

**Program: I&TM (Innovation and Technology Management)**

**1. Learning goals and rubrics**

| Learning Goal   | Learning Objectives   | Where to measure?           | How to Measure?                       |
|---|---|-----------------------------|---------------------------------------|
| <b>L1. Critical, Innovative and Strategic Thinking</b><br>- Our graduates will be able to apply critical, innovative, and strategic thinking in a dynamic business environment. | L11. Our students will have the ability to identify and analyze complex problems from multiple perspectives         | Case study presentation     | Case study evaluation                 |
|   | L12. Our students will be able to apply innovative and strategic solutions to organizational problems               | Case study presentation     | Case study evaluation                 |
| <b>L2. Communication Skills</b><br>- Our graduates will acquire the communication skills needed to function effectively   | L21. Our students will communicate effectively in written document and/or oral presentations.                       | Course embedded assignments | Course-embedded assignment evaluation |
|   | L22. Our students will diagnose and communicate management problems.  | Course embedded projects    | Project report evaluation             |
| <b>L3. Organizational Leadership</b><br>- Our graduates will be competent and effective leaders   | L31. Our students will be able to work effectively in a team environment  | Course embedded subject     | Course-embedded survey                |
|   | L32. Our students will understand ethical and social issues in organizations  | Course embedded assignments | Course-embedded assignment evaluation |
| <b>L4. Comprehensive Knowledge in Business and Technology</b><br>- Our graduates will acquire knowledge related to business innovation and technology management                | L41. Our students will be able to develop technology strategy to aid a wide range of corporate management decisions | Course embedded projects    | Project report evaluation             |
|   | L42. Our students recognize the importance of technology in business innovation                                     | Course embedded assignments | Course-embedded assignment evaluation |

**2. Rubric to assess achievements of learning objectives**

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| <b>L1. Critical, Innovative and Strategic Thinking: Our graduates will be able to apply critical, innovative, and strategic thinking in a dynamic business environment.</b> |  |   |   |
| <b>L11. Our students will have the ability to identify and analyze complex problems from multiple perspectives.</b>   |  |   |   |
| <b>Traits</b>   | <b>Performance Level</b>                             |   |   |
|   | <b>1 (Fails to meet expectations)</b>                | <b>2 (Meets expectations)</b>                         | <b>3 (Exceeds expectations)</b>   |
| 1. Identification of current business strategy  | · Elements missing and inaccurate conclusions drawn. | · Current business strategy correctly identified.     | · All elements of the current business strategy identified correctly and gaps noted between current performance and management expectation. |
| 2. Identification of alternatives   | · Alternatives not identified or poorly defined.     | · Only a single visible strategy is identified.       | · Multiple strategies are evaluated and the best strategy is recommended.   |
| 3. Development of a business strategy   | · Elements are missing or poorly identified.         | · Some elements of the model are present but not all. | · All the elements are presented.   |

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| <b>L1. Critical, Innovative and Strategic Thinking: Our graduates will be able to apply critical, innovative, and strategic thinking in a dynamic business environment.</b> |   |   |   |
| <b>L12. Our students will be able to apply innovative and strategic solutions to organizational problems.</b>   |   |   |   |
| <b>Traits</b>   | <b>Performance Level</b>  |   |   |
|   | <b>1 (Fails to meet expectations)</b>   | <b>2 (Meets expectations)</b>   | <b>3 (Exceeds expectations)</b>   |
| 1. Formulation of the problem statement   | <ul style="list-style-type: none"> <li>The problem statement is unclear or unfocused.</li> </ul>  | <ul style="list-style-type: none"> <li>The problem statement is focused on its cause, not just symptoms.</li> </ul>           | <ul style="list-style-type: none"> <li>The problem statement is focused on its cause, and it is not simply a disguised solution.</li> </ul>               |
| 2. Problem analysis   | <ul style="list-style-type: none"> <li>The problem analysis is superficial and does not reflect the complexity of the problem.</li> </ul>                     | <ul style="list-style-type: none"> <li>The problem analysis reflects a comprehensive understanding of the problem.</li> </ul> | <ul style="list-style-type: none"> <li>The problem analysis clearly specifies underlying cause-and-effect relationships of the problem.</li> </ul>        |
| 3. Generation of alternatives   | <ul style="list-style-type: none"> <li>Generates only one obvious alternative to the problem that provide only piecemeal solutions to the problem.</li> </ul> | <ul style="list-style-type: none"> <li>Generates more than one obvious alternative solution to the problem.</li> </ul>        | <ul style="list-style-type: none"> <li>The alternatives generated represent innovative and comprehensive solutions to the problems identified.</li> </ul> |

