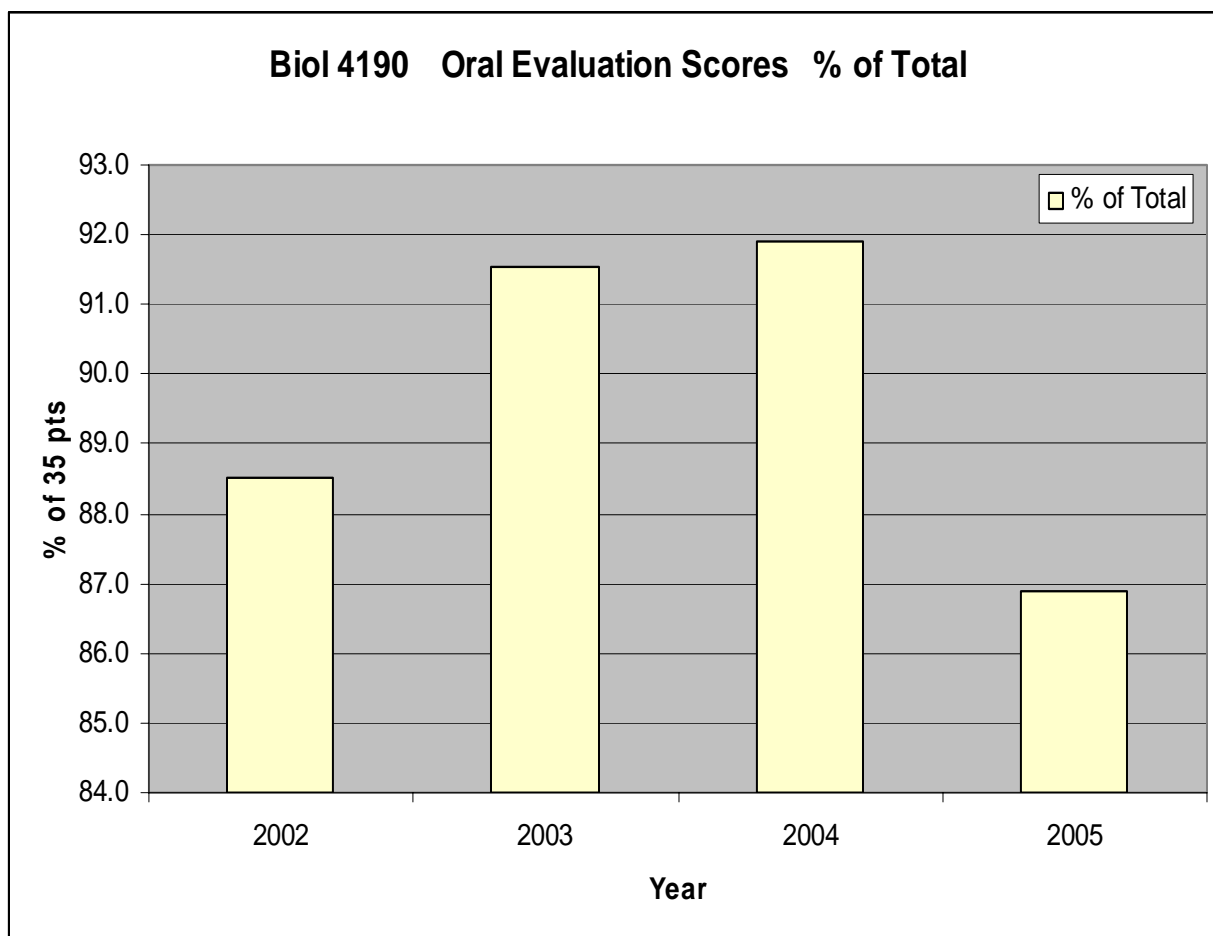
Questions that now arise are:

