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College: College of Science and Mathematics

Department: Psychology

Academic Programs Reviewed (list in PED)

Program 1. B.A.

Program 2. B.S.

Program 3. Minor

Program 4. M.S.

Program Review Committee (insert name and title of committee members)

Committee member 1. Debra Steele-Johnson

Committee member 2. Martin Gooden

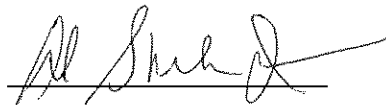
Committee member 3. Michael Hennessy

Committee member 4. Pamela Tsang


Committee member 5. Stephen Gabbard

Submitted January 15, 2015

Department Chair, Debra Steele-Johnson

A handwritten signature in black ink, appearing to read "Debra Steele-Johnson", written over a horizontal line.

Dean, Yi Li,

A handwritten signature in black ink, appearing to read "Yi Li", written over a horizontal line.

Program 1. B.A. Psychology

Enrollment and Graduate History

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Enrollment*	840	947	960	881	814
Graduates*	208	232	237	251	227

*Includes both B.A. and B.S. students because some undergraduates begin in B.S. and switch into B.A. program.

Program Description

The undergraduate B.A. program involves instruction, laboratory, and other experiential opportunities relating to the scientific investigation of psychological and neurophysiological processes, as well as the social and situational factors underlying the behaviors of human and non-human animals. Students pursuing the undergraduate degree can earn a Bachelor of Arts or a Bachelor of Science, with the latter offering concentrations in Behavioral Neuroscience, Industrial Organizational Psychology, and Cognition and Perception. Also, a minor program is provided offering students majoring in other disciplines insights on psychological theory and applications. A variety of graduate and professional school as well as employment opportunities exist for graduates earning this degree.

Alignment with University Mission and Strategic Plan

The psychology undergraduate program supports all aspects of the university mission. We focus on supporting student success by 1) providing academic, graduate school, and career advising to our majors through our Psychology Undergraduate Program (PUP) office, 2) delivering coursework that employs teaching innovations designed to leverage lecture content with proper alignment with laboratory content and to offer course activities that increase student engagement which benefits both majors and non-majors who take our courses, and 3) encouraging interested students to avail themselves of research opportunities in faculty laboratories. Indeed, we impact a large number of students because not only do we have approximately 800 majors and 90 minors, but we also provide required coursework for students in other majors, e.g., nursing. Moreover, our faculty in Behavioral Neuroscience, Human Factors, and Industrial-Organizational Psychology are very active in research as demonstrated by the large number of publications in top journals and the large amount of grant dollars we produce each year. Also, because of WSU's balance of teaching and research and WSU's size, the scholarly research of our faculty increases WSU's visibility and reputation while our faculty still remain accessible to students who want research experience. Additionally, the content areas of our faculty ensure that the knowledge we are creating is useful in enhancing human performance at work both in terms of how technology can be better utilized to accomplish work and how employees and leaders in the workplace can work together more effectively to increase organizational productivity. Finally, the undergraduate internship program in our department ensures that many of our students provide useful service to the Dayton community as part of their learning in a variety of health and human service settings.

Program Distinctiveness

1. Undergraduate concentrations that are attractive to the workforce and graduate programs in STEM fields.

We have three undergraduate concentrations that contribute to our students' education and employability and enhance the mission of the university. The **Behavioral Neuroscience (BNS)** concentration supports a burgeoning scientific discipline that is experiencing rapid growth in academic and research units worldwide. We are able to offer an unusually wide array of behavioral neurosciences courses and provide undergraduates with the opportunity to participate in government-sponsored behavioral neuroscience research with extensive individual mentoring by our BNS faculty. The **Cognition and Perception (CAP)** concentration addresses basic human cognitive and perceptual functioning, which is increasingly recognized for its practical implications for a wide array of applications, including the design and evaluation of education programs, training strategies, and human-machine interfaces. The CAP concentration provides a unique preparation for understanding and facilitating complex human performance in basic and applied work in government laboratories and industry and provides an excellent preparation for graduate programs in Cognition, Perception, and Cognitive Science. Finally, the **Industrial/Organizational Psychology (IO)** concentration addresses an area of psychology with an excellent employment outlook. Students with knowledge in this area are likely to find work in various human resource disciplines as well as be competitive for jobs in management, human services, health-care related fields, sales or marketing, and the hospitality industry.

2. Faculty that integrate their ongoing research and practice into their classroom teaching and graduate training.

Of our TET and NTE faculty, 100% have a Ph.D. in psychology. Over 70% of the adjuncts teaching in the psychology department have a doctoral degree. Moreover, 90% of the tenured-track faculty have an active research program supported by consulting contracts with local industries and federal funding from the Department of Defense, National Science Foundation, and the National Institutes of Health. Faculty research provides ample research training opportunities for graduate and undergraduate students. Further, many faculty researchers collaborate actively with researchers in the region, nationally, and internationally. Finally, we have developed diverse and numerous internship and research opportunities with local companies and the 711th Human Performance Wing of the Wright-Patterson Air Force Base for graduate and undergraduate students.

