

solid computer science knowledge and skills **MET**

Students will have solid computer science knowledge and skills and be prepared for their further studies or first jobs.

MEASURES	RESULTS	ACTIONS
<p><b>Assessment of Selected Courses</b></p> <p>Direct: Faculty Assessment for COSC 5369 Graduate Project or COSC 5391 Thesis II.</p> <p>Faculty Assessment &gt; 4 points; Direct - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <p>Faculty Assessment=4.584 (94.81% of students received &gt; 4 points)</p> <p>The faculty assessment data demonstrate that most MSCS students have acquired the necessary computer science knowledge and are well-prepared for future careers and advanced studies. They are satisfied with the courses, teaching, and curriculum of the MSCS program.</p>	<p><b>Revise Curriculum</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Regularly review and update the graduate computer science program catalog to ensure it reflects current program structures, requirements, and specializations that support students' career development and academic progression.</li> <li>The department is also working to reduce the required credit hours, aligning with similar efforts at Lamar University and other institutions within the Texas State University System, to enhance the competitiveness of the MSCS program at Lamar University.</li> <li>Design and implement new graduate-level courses that respond to evolving societal and industry demands. Retire outdated courses, revise prerequisites, and modernize existing content to incorporate the latest advancements and methodologies in computer science.</li> </ul> <p><b>Other - [Expand career readiness support]</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Expand career readiness support by increasing access to internship opportunities and enhancing training in job search strategies, technical interviews, and communication skills. Provide guidance for students pursuing PhD programs, especially in response to the current downturn in the computer science job market.</li> </ul>

<p><b>Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations</b></p> <p>Indirect: Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations/Department of Computer Science (Question Set # 1)</p> <p>Alumni Survey &gt; 4 points; Exit Interview &gt; 3.75 points; Exit Survey &gt; 4 points; Student evaluations &gt; 3.75 points;</p> <p>Indirect - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <p>Exit Survey=4.262 points (79.44% of students rated &gt; 4 points)  Exit Interview=4.390 points (94.67% of students rated &gt; 3.75 points)  Alumni Survey=4.466 points (93.37% of students rated &gt; 4 points)  Student Evaluation=4.62 points</p> <p>In the Exit Survey, 79.44% of students rated 4 points and higher, which is 0.56% lower than the benchmark of 80%. This discrepancy may be attributed to a few students not completing the form accurately. For instance, some students gave low numerical ratings (e.g., 1 or 2) while providing positive written comments, suggesting possible confusion or inconsistency in their responses.</p>	<p><b>Revise Measurement / Assessment</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Reduce the required credit hours to 30 and revise the core course requirements to streamline program completion, lower tuition costs, and improve accessibility for students pursuing graduate education.</li> <li>Change COSC 5369 Graduate Project from a required course to an elective course, remove its student evaluations from the indirect assessment process.</li> </ul> <p><b>Gather Additional Data</b></p> <p><b>IN PROGRESS</b></p> <p>Conduct and analyze student feedback. Discuss appropriate response actions and implement improvements with the goal of enhancing assessment outcomes in the following year.</p>
--	---	---

## General Outcome Actions

ACTIONS
<p><b>Collaborate with another Department / Unit / Program</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Strengthen interdisciplinary collaboration by partnering with other academic departments across campus to diversify course offerings and enrich the program. Leveraging faculty expertise from various disciplines will foster innovative, interdisciplinary courses at the intersection of computer science and other fields.</li> </ul>
<p><b>Other - [Comprehensive review of student learning outcomes]</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Conduct a comprehensive review of student learning outcomes for both core and elective graduate courses.</li> </ul>
<p><b>Additional Training</b></p> <p><b>IN PROGRESS</b></p> <p>Support faculty development through targeted training and professional growth opportunities focused on innovative teaching practices and emerging technologies in the field.</p>

## Conclusion

Both direct and indirect assessment measures indicate that students are meeting faculty expectations and are satisfied with their academic experience in the Department of Computer Science at Lamar University.

Ability to use learned knowledge to solve real-world problems **MET**

Students will be able to employ mathematical tools, scientific principles, and fundamental knowledge of Computer Science to solve problems and work in multidisciplinary teams.

