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MS SM

The Department seeks to provide the highest quality of education through a learning environment that enables and inspires students to succeed academically and professionally, provides the highest quality



The UAA mechanical engineering graduate program objectives are to provide graduates with:

1. Graduate-level technical knowledge within mechanical engineering.
2. An ability to conceive and conduct graduate-level engineering research and problem solving.
3. An ability to effectively communicate graduate-level engineering concepts and applications.



At the completion of the MSME program,

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The School of Engineering administration is responsible for:

- x Providing sufficient financial and staff support for the implementation of this plan.
- x Ensuring faculty assessment efforts are appropriately reflected in annual workload agreements.

The ME Program faculty are responsible for:

- x Performing assessment as an integral part of teaching activity (course level assessment).
- x Participating in meetings to discuss development and implementation of the assessment plan.
- x Participating in meetings to discuss interpretation of the data and implementation of continuous improvement, particularly relating to the ME curriculum.
- x Preparing the data from their own Course Level Assessments for the Chair of the Department Assessment and Curriculum Committee.

The Chair of the Department Curriculum and Assessment Committee is responsible for:

- x Keeping central records of all assessment activities.
- x Preparing reports related to assessment activities, subject (s)-5(es)-5w-4()-centr -4(p)-4(r)-1(i)-6(at)v rrc act

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The ME faculty are ultimately responsible for all aspects of the assessment process.

Development of assessment plans:

- x Assessment plans are implemented following a vote of the ME faculty at a faculty meeting attended by a quorum.

Implementation of assessment measures:

- x Direct course level assessments (CLAs) are undertaken on a volunteer basis by the instructors of certain courses, as discussed in the approved assessment plan.
- x Course instructors collect data for direct CLAs and perform preliminary analysis and interpretation before turning the data over to the Chair of the Department Curriculum and Assessment Committee.
- x Other assessment activities are lead by individual faculty members or special committees on a volunteer basis. The formation of special committees for the purpose of assessment is subject to a vote by the ME faculty. These individual faculty members of special committees are responsible for preliminary analysis and interpretation of the data.

Recommendations for continuous improvement:

- x The Chair of the Department Curriculum and Assessment Committee prepares reports on the findings of assessment activities, which may contain analysis of the data and recommendations for continuous improvement. These reports are subject to the approval by the full ME faculty before adoption or dissemination.
- x ME faculty members are free as instructors take action for continuous improvement within their own courses as suggested by the results of their assessment activities and the assessment activities of their colleagues.
- x Recommendations for actions to be taken for continuous improvement at the Department level may be suggested by any ME faculty member, to be discussed and voted upon at an ME faculty meeting. These suggestions may include:
 - o Changes in course content, sequencing, or prerequisites,
 - o Substitution, creation or deletion of courses in the current curriculum,
 - o Changes in instructor assignments,
 - o Changes in advising methods, or
 - o Additions or replacement of equipment, such as lab equipment.

HR

Potential changes to the assessment plan may be suggested by any faculty member to be discussed at one of the regular faculty meetings. Changes to the assessment plan are implemented following a discussion and a vote at a faculty meeting at which a quorum (2/3 of full-time faculty) is present.

<div style="display: flex; justify-content: space-between; align-items: center;"> 100 100 100 </div>				
100	80	60	40	20
1. Selects appropriate theory, model or governing equation	Does not demonstrate understanding of appropriate model	Demonstrates some idea of appropriate model	Selects appropriate model or theory for the problem	Judgment exceeds expectations when selecting model for problem
2. Understands simplifying assumptions or limitations of the chosen model	Does not demonstrate understanding of simplifying assumptions or limitations	Demonstrates incomplete understanding of simplifying assumptions or limitations	Demonstrates understanding of simplifying assumptions or limitations	Demonstrates particularly thorough understanding of limitations of model
3. Implements theory, model or governing equation correctly to perform analysis	Is unable to implement theory or model to perform analysis	Begins analysis but is unable to see it to completion	Implements theory or model correctly to perform analysis	Implements theory or model to perform analysis in a way that exceeds expectations

G	P	D	S	E
1. Communicates with committee and other colleagues in a clear, professional and timely manner	Does not communicate, or communicates sporadically and/or unprofessionally	Attempts at professional communication are uneven	Communicates to a satisfactory level	Demonstrates exceptional effort at communication

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This measure uses student performance on comprehensive written or oral exam required for completion of the MSME degree. Project and thesis students take an oral exam as part of their defense, and non-thesis students may opt for a written exam instead of a project. Comprehensive