3. A curriculum that focuses on developing critical thinking.

We have designed our curriculum not only to instill knowledge in the various psychological domains but to prepare students to become effective, productive citizens in an increasingly interconnected world full of opportunities and challenges. Our curriculum emphasizes the understanding of complex data, the development of cogent means to evaluate ideas and resolve differences, and the demonstration of communication skills. We begin our focus on critical thinking through integrative writing activities in the Introduction to Psychology (Psyc 1010) course. We continue our focus in subsequent courses by providing course content that is

scientifically and technologically current, develops a scientific way of thinking, and provides information and practice to help students develop basic computer and quantitative skills. To support the development of critical thinking, we also offer laboratory-based research experience at the 1000-, 3000-, and 4000-levels of instructions. Students have the opportunity to hone and demonstrate their communication skills in a diverse array of Capstone courses.

4. Student-centered advising that emphasizes degree progress, career planning, and civic engagement at the local, national, and international level.

The Psychology Undergraduate Program (PUP) office provides a variety of resources to students who are psychology majors, minors, or simply interested in learning more about the field of psychology. Advisors in the PUP office provide comprehensive support for all issues related to earning an undergraduate degree in psychology at Wright State--whether it is declaring psychology as a major or a minor, scheduling classes, managing issues associated with courses and/or faculty, identifying and applying for volunteer opportunities, finding ways to pay for school, getting involved in research, or learning about our undergraduate organizations in psychology. Also, the PUP office provides career counseling to help students understand what they can do with a psychology degree. Whether the student's interests are related to mental health, business, education, law enforcement, or public service, the trained advisors in the PUP office help students match their knowledge and skills in psychology with a variety of career opportunities. Moreover, the PUP office advisors assist students in preparing for and applying to graduate school. The PUP office offers G.R.E. Boot Camps to help students prepare to take the GRE. Also, PUP office advisors help students specialize their undergraduate degree to make them more competitive for either B.A. level jobs or graduate schools, including completing a concentration in Behavioral Neuroscience, Industrial/Organizational Psychology, or Cognition and Perception or tailoring their curriculum in some other way.

5. Teaching innovations and course scheduling to facilitate and support a diverse learning environment.

We have examined, developed, and adopted a variety of teaching innovations to increase student learning and student engagement. We have introduced such innovations in acknowledgement of and to accommodate students' diverse learning styles and life circumstances. We have embedded increased levels of team-based, problem-based, and audience response technologies in our courses to enhance learning and engagement. Moreover, we have planned the redesign of dedicated classroom spaces to enable greater levels of team-based or problem-based learning (e.g., into SCALEUP configurations). Also, we have introduced various forms of distance learning and hybrid courses to support students' life demands. For example, our extensive offering of evening classes enables students to complete 100% of their major requirements after 4pm, and we have piloted the delivery of some Saturday courses.

Recognition of Quality of the Program

One recognition of the quality of our B.A. program is that students can complete a Department Honors program, enabling students to work closely with a faculty mentor on a piece of research. Between 2008 and 2012, 38 students (both B.A. and B.S.) have completed the Honor's program

within the department of Psychology. Another recognition of the quality of our B.A. program is the integration of our B.A. undergraduates into classes with our B.S. undergraduates and which are taught by faculty who are active in research and in many cases supporting the HF/IO Ph.D. program. The primary distinction between B.A. and B.S. students is that B.A. students take fewer methods-related courses. However, in all of their major requirement courses, WSU's B.A. students are educated under a scientist/practitioner model. That is, B.A. students' education is enriched by a focus on research and the scientific method. This distinguishes our B.A. program from B.A. programs in other universities.

Program Learning Outcomes

The B.A. curriculum is designed to provide opportunities to achieve the following four outcomes:

Outcome 1: Be familiar with current theory and research in diverse areas of psychology

Outcome 2: Have fundamental research design and math/statistical skills needed to understand psychological science

Outcome 3: Communicate effectively in both written and oral forms

Outcome 4: Have skills in integrating and communicating about psychological knowledge

Outcome 5: (B.S. Degree only; see next program description): Have advanced research design, mathematical/statistical, and computing skills needed to critically evaluate and conduct research in a self-selected area of psychology

Description of Learning Outcomes Assessment Program

Learning outcomes have been assessed in two ways. 1. Students earning either a B.A. or B.S. degree in psychology were asked to indicate how much the curriculum provided opportunities to achieve each program learning objective (see Summary table below). Further, learning outcomes have been assessed in each of two required capstone courses. 2. Faculty teaching capstone courses evaluate students on each of the previously described learning outcomes.

