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| **Assurance of Student Learning****2020-2021** |
| Ogden College of Science and Engineering | Psychological Sciences |
| M.S. in Psychology (0469) |

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| **Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.** |
| **Student Learning Outcome 1:**  Demonstrate core knowledge in a basic or applied area of psychological sciences, proficiency in research design and methodology, and expertise in research communication. |
| **Instrument 1** | **Direct: Research Practicum Presentation Evaluation Rubric** |
| **Instrument 2** | **Direct: Thesis Proposal Evaluation Rubric**  |
| **Instrument 3** | **Direct: Graduate Student Progress Report – Research & Data Analysis Competencies** |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.** | **Met** | **Not Met** |
| **Student Learning Outcome 2:**  Applies knowledge of recognized ethical principles in psychological research to a basic or applied research project. |
| **Instrument 1** | **Direct: Certificate of CITI training** |
| **Instrument 2** | **Direct: IRB Approval of Research Project (if applicable)** |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.** | **Met** | **Not Met** |
| **Student Learning Outcome 3:**  Integrates knowledge gained from training to independently complete abasic or applied research project that contributes to the understanding of behavior. |
| **Instrument 1** | **Direct: Thesis Evaluation Rubric** |
| **Instrument 2** | **Direct: Author or Co-author of Journal Article, Technical Report, or Professional Conference Presentation/Poster** |
| **Instrument 3** | **Direct: Graduate Student Progress Report – Writing and Presentation Skills** |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.** | **Met** | **Not Met** |
| **Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)**  |
| The following actions will be implemented in Fall 2021: (1) Due to the success of MI 1 and MI 3 for SLO1 for students in the Psychological Science concentration, students in the IO concentration will be evaluated on the same measurement instruments; (2) Students in the Psychological Science concentration will take an additional 3 hours in the Science of Behavior category of their curriculum and IO concentration students will have the option of studying a specific topic in IO psychology in depth by taking PSYS 590 Readings of Research in Psychology; (3) All students will take Advanced Research Methods course in the second semester of their 1st year to help them retain more information from the course and use the research proposal assignment to begin the work on their thesis proposal. |

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| **Student Learning Outcome 1** |
| **Student Learning Outcome**  | Students completing the program will demonstrate core knowledge in a basic or applied area of psychological sciences, proficiency in research design and methodology, and expertise in research communication. |
| **Measurement Instrument 1**  | **Direct measure of student learning**: 1st and 2nd year graduate students in the Psychological Science concentration participate in a research practicum designed to help them gain expertise in the communication of research. Each semester, students prepare presentations on the research projects being conducted in their laboratories or on their thesis research and present it to student and faculty practicum attendees. Faculty in attendance evaluate their performance using a standard rubric that included the following dimensions: (1) presentation style, (2) presentation quality, (3) adequacy/appropriateness of visual aids, (4) presentation content, and (5) handling of questions |
| **Criteria for Student Success** | Students will receive an average grade of 85% or better on the standard rubric. |
| **Program Success Target for this Measurement** | 80% of students will receive an average grade of 85% or higher on the standard rubric for research presentations | **Percent of Program Achieving Target** | 100% |
| **Methods**  | **Direct**: All 15 1st and 2nd year Psychological Science concentration students (includes 1 JUMP student) participated in the research practicum both Fall and Spring semesters. For each student, the faculty members in attendance at that student’s practicum research presentation (a minimum of 5 faculty members) scored the student on each rubric dimension using a 0-100 scale and computed the average score across these dimensions. The criteria for student success was obtained by averaging all the faculty members’ scores for the student. |
| **Measurement Instrument 2** | **Direct measure of student learning**: Thesis proposals submitted by students in the program are scored by the students’ thesis committee members according to a standard scoring rubric that addresses the quality and appropriateness of the following dimensions: (1) literature review and rationale for the research, (2) proposed research design and methodology, (3) representative sampling, (4) proposed analysis of results, and (4) overall quality of the writing. |
| **Criteria for Student Success** | Students will receive a rating of good or excellent on each dimension by each thesis committee member. |
| **Program Success Target for this Measurement** | 80% of students rated as good or excellent on each dimension | **Percent of Program Achieving Target** | 81.25% |
| **Methods** | **Direct**: Sixteen (16) students proposed their thesis research during this assessment period. Thesis committee members (at least 3 members of the graduate faculty) rated each student’s performance as poor, good, or excellent on each of the five rubric dimensions. |
| **Measurement Instrument 3**  | **Direct measure of student learning**: Each semester 1st and 2nd year graduate students receive a formative assessment of their performance in the program. This assessment has two parts: (1) a faculty review with feedback on academic performance and interpersonal skills at the end of each semester in the program and (2) a student reflection and self-report on progress in the program. The goal for this advisement procedure is to enhance student success on SLO 1 and 3 by giving students early and frequent feedback on their performance and recommendations for improvement throughout their time in the program. The graduate faculty review students’ performance twice: 1st and 2nd year students in early Spring of the AY and returning 2nd year students in early Fall. Faculty mentors meet with students individually after each review. |