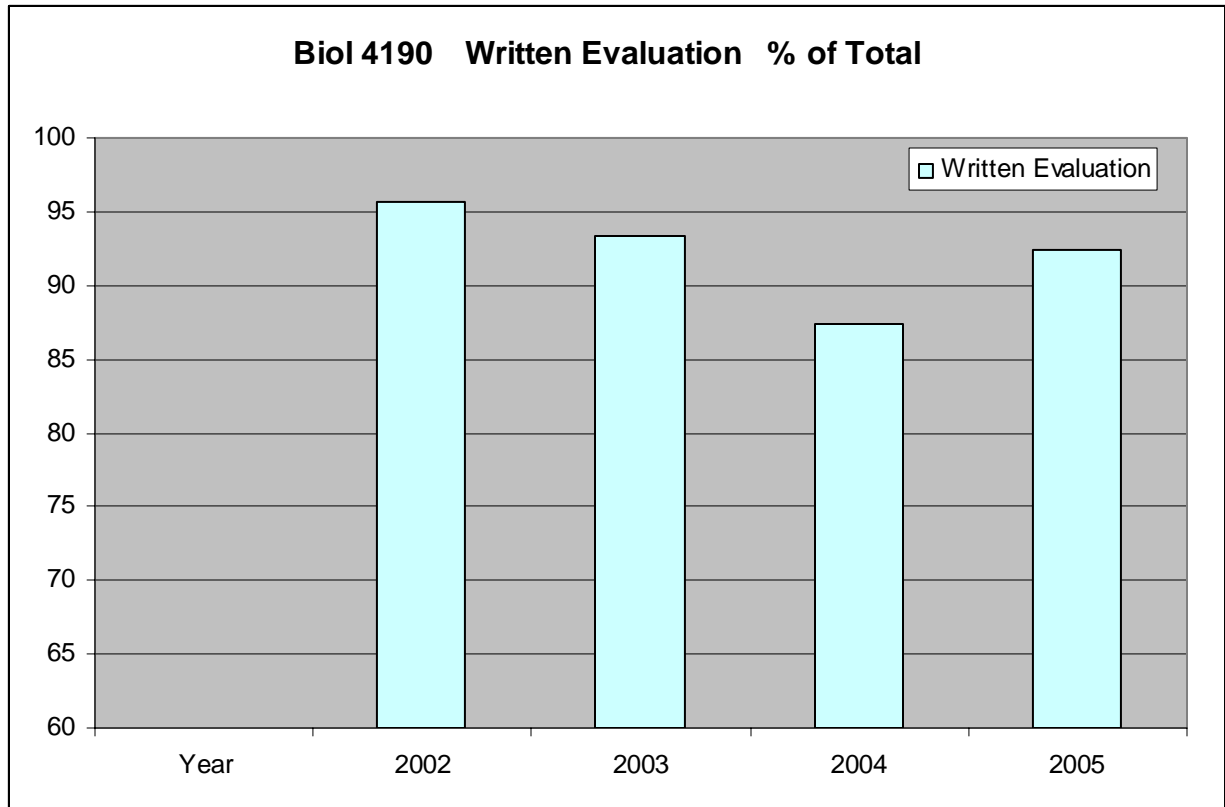
- a) Should the assessment look at wildlife concentration seniors vs. general biology seniors?
- b) Do we need to focus on the ACAT subject areas for a determination of the topics covered as compared to the instruction in our core courses?
- c) Are student population factors correlated to ACAT subject area success?
- d) What is the expectation and how do we predict it?

Summary of Senior Oral and Written Evaluation Tools

| | Oral Evaluation | Oral Evaluation | Written Evaluation | Written Evaluation |
|-------------|-----------------------------------|------------------------|-----------------------------------|---------------------------|
| Year | Total Points out of 35 pts | % of Total | Total Points out of 40 pts | % of Total |
| 2002 | 30.98 | 88.5 | 38.26 | 95.7 |
| 2003 | 32.04 | 91.5 | 37.35 | 93.4 |
| 2004 | 32.17 | 91.9 | 34.97 | 87.4 |
| 2005 | 30.41 | 86.9 | 36.98 | 92.5 |

(see attachment 1A an 1B for the rubrics)





| Oral Evaluation % | | ACAT Total Score | % Aboves |
|----------------------|------|------------------|--------------|
| 2002 | 88.5 | 51 | 37.5 |
| 2003 | 91.5 | 61 | 62.96 |
| 2004 | 91.9 | 45 | 36.67 |
| 2005 | 86.9 | 36 | 24.32 |
| Correlation | | 0.61 | 0.33 |
| Written Evaluation % | | ACAT Total Score | % Aboves |
| 2002 | 95.7 | 51 | 37.5 |
| 2003 | 93.4 | 61 | 62.96 |
| 2004 | 87.4 | 45 | 36.67 |
| 2005 | 92.5 | 36 | 24.32 |
| Correlation | | 0.33 | 0.176 |

Analysis

- 1) These data seem to indicate that our seniors are doing very well in both their oral and written presentations. This finding indicates an acceptable level of achievement of the student learning objectives.
- 2) The correlations of the oral and written scores to the total ACAT score are intriguing and will require thoughtful analysis
- 3) Possibilities based on the correlation data are:
 - a) The ACAT does provide a good measure of critical thinking skills.
(Note that this fact addresses one of the 2004 Evaluation comments)
 - b) The written part may measure other parameters not addressed in the ACAT and oral presentations.