Summary of Assessment Findings for Past Five Years

Students indicated how much (1 = *not at all* through 5 = *very much*) the curriculum provided opportunities to achieve each program learning objective. The following reflects the numeric averages of those ratings. Ratings include both B.A. and B.S. students.

We note that outcome scores were high in the first 4 years reported above and reflected a drop in 2011-2012. We believe the scores from the first 4 years are more reflective of student outcomes than the final year. The drop occurred in the year in which we switched from paper assessment forms to an online tool (e.g., survey monkey), assuming it would be more convenient for students. It is conceivable that with the change from a paper to electronic format, we captured a slightly different student sample. Certainly, we had far fewer students completing the assessment in that initial year of online assessment. Another reason for the drop could be the stress students experienced associated with the semester conversion. For example, students were concerned that credits might be lost, that their graduation might be delayed or that further

expenses would be incurred. Unfortunately, we cannot compare scores with 2012-2013 because no assessment data was requested for that year, and data for this past year is not yet available.

	Outcome #1	Outcome #2	Outcome #3	Outcome #4	Outcome #5 B.S. Only
2007-2008 <i>N</i> = 78	4.44	4.22	4.45	4.48	4.65
2008-2009 <i>N</i> = 72	4.22	4.08	4.36	4.28	4.10
2009-2010 <i>N</i> = 98	4.41	4.29	4.56	4.53	3.78
2010-2011 <i>N</i> = 71	4.06	4.03	4.36	4.19	3.59
2011-2012 <i>N</i> = 46	3.30	3.36	3.63	3.33	3.65

Major Curricular Changes since Last Review (or Past Five Years)

1. Transitioned curriculum from 3 quarters to 2 semesters system, which has enabled greater depth in content coverage and skill development (e.g., writing, research design, and methodology).
2. Restructured our 3-course research method sequence into 2-course method sequence.
3. Added Industrial-Organizational Psychology Concentration
4. Added Cognition and Perception Concentration
5. Added Behavioral Neuroscience Concentration

Graduate Placement Data and Employer Satisfaction

Not available

If program has professional accreditation, attach most recent review findings and recommendations

Not applicable

REPEAT THIS INFORMATION OF EACH PROGRAM IN DEPARTMENT. BEGIN NEXT PROGRAM ON NEW PAGE.

Program 2. B.S. Psychology

Enrollment and Graduate History

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Enrollment*	840	947	960	881	814
Graduates*	208	232	237	251	227

*Includes both B.A. and B.S. students because some undergraduates begin in B.S. and switch into B.A. program.

Program Description

The undergraduate B.S. program involves instruction, laboratory, and other experiential opportunities relating to the scientific investigation of mental and physiological processes, as well as the social and situational factors underlying the behaviors of human and non-human animals. Students pursuing the undergraduate degree can earn a Bachelor of Arts or a Bachelor of Science, with the latter offering concentrations in Behavioral Neuroscience, Industrial Organizational Psychology, or Cognition and Perception. Also, a minor program is provided offering students majoring in other disciplines insights on psychological theory and applications. A variety of graduate and professional school as well as employment opportunities exist for graduates earning this degree.

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Recognition of Quality of the Program

The quality of our Bachelor of Science (BS) program is perhaps best indicated by the success of our students on measures of psychological scholarship while still undergraduates. A total of 16 B.S. students working with faculty mentors have been co-authors on 14 refereed journal

publications, three of these as senior author. A large contingent of B.S. students, many of them members of our very active student groups (the psychology club and the psychology honorary society, Psi Chi) travel each year to Chicago to present papers and posters at the Midwestern Psychological Association (MPA) meetings. Thirty three B.S. students presented papers at MPA from 2009-2013. Three of these were named Psi Chi regional award winners. In total, 61 B.S. students have been authors of presentations or posters at various professional conferences during the evaluation period.

Another recognition of the quality of our B.S. program is that students can complete a Department Honors program, enabling students to work closely with a faculty mentor on a piece of research. Between 2008 and 2012, 38 students (both B.A. and B.S.) have completed the Honor's program within the department of Psychology. Many of the students who presented research at MPA presented research from their honor's project.