| **Criteria for Student Success** | Students will receive a rating of meeting or exceeding expectations for their level of experience |
| **Program Success Target for this Measurement** | 80% of students rated as meeting or exceeding expectations for level of experience  | **Percent of Program Achieving Target** | 100% |
| **Methods** | **Direct**: The graduate faculty in the Psychological Science concentration reviewed students’ FY 2020-2021 performance twice: returning 2nd year students in early Fall and 1st and 2nd year students in early Spring. Faculty mentors met with students individually after each review. |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.** | **Met** | **Not Met** |
| **Actions** (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.) |
| During the review of the assessment of SLO 1, the graduate faculty discussed two issues that merited changes in the curriculum for the graduate program: 1. Due to the success of the research practicum and the formative assessment of students in the Psychological Science concentration, starting in Fall 2021, IO students will attend practicum and be evaluated on the same measurement instruments.2. To increase students’ core knowledge in the discipline, students in the Psychological Science concentration will be required to take an additional 3 hours in the Science of Behavior category of their curriculum (formerly 2 courses, now 3 courses) and IO concentration students will have the opportunity for more in-depth study of a specific topic in IO psychology by the addition of PSYS 590 Readings of Research in Psychology as an option in their curriculum. These changes were approved by the Graduate Council for implementation in Fall 2021.3. Although this year’s assessment indicated that students achieved the established goals, the ratings for thesis proposals were relatively low. To improve performance on the five dimensions of the thesis proposal, the faculty decided to move the Advanced Research Methods course from the first to the second semester of the 1st year. This change will be implemented in Fall 2021 and will ensure that the course assignments (i.e., meta-analysis and research proposal) will be more relevant to the students’ thesis research projects because they will have more time to select the topic and can use the course assignments to begin the work on their thesis proposal.  |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) |
| 1st and 2nd year students were successful and on track to meet the criteria for all three measures of SLO 1. Although COVID-19 created a large disruption in face-to-face classes, all 2nd year students were able to complete their thesis proposal by the end of the first semester of their second year. Because there was some evidence that student performance on the thesis proposal was lower than desirable, changes in the program as described above were proposed and approved and will be implemented in Fall 2021. This will allow us to determine whether these changes have resulted in program improvement in the next assessment cycle.  |

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| **Student Learning Outcome 2** |
| **Student Learning Outcome**  | Applies knowledge of recognized ethical principles in psychological research to a basic or applied research project |
| **Measurement Instrument 1** | **Direct Measure of Student Learning**: Students will complete online CITI courses including Social and Behavioral Responsible Conduct of Research and when applicable, Human Subjects Research – Social/Behavioral Research and will provide official certificates showing that they passed these courses. |
| **Criteria for Student Success** | Student will achieve a score of 80% or higher on all modules in both CITI courses  |
| **Program Success Target for this Measurement** | 100% | **Percent of Program Achieving Target** | 100% |
| **Methods**  | **Direct**: Students who are conducting research in the department must complete one or both of two training modules offered by the Collaborative Institutional Training Initiative (CITI). The first is a basic course on the history and guidelines for responsible conduct of research and the second is a focused course on the ethical requirements for conducting research with human participants. To pass each module, students must achieve a score of at least 80%. Students in the Psychological Sciences concentration are required to complete both modules in their first year of the program. Depending on their research topic, students in the IO concentration complete either the first module or both modules in either their first or second year of the program. Specifically, those who conduct archival research or research involving statistical modeling may only complete the first module whereas those who conduct research with human participants must complete both modules. All 1st year Psychological Science students completed both modules (3 first year students and 1 JUMP student). Of the 6 first year IO students, 3 completed both modules and of the 6 second year IO students, 6 completed both modules. |
| **Measurement Instrument 2** | **Direct Measure of Student Learning**: Students present their proposed thesis research to the WKU Institutional Review Board or the Institutional Animal Care and Use Committee, if applicable, and provide documentation that this research was reviewed and approved by the relevant committee. Students who conduct archival research or research involving statistical modeling and are not required to obtain IRB or IACUC approval for these projects. |
| **Criteria for Student Success** | Students who conduct thesis research with human participants or animal subjects will have their research approved by the WKU IRB or the IACUC, respectively. |
| **Program Success Target for this Measurement** | 100% of students who conduct research with human or animal subjects will obtain approval with no or only minor revisions of research procedures | **Percent of Program Achieving Target** | 100% |
