Department of Natural Sciences

Division of the University: Academic Affairs

Administrative Unit Assessment Year Reporting: FY22 (July 2021 – June 2022)

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Department Mission and Goals. The mission and goals of the department should be consistent over a 5-year period, although some institutional changes may necessitate and prompt a change in mission or goals for specific departments. In this section, you will report the mission statement for your department as well as the long-term goals (5-year range) for the department.

6. What is the mission statement for this department/area? Your mission should explain why the department/area exists and who it serves.	The department of Natural Sciences serves a diverse student body ranging from science majors to students taking science courses for their core curriculum. Departmental programs prepare students for rigorous post-baccalaureate programs or to enter into today's competitive job markets by providing opportunities for students to advance their knowledge through undergraduate research and through experiential learning. The Department of Natural Sciences supports the scholarly atmosphere of the university by promoting faculty research and scholarly activity.
7. What are the goals for this department? These should be the "big things" the department/area intends to accomplish within 5 years.	1. To increase biology majors engagement through participation in undergraduate research projects. 2. To support faculty research and the scholarly atmosphere of the university. 3. To provide an opportunity for undergraduate researchers to present their work to the campus and surrounding community in a STEM Undergraduate Research Symposium. 4. To review B.S. Biology curriculum and bring it into alignment with the goals and objectives outlined in Vision and Change in Undergraduate Biology Education (NSF 2009).

Objectives

Each year, every department should identify objectives the department hopes to accomplish in the next year. These should align with departmental goals and the MGA strategic plan. In the next section you will be reporting on the objectives you set and whether or not you achieved them in FY22. Later in the document you will report on objectives you hope to accomplish in the coming fiscal year, FY23.

Objective 1

8. Objective 1: What was this department's first objective for this fiscal year? Objectives should be specific, measurable, and achievable within one year.	To increase number of students involved in undergraduate research.
9. Objective 1: Detail specifically how your department measured this objective? (Survey, budget number, number of participants, jobs completed, measurable time and/or effort)	Measured by count of student enrollment in research courses, SCIE 2999 & BIOL 4894. Target was to increase enrollment in these courses by 5% over last year. This target was based on discussion with peers at other institutions.
10. Objective 1: What was your target outcome for this objective? (1.e. 80% participation, 5% enrollment growth, 7% change in engagement)	Target was to increase enrollment in these courses by 5% over last year. This target was based on discussion with peers at other institutions.
11. Objective 1: Provide details for your target performance level established (i.e., accreditation requirement, past performance data, peer program review, etc.)	This target was based on discussion with peers at other institutions.
12. Objective 1: At what level did the department/area achieve on this objective? (This should be a number, i.e., 82%, 6%, 345 attendees, 75% engagement)	In FY 2020-21-total number of students enrolled in these courses was 4. In FY 2021-22-total number of students enrolled in these courses was 13.
13. Objective 1: Did your department meet this objective?	The department exceeded this objective.
14. Objective 1: Improvement Plans and Evidence of changes based on an analysis of the results: What did your department learn from working toward this objective? What changes will you make based on this effort next year?	The increase in students enrolled is likely to be tied to the return to face-to-face classes and fully on campus operations. Students were able to work with faculty in lab settings and could conduct field research again. The department will continue to encourage participation in undergraduate research in the upcoming years.