MEASURES	RESULTS	ACTIONS
<p><b>Assessment of Selected Courses</b></p> <p>Direct: Faculty Assessment for COSC 5369 Graduate Project or COSC 5391 Thesis II.  Direct: 80% of students are expected to achieve the proficiency</p> <p>Direct - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>Faculty Assessment=4.571 (97.81% of students received &gt; 4 points)</li> </ul> <p>These results indicate that most faculty affirm students' capability to work in a multidisciplinary environment using the math and computer science knowledge gained from the MSCS program at Lamar University.</p>	<p><b>Revise Curriculum</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Map updated learning outcomes to specific courses and instructional activities within the curriculum to ensure alignment between educational goals and course content.</li> <li>Encourage faculty to develop advanced courses and new modules that integrate applied mathematics, scientific reasoning, and interdisciplinary collaboration, supporting the development of well-rounded, high-impact professionals.</li> </ul> <p><b>Collaborate with another Department / Unit / Program</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Strengthen interdisciplinary collaboration by partnering with other academic departments across campus to diversify course offerings and enrich the program. Leveraging faculty expertise from various disciplines will foster innovative, interdisciplinary courses at the intersection of computer science and other fields.</li> </ul>
<p><b>Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations</b></p> <p>Indirect: Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations/Department of Computer Science (Question Set # 2)</p> <p>Indirect: Alumni Survey &gt; 4 points; Exit Interview &gt; 3.75 points; Exit Survey &gt; 4 points; Student evaluations &gt; 3.75 points;</p> <p>Indirect - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>Exit Survey=4.287 points (81.67% of students rated &gt; 4 points)  Exit Interview=4.392 points (95.86% of students rated &gt; 3.75 points)  Alumni Survey=4.449 points (91.71% of students rated &gt; 4 points)  Student Evaluation=4.65 points</li> <li>All assessment results meet the expectation.</li> </ul> <p>These results indicate that most students also affirm students' capability to work in a multidisciplinary environment using the math and computer science knowledge gained from the MSCS program at Lamar University.</p>	<p><b>Revise Measurement / Assessment</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Conduct a thorough evaluation of student learning outcomes for both core and elective graduate-level courses. Engage faculty, industry experts, and alumni in the process to ensure outcomes emphasize problem-solving, interdisciplinary knowledge, and relevance to current and emerging technologies.</li> <li>Remove student evaluations of COSC 5369 graduate project course from the indirect assessment to reflect the new curriculum change.</li> </ul>

#### General Outcome Actions

ACTIONS
<p><b>Other - [Incorporate real-world learning opportunities]</b></p> <p><b>IN PROGRESS</b></p> <ul style="list-style-type: none"> <li>Incorporate real-world learning opportunities into course project and thesis courses through the use of case studies, simulations, and applied projects that require students to apply mathematical and scientific principles to practical challenges.</li> </ul>

### Other - [Recruit Faculty]

IN PROGRESS

- Recruit faculty with diverse backgrounds and specialized expertise to expand the program's instructional and research capabilities, supporting future growth and innovation within the graduate curriculum.

### Conclusion

These results indicate that most students affirm their capability to work in a multidisciplinary environment using the math and computer science knowledge gained from the MSCS program at Lamar University.

