Program Mission:
The mission of the Computer Science B.S. Program is to provide students with a challenging, market relevant and high-quality education in computer science.

Student Learning Outcome 1:
Understand basic computer science terminology, technology and programming methods.

NMHU Traits Specifically Linked to Student Learning Outcome 1
- Mastery of Content Knowledge and Skills

First Means of Assessment for Outcome 1:
Final grade from CS 144: Introduction to Computer Science; introduction to relevant terminology, technology and programming methods in computer science. Students' mastery will be measured with a C or better in the course.

Second Means of Assessment for Outcome 1:
Final grade from CS 145: Introduction to Object Oriented Programming; introduction to relevant object oriented terminology, technology and programming methods in computer science. Students' mastery will be measured with a C or better in the course.

Student Learning Outcome 2:
Successfully apply knowledge of advanced programming methodology to complex problems in computer science.

NMHU Traits Specifically Linked to Student Learning Outcome 2
- Critical and Reflective Thinking Skills
- Effective Use of Technology

First Means of Assessment for Outcome 2:
Programming Labs and Exams from CS 245: Advanced Computer Programming evaluating current knowledge of software engineering, debugging/testing, simple data structures and object oriented programming principles. Students' ability to successfully
accomplish the above topics in programming methods will be measured by an achievement of a C or above in their final grade.

Second Means of Assessment for Outcome 2:

Programming Labs and Exams from CS 345: Data & File Structures evaluating current knowledge of advanced programming techniques and technologies involving complex data structures and algorithms, graphical user interfaces and object-based programming utilizing sophisticated software development and debugging tools. Students’ ability to successfully accomplish the above programming tasks will be measured by an achievement of a C or above in their final grade.

Third Means of Assessment for Outcome 2:

Programming Labs and Exams from CS 451: Software Engineering evaluating current knowledge of concepts and techniques of software engineering as related to object oriented design principles, integration of systems analysis into all aspects of the software life cycle, correctness and functionality of large scale software projects as formally specified in the design process. Students’ ability to successfully accomplish the above programming tasks will be measured by an achievement of a C or above in their final grade.

Student Learning Outcome 3:

Effectively design/implement a relevant computer science project and communicate ideas, information and results, both verbally and in writing that (1) demonstrate consistent logic/critical thinking; (2) are well organized; (3) state and defend a thesis; and (4) demonstrate competent use of language in oral and written reports. (5) Project works as designed with a complete demonstration to students and faculty.

NMHU Traits Specifically Linked to Student Learning Outcome 3

- Effective Communication Skills
- Mastery of Content Knowledge and Skills
- Critical and Reflective Thinking Skills
- Effective Use of Technology

First Means of Assessment for Outcome 3:
Final grade (Oral presentation/Technical report) from CS 481: Senior Design term project in which students submit project proposal to computer science faculty for approval/modification Once approved student will successfully integrate previous course work into project and submit technical report to faculty as well as do an oral presentation for all computer science students and faculty at the end of the term. Students’ ability to effectively communicate scientific ideas, information, and results will be measured by achievement of a score of a C or better on final grade in the course.
Second Means of Assessment for Outcome 3:
Final grade (Oral presentation/Technical report) from CS 482: Senior Implementation term project in which students implement project proposal. A technical report to faculty as well as do an oral presentation for all computer science students and faculty at the end of the term will be required. Additionally, students will upload all source code and documentation to an open-source entity such as Github to build their professional portfolio as well as create a tracking/critique mechanism for faculty and external advisory board members to provide critical feedback to the students and program. Students’ ability to effectively communicate computer science ideas, information, and results will be measured by achievement of a score of a C or better on their final grade in the course.

Utilization of Results:

Changes to Program Based on Results:

Retention Strategies: