

NOTE: Expectations outlined in this rubric are geared to undergraduate research and not doctoral level research.

Outcome	Developing-1	Competent-2	Exemplary-3
1. Students will be able to formulate a research question or problem	The research question or problem is neither clear nor adequate for the discipline and needs modifications to contribute to the research in the discipline.	The research question or problem is not completely clear and requires modifications to contribute to the research in the discipline.	The research question or problem is clear and will contribute to the research in the discipline.
2. Students will be able to identify basic principles and knowledge related to their research question or problem	- Missing relevant theories, research evidence, and sources. - Incomplete examination of evidence and sources, or includes inaccuracies in the interpretation of evidence or sources. - Missing relevant existing variables for the problem under study or includes irrelevant variables. - Relevant principles and knowledge that provide the framework for the research question are neither described nor applied. - Student fails to demonstrate appropriate use of research databases (e.g., library, internet) and relevant sources to inform the research question.	- Includes appropriate theories, research evidence, and sources but may be missing some relevant material. - Sufficient evaluation of evidence or sources but may be missing aspects of the interpretation. - Some, but not all, relevant existing variables for the problem under study are provided. - Some relevant principles and knowledge that provide the framework for the research question are accurately described and applied. - Student demonstrates limited use of research databases (e.g., library, internet) and relevant sources to inform the research question.	- Selects appropriate theories, research evidence, and sources. - Examines evidence and its source; questions its accuracy, relevance, and completeness. - Variables identified are germane to the problem under study and are related in a manner that supports the question. - Relevant principles and knowledge that provide the framework for the research question are accurately described and applied. - Student demonstrates appropriate use of research databases (e.g., library, internet) and relevant sources to inform the research question.
3. Students will be able to develop a research plan to address or resolve a specific question or problem.	- Research plan is not completely formulated. - Hypothesis or thesis is not sufficiently articulated and/or operationalized. - Methodological approach has flaws. - Research plan is not in sufficient detail or may not accurately describe the method.	- Research plan is adequately formulated. - Hypothesis or thesis is adequately described and/or operationalized, and is somewhat novel. - Methodological approach adequately fits the scientific and practical and philosophical issues but may still allow for alternative explanations. - Plan may be missing details of the method for replication.	- A specific research plan is formulated. - Hypothesis or thesis is clearly articulated and/or operationalized and sufficiently novel. - The methodological approach fits the scientific, philosophical, and practical issues related to responding to the question. - Plan includes sufficient details of the research method for replication.

4. Students will be able to collect and interpret data and information in an attempt to resolve the question or problem.	• Information Gathering. Students lack the ability to consistently locate, evaluate, select, or make effective use of appropriate and credible information resources (databases, Internet, library catalogue, etc.) and have difficulty translating their research plan into an adequate research process. • Data collection. Data collected do not reflect a thorough or sound data collection process • Relevance of data to research question. Data collected are not sufficiently relevant to the research question, with too much extraneous material • Interpretation. Interpretation of data is not appropriate enough, or the student does not demonstrate effort to address bias in interpretation. There is insufficient description or use of validation procedures. • Relevance of interpretation to research question. There is no clear link between the interpretation of the data and the original research question or problem. • Analysis. Lacking in skills to select and generate appropriate analytic techniques, figures, and diagrams.	• Information Gathering. Students are generally able to locate, evaluate, select, and make effective use of appropriate and credible information resources (databases, Internet, library catalogue, etc.), and can adequately translate their research plan into an adequate research process • Data collection. The collection process is generally sound. • Relevance of data to research question. Data collected are mostly relevant to the research question, with some extraneous material. • Interpretation. Interpretation of data is mostly appropriate with some minor errors. There is some effort to minimize or address bias. Student attempts to use or describe validation procedures for data. • Relevance of interpretation to research question. The interpretation of the data is linked to the original research question or problem. • Analysis. Able to select and generate adequate analytic techniques, figures, and diagrams.	• Information Gathering. Students consistently locate, evaluate, select, and make effective use of the most appropriate and credible information resources (databases, Internet, library catalogue, etc.), and translate their research plan into a thorough research process • Data collection. Data collected reflect a thorough and sound data collection process. • Relevance of data to research question. Data collected directly address the research question, without extraneous material • Interpretation. Interpretation of data is appropriate. Student demonstrates effort to minimize or address bias. Student describes appropriate data validation procedures. Student presents caveats and results that may not agree with hypothesis. • Relevance of interpretation to research question. The interpretation of the data is clearly linked to the original research question or problem. • Analysis. Demonstration of an understanding of strengths and limitations of analytic techniques, generated code for analysis, and presented elegant text, figures, and diagrams describing and illustrating results.
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5. Students will demonstrate awareness of the responsible conduct of research.	• Ethical Research: The research question cannot be investigated in an ethical manner. • Responsible Data Collection: The student fails to demonstrate the appropriate application of relevant protocols, safety, ethical, and legal guidelines during data collection and interpretation (i.e., proper documentation of methods used and data collected, appropriate citations, human and animal subjects protocols). • Efficient use of Resources: The research plan does not adequately make efficient use of resources and is wasteful. • Responsible Reporting: The student does not adequately demonstrate honesty and accuracy in communicating findings. There is evidence of plagiarism and/or inappropriate use of others' work. • Objectivity: The student does not adequately address limitations of the research findings, draws some biased conclusions, and does not provide appropriate recommendations for future works. • Honest Collaboration: Where group work is involved, there is little or no evidence that the student contributes substantially to the team effort.	• Ethical Research: The research question with minor changes can be investigated in an ethical manner. • Responsible Data Collection: The student loosely demonstrates the appropriate application of relevant protocols, safety, ethical, and legal guidelines during data collection and interpretation (i.e., proper documentation of methods used and data collected, appropriate citations, human and animal subjects protocols). • Efficient use of Resources: The research plan generally makes efficient use of resources and avoids waste. • Responsible Reporting: The student generally demonstrates honesty and accuracy in communicating findings. There may be minor oversights in terms of cited work. • Objectivity: The student generally addresses limitations of the research findings, seldom draws biased conclusions, and provides appropriate recommendations for future works. • Honest Collaboration: Where group work is involved, there is some evidence that the student contributes equitably to the team effort	• Ethical Research: The research question can be investigated in an ethical manner. • Responsible Data Collection: The student demonstrates appropriate application of relevant protocols, safety, ethical, and legal guidelines during data collection and interpretation (i.e., proper documentation of methods used and data collected, appropriate citations, human and animal subjects protocols). • Efficient use of Resources: The research plan skillfully makes efficient use of resources and avoids waste. • Responsible Reporting: The student skillfully demonstrates honesty and accuracy in communicating findings. There is no evidence of plagiarism and/or inappropriate use of others' work. • Objectivity: The student fully addresses limitations of the research findings, draws unbiased conclusions, and provides appropriate recommendations for future works. • Honest Collaboration: Where group work is involved, there is a preponderance of evidence that the student contributes equitably to the team effort.
6. Students will be able to articulate their research findings through written, performance, and/or oral presentations.	• Findings of the study are not clearly described or not accurately described. • Fails to discuss implications, and consequences of research findings. • Conclusions presented as absolute, without considering ambiguities or other perspectives.	• Describes the findings of the study but may be missing some aspects. • Discusses implications and consequences but may be missing some aspect of context, assumptions, data and evidence. • Conclusions presented but are not sufficiently qualified.	• Describes the findings of the study and relates them to the hypotheses. • Identifies, discusses, and extends conclusions, implications, and consequences. Considers context, assumptions, data, and evidence. • Conclusions are qualified with available evidence.