



## Program Assessment Report (PAR)

**Human Factors/Indust Psych (HFIP) Masters Degree**

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**ACADEMIC YEAR COVERED BY THIS REPORT: 2021-2022**

### **I. PROGRAM LEARNING OUTCOMES**

1. Understand advanced research design and the mathematical/statistical concepts needed to comprehend, analyze, and evaluate research.
2. Read, analyze, and synthesize current theory and research in Human Factors Psychology.
3. Read, analyze, and synthesize current theory and research in Industrial/Organizational Psychology.
4. Demonstrate skills in integrating and communicating psychological knowledge.

### **II. PROCEDURES USED FOR ASSESSMENT**

#### **A. Direct Assessment**

Learning Outcome 1: This objective is evaluated at the student's public oral dissertation defense by all of the graduate program faculty in attendance using a 5-point rating scale.

Learning Outcome 2: This objective is evaluated at the student's public oral dissertation defense by all of the graduate program faculty in attendance using a 5-point rating scale.

Learning Outcome 3: This objective is evaluated at the student's public oral dissertation defense by all of the graduate program faculty in attendance using a 5-point rating scale.

Learning Outcome 4: This objective is evaluated at the student's public oral dissertation defense by all of the graduate program faculty in attendance using a 5-point rating scale.

Additional measures

Annual Faculty Evaluation. Every year students are required to submit activity reports documenting their class performance, degree progress, and research productivity. The graduate faculty review the reports and evaluate the students' standing.

Publications/Presentations. The number of graduate student publications and conference presentations is culled from their activity reports.

Program Milestones. Milestone accomplishments are recorded as the appropriate approval paperwork is submitted.

Employment. We track students' employment and whether it is directly related to their degree discipline, HF/IO psychology.

## **B. Scoring of Student Work**

Learning Outcome 1: This objective is evaluated with a survey (5-point rating scale) with questions probing several aspects of the student's abilities exhibited through their presentation. Questions 6 and 7 specifically assess this objective.

Learning Outcome 2: This objective is evaluated with a survey (5-point rating scale) with questions probing several aspects of the student's abilities exhibited through their presentation. Questions 4, 5 and 8 specifically assess this objective.

Learning Outcome 3: This objective is evaluated with a survey (5-point rating scale) with questions probing several aspects of the student's abilities exhibited through their presentation. Questions 4, 5 and 8 specifically assess this objective.

Learning Outcome 4: This objective is evaluated with a survey (5-point rating scale) with questions probing several aspects of the student's abilities exhibited through their presentation. Questions 1-3 and 9-10 specifically assess this objective.

## **C. Indirect Assessment**

We normally have graduate students evaluate the program via a survey and have them provide a summary report for the faculty to review each year. However, this process has been derailed by the COVID-19 pandemic and was not completed in the 21-22 academic year but it will be reinstated during the 22-23 academic year.

## **III. ASSESSMENT RESULTS/INFORMATION:**

LO1: Questions 6 and 7 from dissertation defense survey (5-point rating scale, 1-poorest to 5-best).

LO2: Questions 4, 5 and 8 from dissertation defense survey (5-point rating scale, 1-poorest to 5-best). Performance rating from written and oral qualifying exam (4-point scale, 1-unacceptable to 4-outstanding).

LO3: Questions 4, 5 and 8 from dissertation defense survey (5-point rating scale, 1-poorest to 5-best). Performance rating from written and oral qualifying exam (4-point scale, 1-unacceptable to 4-outstanding).

LO4: Questions 1-3 and 9-10 from dissertation defense survey (5-point rating scale, 1-poorest to 5-best).

Learning Outcome 1: Survey questions (5-point rating scale) results.

Q6. The statistical analyses were appropriate to the methodological design.

Results: The average score for this item was 4.88 (Std Err=0.07)

2015-2021 cumulative performance: The average score for this item was 4.61 (Std Err=0.13)

Q7. The statistical analyses were interpreted appropriately.

Results: The average score for this item was 4.9 (Std Err=0.10)

2015-2021 cumulative performance: The average score for this item was 4.52 (Std Err=0.12)

Learning Outcome 2: Survey questions (5-point rating scale) results.

Q4. The student provided a logical progression from introduction to hypotheses to conclusions.