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| <p>4. Evaluation of alternatives</p>        | <ul style="list-style-type: none"> <li>· Clear criteria by which the alternative solutions will be evaluated are not explicitly stated.</li> <li>· There is no or little criteria related to problem analysis.</li> <li>· Both short-term and long-term pros and cons of each alternative relative to the criteria are not considered.</li> </ul> | <ul style="list-style-type: none"> <li>· The criteria by which alternatives will be evaluated are explicitly stated.</li> <li>· The criteria are directly tied to the problem analysis and clearly communicate criteria for a “good solution”.</li> <li>· Only the short-term pros and cons of each alternative relative to the criteria are considered; long-term considerations of alternatives are missing.</li> </ul> | <ul style="list-style-type: none"> <li>· The criteria by which alternatives will be evaluated are explicitly stated.</li> <li>· The criteria are directly tied to the problem analysis and clearly communicate criteria for a “good solution”.</li> <li>· Both short-term and long-term pros and cons of each alternative relative to the criteria are explicitly stated and evaluated.</li> </ul> |
| <p>5. Recommendation and implementation</p> | <ul style="list-style-type: none"> <li>· The selected alternative is only vaguely related to the causes of the problem and a strong case has not been built for its appropriateness.</li> <li>· There is no mention of a plan to gain acceptance.</li> <li>· Progress toward solution is not monitored.</li> </ul>                                | <ul style="list-style-type: none"> <li>· The selected alternative is stated explicitly; however, no rationale is provided.</li> <li>· A plan for gaining acceptance is stated but detailed steps to be taken are unclear.</li> <li>· Progress toward solution is monitored but is not systematic.</li> </ul>  | <ul style="list-style-type: none"> <li>· The selected alternative is stated explicitly with clear rationale for the chosen solution.</li> <li>· A plan to gain the acceptance of those affected is specified with detailed plans for negotiation and persuasion.</li> <li>· A system for monitoring progress toward the solution is established.</li> </ul>  |

**L2. Communication skills: Our graduates will acquire the communication skills needed to function effectively.**

**L21. Our students will communicate effectively in written document and/or oral presentations.**

| Traits                            | Performance Level  |   |  |
|-----------------------------------|--|---|--|
|                                   | 1 (Fails to meet expectations)   | 2 (Meets expectations)  | 3 (Exceeds expectations)   |
| 1. Logic & Organization           | <ul style="list-style-type: none"> <li>· Introduction and/or conclusion are unclear.</li> <li>· Does not use a sequence of appropriate materials to guide reader through the paper.</li> <li>· Draws illogical conclusions.</li> </ul> | <ul style="list-style-type: none"> <li>· Develops ideas through effective use of paragraphs, transitions, opening and concluding statements.</li> <li>· Generally well structured to suggest connection between sub-topics.</li> <li>· Draws somewhat logical conclusions.</li> </ul> | <ul style="list-style-type: none"> <li>· Maintains clear focus throughout the communication.</li> <li>· Uses appropriate evidence to build the paper's conclusions and presents analysis using a sequence of ideas, clarity of flow between sub-topics and continuous voice or point of view.</li> <li>· Draws logical, strong and sound conclusions.</li> </ul> |
| 2. Grammar and sentence structure | <ul style="list-style-type: none"> <li>· Frequently uses inappropriate grammar and incomplete or poorly structured sentences which interfere with comprehension.</li> </ul>  | <ul style="list-style-type: none"> <li>· Generally complies with standard English and grammar and sentence usage.</li> </ul>  | <ul style="list-style-type: none"> <li>· Sophisticated and error-free use of language, using varied sentence structures, phrasing and cadence.</li> </ul>  |
| 3. Spelling and word choice       | <ul style="list-style-type: none"> <li>· Many unsupported statements are offered.</li> </ul>   | <ul style="list-style-type: none"> <li>· Most statements are supported.</li> </ul>  | <ul style="list-style-type: none"> <li>· Statements show thoughtful reasoning and exploration of alternatives.</li> </ul>  |

