# Bachelor of Science with a major in Mathematics, Macon 

## Semester reporting: Spring Semester 2022

Reporting cycle: Annual Reporting Cycle
Academic Program Assessment by Location Report Information

| Prepared on: 4/5/2022 14:03 PM | Prepared by: barry.monk@mga.edu |
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|  | Email address of person responsible for this <br> report: barry.monk@mga.edu |
| In which school is this program located? | Computing |
| Program Type: | Undergraduate |
| Approximately how many students are enrolled <br> in this program at this location? | 57 |

## Student Learning Outcomes

## SLO1

| 7. SLO 1: What is the first Student Learning <br> Outcome for this academic program? Student <br> Learning Outcomes should be stated in <br> measurable terms (i.e. students will be able <br> to......) | Demonstrate an understanding of the common <br> body of knowledge in mathematics. |
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| 8. SLO 1: What instrument (assessment type) was <br> used to measure student's ability to demonstrate <br> mastery of this learning outcome? (i.e. exam, <br> assignment with rubric, speech, demonstration of <br> ability, lab assignment) and provide specific <br> details of the instrument (e.g. Exam 2, Course | Targeted subject questions on Final Exam in <br> HATH 2252 |
| 9. SLO 1: What target performance level would a <br> student need to achieve on the assessment <br> instrument to demonstrate mastery of this | 70\% |
| learning outcome? (i.e. 80\% of all students will |  |
| earn an average grade of 75\% or better on....) |  |$\quad$| 10. SLO 1: Provide details for your target <br> performance level established (i.e. accreditation <br> requirement, past performance data, peer <br> program review, etc) |
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| Based on discussions with other department <br> chairs about similar assessments, a target <br> performance level of 70\% was set as it was the <br> li. SLO 1: During this assessment cycle, what <br> percent of the students who participated in this <br> assessment demonstrated mastery of this <br> learning outcome? (this should be a number <br> between 0-100) |
| $81.8 \%$ <br> 12. SLO 1: Improvement Plans and Evidence of <br> changes based on an analysis of the results: What <br> changes were implemented based on an analysis <br> of the students' performance on this Student <br> Learning Outcome? |
| The target performance measure was met. <br> Instruction in the Calculus sequence is continually <br> trying to be improved through pedagogical <br> strategies (review sessions, prerequisite <br> remediation, etc.) This SLO will continue to be <br> monitored carefully as the classes involved are an <br> important foundation for mathematics majors. |

## Student Learning Outcomes

## SLO2

| 13. SLO 2: What is the second Student Learning <br> Outcome for this academic program? Student <br> Learning Outcomes should be stated in <br> measurable terms (i.e. students will be able <br> to.....) | Demonstrate the ability to formulate, analyze, and <br> solve problems throgh analytical and <br> computational techniques. |
| :--- | :--- |
| 14. SLO 2: What instrument (assessment type) <br> was used to measure student's ability to <br> demonstrate mastery of this learning outcome? <br> (i.e. exam, assignment with rubric, speech, <br> demonstration of ability, lab assignment) and <br> provide specific details of the instrument (e.g. <br> Exam 2, Course HLSA 3800; Final Group Project, <br> HIST 3900) | Targeted subject questions on Exam 04 in MATH <br> 4150 |
| 15. SLO 2: What target performance level would <br> a student need to achieve on the assessment <br> instrument to demonstrate mastery of this | $70 \%$ |
| learning outcome? (i.e. 80\% of all students will <br> earn an average grade of 75\% or better on.....). |  |
| 16. SLO 1: Provide details for your target <br> performance level established (i.e. accreditation <br> requirement, past performance data, peer <br> program review, etc) | Based on discussions with other department <br> chairs about similar assessments, a target <br> performance level of $70 \%$ was set as it was the <br> level that is considered "passing". |
| 17. SLO 2: During this assessment cycle, what <br> percent of the students who participated in this <br> assessment demonstrated mastery of this <br> learning outcome? (this should be a number <br> between 0-100) | $82.6 \%$ |
| 18. SLO 2: Improvement Plans and Evidence of <br> changes based on an analysis of the results: What <br> changes were implemented based on an analysis <br> of the students' performance on this Student <br> Learning Outcome? | The target performance measure was met. This <br> SLO will continue to be monitored. |