Awareness of responsibility, ethics, and life-long learning **MET**

MEASURES	RESULTS	ACTIONS
<p><b>Assessment of Selected Courses</b></p> <p>Direct: Faculty Assessment for COSC 5369 Graduate Project or COSC 5391 Thesis II. Faculty Assessment &gt; 4 points; Direct - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>Faculty Assessment=4.575 (95.28% of students received &gt; 4 points)</li> <li>The direct assessment score indicates that faculty believe students have developed a stronger awareness of ethics and the importance of lifelong learning.</li> <li>The data demonstrates that most students are aware of the significance of the social and technical context of their professional responsibilities, ethics, and lifelong learning.</li> </ul>	<p><b>Collaborate with another Department / Unit / Program</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Partner with the Lamar University Career Center to organize workshops and seminars focused on leadership development, effective communication, and collaborative problem-solving—skills that complement the academic curriculum and prepare students for success in the workplace.</li> </ul>
<p><b>Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations</b></p> <p>Indirect: Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations/Department of Computer Science (Question Set # 3)</p> <p>Indirect: Alumni Survey &gt; 4 points; Exit Interview &gt; 3.75 points; Exit Survey &gt; 4 points; Student evaluations &gt; 3.75 points;</p> <p>Indirect - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the average of indirect proficiencies</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <p>Exit Survey=4.283 points (85.00% of students rated &gt; 4 points) Exit Interview=4.385 points (94.67% of students rated &gt; 3.75 points) Alumni Survey=4.445 points (90.06% of students rated &gt; 4 points) Student Evaluation=4.55 points</p> <p>All result demonstrates that most students are aware of the significance of the social and technical context of their professional responsibilities, ethics, and lifelong learning.</p>	<p><b>Revise Measurement / Assessment</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Remove student evaluation from the indirect assessment process to reflect new program curriculum.</li> </ul> <p><b>Other - [Encourage group-based projects]</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Encourage faculty to incorporate more group-based projects within both core and elective graduate courses to promote collaborative learning and strengthen students' leadership and teamwork skills</li> </ul>

### General Outcome Actions

## ACTIONS

### Other - [Support for internship]

IN PROGRESS

- Expand support for internship and practicum experiences that allow graduate students to apply their academic knowledge in professional environments, reinforcing the development of real-world competencies.

## Conclusion

The data demonstrate that most students understand the importance of social impact and ethics for their careers and are committed to engaging in lifelong learning.

critical thinking, communication, teamwork, and leadership skills **MET**

MEASURES	RESULTS	ACTIONS
<p><b>Assessment of Selected Courses</b></p> <p>Direct: Faculty Assessment for COSC 5369 Graduate Project or COSC 5391 Thesis II.</p> <p>Faculty Assessment &gt; 4 points; Direct - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the proficiency</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>Faculty Assessment=4.588 (95.28% of students received &gt; 4 points)</li> <li>The direct assessment shows that 95.28% of students received scores above 4 for this learning outcome. This indicates that faculty believe students have demonstrated significant improvement in critical thinking, communication, teamwork, and leadership skills essential for professional and productive performance.</li> </ul>	<p><b>Other - [Encourage group-based projects]</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Encourage faculty members to integrate more group projects into graduate-level core and elective courses to foster collaboration and promote the development of leadership and teamwork skills.</li> </ul>
<p><b>Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations</b></p> <p>Indirect: Student Exit Survey, Exit Interview, Alumni Survey, and Student Evaluations/Department of Computer Science (Question Set # 4)</p> <p>Indirect: Alumni Survey &gt; 4 points; Exit Interview &gt; 3.75 points; Exit Survey &gt; 4 points; Student evaluations &gt; 3.75 points;</p> <p>Indirect - Other</p> <p><b>Target</b></p> <p>80% of students are expected to achieve the average of indirect proficiencies</p>	<p><b>MET</b></p> <p><b>Analysis</b></p> <ul style="list-style-type: none"> <li>Exit Survey=4.287 points (85.56% of students rated &gt; 4 points) Exit Interview=4.389 points (95.86% of students rated &gt; 3.75 points) Alumni Survey=4.450 points (92.82% of students rated &gt; 4 points) Student Evaluation=4.54 points</li> </ul> <p>All indirect assessments result demonstrate that the majority of MCSC students are equipped with critical thinking, communication, and teamwork abilities, which will help them develop leadership skills.</p>	<p><b>Other - [Support for internship]</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Promote and support opportunities for graduate students to engage in internships and practicums, allowing them to refine and apply their collaborative, technical, and professional skills in real-world settings.</li> </ul> <p><b>Revise Measurement / Assessment</b></p> <p>IN PROGRESS</p> <ul style="list-style-type: none"> <li>Remove the student evaluations from the indirect assessment process to reflect to the new program curriculum.</li> </ul>

## **Conclusion**

The data demonstrate that most students are equipped with critical thinking, communication, and teamwork abilities, which will help them develop leadership skills.