Program Learning Outcomes

The B.S. curriculum is designed to provide opportunities to achieve the following five outcomes:

Outcome 1: Be familiar with current theory and research in diverse areas of psychology

Outcome 2: Have fundamental research design and math/statistical skills needed to understand psychological science

Outcome 3: Communicate effectively in both written and oral forms

Outcome 4: Have skills in integrating and communicating about psychological knowledge

Outcome 5: (B.S. Degree): Have advanced research design, mathematical/statistical, and computing skills needed to critically evaluate and conduct research in a self-selected area of psychology

Description of Description of Learning Outcomes Assessment Program

Learning outcomes have been assessed in two ways. 1. Students earning either a B.A. or B.S. degree in psychology were asked to indicate how much the curriculum provided opportunities to achieve each program learning objective (see Summary table below). Further, learning outcomes have been assessed in each of two required capstone courses. 2. Faculty teaching capstone courses evaluate students on each of the previously described learning outcomes.

Summary of Assessment Findings for past five years

Students indicated how much (1 = *not at all* through 5 = *very much*) the curriculum provided opportunities to achieve each program learning objective. The following reflects the numeric averages of those ratings. Ratings include both B.A. and B.S. students.

We note that outcome scores were high in the first 4 years reported above and reflected a drop in 2011-2012. We believe the scores from the first 4 years are more reflective of student outcomes than the final year. The drop occurred in the year in which we switched from paper assessment forms to an online tool (e.g., survey monkey), assuming it would be more convenient for students. It is conceivable that with the change from a paper to electronic format, we captured a slightly different student sample. Certainly, we had far fewer students completing the

assessment in that initial year of online assessment. Another reason for the drop could be the stress students experienced leading up to the semester conversion. Students were concerned that credits might be lost, that their graduation might be delayed or that further expenses would be incurred. Unfortunately, we cannot compare scores with 2012-2013 because no assessment data was requested for that year, and data for this past year is not yet available.

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Major Curricular Changes since Last Review (or Past Five Years)

1. Transitioned curriculum from 3 quarters to 2 semesters system, which has enabled greater depth in content coverage and skill development (e.g., writing, research design, and methodology).
2. Restructured our 3-course research method sequence into 2-course method sequence.
3. Added Industrial-Organizational Psychology Concentration
4. Added Cognition and Perception Concentration
5. Added Behavioral Neuroscience Concentration

Graduate placement data, employer satisfaction

Not available

If program has professional accreditation, attach most recent review findings and recommendations

Not applicable

REPEAT THIS INFORMATION OF EACH PROGRAM IN DEPARTMENT. BEGIN NEXT PROGRAM ON NEW PAGE.

Program 3. Minor in Psychology

Enrollment and Graduate History

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Enrollment	60	53	90	102	90
Graduate	40	44	47	57	48

Program Description

The number of psychology minors has been increasing since Fall 2009. Our minor program requires 22 credit hours and is integrated with our major program. The undergraduate minor program involves instruction, laboratory, and other experiential opportunities relating to the scientific investigation of mental and physiological processes, as well as the social and situational factors underlying the behaviors of human and non-human animals. Students pursuing the undergraduate degree can earn a Bachelor of Arts or a Bachelor of Science, with the latter offering concentrations in Behavioral Neuroscience, Industrial Organizational Psychology, or Cognition and Perception. A minor program is provided offering students majoring in other disciplines insights on psychological theory and applications. A variety of graduate and professional school as well as employment opportunities exist for graduates earning this degree.

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Program Distinctiveness

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4. Student-centered advising that emphasizes degree progress, career planning, and civic engagement at the local, national, and international level.

The Psychology Undergraduate Program (PUP) office provides a variety of resources to students who are psychology majors, minors, or simply interested in learning more about the field of psychology. Advisors in the PUP office provide comprehensive support for all issues related to earning an undergraduate degree in psychology at Wright State--whether it is declaring psychology as a major or a minor, scheduling classes, managing issues associated with courses and/or faculty, identifying and applying for volunteer opportunities, finding ways to pay for school, getting involved in research, or learning about our undergraduate organizations in psychology. Also, the PUP office provides career counseling to help students understand what they can do with a psychology degree. Whether the student's interests are related to mental health, business, education, law enforcement, or public service, the trained advisors in the PUP office help students match their knowledge and skills in psychology with a variety of career opportunities. Moreover, the PUP office advisors assist students in preparing for and applying to graduate school. The PUP office offers G.R.E. Boot Camps to help students prepare to take the GRE. Also, PUP office advisors help students specialize their undergraduate degree to make them more competitive for either B.A. or B.S. level jobs or graduate schools, including completing an concentrations in Behavioral Neuroscience, Industrial/Organizational Psychology, or Cognition and Perception or tailoring their curriculum in some other way.

5. Teaching innovations and course scheduling to facilitate and support a diverse learning environment.

We have examined, developed, and adopted a variety of teaching innovations to increase student learning and student engagement. We have introduced such innovations in acknowledgement of and to accommodate students' diverse learning styles and life circumstances. We have embedded increased levels of team-based, problem-based, and audience response technologies in our courses to enhance learning and engagement. Moreover, we have planned the redesign of dedicated classroom spaces to enable greater levels of team-based or problem-based learning (e.g., into SCALEUP configurations). Also, we have introduced various forms of distance learning and hybrid courses to support students' life demands. For example, our extensive offering of evening classes enables students to complete 100% of their major requirements after 4pm, and we have piloted the delivery of some Saturday courses.