## Student Learning Outcomes

## SLO3

| 19. SLO 3: What is the third Student Learning <br> Outcome for this academic program? Student <br> Learning Outcomes should be stated in <br> measurable terms (i.e. students will be able <br> to......) | Demonstrate logical argumentation, analysis, and <br> synthesis skills. |
| :--- | :--- |
| 20. SLO 3: What instrument (assessment type) <br> was used to measure student's ability to <br> demonstrate mastery of this learning outcome? <br> (i.e. exam, assignment with rubric, speech, <br> demonstration of ability, lab assignment) and <br> provide specific details of the instrument (e.g. <br> Exam 2, Course HLSA 3800; Final Group Project, <br> HIST 3900) | Targeted questions from Chapter 07 assignment <br> in MATH 3040 |
| 21. SLO 3: What target performance level would <br> a student need to achieve on the assessment <br> instrument to demonstrate mastery of this | 70\% |
| learning outcome? (i.e. 80\% of all students will <br> earn an average grade of 75\% or better on.....). |  |
| 22. SLO 1: Provide details for your target <br> performance level established (i.e. accreditation <br> requirement, past performance data, peer <br> program review, etc) | Based on discussions with other department <br> chairs about similar assessments, a target <br> performance level of 70\% was set as it was the <br> level that is considered "passing". |
| 23. SLO 3: During this assessment cycle, what <br> percent of the students who participated in this <br> assessment demonstrated mastery of this <br> learning outcome? (this should be a number <br> between 0-100) | 75\% |
| 24. SLO 3: Improvement Plans and Evidence of <br> changes based on an analysis of the results: What <br> changes were implemented based on an analysis <br> of the students' performance on this Student <br> Learning Outcome? | The target performance measure was met. This <br> SLO will continue to be monitored. |

## Student Learning Outcomes

SLO4

$\left.$| 25. SLO 4: What is the fourth Student Learning <br> Outcome for this academic program? Student <br> Learning Outcomes should be stated in <br> measurable terms (i.e. students will be able <br> to......) | Successful mathematics majors will be able to <br> communicate mathematical principles and ideas <br> with clarity and coherence. |
| :--- | :--- |
| 26. SLO 4: What instrument (assessment type) <br> was used to measure student's ability to <br> demonstrate mastery of this learning outcome? <br> (i.e. exam, assignment with rubric, speech, <br> demonstration of ability, lab assignment) and <br> provide specific details of the instrument (e.g. <br> Exam 2, Course HLSA 3800; Final Group Project, <br> HIST 3900) | Research project with oral/written presentation in <br> MATH 3207 |
| 27. SLO 4: What target performance level would <br> a student need to achieve on the assessment <br> instrument to demonstrate mastery of this <br> learning outcome? (i.e. 80\% of all students will <br> earn an average grade of 75\% or better on..... | 70\% |
| 28. SLO 1: Provide details for your target <br> performance level established (i.e. accreditation <br> requirement, past performance data, peer <br> program review, etc) | This is a new assessment instrument for the <br> deparmtent. It seems reasonable to set the <br> target level at the "passing" grade of 70\%. This <br> also places this target level so that it is consistent <br> with other SLO's. Adjustments will be made in the <br> future if deemed necessary. |
| 71.4\% <br> 29. SLO 4: During this assessment cycle, what <br> percent of the students who participated in this <br> assessment demonstrated mastery of this <br> learning outcome? (this should be a number <br> between 0-100) | 30. SLO 4: Improvement Plans and Evidence of <br> changes based on an analysis of the results: What <br> changes were implemented based on an analysis <br> of the students' performance on this Student <br> Learning Outcome? | | The target performance measure was met, |
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| though not by a great deal. The department will |
| look into ways to improve written and oral |
| communication skills for mathematics majors. |
| This SLO will continue to be monitored. | \right\rvert\, | The |
| :--- |

## Sampling

| 31. How many students participated in the | 23 |
| :--- | :--- |
| assessment of these learning outcomes, in this |  |
| program, for this assessment cycle at this |  |
| location? |  |

## Open Box for Assessment Comments

| 32. In this field, please document the overall use <br> of assessment results for continuous <br> improvement (consider the past, present, and <br> future and specifically address these in your <br> narrative). | The Curriculum Committee of the Department of <br> Mathematics \& Statistics recently updated the <br> SLO's of the deparmtent and this is the first <br> assessment cycle using the new SLO's. The SLO's <br> better reflect the outcomes expected of <br> Mathematics Majors. For SLO 4, a new <br> assessment instrument was put in place - a <br> research project with oral and written <br> requirements. |
| :--- | :--- |
| 33. Optional Open Text Box For Assessment <br> Comments: | All SLO's were met, but with SLO 4 <br> (communicating mathematical ideas), it appears <br> that there is room for improvement. This will be a <br> focus of the department in the upcoming year. |
| The number of students who participated in the <br> assessment differed for each SLO instrument. <br> The number of students who participated for SLO <br> 1 is 22. The number of students who participated <br> for SLO 2 is 23. The number of students who <br> participated for SLO 3 is 4. The number of <br> students who participated for SLO 4 is 7. |  |
| 34. If the COVID-19 pandemic impacted this <br> assessment cycle, please provide specific details <br> below. |  |