Objective 2

15. Objective 2: What was this department's second objective for this fiscal year? Objectives should be specific, measurable, and achievable within one year.	To use USG STEM IV grant monies to provide seed grants to faculty offering undergraduate research projects or Course-Related Research Experiences (CUREs).
16. Objective 2: Detail specifically how your department measured this objective? (Survey, budget number, number of participants, jobs completed, measurable time and/or effort)	Count of the number of faculty applications for research apprenticeships and CURE course offerings were counted. Target was to have approximately 30% participation level. This target was arrived at through estimating discussions with departmental faculty about scholarly activities and interests.
17. Objective 2: What was your target outcome for this objective? (1.e. 80% participation, 5% enrollment growth, 7% change in engagement)	Target was to have approximately 30% participation level. This target was arrived at through estimating discussions with departmental faculty about scholarly activities and interests.
18. Objective 2: Provide details for your target performance level established (i.e., accreditation requirement, past performance data, peer program review, etc.)	This target was arrived at through estimating discussions with departmental faculty about scholarly activities and interests.
19. Objective 2: At what level did the department/area achieve on this objective? (This should be a number, i.e., 82%, 6%, 345 attendees, 75% engagement)	Seven faculty applied for research seed grant money in fall and spring semesters (27%). Seven (different) faculty offered CUREs in their courses this past fall and spring semesters.(27%).
20. Objective 2: Did your department meet this objective?	The department did not meet this objective.
21. Objective 2: Improvement Plans and Evidence of changes based on an analysis of the results: What did your department learn from working toward this objective? What changes will you make based on this effort next year?	The Department was able to hire 5 new faculty last year. These faculty were exempt from scholarship requirements this past year, but in the upcoming year will be building their scholarship portfolios. Several of them have indicated an interest in supervising undergraduate research (and one has already begun doing so). We asked current faculty who are offering CUREs to share their work with colleagues at the STEMposium to both highlight their work and encourage other faculty to incorporate CUREs in their courses over the next year.

Objective 3

22. Objective 3: What was this department's third objective for this fiscal year? Objectives should be specific, measurable, and achievable within one year.	To co-host the first annual undergraduate research STEMposium in spring 2022.
23. Objective 3: Detail how your department measured this objective? (Survey, budget number, number of participants, jobs completed, measurable time and/or effort)	We counted the number of student presenters, faculty presenters and attendees.
24. Objective 3: What was your target outcome for this objective? (1.e. 80% participation, 5% enrollment growth, 7% change in engagement)	Target was to have 10 student participants, 4 faculty participants and approximately 50 attendees.
25. Objective 4: Provide details for your target performance level established (i.e., accreditation requirement, past performance data, peer program review, etc.)	Thirteen students were involved in undergraduate research projects this past year. Are target was based on the idea that most would participate in the symposium. This past year, 7 faculty offered CUREs so expected at least half of them to participate.
26. Objective 2: At what level did the department/area achieve on this objective? (This should be a number, i.e., 82%, 6%, 345 attendees, 75% engagement)	The Spring 2022 STEMposium had 9 students who gave oral presentations and 5 students who gave poster presentations for a total of 14. Students included mathematics, biology and engineering majors. Four faculty presented on their CURE work. Approximately 50 people were in attendance.
27. Objective 2: Did your department meet this objective?	The department exceeded this objective.
28. Objective 2: Improvement Plans and Evidence of changes based on an analysis of the results: What did your department learn from working toward this objective? What changes will you make based on this effort next year?	The Departments of Natural Sciences and Mathematics/Statistics successfully co-hosted a STEMposium. It was a way to showcase undergraduate research projects and CUREs. The benefits are twofold. First, students who may not currently be participating in research had an opportunity to see what other students are doing. Second, faculty had a chance to share their ideas for CURE's in their courses. We hope to continue to grow this event in the upcoming year.

Objective 4

29. Objective 4: What was this department's fourth objective for this fiscal year? Objectives should be specific, measurable, and achievable within one year.	To begin mapping B.S. Biology curriculum for upper level required courses.
30. Objective 4: Detail how your department measured this objective? (Survey, budget number, number of participants, jobs completed, measurable time and/or effort)	Faculty instructors of upper level required courses were sent surveys asking them to identify content covered in each of the upper-level biology courses. Instructors for a specific upper-level course were asked to identify content covered in their course. Non-instructors of that course were asked to identify areas of overlap from other courses they teach. Faculty were also asked to describe at what level and by what methods content was covered.
31. Objective 4: What was your target outcome for this objective? (1.e. 80% participation, 5% enrollment growth, 7% change in engagement)	100% faculty participation
32. Objective 4: Provide details for your target performance level established (i.e., accreditation requirement, past performance data, peer program review, etc.)	All faculty teaching upper level courses were asked to fill out the survey.
33. Objective 4: At what level did the department/area achieve on this objective? (This should be a number, i.e., 82%, 6%, 345 attendees, 75% engagement)	100%
34. Objective 4: Did your department meet this objective?	The department met this objective.
35. Objective 4: Improvement Plans and Evidence of changes based on an analysis of the results: What did your department learn from working toward this objective? What changes will you make based on this effort next year?	Early results show that the Cell Biology course is covering many V&C concepts and competencies. We plan to use the results to guide conversations with faculty regarding incorporation of Vision & Change concepts and competencies. Results can also be used to determine strengths and weaknesses of the program (gaps and excessive overlaps).

