Saint Louis University
Program Assessment Plan

Program (Major, Minor, Core): Ph.D. in Anatomy
Department: Center for Anatomical Science and Education (CASE), Department of Surgery
College/School: School of Medicine
Person(s) Responsible for Implementing the Plan: John R. Martin, III, Ph.D.
Date Submitted: March 10, 2016

* Students who complete the **Ph.D. Anatomy program** will secure positions in their chosen career goals (employment in academic or industry positions).

Program Learning Outcomes	Curriculum Mapping	Assessment Methods	Use of Assessment Data
What do you expect all students who complete the program to know, or be able to do?	*Where is the outcome learned/assessed (courses, internships, student teaching, clinical, etc.)?*	*How do students demonstrate their performance of the program learning outcomes? How does the program measure student performance? Distinguish your direct measures from indirect measures.*	*How does the program use assessment results to recognize success and "close the loop" to inform additional program improvement? How/when is this data shared, and with whom?*

KNOWLEDGE OF PRACTICE: Students will demonstrate: 1) knowledge and application of the underlying concepts, advanced knowledge and analytical approaches used in general and advanced gross anatomy, microscopic anatomy, neuroanatomy, physiology, and embryology; 2) the application of current scientific literature, especially in areas representing gaps of knowledge, through framing hypotheses-driven experiments, independent reading and the completion of additional work; and 3) the application of designing and conducting experiments and to analyze and interpret data.	Students will complete successfully: 1) a sequence of core courses that stress knowledge, fundamental principles, teaching methods and problem solving skills necessary in anatomy ; 2) courses that require students to critically evaluate current scientific knowledge, frame research questions as testable hypotheses, and explain to others hypotheses-driven research strategies; and 3) courses that require experimental investigation and quantitative assessment through laboratory participation, assigned readings, discussions with principal investigator, and oral and written presentations.	Student performance is measured through exams and grading rubrics of oral and written presentations, participation in course discussions, progress meetings with faculty, and completion of laboratory experiences, annual student reviews, course evaluations, and graduate exit surveys.	Student performance data is discussed each semester at faculty meetings and recommendations are made to be discussed with each student during progress meetings. Student progress is formally assessed at the completion of each semester. To remain in good academic standing students must maintain a minimum cumulative 3.0 GPA. Any student with a cumulative GPA significantly below 3.0 can be recommended to be dropped from the Anatomy Graduate Program for unacceptable academic performance. Students with a GPA slightly below a cumulative 3.0 GPA may be placed on academic probation to give them an opportunity to take additional courses to raise their cumulative GPA to 3.0. A student cannot remain on probation for more than one year. Course evaluations are assessed each semester by course directors and appropriate modifications are made to improve course quality.

SKILLS OF INQUIRY, CRITICAL THINKING AND PROBLEM SOLVING: Students will demonstrate: 1) the ability to gather data to verify the existence of a problem, conduct extended research/analysis into a problem/topic, evaluate the evidence, generate ideas for possible solutions and formulate a thesis based on analysis; and 2) the ability to read materials carefully and analyze them critically.	Written material and oral presentations completed in courses will be used to evaluate critical thinking and problem solving skills. These written materials may include: 1) project reports from required and elective courses; 2) lab reports; 3) embedded exam questions in required and elective courses; and 4) dissertation research and written preliminary examination. Oral presentations from Journal Club, seminar, oral preliminary examination and dissertation defense will similarly be evaluated.	Student performance for written material and oral presentations is measured through use of grading rubrics that evaluate the following dimensions: 1) understanding of the problem to be solved; 2) statement of hypotheses made; 3) conceptual dimensions of reasoning; 4) empirical dimensions of reasoning; and 5) statement of thesis and inference drawn. Other evaluations include: participation in course discussions, progress meetings with faculty, and completion of laboratory experiences, annual student reviews, course evaluations, and graduate exit surveys.	Student performance data is discussed each semester at faculty meetings and recommendations are made to be discussed with each student during progress meetings.

COMMUNICATION SKILLS: Students will demonstrate: 1) written communication skills with respect to clarity, use of appropriate grammar, syntax and vocabulary appropriate to the development of a NIH-style grant proposal; organizes research materials to support an original thesis; and, present ideas and arguments clearly, logically and with an appropriate balance of text and graphic materials; and 2) oral communication skills with respect to designing, organizing and presenting main points concisely and clearly; providing persuasive arguments, using data and information, that are appropriate for the audience and occasion; using language vocal variety, pronunciation and physical behaviors that support the verbal message for the audience and occasion; using visual aids appropriate for technical presentation, and ability to answer audience questions.	Student written material will be evaluated in course work and examinations, written preliminary examination and in dissertation research. Similarly, oral presentations will be evaluated in Journal Club, seminar and oral preliminary examination and in dissertation defense.	Student performance is measured through use of grading rubrics of written presentations that evaluate the following dimensions: 1) knowledge of the literature, 2) ability to formulate research questions as hypotheses to be tested, 3) relevance of the data to specific aims, 4) soundness of the conclusions drawn from the data, 5) treatment of alternative interpretations of the data, 6) completion of specific aims and the ability to foresee and address questions, and 7) appropriate use of research references and resources. Similarly, oral presentations will be measured through use of grading rubric that evaluates the following dimensions: 1) content, 2) use of appropriate data, 3) organization and clarity, 4) audio and visual support devices, and 5) appropriate verbal and physical support mechanisms. Other evaluations include: participation in course discussions, progress meetings with faculty, and completion of laboratory experiences, annual student reviews, course evaluations, and graduate exit surveys.	Student performance data is discussed each semester at faculty meetings and recommendations are made to be discussed with each student during progress meetings.

1. **It is <u>not recommended</u> to try and assess (in depth) all of the program learning outcomes every semester. It is best practice to plan out when each outcome will be assessed and focus on 1 or 2 each semester/academic year. Describe the responsibilities, timeline, and the process for implementing this assessment plan.**

An assessment committee will be formed in the Spring of 2016 to identify and initiate an assessment plan to be in effect at the beginning of the Fall 2016 semester.

2. **Please explain how these assessment efforts are coordinated with Madrid (courses and/or program)?**

NA

3. **The program assessment plan should be developed and approved by all faculty in the department. In addition, the program assessment plan should be developed to include student input and external sources (e.g., national standards, advisory boards, employers, alumni, etc.). Describe the process through which your academic unit created this assessment plan. Include the following:**

   a. Timeline regarding when or how often this plan will be reviewed and revised. (This could be aligned with program review.)

The assessment plan will be reviewed and revised every 3 years.

   b. How students were included in the process and/or how student input was gathered and incorporated into the assessment plan.

Graduate student exit surveys will be analyzed and suggestions will be incorporated into assessment plan.

   c. What external sources were consulted in the development of this assessment plan?

NA

   d. Assessment of the manageability of the plan in relation to departmental resources and personnel

Current plan is manageable.