| **Methods** | **Direct**: Prior to holding their thesis proposal oral examination, students completed the IRB or IACUC proposal form required by the WKU Office of Research Integrity. Their proposed research was evaluated for compliance with federal guidelines that promote responsible conduct of research and assure protection of the rights, welfare, and security of research participants/subjects. Nine of the 10 students in the Psychological Science concentration who proposed research with humans received approval; 1 proposed using archival data and was not required to obtain IRB approval. Two of the 6 students in the IO concentration conducted research using human participants and received IRB approval for their research; the remaining 4 students proposed projects using archival data or statistical modeling and were therefore not required to have their projects approved by IRB. |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.** | **Met** | **Not Met** |
| **Actions** (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.) |
| Six courses in the graduate curriculum contain content on ethical principles in psychological research (i.e., PSYS 510 Advanced Research Methods in Psychology, PSYS 570 Job Analysis and Compensation, PSYS 581 Professional Issues and Ethics in Psychological Science, PSYS 599 Thesis Research and Writing, PSYS 670 EEO, Law, and Ethical Considerations, and PSYS 673 Advanced Training in Business and Industry). The online CITI courses that students must successfully complete and the IRB or IACUC approval of their proposed research provide objective, external evidence that they are meeting the criterion for success for SLO 2. Consequently, no changes in the instructional program are planned at this time. |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) |
| We currently have strong evidence that students are meeting the criterion for success for this learning outcome. We will continue to monitor successful approval of research proposals. Any evidence of decline in approval rates will require a change in our method for achieving target success. |

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| **Student Learning Outcome 3** |
| **Student Learning Outcome**  | Integrates knowledge gained from training to independently complete abasic or applied research project that contributes to the understanding of behavior. |
| **Measurement Instrument 1** | **Direct Measure of Student Learning**: Theses submitted by students completing the program were scored by the students’ thesis committee members according to a standard scoring rubric that addressed the quality and appropriateness of: (1) the literature review and rationale for the research, (2) the design and methodology, (3) the method(s) of analysis and description of the results, (4) the interpretation and discussion of the results, and (5) the overall quality of the writing. |
| **Criteria for Student Success** | Students will receive a rating of “good” or “excellent” on each of the five dimension by each committee member. |
| **Program Success Target for this Measurement** | 80% of students rated as good or excellent on each dimension | **Percent of Program Achieving Target** | 100% |
| **Methods**  | **Direct**: Of the 16 second year students and 3 third year students who were unable to finish their research last year due to COVID-19, 14 presented their completed thesis research to their thesis committee for assessment (Note: the remaining 5 will defend this summer). Thesis committee members (at least 3 members of the graduate faculty) rated each student’s performance as poor, good, or excellent on each of the five rubric dimensions. |
| **Measurement Instrument 2** | **Direct Measure of Student Learning**: Students will author or co-author a journal article (that is published or accepted for publication), a technical report, or a professional conference presentation or poster (that is presented or accepted for presentation). |
| **Criteria for Student Success** | By the time they complete the program, students will author or co-author at least one of the following: a journal article that is published or accepted for publication, a technical report on an applied research project, or an oral or poster presentation at a national or international professional conference in their area of study.  |
| **Program Success Target for this Measurement** | 50% of the students will meet the criteria for success | **Percent of Program Achieving Target** | 96.875% |
| **Methods** | **Direct**: There were three (3) 1st year, one (1) JUMP, sixteen (16) 2nd year, three (3) third year, and nine (9) past students included in this assessment. Faculty research mentors documented all publications and conference presentations for which these students were authors or co-authors and provided this documentation, along with the relevant citations, to the graduate coordinator. Students were counted only once for this metric regardless of the number of publications or presentations they had. In addition, because of COVID-19 conference cancellations, papers accepted for presentation were included in the reported percentage. Several students had both journal publications and presentations (10 students) and/or multiple presentations (12 students) during this assessment period. |
| **Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.** | **Met** | **Not Met** |
| **Actions** (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.) |
| See Actions for SLO1 above. The graduate faculty for the Psychological Science concentration has used a new advisement procedure incorporating a formative assessment of graduate students for the last 2 years. The goal for this advisement procedure was to enhance student success on SLO 3 (and SLO 1) by giving students early and frequent feedback on their performance and recommendations for improvement throughout their time in the program. Beginning in Fall 21, this formative assessment will be used by faculty in the IO concentration. |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) |
| This advisement procedure has produced objective improvement in student performance for SLO 1 and SLO 3, specifically on-time proposal and completion of thesis research and involvement in research communication. We will continue to track program improvements related to this measure for the Psychological Science concentration and will extend this assessment to the IO concentration. |