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|  | <ul style="list-style-type: none"> <li>· Uses flawed or unclear reasoning.</li> </ul>  | <ul style="list-style-type: none"> <li>· Ideas are explained with examples and written with sufficient explanation.</li> </ul>  | <ul style="list-style-type: none"> <li>· Uses existing, supported ideas to develop well-formed, readable output.</li> </ul>   |
| 4. Voice and body language                 | <ul style="list-style-type: none"> <li>· Cannot be heard well due to volume, mumbling, speed, or rote delivery.</li> <li>· Turns away from the audience or uses distracting gestures.</li> </ul> | <ul style="list-style-type: none"> <li>· Clear delivery with good volume and pace in speech.</li> <li>· Little use of gestures.</li> </ul>                                | <ul style="list-style-type: none"> <li>· Exemplary delivery using voice and gestures.</li> <li>· Uses vocal and physical resources to aid in communicating topic.</li> </ul>        |
| 5. Use of slides to enhance communications | <ul style="list-style-type: none"> <li>· Frequent spelling errors and/or too many slides for allotted time.</li> <li>· Poor use of graphics.</li> </ul>  | <ul style="list-style-type: none"> <li>· Readable slides containing reasonable amount of material per slide.</li> <li>· Good use of graphics or illustrations.</li> </ul> | <ul style="list-style-type: none"> <li>· Well-written and designed, used to support verbal content presentation.</li> <li>· Excellent use of graphics and illustrations.</li> </ul> |
| 6. Contents                                | <ul style="list-style-type: none"> <li>· Does not satisfy assignment requirements and misuses theory or selects poor examples.</li> </ul>  | <ul style="list-style-type: none"> <li>· Provides good analysis of subject, satisfying intent of assignment and demonstrating knowledge.</li> </ul>                       | <ul style="list-style-type: none"> <li>· Shows evidence of extensive research and highly competent analyses to reach conclusions and recommendations.</li> </ul>                    |

**L2. Communication skills: Our graduates will acquire the communication skills needed to function effectively.**

**L22. Our students will diagnose and communicate management problems.**

| Traits                              | Performance Level  |   |   |
|-------------------------------------|--|---|---|
|                                     | 1 (Fails to meet expectations)   | 2 (Meets expectations)  | 3 (Exceeds expectations)  |
| 1. Problem identification           | <ul style="list-style-type: none"> <li>· Fails to identify a problem statement or factors in relevant context.</li> </ul>      | <ul style="list-style-type: none"> <li>· Demonstrates the ability to construct a problem statement with evidence of most factors in relevant context, but problem statement is superficial.</li> </ul>  | <ul style="list-style-type: none"> <li>· Demonstrates the ability to construct a clear and insightful problem statement with evidence of all factors in relevant context.</li> </ul>  |
| 2. Problem analysis                 | <ul style="list-style-type: none"> <li>· Fails to analyze the problem within specific context.</li> </ul>                      | <ul style="list-style-type: none"> <li>· Analysis of the problem is clear and demonstrates a sound understanding in relevant concepts and theories.</li> </ul>  | <ul style="list-style-type: none"> <li>· Analysis of the problem is excellent and demonstrate mastery of relevant concepts and theories.</li> </ul>   |
| 3. Solution proposal and evaluation | <ul style="list-style-type: none"> <li>· Proposes a solution that is vague.</li> <li>· Fails to evaluate solutions.</li> </ul> | <ul style="list-style-type: none"> <li>· Proposes one or more solutions that address the specific problem.</li> <li>· Evaluation of solutions is supported by some subject knowledge and theories but it is brief and lacks depth.</li> </ul> | <ul style="list-style-type: none"> <li>· Proposes one or more solutions that are creative and feasible.</li> <li>· Evaluation of solutions is fully supported by substantial subject knowledge and theories, and logical evidence.</li> </ul> |