Recognition of Quality of the Program

The clearest recognition of the quality of our minor program is the integration of our minor undergraduates into classes with our B.A. and B.S. undergraduates and which are taught by faculty who are active in research and in many cases supporting the HF/IO Ph.D. program. We

do not distinguish between our minors and our major students. The education of students completing our minor is enriched by a focus on research and the scientific method.

Program Learning Outcomes

The B.A. curriculum is designed to provide opportunities to achieve the following four outcomes:

Outcome 1: Be familiar with current theory and research in diverse areas of psychology

Outcome 2: Have fundamental research design and math/statistical skills needed to understand psychological science

Outcome 3: Communicate effectively in both written and oral forms

Outcome 4: Have skills in integrating and communicating about psychological knowledge

Outcome 5: (B.S. Degree): Have advanced research design, mathematical/statistical, and computing skills needed to critically evaluate and conduct research in a self-selected area of psychology

Description of Description of Learning Outcomes Assessment Program

Learning outcomes have been assessed in two ways. 1. Students earning either a B.A. or B.S. degree in psychology were asked to indicate how much the curriculum provided opportunities to achieve each program learning objective (see Summary table below). Further, learning outcomes have been assessed in each of two required capstone courses. 2. Faculty teaching capstone courses evaluate students on each of the previously described learning outcomes.

Summary of Assessment Findings for past five years

B.A. and B.S. students indicated how much (1 = *not at all* through 5 = *very much*) the curriculum provided opportunities to achieve each program learning objective. The following reflects the numeric averages of those ratings. Similar ratings are likely for minors.

We note that outcome scores were high in the first 4 years reported above and reflected a drop in 2011-2012. We believe the scores from the first 4 years are more reflective of student outcomes than the final year. The drop occurred in the year in which we switched from paper assessment forms to an online tool (e.g., survey monkey), assuming it would be more convenient for students. It is conceivable that with the change from a paper to electronic format, we captured a slightly different student sample. Certainly, we had far fewer students completing the assessment in that initial year of online assessment. Another reason for the drop could be the stress students experienced leading up to the semester conversion. Students were concerned that credits might be lost, that their graduation might be delayed or that further expenses would be incurred. Unfortunately, we cannot compare scores with 2012-2013 because no assessment data was requested for that year, and data for this past year is not yet available.

	Outcome #1	Outcome #2	Outcome #3	Outcome #4	Outcome #5 B.S. Only
2007-2008 <i>N</i> = 78	4.44	4.22	4.45	4.48	4.65
2008-2009 <i>N</i> = 72	4.22	4.08	4.36	4.28	4.10
2009-2010 <i>N</i> = 98	4.41	4.29	4.56	4.53	3.78
2010-2011 <i>N</i> = 71	4.06	4.03	4.36	4.19	3.59
2011-2012 <i>N</i> = 46	3.30	3.36	3.63	3.33	3.65

Major Curricular Changes since Last Review (or Past Five Years)

1. Transitioned curriculum from 3 quarters to 2 semesters system, which has enabled greater depth in content coverage and skill development (e.g., writing, research design, and methodology).
2. Restructured our 3-course research method sequence into 2-course method sequence.
3. Added Industrial-Organizational Psychology Concentration
4. Added Cognition and Perception Concentration
5. Added Behavioral Neuroscience Concentration

Graduate placement data, employer satisfaction

Not available

If program has professional accreditation, attach most recent review findings and recommendations

Not applicable

REPEAT THIS INFORMATION OF EACH PROGRAM IN DEPARTMENT. BEGIN NEXT PROGRAM ON NEW PAGE.

Program 4. M.S. in HF/IO Psychology

Enrollment and Graduate History

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Enrollment	6	7	4	2	2
Graduates	6	13	9	2	7

Note: We are reporting the numbers provided to us.

Program Description

The M.S. HF/IO program is fully integrated with the Ph.D. program. The numbers provided to us regarding graduates appear to include at least some students who have completed the M.S. as they move toward the Ph.D. We have a terminal M.S. program, but few students apply to that program. Most of the students in our graduate program intend to complete the Ph.D. Some of the students entering our Ph.D. program have already completed a M.S. degree at another university. All students in our Ph.D. program must complete a M.S. degree (either at another school or at WSU). Students in the program are supported by GTAs, GRAs, internships, practica, or other forms of external funding.

