**ILO: REASONING**

Statement of Intent: Associate degree graduates identify and solve problems, analyze new information, synthesize and evaluate ideas, and transform ideas into a course of action by using critical, creative, and/or analytical skills.

Examples (not intended to be a comprehensive or exclusive list):

* Distinguishing between subtle but important distinctions, such as normal stress and shear stress
* Applying (correctly) any scientific principle to understand a novel situation
* Applying the correct mathematical relationship between measurements, such as velocity and acceleration
* Analyzing information to identify bias
* Improving mechanical efficiency by examining energy losses
* Evaluating mathematical functions
* Analyzing a work of art, using specific elements related to that art form
* Applying the knowledge of music elements as related to genre and/or time period
* Understanding how a change in geometry of a part will affect its performance in specific situations
* Using presented signs and symptoms to interpret a patient’s needs and provide appropriate intervention and support
* Analyzing a specimen, based on knowledge and skills, and reports specific results
* Using data on soil content to evaluate what kinds of fertilizer to apply to farm fields
* Developing a regimen to diagnose technical problems in a faulty engine and plan repairs
* Evaluating the role of stress on quantifiable patho-physiological symptoms
* Analyzing the forces acting on a proposed building project
* Performing cost-benefits analysis of two or more different approaches to improving customer service
* Preparing for half-time meeting to provide strategy/tactics to team for second half
* Developing alternative solutions to resolve a dispute fairly
* Presenting experimental data provides rationale for a particular methodology and/or for the standard of proof employed
* Estimating costs or analyzing a budget

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**Reasoning ILO**

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| **Course Name/No.** | Click or tap here to enter text. |
| **Course-Level Outcomes (CLOs)**  | Click or tap here to enter text. |
| **Faculty Name** | Click or tap here to enter text. |
| **Academic Department** | Click or tap here to enter text. |
| **Things to Consider** |
| 1. **Student Achievement of CLO/ILO**
 | *Think about how your students, in meeting your selected CLO(s), provide evidence of the achievement of the ILO Statement of Intent above.* |
| 1. **What Student Achievement Reflects**
 | *What do the above achievement results reflect about students’ ability to demonstrate the CLO/ILO?* |
| 1. **Instructional/Curricular Changes**
 | *Think about potential curricular or instructional changes that might improve student learning related to the CLO/ILO?* |

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| Skills/Abilities | Absent (0) | Attempting (1) | Emerging (2) | Developing (3) | Competent (4) | Advanced (5) |
| **Student-****Identifies and Solves Problems** | Ignores problems. | Demonstrates limited ability in identifying a problem or related contextual factors. | Identifies the problem but does not demonstrate logical, consistent plan to solve the problem. | Identifies the problem but evaluation of solutions is brief or lacks depth and implementation ignores some contextual factors. | Identifies the problem considering some but not all contextual factors, evaluates solutions, and implements a solution. | Identifies the problem considering all relevant contextual factors, evaluates solutions, and implements a solution. |
| **Course-level operationalization** | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| **Student-****Analyzes, Synthesizes, and Evaluates Information** | Fails to use information. | Provides information but it is not organized and/or is irrelevant. | Organizes information but organization is not effective in revealing insightful patterns, differences, or similarities and/or does not provide a conclusion. | Organizes information to reveal important patterns, differences, or similarities and/or only provides a partial conclusion. | Organizes information to reveal important patterns, differences, or similarities and provides a complete conclusion based on the analysis. | Organizes and synthesizes information to reveal insightful patterns, differences, or similarities and provides a complete conclusion and explanation of their findings. |
| **Course-level operationalization**  | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |
| **Student-****Transforms Ideas into Course of Action** | Does not identify existing connections and/or does not attempt to transform ideas into a course of action. | Identifies existing connections among ideas or solutions but does not transform ideas into a course of action. | Identifies existing connections among ideas or solutions and transforms ideas into a basic course of action.  | Identifies and connects ideas or solutions in novel or logical ways to transform ideas into a coherent course of action. | Connects and synthesizes ideas or solutions in novel or logical ways to transform ideas into an advanced course of action.  | Connects and synthesizes ideas or solutions and considers alternative viewpoints in novel or logical ways to transform ideas into an advanced course of action. |
| **Course-level operationalization**  | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. | Click or tap here to enter text. |

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