Program-Level Assessment Plan

Program: Health Outcomes Research	Degree Level (e.g., UG or GR certificate, UG major, master's program, doctoral program): Doctoral (PhD)
Department: Health and Clinical Outcomes Research (HCOR)	College/School: School of Medicine
Date (Month/Year): Sep 2021	Primary Assessment Contact: Paula Buchanan

Note: Each cell in the table below will expand as needed to accommodate your responses.

#	Student Learning Outcomes What do the program faculty expect all students to know or be able to do as a result of completing this program? Note: These should be measurable and manageable in number (typically 4-6 are sufficient).	Curriculum Mapping In which courses will faculty intentionally work to foster some level of student development toward achievement of the outcome? Please clarify the level at which student development is expected in each course (e.g., introduced, developed, reinforced, achieved, etc.).	Assessment Methods	
			Artifacts of Student Learning (What) 1. What artifacts of student learning will be used to determine if students have achieved this outcome? 2. In which courses will these artifacts be collected?	Evaluation Process (How) 1. What process will be used to evaluate the artifacts, and by whom? 2. What tools(s) (e.g., a rubric) will be used in the process? Note: Please include any rubrics as part of the submitted plan documents.
1	Effectively review, summarize, and synthesize literature related to clinical aspects of health outcomes.	• ORES 5300: Foundations of Outcomes Research I (Introduced and Developed) • ORES 5320: Scientific Writing and Communication (Introduced and Developed) • PhD Written Examination (Reinforced and Achieved) • PhD Oral Examination (Reinforced and Achieved) • PhD Dissertation (Achieved)	1. We will utilize the final paper from ORES 5300: Foundations of Outcomes Research I. 2. We will utilize PhD Dissertation-Chapters 1 and 2 (Introduction and Background Literature)	1. The selected artifact from a minimum of 5 students up to a maximum of 10% of the students in each course will be assessed by 2 faculty members of the department. If there is a disagreement, a 3rd faculty member will be brought in to assess the artifact. 2. We will use the attached rubric to assess the artifacts selected.
2	Critically evaluate clinical aspects and healthcare-specific methodological designs.	• ORES 5430: Health Outcomes Measurement (Introduced and Developed) • ORES 5300: Foundations of Outcomes Research I (Introduced and Developed)	1. We will utilize the final paper from ORES 5300: Foundations of Outcomes Research I. 2. We will utilize the final paper project from ORES 5210:	1. The selected artifact from a minimum of 5 students up to a maximum of 10% of the students in each course will be assessed by 2 faculty members

		• ORES 5260: Pharmacoepidemiology (Reinforced) • ORES 5400: Pharmacoeconomics (Reinforced) • ORES 5210: Foundations of Medical Diagnosis and Treatment (Reinforced) • PhD Written Examination (Reinforced and Achieved) • PhD Oral Examination (Reinforced and Achieved) • PhD Dissertation (Achieved)	Foundations of Medical Diagnosis and Treatment. 3. We will utilize PhD Dissertation-Chapter 3 (Methodology)	of the department. If there is a disagreement, a 3rd faculty member will be brought in to assess the artifact. 2. We will use the attached rubric to assess the artifacts selected.
3	Apply appropriate data management strategies related to clinical aspects of health outcomes.	• ORES 5430: Health Outcomes Measurement (Introduced, Developed, and Reinforced) • ORES 5010: Introduction to Biostatistics for Health Outcomes (Introduced) • ORES 5160: Data Management (Introduced, Developed, and Reinforced) • HDS 5310: Analytics and Statistical Programming (Introduced) • ORES 5150: Multivariate Data Analysis (Developed and Reinforced) • HDS 5320: Inferential Modeling (Developed and Reinforced) • PhD Written Examination (Reinforced and Achieved) • PhD Oral Examination (Reinforced and Achieved) • PhD Dissertation (Achieved)	1. We will utilize the Assignment 2 from ORES 5150: Multivariate Data Analysis or final exam of HDS 5320 Inferential Modeling 2. We will utilize the final project ORES 5160: Data Management. 3. We will utilize PhD Written exam.	1. The selected artifact from a minimum of 5 students up to a maximum of 10% of the students in each course will be assessed by 2 faculty members of the department. If there is a disagreement, a 3rd faculty member will be brought in to assess the artifact. 2. We will use the attached rubric to assess the artifacts selected.

4	Effectively communicate study results related to clinical aspects of health outcomes.	• ORES 5430: Health Outcomes Measurement (Introduced and Developed) • ORES 5320: Scientific Writing and Communication (Introduced and Developed) • ORES 5150: Multivariate Data Analysis (Reinforced) • HDS 5320: Inferential Modeling (Reinforced) • PhD Written Examination (Reinforced and Achieved) • PhD Oral Examination (Reinforced and Achieved) • PhD Dissertation (Achieved)	1. We will utilize ORES 5320: Scientific Writing and Communication final paper. 2. We will utilize PhD Dissertation- Chapters 4 and 5 (Results and Discussion).	1. The selected artifact from a minimum of 5 students up to a maximum of 10% of the students in each course will be assessed by 2 faculty members of the department. If there is a disagreement, a 3rd faculty member will be brought in to assess the artifact. 2. We will use the attached rubric to assess the artifacts selected.
5	Demonstrate a thorough and ethical approach to conducting academic research.	• ORES 5300: Foundations of Outcomes Research I (Introduced and Developed) • HCE 5330: Research Ethics (Elective) (Introduced and Developed) • PhD Written Examination (Reinforced and Achieved) • PhD Oral Examination (Reinforced and Achieved) • PhD Dissertation (Achieved)	1. We will utilize the scores obtained from the CITI training (related to Institutional Review Board) assignment from ORES 5300: Foundations of Outcomes Research I 2. We will utilize PhD Oral Examination presentation.	1. The selected artifact from a minimum of 5 students up to a maximum of 10% of the students in each course will be assessed by 2 faculty members of the department. If there is a disagreement, a 3rd faculty member will be brought in to assess the artifact. 2. We will use the attached rubric to assess the artifacts selected.