Our graduate program is unique in that it provides students a solid grounding in both Human Factors and Industrial-Organizational Psychology. The program emphasizes that both specialties work best together to produce results that neither specialty could achieve alone. Students in both the M.S. and Ph.D. programs complete traditional specialization in either human factors or industrial-organizational psychology, and the second area serves as a minor area of focus. Our program is designed to foster an understanding of the relationships between both specialties. Students are prepared for this collaboration by learning the fundamentals of each specialty then interacting with one another in a wide variety of settings. The goal is a multidimensional education that prepares students for careers in business and industry as well as research, teaching, government, and consulting. Our graduate degree programs place a heavy emphasis on research that is focused on but not limited to: workload and attention; virtual environments; personality and stress assessment; job performance and assessment; cognitive development and aging; visual and auditory processes; aviation, medicine, and driving; human-computer interaction; decision making and expertise; and motivation, training, teams, and leadership. In addition to the Human Factors and Industrial Organizational Psychology programs. Also, our graduate students have access to department faculty who participate in the Neuroscience track of Wright State's interdisciplinary Biomedical Sciences Ph.D. program. Moreover, the HFIO program collaborates in the Technology-based Learning with Disabilities Specialization (LwD). The LwD program is an interdisciplinary program to study technologies to support learning for students with disabilities, is supported through NSF's Integrated Graduate Education and Research Traineeship (IGERT) program, and offers Fellowships for qualified students who are interested in pursuing research in the fields of disability and assistive technologies.

Alignment with University Mission and Strategic Plan

The psychology M.S. program supports all aspects of the university mission. We focus on supporting student success by 1) providing academic and career advising to our graduate students through our HFIO faculty, area leaders, and graduate program director, 2) delivering coursework that integrates theory/research and application, and 3) mentoring graduate students as they develop and carry out their thesis and other research projects. Moreover, our faculty members in Human Factors, Industrial-Organizational, and Behavioral and Cognitive Neuroscience Psychology are very active in research as demonstrated by the large number of publications in top journals and the large amount of grant dollars we produce each year. The scholarly research of our faculty is nationally and internationally recognized, increasing WSU's visibility and reputation. Further, the HFIO program provides significant service to the community through research and application partnerships with industry and government, including well-established relationships with Air Force Research Laboratory researchers at Wright-Patterson Air Force Base as well as providing well-trained graduates who serve the community, locally, nationally, and internationally, in academic and applied positions.

Program Distinctiveness

1. A unique program that provides training to meet the sociotechnical demands of complex human-machine systems and organizations.

Although the HFIO program at Wright State prepares its students to the same level of qualification in their respective specializations in human factors or industrial/organizational psychology as do other programs, it goes beyond the scope of the traditional training offered in other separated HF and IO programs to prepare its graduates to seek solutions to contemporary problems. Almost universally, addressing modern workplace problems requires being able to contribute to a team effort that considers both technological issues and social/organizational factors. The HFIO program was founded with the belief that a professional who appreciates the full range of these issues can interact better and contribute more than one who is more narrowly trained. Now in our 20th year, the success of our endeavor is indicated by a recent report (The Industrial-Organizational Psychologist, 2014) ranking our program 20th (out of 62 IO programs) in terms of research productivity.

2. A faculty recognized for their excellence in both research and teaching nationally and internationally.

Our faculty have been recognized for their excellence in both research and teaching. Numerous faculty are editors or serve on editorial boards of respected research journals. Drs. John Flach, Valerie Shalin, Michael Hennessy, and Scott Watamanuik have completed recently or are currently on sabbaticals in The Netherlands, France, Germany, and Australia, and they are continuing research collaborations with colleagues there. Drs. Kevin Bennett, John Flach, and Nathan Bowling have received awards for their research publications. Dr. John Flach recently received the Paul Fitts award for excellence in teaching.

3. Graduates who are much sought-after in the workforce as evidenced by a zero unemployment rate.

Both HF and IO psychology have excellent employment outlooks. Our graduates who seek employment upon completion of their M.S. degrees have had a zero unemployment rate. Graduates work in a variety of industry and military settings, including Nationwide Insurance, Select International, and Wright Patt AFB.

4. A curriculum that focuses on developing critical thinking.

We have designed our curriculum not only to instill knowledge in the various psychological domains but to prepare students to become effective, productive citizens in an increasingly interconnected world full of opportunities and challenges. Our curriculum emphasizes the understanding of complex data, the development of cogent means to discover ideas and resolve differences, and the demonstration of communication skills. In our M.S. program, we begin our focus on critical thinking in initial coursework and carry it through the masters thesis research project. Students have the opportunity to hone and demonstrate their communication skills by presenting or publishing their research at appropriate professional conferences.

Recognition of Quality of the Program

We have multiple indicators of the quality of our M.S. program.