3.2) Have these findings led to making any significant changes in your program? If so, what are they?

Not at this time

3.3) Please focus on evidence for or proposed changes that will lead to improvements in student learning outcomes.

The written part in senior seminar may be very critical, more so than the oral exams. We may expand the written activities in the senior semester class.

We plan to gather evidence for potential changes via student surveys, exit exams and faculty surveys.

We note that there is a failure to account for the faculty's point in objective 5. We will address this via the faculty survey (attachment 4) and next year we will report on the results.

4.1) How does what you did this past year fit into the overall assessment plan for your program?

Note that we continued with our previous activities and made no changes this year.

4.2) Please include any changes you may have made to your plan in response to last year's feedback.

An alternative analysis of the ACAT test has made the major comment by the 2004 evaluations irrelevant. This alternative analysis corresponds with a personnel change in the position of the Chair of Biology.

Reviewers should note presented data concerning on the ACAT test, data correlations and the relationship of the ACAT to student learning objective 2.

The Biology assessment committee will continue to discuss and analyze the ACAT tests, written evaluation in seminar and the surveys.

4.3) Do you plan to make any changes in your assessment plan itself? What will your targets be for the coming assessment year?

We plan to add exit exams, faculty exams, and an alumni survey that will be included in our annual newsletter to be spent out later this year.

5.1) Please describe how faculty, students, and other stakeholders have been involved in the assessment process and the decisions arising out of assessment findings. How have you shared the results and your interpretation with your stakeholders?

An undergraduate student, graduate student, and alumnus are full members of the Assessment Committee. They provide major input in the development of the survey instrument for alumni and employers. In addition, the students interact to provide information for exit interviews with seniors. Exit interviews have not yet been conducted except on a trial basis with several graduating seniors. The exact methodology of these interviews has not been determined but we have included a trial exam to be given in 2006 to the senior seminar students (**attachment 3**).

Students are also involved through student course evaluations as well as individual consultations. Data from these course evaluations, surveys and interviews will be shared with the department for discussion and recommendations will be forwarded to the Curriculum Committee and/or other appropriate departmental committees for evaluation and/or implementation to the departmental program.

5.1) What changes, if any, would you recommend in the assessment process in your college or in the university as a whole?

Assessment as well as a program review should be shifted to a 5 year cycle unless major changes or significant findings occur.

5.2) What additional resources could the university provide that would be of most help to you in your assessment efforts?

- 1) A CSAM full-time stats person and a CSAM Assistant Dean for assessment, retention and recruitment.
- 2) Provide the infrastructure (i.e. space, resources, salary, positions etc) for faculty success. Successful faculty will make for successful students.

5.3) Please estimate what resources you have spent on assessment this last year, including both time and money.

We spent all the money asked for by our assessment committee. Time spent is estimated at a 100 plus hours a year.

5.4) Courses offered through distance learning technologies are becoming a part of more and more programs. These courses should be treated like any other course offered by a department—including being part of the assessment of the program. For example, if students are supposed to include something from every upper-level course in their major, then they need to include distance as well as on-campus courses. What guidelines have you put into place to be sure that courses offered through distance learning technology are included in the assessment of the program?

As part of a proposed distance learning course the instructor must also include how they plan to assess it. We currently have no upper-level course taught this way and have no plans for such courses.

ATTACHMENT 1A – SEMINAR RUBRICS

BIOLOGY 4190 – SENIOR SEMINAR EVALUATION OF ORAL PRESENTATION

Name of Presenter _____

General:

- _____ **Visual Aids** (4 pts) – Were the visual aids appropriate for the topic, incorporated into the presentation effectively, and did they convey information effectively.
- _____ **Presentation** (2) – Was the delivery smooth and appropriate for the audience?

Topic:

- _____ **Teaching Presentation** (12 pts) – Was the teaching portion of the presentation appropriate for the audience and did it provide a thorough enough introduction to the research topic? Was it organized? Did it add to the audience's knowledge of biology?

Research Presentation

- _____ **Introduction** (2) – Was the research need and hypothesis clearly stated?
- _____ **Methods** (2) – Was the research methods and materials clearly explained?
- _____ **Results/Discussion** (4) – Were the results clearly stated? Were the data presented in an understandable manner? Did the presenter explain the main points of the research?
- _____ **Summary/Conclusions** (4) – Was the “take home message” and critique of the research clear and appropriate?

Class Discussion: (5)

- _____ Was the presenter able to explain and answer questions from the audience in an accurate and appropriate manner?