Results: The average score for this item was 4.88 (Std Err=0.07)

2015-2021 cumulative performance: The average score for this item was 4.56 (Std Err=0.06)

Q5. The literature review had an appropriate breadth and depth.

Results: The average score for this item was 4.6 (Std Err=0.19)

2015-2021 cumulative performance: The average score for this item was 4.46 (Std Err=0.11)

Q8. The discussion of previous research was focused and appropriately supported the present project.

Results: The average score for this item was 4.83 (Std Err=0.11)

2015-2021 cumulative performance: The average score for this item was 4.55 (Std Err=0.08)

Learning Outcome 3: Survey questions (5-point rating scale) results.

Q4. The student provided a logical progression from introduction to hypotheses to conclusions.

Results: The average score for this item was 4.88 (Std Err=0.07)

2015-2021 cumulative performance: The average score for this item was 4.56 (Std Err=0.06)

Q5. The literature review had an appropriate breadth and depth.

Results: The average score for this item was 4.6 (Std Err=0.19)

2015-2021 cumulative performance: The average score for this item was 4.46 (Std Err=0.11)

Q8. The discussion of previous research was focused and appropriately supported the present project.

Results: The average score for this item was 4.83 (Std Err=0.11)  
2015-2021 cumulative performance: The average score for this item was 4.55 (Std Err=0.08)

Learning Outcome 4: Survey questions (5-point rating scale) results.

Q1. The presentation was well organized.

Results: The average score for this item was 4.9 (Std Err=0.10)

2015-2021 cumulative performance: The average score for this item was 4.81 (Std Err=0.07)

Q2. The presentation was at the appropriate 'level' for a general science audience.

Results: The average score for this item was 4.73 (Std Err=0.17)

2015-2021 cumulative performance: The average score for this item was 4.66 (Std Err=0.04)

Q3. The slides were clear, concise, and free of technical errors.

Results: The average score for this item was 4.73 (Std Err=0.27)

2015-2021 cumulative performance: The average score for this item was 4.49 (Std Err=0.06)

Q9. The discussion was situated in the unique contributions of this work relative to the field.

Results: The average score for this item was 4.9 (Std Err=0.10)

2015-2021 cumulative performance: The average score for this item was 4.44 (Std Err=0.08)

Q10. Previous work was appropriately acknowledged.

Results: The average score for this item was 4.5 (Std Err=0.39)

2015-2021 cumulative performance: The average score for this item was 4.65 (Std Err=0.09)

Annual Faculty Evaluation. Faculty assessment of the graduate students showed that the majority of students are meeting or exceeding the expectations listed in the statement of outcomes. Only a minority of students were not making good progress and were given clear goals, specific directions, and deadlines for correcting their situation were given in writing to the students.

Publications/Presentations. A total of 9 journal articles or book chapters were published with graduate students as lead or co-authors and 9 presentations, posters, or proceedings were completed with graduate students as presenters. In addition, 10 journal articles or book chapters were submitted with graduate students as lead or co-authors and 6 presentations, posters, or proceedings were submitted. These numbers are slightly lower than we have seen in the past and may reflect the difficulty of running human experiments under COVID protocols.

Program Milestones. In 2021-2022, 5 students graduated with an MS. This is similar to previous years.

Employment. On average, 20 active students either obtained employment in the field or maintained outside employment previously obtained.

Learning Outcome 1. Student demonstrates research competence. The number for publications and conference presentations suggests that our students are achieving this outcome.

Learning outcome 2. Student has basic professional presentation skills necessary for communicating scientific findings. The number for publications and conference presentations suggests that our students are achieving this outcome.

Learning outcome 3. Student has demonstrated critical reasoning skills in selected fields. The successful completion of milestones and performance in courses reflects that our students are achieving this outcome.

Learning outcome 4. Student has demonstrated broad knowledge of Human Factors or Industrial Organizational Psychology. Students performance in courses suggests that they are meeting this outcome.

#### **IV. ACTIONS TO IMPROVE STUDENT LEARNING**

Information regarding graduate student progress is shared through graduate and department faculty meetings. The graduate faculty participate in annual meetings to evaluate the progress of each student. In addition, a graduate faculty member conducts a one-on-one mid-year status check with each graduate student early in the Spring semester.

#### **V. SUPPORTING DOCUMENTS**

Additional documentation, when provided, is stored in the internal Academic Program Assessment of Student Learning SharePoint site.