1. A recent report (The Industrial-Organizational Psychologist, 2014) ranking our program 20th (out of 62 IO programs) in terms of research productivity.
2. HFIO faculty who have received awards for both teaching and research excellence, received substantial external funding, and who are sought after for consulting.
3. A 100% employment rate of our M.S. graduates in a job related to their discipline.
4. National and international research collaborations.
5. Editorships and memberships on editorial boards at HFIO research journals.

Program Learning Outcomes

The M.S. program is designed to provide opportunities to achieve the following four outcomes:

Outcome 1: Be familiar with current theory and research in HF, IO, and other areas of psychology

Outcome 2: High level research design and math/statistical skills needed to understand, conduct, and communicate psychological research

Outcome 3: Communicate effectively in both written and oral forms

Outcome 4: Have skills in integrating and communicating about psychological knowledge

Description of Learning Outcomes Assessment Program

Learning outcomes are assessed for each M.S. student by HFIO faculty in an annual review process. The review process assesses quality of work in relation to coursework, research/scholarship, and professionalism. Each student is provided with individual feedback and works closely with a faculty advisor/mentor to improve their knowledge and skills.

Summary of Assessment Findings for past five years

Our assessment program has been conducted as an individual-level assessment and feedback process.

Major Curricular Changes since Last Review (or Past Five Years)

1. Transitioned curriculum from 3 quarters to 2 semesters system, which has enabled greater depth in content coverage and skill development (e.g., writing, research design, and methodology).
2. Restructured courses offered and provided students with a curriculum planning tool.

Graduate placement data, employer satisfaction

Examples of employment include Nationwide Insurance, Select International, and several contractor firms associated with Wright Patt AFB. Employer satisfaction data are not available.

If program has professional accreditation, attach most recent review findings and recommendations

Not applicable

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Departmental Summary**Faculty Demographics (Data from ADS)**

	2008	2009	2010	2011	2012
Full	9	8	8	7	9
Associate	11	10	10	10	9
Assistant	2	3	3	3	3
Inst/Lect	3	3	3	1	3
Adjunct	11.33	8.05	7.25	11.52	6.58
Total	36.33	32.05	31.25	32.52	30.58

Staffing Summary (Data from ADS)

	2008	2009	2010	2011	2012
Unclassified	2.01	2.10	2	2	4
Classified	3.75	3.75	3.75	3.75	5
Total	5.76	5.76	5.75	5.75	9

Student/Faculty Ratio (Data from ADS)

	2008	2009	2010	2011	2012
Student FTE/Fac FTE	21.12	25.27	25.89	25.44	22.92

Average Class Size (Data from ADS)

	2010	2011	2012
Lecture	38.74	39.54	73.66
Lab only	16.12	47.75	51.84
Lecture/Lab	41.58	51.84	68.92

Total of Student Data for all Programs in Unit ((Data from PED)

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Enrollment	840	947	960	881	814
Graduates	208	232	237	251	227

Total Courses Taught and Credit hours Generated for Unit (Data from PED)

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Undergraduate	30121	31552	31044	25689	24432
Graduate	1305	1561	1351	1205	1193
Total	31426	33113	32395	26894	25625

Course Completions (Data from ADS)

	2008	2009	2010	2011	2012
Undergraduate	84.1%	82.5%	81.0%	82.7%	81.4%
Master's	97.2%	90.5%	85.1%	89.5%	86.3%

Expense per Student and Revenue to Expense Ratio (Data from ADS)

	2008	2009	2010	2011	2012
Expense per student	\$4,233	\$3,931	\$3,872	\$3,922	\$4,789
Rev/Expense	2.633	2.918	3.039	2.937	2.603

Research and External Funding (Data from PED)

	2008	2009	2010	2011	2012
External funding	1,210,420	1,612,914	800,340	1,033,422	825,069

Future Employment Projections for Discipline (to be provided to unit)

Future employment projections are clear at the M.S. and less clear at the B.A. or B.S. level. The employment outlook for students graduating with the M.S. degree are excellent. At the B.A. or B.S. levels the employment outlooks are more difficult to determine because few jobs have the term "Psychology" in the title. Most jobs with the term "Psychology" in the title refer to jobs at the doctoral level. We report below the data that was provided to us.

