Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Mathematics, science and engineering
Ability to apply knowledge of mathematics, science and engineering

Related Measures

**M 1:** Assessment of ABET student outcome A
Assessment of departmental rubric for ABET student outcome A in all required junior 3000-level NAME courses.
Source of Evidence: Academic direct measure of learning - other
Target:
Average score of 80% or higher and a minimum score greater than 60%.

**M 6:** FE test scores in sciences
Assessment of ratio scores in selected science subject matters on the national Fundamentals of Engineering exam.
Source of Evidence: Standardized test of subject matter knowledge
Target:
The ratio score in subject matters (i) mathematics and advanced engineering mathematics, (ii) probability and statistics, (iii) electricity, power, and magnetism, (iv) heat, mass, and energy transfer, and of the FE exam is larger than 0.9. Scores will be averaged for one academic year.

SLO 2: Techniques, skill, and modern engineering tools
Ability to use the techniques, skill, and modern engineering tools necessary for engineering practice

Related Measures

**M 4:** Assessment of ABET student outcome K
Assessment of departmental rubric for ABET student outcome K in the classes NAME 3171 Marine Design Methods and NAME 4170 Marine Design.
Source of Evidence: Academic direct measure of learning - other
Target:
Average score of 80% or higher and a minimum score greater than 60%.

SLO 3: Identify, formulate, and solve engineering problems
Ability to identify, formulate, and solve engineering problems

Related Measures

**M 3:** Assessment of ABET student outcome E
Assessment of departmental rubric for ABET student outcome E in the classes NAME 3171 Marine Design Methods, NAME 4170 Marine Design, and NAME 4175 Marine Design Project.
Source of Evidence: Academic direct measure of learning - other
Target:
Average score of 80% or higher and a minimum score greater than 60%.

SLO 4: Design a system or process
Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

Related Measures

**M 2:** Assessment of ABET student outcome C
Assessment of departmental rubric for ABET student outcome C in the classes NAME 3171 Marine Design Methods, NAME 4170 Marine Design, and NAME 4175 Marine Design Project.
Source of Evidence: Academic direct measure of learning - other
Target:
Average score of 80% or higher and a minimum score greater than 60%.

**M 7:** Senior design projects
The completed senior design projects (NAME 4175) of the BS in Naval Architecture and Marine Engineering program are presented to industry experts at a meeting of the Gulf Section of the Society of Naval Architects and Marine Engineers (SNAME). The experts will rate all design projects as satisfactory or better on a respective survey.
Source of Evidence: Project, either individual or group
Target:
All students achieve a grade of "C" or better

SLO 5: Fluid mechanics, dynamics, structural mechanics, material properties, hydrostatics and energy/propulsion systems
Basic knowledge of fluid mechanics, dynamics, structural mechanics, material properties, hydrostatics and energy/propulsion systems in the context of marine vehicles
<table>
<thead>
<tr>
<th>Related Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M 5: Assessment of ABET student outcome M</strong></td>
</tr>
<tr>
<td>Assessment of departmental rubric for ABET student outcome M in NAME 3150 Ship</td>
</tr>
<tr>
<td>Resistance and Propulsion and NAME 3160 Offshore Structure and Ship Dynamics.</td>
</tr>
<tr>
<td>Source of Evidence: Academic direct measure of learning - other</td>
</tr>
<tr>
<td><strong>Target:</strong></td>
</tr>
<tr>
<td>Average score of 80% or higher and a minimum score greater than 60%.</td>
</tr>
<tr>
<td><strong>M 8: FE test scores in engineering</strong></td>
</tr>
<tr>
<td>Assessment of ratio scores in selected engineering subject matters on the national Fundamentals of Engineering exam.</td>
</tr>
<tr>
<td>Source of Evidence: Certification or licensure exam, national or state</td>
</tr>
<tr>
<td><strong>Target:</strong></td>
</tr>
<tr>
<td>The ratio score for the subject matters (i) statics, (ii) dynamics, (iii) strength of materials, and (iv) fluid mechanics and dynamics of liquids of the FE exam is larger than 0.9. The score is averaged for one academic year.</td>
</tr>
</tbody>
</table>