

	Exceeds Requirements 10 - 12	Meets Requirements 7-9	Partially Meets Requirements 4-6	Does Not Meet Requirements 1-3	Score
<p>Learning Outcomes When students successfully complete the program, what should they know? What should they be able to do? What should they value?</p>	<ul style="list-style-type: none"> o All outcomes clearly stated; o Compatible with IU South Bend campus goals and mission statements; o Measurable; o An appropriate range of measures; o Cover key/focused components of learning; o Reflect multiple levels of learning, primarily higher levels of learning (e.g. Bloom’s Taxonomy: synthesis, application, analysis.) 	<ul style="list-style-type: none"> o Most are clearly stated; o Most are compatible with IU South Bend campus goals and mission statements o Most are measurable; o An adequate range of measures; o Most cover key/focused components of learning; o Reflect multiple levels of learning, including higher levels of learning. 	<ul style="list-style-type: none"> o Some are clearly stated; o Some are compatible with IU South Bend campus goals and mission statements o Some are measurable; o Too many or too few in number o Some cover key/focused components of learning; o Some reflect multiple levels of learning, and some may reflect higher levels of learning 	<ul style="list-style-type: none"> o Not clearly stated; o Not compatible with IU South Bend campus goals and mission statements o Inappropriate number to reflect required student learning o Not measurable; o Do not cover key/focused components of learning; o Generally reflect basic knowledge. 	1
<p>Tools and Processes Direct Measures – directly evaluate student work. Examples of direct measure include exams, papers, projects, and computer programs, interactions with a client or musical performances. Indirect Measures – indirectly evaluate student learning and include asking students and alumni how will they thought they learned, tracking their graduate school or job placement rates, and so on.¹</p>	<ul style="list-style-type: none"> o Appropriate number of observations; o All measure mastery of student learning using multiple methods; o Include a wide range of student work samples; o Tells you what needs to change and where in the curriculum it must be changed. 	<ul style="list-style-type: none"> o Adequate number of observations; o Measure student learning; o Include student work samples; o Measures how closely target is achieved and guides curriculum changes 	<ul style="list-style-type: none"> o Some observations; o Some measure student learning; o Includes few student work samples; o Measures how closely target is achieved but may not suggest specific actions for improvement. 	<ul style="list-style-type: none"> o Few or no observations; o No appropriate methods to measure desired student learning; o No student work samples; o Does not measure target achievement, does not make necessary curricular changes clear. 	2
<p>Benchmarks/Performance Targets Level of performance students should achieve for selected measures.</p>	<ul style="list-style-type: none"> o Well defined and appropriate levels of student learning are identified; o Measures how closely target is achieved 	<ul style="list-style-type: none"> o Defined and adequate levels of student learning are identified; 	<ul style="list-style-type: none"> o Loosely defined or insufficient levels of student learning are identified; 	<ul style="list-style-type: none"> o No benchmarks or targets for student learning are identified; 	1
<p>Results and Analysis Information is gathered, summarized and provided to faculty for review, discussion and analysis</p>	<ul style="list-style-type: none"> o Clearly developed and well-conceived analysis; o Clear findings are reported on all methods o Faculty and other relevant stakeholders review and discuss all data 	<ul style="list-style-type: none"> o Analyses are provided; o Findings are reported on all methods; o Faculty review and discuss all data. 	<ul style="list-style-type: none"> o Some analyses are provided; o Findings are reported on most methods; o Limited review and discussion. 	<ul style="list-style-type: none"> o No analysis; o Insufficient findings or number of methods used; o Limited or no review and discussion. 	1
<p>Actions How do faculty use assessment information to modify and improve their program?</p>	<ul style="list-style-type: none"> o A thorough plan is developed with broad-based faculty participation to improve curriculum, assessment planning, and/or student learning outcomes; o Actions provide thorough evidence that findings have influenced curricular and co-curricular decision making 	<ul style="list-style-type: none"> o A plan to improve is developed with faculty participation; o Actions provide evidence that findings have influenced curricular and co-curricular decision making 	<ul style="list-style-type: none"> o A plan is with partial faculty participation is developed; o Unclear connections between findings and curricular and co-curricular decision making. 	<ul style="list-style-type: none"> o No plan has been developed; o No evidence-based decision making is discernible. 	1

General Comments

- In light of the greater accountability being required of educational institutions, the assessment committee is committed to having documentation of the student learning taking place in our academic departments. We are convinced that students are receiving an excellent education from our colleagues. We also know that our university will be required to provide evidence supporting this claim to our accrediting commission and state funding bodies. Assessment is a crucial, and increasingly necessary, component of the educational process.
- The assessment committee would like to make clear that this is an evaluation of the assessment processes in the Applied Math and Computer Science program, not of the program itself. The committee hopes that academic programs can use assessment to highlight excellent and important educational work and identify places where educational goals are not being met. The assessment committee understands that a one-size –fits-all assessment process will not work with the diverse academic programs on campus. Instead, they urge each program to consider precisely what their educational goals are and to identify ways to see whether those goals are being met. The result should be meaningful data that can provide useful input for curriculum revision.
- The program faculty need to have a clearer understanding of the purpose of assessment. The assessment committee encourages the applied math and computer science faculty to take advantage of the assessment education opportunities on campus. UCET and the assessment committee provide workshops on assessment topics. Individualized consultations are available from Firm Faith Nelson in UCET, and by assessment committee members. There is also a collection of assessment books that can be borrowed.
- The committee understands it is difficult to maintain a useful and consistent assessment program with frequent changes in leadership. However, a written record with quantified results would be very useful in maintaining consistency from year to year, and would provide justification for changes in the program.

Comments

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<p>Learning Outcomes When students successfully complete the program, what should they know? What should they be able to do? What should they value?</p>	<ul style="list-style-type: none"> - Need to work on developing goals so they are measurable - The program should consider what they expect students be able to do at the end of the program, rather than what the program offers. - It will be important to define the unique education goals for each of the specific concentrations. Please include a short description of each of the concentrations in future reports.
<p>Tools and Processes Direct Measures – directly evaluate student work. Examples of direct measure include exams, papers, projects, and computer programs, interactions with a client or musical performances. Indirect Measures – indirectly evaluate student learning and include asking students and alumni how will they thought they learned, tracking their graduate school or job placement rates, and so on.¹</p>	<p>Direct measure – The committee strongly recommends that the student thesis defense be evaluated by the faculty using a common checklist or rubric. The assessment committee, or UCET would be able to consult with the program in the development of a rubric. -A curriculum map would be a very useful tool once desired educational outcomes are fully developed. It will show where educational goals are being addressed, and highlight weaknesses in the curriculum.</p> <p>Indirect measure -The student and alumni surveys mentioned in the assessment plan would be good sources of indirect assessment information if they were implemented</p>
<p>Benchmarks/Performance Targets Level of performance students should achieve for selected measures.</p>	None
<p>Results and Analysis Information is gathered, summarized and provided to faculty for review, discussion and analysis</p>	none
<p>Actions How do faculty use assessment information to modify and improve their program?</p>	None