Use of Assessment Data

1. How and when will analyzed data be used by program faculty to make changes in pedagogy, curriculum design, and/or assessment practices?

   At the end of each academic year, department faculty will score these artifacts using the rubric and use the data to make necessary changes. Results of these rubric evaluations will then be used by the curriculum committee. Assessments are used to identify problem areas and to make curricular changes across all courses to ensure student proficiency in all core areas. Curricular changes are documented and results of assessments and changes to curriculum are reported back to HCOR faculty.

2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?

Results of the assessment done after informed changes have been made will be compared to the assessment of the same outcomes prior to the changes. If no or minimal improvement in performance is detected additional changes to the curriculum will be made.

Additional Questions

1. On what schedule/cycle will program faculty assess each of the program's student learning outcomes? (Please note: It is not recommended to try to assess every outcome every year.)

   We will assess program learning outcomes 1, 2, and 3 in one year, and then outcomes 4 and 5 the following year.

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

   The HCOR curriculum committee developed this plan which was presented to other department faculty members for suggested changes and approval.

IMPORTANT: Please remember to submit any rubrics or other assessment tools along with this plan.

Program Assessment Rubric: PhD in Health Outcomes Research

#	Program Learning Outcomes	High Mastery (3)	Average Mastery (2)	Low Mastery (1)
1	Effectively review, summarize, and synthesize literature related to clinical aspects of health outcomes.	• Uses sufficient and appropriate primary resources to describe/explain theoretical assumptions that contextualize the research question • Uses sufficient and appropriate primary resources to develop background or context for research question • Culminates with a clearly stated purpose/ research question • Theoretical background and contextual information flow seamlessly into a well stated research question that has potential to add to the professional knowledge base and is of publishable quality.	• Cites two or more primary sources to set up theoretical assumptions and develop background for research question • Research question is stated with clear and sufficient scope and focus	• No introduction or contextual information for research question • Insufficient primary resources • There is no clearly stated research question • Question does not have appropriate scope or focus

2	Critically evaluate clinical aspects and healthcare-specific methodological designs.	• Original, clear, creative, and innovative • Provides thorough and comprehensive description • Flows from question and theory • Uses state-of-the-art tools, techniques, or approaches • Applies or develops new methods, approaches, techniques tools, devices, or instruments • Uses multiple methods • Analysis is sophisticated, robust, and precise • Uses advanced, powerful, cutting-edge techniques	• Appropriate for the problem • Uses existing methods, techniques, or approaches in correct and creative ways • Discusses why method was chosen • Analysis is objective, thorough, appropriate, and correct • Uses standard methods	• Lacks a method • Uses wrong (statistical) method for the problem • Uses (statistical) method incorrectly • Methods do not relate to question or theory • Is fatally flawed or has major confound issues • Does not describe or describes poorly (insufficient detail) • Is minimally documented • Shows basic competence • Analysis is wrong, inappropriate, or incompetent

3	Apply appropriate data management strategies related to clinical aspects of health outcomes.	• Utilize appropriate statistical methods to analyze data in the chosen content area • Clearly describes the types of variables used • Clearly describes the outcomes of the data analysis • Display the data analysis visually using a graph, table, etc. • Factors that may have contributed to the data obtained • Implications of the data analyzed	• Most statistical methods were correctly applied but more could have been done with the data.	• Some statistical methods were applied but with significant errors or omissions.

4	Effectively communicate study results related to clinical aspects of health outcomes.	• Results are aligned with question and theory • Sees complex patterns in the data • Iteratively explores questions raised by analyses • Results are usable, meaningful, and unambiguous • Presents data clearly and cleverly • Makes proper inferences • Provides plausible interpretations • Refutes or disproves prior theories or finding	• Links results to question and theory • Substantiates the results • Provides plausible arguments and explanations	• Results are correct but not robust • Includes extraneous information and material • Has difficulty making sense of data • Interpretation is too simplistic • Data are wrong, insufficient, fudged, fabricated, or falsified • Data or evidence do not support the theory or argument • Interpretation is too simplistic, and not objective, cogent, or inferences • Overstates the results
5	Demonstrate a thorough and ethical approach to conducting academic research.	• Utilize appropriate ethical approach to conducting research • Clearly follows instructions set by Saint Louis University Institutional Review Board • Clearly describes study procedures for IRB proposal submission	• Most ethical policies and procedures demonstrated through research studies	• Does not demonstrate a thorough ethical approach to research studies