**L3. Organizational leadership: Our graduates will be competent and effective leaders.**

**L31. Our students will be able to work effectively in a team environment.**

| Traits   | Performance Level   |   |  |
|--|---|---|--|
|  | 1 (Fails to meet expectations)  | 2 (Meets expectations)  | 3 (Exceeds expectations)   |
| 1. Committed and Collaborative problem solving | <ul style="list-style-type: none"> <li>Reluctant to engage in team task.</li> <li>Reluctant to collaborate with teammates.</li> </ul> | <ul style="list-style-type: none"> <li>Somewhat reluctant to proactively engage in team task and discussions.</li> <li>Collaborate with teammates when there is an immediate need.</li> </ul> | <ul style="list-style-type: none"> <li>Proactively participate and lead team discussion and tasks.</li> <li>Collaborate with teammates consistently in a way that improves everyone's efficiency.</li> </ul> |



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| <p>2. Feedback seeking and Self-development</p> | <ul style="list-style-type: none"> <li>· Demonstrates little or no capacity to engage in meaningful reflection.</li> <li>· Resists feedback and fails to engage in reflective process.</li> <li>· Does not convey personal values or objectives.</li> </ul> | <ul style="list-style-type: none"> <li>· Uses leadership constructs and principles to articulate key strengths and areas for development.</li> <li>· Solicits and processes feedback and input constructively. Conveys personal values and objectives clearly.</li> <li>· Conveys personal values and objectives clearly.</li> </ul> | <ul style="list-style-type: none"> <li>· Demonstrates exceptional personal insight as evidenced by the capacity to see relationships between various strengths and areas for development.</li> <li>· Demonstrates exceptional personal insight as evidenced by the capacity to apply insights to personal improvement.</li> <li>· Demonstrates exceptional personal insight as evidenced by the capacity to convey links between skills, personal values, and objectives.</li> </ul> |
| <p>3. Communication</p>                         | <ul style="list-style-type: none"> <li>· Explains one's own views impatiently prior to seeking an understanding of other team members' views.</li> </ul>  | <ul style="list-style-type: none"> <li>· Tries to understand the team members' points of view so that the members' messages are better understood.</li> </ul>  | <ul style="list-style-type: none"> <li>· Patiently seeks to understand other members' views before explaining one's own views.</li> </ul>  |
| <p>4. Team planning and task coordination</p>   | <ul style="list-style-type: none"> <li>· Fails to help clarify responsibilities and goes off track from the task.</li> </ul>  | <ul style="list-style-type: none"> <li>· Assists the team in clarifying roles, responsibilities, goals, and milestones and stays on track.</li> </ul>  | <ul style="list-style-type: none"> <li>· Aids the team in attaining an agreement on the team objective and actively suggests ways so that the team can achieve its objective.</li> </ul>   |

**L3. Organizational leadership: Our graduates will be competent and effective leaders.**

**L32. Our students will understand ethical and social issues in organizations.**

| Traits   | Performance Level  |  |   |
|--|--|--|---|
|  | 1 (Fails to meet expectations)   | 2 (Meets expectations)   | 3 (Exceeds expectations)  |
| 1. Identification of ethical dilemmas  | <ul style="list-style-type: none"> <li>· Fails to be aware of ethical dilemmas to be discussed and decisions to be made in organizations.</li> </ul>                                   | <ul style="list-style-type: none"> <li>· Is aware of particular ethical dilemmas at management level of organizations based on the analysis of reasons behind them</li> </ul>        | <ul style="list-style-type: none"> <li>· Demonstrates a comprehensive and deep understanding of particular ethical dilemmas at management level of organizations.</li> </ul>  |
| 2. Understanding of relevant social and ethical considerations                                       | <ul style="list-style-type: none"> <li>· Shows no awareness of the relations between ethical practice and ethical theory.</li> <li>· Poor explanations.</li> </ul>                     | <ul style="list-style-type: none"> <li>· Understands the relations between ethical practice and ethical theory.</li> <li>· Essential analysis and explanations.</li> </ul>           | <ul style="list-style-type: none"> <li>· Understands the relations between ethical practice and ethical theory comprehensively with a profound analysis.</li> <li>· Excellent analysis with deep awareness of the possibility of the ethical dilemma in management practice.</li> </ul> |
| 3. Social and ethical consideration when recommending and proposing solutions to the stated problems | <ul style="list-style-type: none"> <li>· Fails to make any proposals with any reasonable considerations of social and ethical issues relevant to organizational management.</li> </ul> | <ul style="list-style-type: none"> <li>· Makes an appropriate proposal with reasonable considerations of social and ethical issues relevant to organizational management.</li> </ul> | <ul style="list-style-type: none"> <li>· Makes an appropriate and detailed proposal with comprehensive and reasonable considerations of social and ethical issues relevant to organizational management.</li> </ul>   |