Overall Comments:

Total Points (35 possible) _____

ATTACHMENT 1B – SEMINAR RUBRICS

BIOLOGY 4190 – SENIOR SEMINAR EVALUATION OF WRITTEN INSTRUMENTS

Name _____

_____ **Abstract** (5 pts) – Did abstract state the purpose, results, and conclusions?

_____ **Introduction** (5) – Did the writer clearly identify the topic, purpose, and hypothesis of the research paper?

_____ **Results/Discussion** (6) – Are the results clearly stated? Are included data relevant and does the discussion of the data explain the main points of the topic?

_____ **Summary** (6) – Does the writer summarize the paper and incorporate his/her own thoughts and evaluation of the research?

_____ **Critical Thinking** (8) – Does the paper reflect the degree of critical thinking that should be expected from a senior biology major?

_____ **Bibliography** (5) – Were the references appropriate, complete, and uniform with scientific format?

_____ **Style** (5) – Was the paper written using appropriate grammar and style?

Comments:

Total Points (40 possible) _____

ATTACHMENT 2 – TELEPHONE SURVEY INSTRUMENT

Department of Biology
B.S. in Biological Sciences

Assessment Plan Questionnaire

Telephone Survey of Alumni

Item #1

Hello, I'm ____ calling from UALR on behalf of the Department of Biology. May I speak to <<FIRST NAME>> <<Last Name>>?

The Department of Biology is conducting a survey of Department of Biology Graduates to assess what parts of the program we should keep, what we should modify and/or what we should change. May I have a few moments of your time?

Item #2

What was your Biology emphasis area?

- General
- Molecular Biotechnology
- Fisheries and Wildlife Management
- Secondary Education
- Environmental Health Sciences

Item #3

Where you a transfer student into the Biology program from some other institution?

- Yes (GoTo Question #4)
- No (GoTo Question #5)

Item #4

Where did you attend school before transferring to UALR?

Item #5.

How long where you at UALR?

- 1 year
- 2 years
- 3 years
- 4 years
- Longer

Item # 6.

Please relate your agreement or disagreement with the following statements using a scale of 1 to 5 where 1 = strongly disagree and 5 = strongly agree.

Item #7

UALR Biology faculty exposed you to basic methods of science and their applications.

Item #8

Prepared you to think critically and to solve problems using the scientific method.

Item #9

Provided a solid understanding of biological concepts and theories.

Item #10

Prepared you to analyze and interpret qualitative and quantitative data sets.

Item #11

Prepared you to develop and write technical reports from technical data.

Item #12

Developed your ability to present technical data in a concise clear fashion.

Item #13

Developed your ability to work with a team on multifaceted problems.

Item #14

The following statements are related to the availability of supporting tools and overall adequacy of the program.

Item #15

Rate the quality and quantity of student computers.

Item #16

Rate the overall quality of hardware.

Item #17

Rate the overall quality software.

Item #18

Rate the quality and quantity of laboratory equipment.

Item #19

Rate faculty and staff support.

Item #20

Rate the overall quality of the teaching in UALR's Biology Program.

Item #21

The following questions relate to employment. Which of the following best describes your employment status?

- Employed full-time working more than 30 hours/week (GoTo #22)
- Employed part-time working less than 30 hrs/week (GoTo #22)
- Self Employed (GoTo #22)
- Out of Work
- Homemaker
- Student (GoTo #26)
- Refused

Item #22

What type of organization do you work for?

- State
- Local
- Federal
- Non-Profit
- Private Business
- Public Corporation
- Other [Specify] _____
- Refused

Item #23

Would you describe your position as upper management, mid-management, supervisory, professional, technical or other?

- Upper Management
- Mid-Management
- Supervisory
- Professional
- Technical
- Other
- Refused

Item #24

Is your position related to your education in the Biological Sciences at UALR?

Item #25

May we contact your employer? If yes, obtain:

Current Employer's Name: _____
Address: _____

Phone Number: _____
Supervisor: _____

Item #26

Are you in a graduate school or a professional school?

- Graduate School (GoTo #27)
- Professional School (GoTo #28)

Item #27

What is your major field of study in graduate school? (GoTo #29)

- Anatomy
- Biochemistry
- Biophysics
- Cell Biology
- Ecology
- Embryology
- Environmental Engineering
- Environmental Health
- Environmental Science
- Evolutionary Biology
- Genetics
- Immunology
- Microbiology
- Physiology
- Systematics
- Zoology
- Other [Specify]

Item #28

What is your major field of study in professional school?

- Dentistry
- Medical Technician
- Medicine
- Nursing
- Physical therapy
- Optometry
- Veterinary
- Other [Specify]

Item #29

Did you participate in undergraduate research opportunities?