Employment Outlook

CIP	Location	Total Jobs for the Occupational Group (2014)	Total Jobs for the Occupational Group (2017)	Growth in Jobs (2014-2017)	Actual Job Openings (2014)
42.0101 Psychology, General	Region:	1,917	2,011	4.90%	96
	State:	11,833	12,439	5.10%	
	US:	419,719	449,895	7.20%	
42.2804 IO Psychology	Region:	22	23	5.10%	1
	State:	135	141	4.30%	
	US:	4,908	5,271	7.40%	

More Employment Outlook Data

CIP	Program	WSU Main Campus Completions (2013)	Other Regional Completions (2013)	Regional Openings (2014)	Median Hourly Earnings
42.0101	Psychology, General Occupations: Clinical, Counseling, and School (19- 3031) IO Psychologists (19-3032) Psychologists, All Other (19-3039)	192	503	96 79 1 16	\$31.47
42.2804	IO Psychology Occupations: IO Psychologists (19-3032)	4	0	1 0	\$34.40
Department Total and Total Regional Job Openings	31426	196	503	97	

Description of how unit programs and curricula are “mission critical” to the core Wright State educational experience

The psychology B.A., B.S., minor, and M.S. programs support all aspects of the university mission. We focus on supporting student success by 1) providing academic, graduate school, and career advising to our majors through our Psychology Undergraduate Program (PUP) office and through our graduate program advisors, 2) delivering coursework that employs teaching innovations designed to leverage lecture content with proper alignment with laboratory content and to offer course activities that increase student engagement which benefits both majors and non-majors who take our courses, and 3) encouraging interested students to avail themselves of research opportunities in faculty laboratories. Indeed, we impact a large number of students because not only do we have approximately 800 majors and 90 minors, but we also provide required coursework for students in other undergraduate majors, e.g., nursing, and elective coursework for graduate students in other programs, e.g., Ed.D. in Organizational Leadership. Moreover, our faculty in Behavioral Neuroscience, Human Factors, and Industrial-Organizational Psychology are very active in research as demonstrated by the large number of publications in top journals and the large amount of grant dollars we produce each year. Also,

because of WSU's balance of teaching and research and WSU's size, the scholarly research of our faculty increases WSU's visibility and reputation while our faculty still remain accessible to students who want research experience. Additionally, the content areas of our faculty ensure that the knowledge we are creating is useful in enhancing human performance at work both in terms of how technology can be better utilized to accomplish work and how employees and leaders in the workplace can work together more effectively to increase organizational productivity. Finally, the undergraduate internship program in our department ensures that many of our student provide useful service to the Dayton community as part of their learning in a variety of health and human service settings.

Faculty accomplishments and recognitions

Using 2013 as a representative year, our faculty members have demonstrated a high level of scholarly productivity and done much to enhance the visibility and reputation of WSU.

Accomplishments include 43 publications from our faculty ($N = 20$), 60% of which included at least one graduate or undergraduate student coauthor; an average of 3.3 presentations per faculty member; 8 faculty serving as editors for a journal or on at least one editorial board; 4 faculty members serving on granting agency study sections; and 4 faculty members holding offices in national professional organizations.

Dr. John Flach received the Paul M. Fitts Education Award in 2013 from the Human Factors and Ergonomics Society (HFES).

Dr. Kevin Bennett received the HFES Most Outstanding Article Award in 2013 for a paper published the Journal of Cognitive Engineering and Decision Making.

One of our recent additions to the faculty, Dr. Joseph Houpt, was the recipient of the 2013 Indiana University Cognitive Science Program Outstanding Dissertation Award.

Programs and areas of recognized excellence with supporting evidence

Now in our 20th year, the success of our HF/IO graduate program is indicated by a recent report (The Industrial-Organizational Psychologist, 2014) ranking our program 20th (out of 62 IO programs) in terms of research productivity.

Excellence in our undergraduate B.A. and B.S. programs is supported by having 19 undergraduates as coauthors on published journal articles between 2009 and 2013, including three students who were coauthors on two publications and one student who was a coauthors on three publications.

Capacity for growth of programs

At the undergraduate level, we are promoting the minor in psychology and double majors. We are working with other departments, e.g., Management and Marketing, that together with

psychology might better prepare students for specific careers. Similarly, we encourage double majors for the more ambitious students.

Also, at the undergraduate level, we are working with SOPP and RSCB to develop early admission programs into the Psy.D. and marketing and management masters programs. With these programs in place, we expect to attract greater numbers of high quality high school students to WSU.

New program opportunities

At the undergraduate level, our faculty are working with faculty in the School of Medicine and Department of Biology to develop and deliver an undergraduate neuroscience major. This program would be administered by NCBP. Our faculty would deliver courses in that program, and the program would also allow students in our Behavioral Neuroscience Concentration to acquire a broader background in neuroscience courses and experiences. This program should enable us to attract greater numbers of high quality high schools to WSU.

At the graduate level, we are working with the Department of Earth and Environmental Sciences to develop a non-thesis track in the Environmental Sciences masters program. The track will address Environmental and Occupational Health and Safety. We have targeted this program at adults working in related fields who are seeking a graduate degree to facilitate advancement in their organizations.

Proposals to enhance programs (if desired)

Addressed in part in preceding sections.