| <b>L4. Comprehensive knowledge in Business and Technology: Our graduates will acquire knowledge related to business innovation and technology management.</b> |  |  |   |
|---|--|--|---|
| <b>L41. Our students will be able to develop technology strategy to aid a wide range of corporate management decisions.</b>                                   |  |  |   |
| <b>Traits</b>   | <b>Performance Level</b>   |  |   |
|   | <b>1 (Fails to meet expectations)</b>  | <b>2 (Meets expectations)</b>  | <b>3 (Exceeds expectations)</b>   |
| 1. Articulate technology-business link  | · No clear link between technology strategy and business strategy.   | · Technology strategy is aligned with business strategy.                     | · The recommended technology strategy is aligned with business strategy and provides a clear opportunity for competitive advantage.                         |
| 2. Identification of technology' strategic implications   | · Technology components are not identified or incorrectly assigned.  | · Technology components are correctly identified.                            | · Components are correctly identified and connections are made to the broader strategic elements related to technology ownership and intellectual property. |
| 3. Development of viable technology strategies  | · Strategies are weak or not viable.   | · There is at least one viable strategy presented.                           | · Multiple alternatives are evaluated and best alternative is presented.  |
| 4. Comprehensive technology strategy  | · Elements are missing or applied incorrectly.   | · All elements are present.  | · All elements are present and innovatively incorporated to enhance viability.  |
| 5. Presentation   | · Arguments presented are disjointed with no connection between technology strategy and business objectives. | · Connections are drawn between technology strategy and business objectives. | · Connections are drawn between technology strategy and business objectives with insight that maximizes business impact.                                    |

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| <b>L4. Comprehensive knowledge in Business and Technology: Our graduates will acquire knowledge related to business innovation and technology management.</b> |   |   |  |
| <b>L42. Our students recognize the importance of technology in business innovation.</b>   |   |   |  |
| <b>Traits</b>   | <b>Performance Level</b>  |   |  |
|   | <b>1 (Fails to meet expectations)</b>   | <b>2 (Meets expectations)</b>   | <b>3 (Exceeds expectations)</b>  |
| 1.Strategic and integrative thinking  | <ul style="list-style-type: none"> <li>Has little understanding of principles of technology with focus remaining on technology alone.</li> </ul>  | <ul style="list-style-type: none"> <li>Average understanding of the principles of technology and how it impacts the organization and overall company profitability.</li> </ul>  | <ul style="list-style-type: none"> <li>Demonstrates solid understanding of technology and its ramifications throughout the organization.</li> </ul>  |
| 2. Development of aligned technology-business strategy  | <ul style="list-style-type: none"> <li>Has little understanding of the relationships between technology and business.</li> <li>Struggles to connect concepts in a comprehensive statement.</li> </ul> | <ul style="list-style-type: none"> <li>Demonstrates an understanding of the relationships between technology and business.</li> <li>Able to explain how these concepts combine to create a comprehensive plan.</li> </ul> | <ul style="list-style-type: none"> <li>Demonstrates an excellent understanding of the relationships between technology and the business and utilizes this understanding to align business with technology.</li> <li>Strategy goes beyond commonplace thinking and demonstrates insight into the future of the firm.</li> </ul> |
| 3. Creative and innovative thinking   | <ul style="list-style-type: none"> <li>Thinking is incremental.</li> </ul>  | <ul style="list-style-type: none"> <li>Some elements of the analysis process show radical change.</li> </ul>  | <ul style="list-style-type: none"> <li>The recommended strategies present a clear opportunity for competitive advantage.</li> </ul>  |

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| 4. Articulation of technology-business relationship | · Relationship between technology and business strategy is not clear. | · Clear link between technology and business strategy is shown. | · The alignment of technology and business through the strategy will provide competitive advantage. |
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