Item #30

How would you rate your experience (positive/negative)?
[Explain]

Item #31

Are there biology courses or support courses that you wish UALR had offered, that would have been helpful to your employment or graduate / professional studies? [Specify]

Item #32

What supporting course(s) have you found to be the most useful to you?

- statistics
- calculus
- general chemistry
- organic chemistry
- writing
- physics
- other [Specify]

Item #33

What supporting course(s) have you found to be the least useful to you?

- statistics
- calculus
- general chemistry
- organic chemistry
- writing
- physics
- other [Specify]

Item #34

If you have recently visited the Biology website, what would you like to see that was not included?

- fine as is
- changes [Specify]

5) FT or PT Job related to my minor field of study _____

Satisfaction

To what extent were you satisfied with UALR in general and Biology in particular?

(4 – Very High 3 – High 2- Somewhat 1- Little 0- Very Little)

| | UALR | BIOLOGY |
|-------------------------------|-------|---------|
| 1) Coursework | _____ | _____ |
| 2) Range of Courses Offered | _____ | _____ |
| 3) Faculty | _____ | _____ |
| 4) Range of Faculty Expertise | _____ | _____ |
| 5) Educational Advising | _____ | _____ |
| 6) Instructional Equipment | _____ | _____ |
| 7) Buildings | _____ | _____ |
| 8) Technology Access | _____ | _____ |
| 9) Counseling | _____ | _____ |
| 10) Respect for Students | _____ | _____ |
| 11) Concern for Students | _____ | _____ |

To what extent were you satisfied?

(4 – Very High 3 – High 2- Somewhat 1- Little 0- Very Little)

| | |
|----------------------|-------|
| 12) Biology Courses | _____ |
| 13) Freshman Biology | _____ |

- 14) Microbiology** _____
 - 15) Botany** _____
 - 16) Zoology** _____
 - 17) Genetics** _____
 - 18) Ecology** _____
 - 19) Upper Level Biology** _____
 - 20) Seminar** _____
-

- 21) Chemistry Courses** _____
 - 22) Freshman Chemistry** _____
 - 23) Other Chemistry courses** _____
 - 14) Physics Courses** _____
 - 15) Math Courses** _____
 - 16) Earth Science (if applicable)** _____
 - 17) ENHS (if applicable)** _____
 - 18) Computer Courses (if applicable)** _____
 - 19) Stats Courses (if applicable)** _____
 - 20) University Core Courses** _____
-

Age at Graduation _____

Sex _____

Ethnicity

White

Hispanic

Black Non-Hispanic

Asian

Other _____

Biology GPA (Check the one that applies)

2.0 to 2.49 _____

2.50 to 2.99 _____

3.0 to 3.49 _____

3.50 to 4.00 _____

Hours Worked A Week on Average _____

Comments Please:

Thanks and Good Luck with Life ☺

ATTACHMENT 4- Proposed Faculty Survey

Biology Faculty Survey

Satisfaction Level

(4 – Very High 3 – High 2- Somewhat 1- Little 0- Very Little)

Students

- 1) Quality of Freshman Students _____
 - 2) Quality of Biology Majors _____
 - 3) Quality of Graduate Students _____
 - 4) Quality of Biology Minors _____
-

Infrastructure

- 5) Classrooms _____
 - 6) Teaching Equipment _____
 - 7) Research Equipment _____
 - 8) Teaching Space _____
 - 9) Research Space _____
 - 10) Buildings _____
 - 11) Building Maintenance _____
 - 12) Technology Space _____
 - 13) Technology Equipment _____
-

Resources

- 14) Salary _____

- 15) Graduate Recruiting _____
 - 16) Undergraduate Recruiting _____
 - 17) Advertising _____
 - 18) New Faculty Positions _____
 - 19) Replacement Faculty Positions _____
 - 20) New Faculty Start-Up Money _____
 - 21) Library Resources _____
 - 22) Seed Grants _____
 - 23) Travel Funds _____
-

Administration

- 24) Departmental Committees _____
 - 25) CSAM Committees _____
 - 26) University Committees _____
 - 27) Chair _____
 - 28) CSAM Administration _____
 - 29) Higher Administration _____
 - 30) ORSP _____
 - 31) GIT _____
 - 32) Purchasing _____
 - 33) Human Resources _____
-

Other

- 34) Assessment Plan _____

35) Surveys

36) Grade Appeal Process

37) Faculty Senate

38) CSAM Assembly

39) Advising process

40) Retention Policies

Comments Please ☺

Thank you and get back to work!