Future Plans

36. Please identify and detail three to four measurable objectives for the next fiscal year. In listing the objectives, please use the format shown in these examples.1) The Department of X will improve services levels by 5% as measured by our satisfaction survey. 2) The department of X will provide training in ABC for at least 73 MGA faculty and staff.	1) The Department of Natural Sciences will increase the number of students involved in undergraduate research by 5%. 2) The Department of Natural will map 100% of the upper level required course curriculum and compare it to the Vision and Change NSF outcomes. 3) The Department of Natural Sciences will co-host the STEMposium in Spring 2023 with a 10% increase in student and faculty participation.

Open Box for Assessment Comments

37. In this field, please document the overall use of assessment results for continuous improvement of this department area (consider the past, present, and future and specifically address these in your narrative).	The Department of Natural Sciences has been offering undergraduate research opportunities to science majors for several years. With funding from the USG STEM grant, faculty were encouraged to apply for mini-grants from the STEM grant to purchase supplies, materials and to support travel to field sites for undergraduate research. More recently, we sought to scale up undergraduate research opportunities by incorporating them into existing courses through the implementation of Course-embedded Undergraduate Research Experiences (CURE's). Although the pandemic slowed down momentum with these efforts last year, it was encouraging to see faculty and students returning to research projects over this last year. We had more faculty adopt CURE projects into their classes than in the previous year and we hope to continue to grow these efforts. One way is by providing an on-campus opportunity for students and faculty to share their work. The first STEMposium brought together students and faculty, along with members of the community to see the research undertaken by MGA. We hope to continue growing this work. Finally, the department was provided the opportunity to participate with peer institutions in a review of the B.S. Biology program curriculum with the long term goal of aligning with national education reform

	initiatives. The surveys to faculty have been collected and we will be working on summarizing the data, with the goal of meeting with faculty to discuss the results. The results can be used to guide conversations with faculty regarding incorporation of Vision & Change concepts and competencies and to determine strengths and weaknesses of the program (gaps and excessive overlaps).
38. Optional Open Text Box for Assessment Comments:	
42. If the COVID-19 pandemic impacted this assessment cycle, please provide specific details below.	

MGA's Strategic Plan

39. Based on your goals and objectives listed above please indicate their connection with MGA's Strategic Plan (https://www.mga.edu/about/docs/Strategic_Plan_Overall_DB.pdf) by checking all associated and relevant Imperatives / Strategies from the list below. (Check all the apply)	Grow Enrollment with Purpose 1. Expand and enrich the face to face student experience, Own Student Success 4. Expand student engagement and experiential learning, Build Shared Culture 5. Attract talent and enhance employee development and recognition, Build Shared Culture 6. Sustain financial health through resourceful fiscal management, Build Shared Culture 7. Cultivate engagement with its local communities
40. Please indicate which of the following actions you have taken because of the 2021/2022 Assessment Cycle (Note: These actions are documented in reports, memos, emails, meeting minutes, or other directives within the reporting area) (Check all the apply)	Disseminating/Discussing Assessment Results/Feedback to Appropriate Members of the Campus Community, Faculty or Staff Support: Professional Development Activities,

	Trainings, Workshops, Technical Assistance, Making Improvements to Teaching Approach, Course Design, Curriculum, Scheduling, other

Other

41. Please indicate (if appropriate) any local, state, or national initiatives (academic or otherwise) that are influential in the operations, or goals, and objectives of your unit. (Complete College Georgia, USG High Impact Practice Initiative, LEAP, USG Momentum Year, Low-Cost No-Cost Books, etc.)	USG STEM IV Initiative, Southeastern Regional Partnership for Undergraduate Life Science Education (SERP III-PULSE Initiative)
43. Mindset Update (Academic Deans ONLY)	