<table>
<thead>
<tr>
<th>MS in MATERIALS SCIENCE AND NANO ENGINEERING (WITH THESIS) PROGRAM OUTCOMES</th>
<th>NATIONAL QUALIFICATIONS OF RELATED FIELD*</th>
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</thead>
<tbody>
<tr>
<td>1 Develop the ability to use critical, analytical, and reflective thinking and reasoning</td>
<td>ENGINEERING</td>
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<tr>
<td>2 Reflect on social and ethical responsibilities in his/her professional life.</td>
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<td>3 Gain experience and confidence in the dissemination of project/research outputs</td>
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<td>4 Work responsibly and creatively as an individual or as a member or leader of a team and in multidisciplinary environments.</td>
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<td>5 Communicate effectively by oral, written, graphical and technological means and have competency in English.</td>
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<td>6 Independently reach and acquire information, and develop appreciation of the need for continuously learning and updating.</td>
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<td>7 Design and model engineering systems and processes and solve engineering problems with an innovative approach.</td>
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<td>8 Establish experimental setups, conduct experiments and/or simulations.</td>
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<td>9 Analytically acquire and interpret data.</td>
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<tr>
<td>10 Apply a broad knowledge of structure &amp; microstructure of all classes of materials, and the ability to use this knowledge to determine the material properties.</td>
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<td>11 Apply a broad understanding of the relationships between material properties, performance and processing.</td>
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<tr>
<td>12 Apply a broad understanding of thermodynamics, kinetics, transport phenomena, phase transformations and materials aspects of advanced technology.</td>
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<tr>
<td>13 Demonstrate hands-on experience using a wide range of materials characterization techniques.</td>
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A: KNOWLEDGE, Theoretical & Factual
B: SKILL, Cognitive & Applied
C: COMPETENCY, Working Independently & Taking Responsibility
D: COMPETENCY, Ability to Learn
E: COMPETENCY, Communication & Social Competencies
F: COMPETENCY, Field Specific