

PSYCHOLOGY

The psychological science department offers a master of science in industrial-organizational psychology (I-O). Our M.S. in I-O psychology degree provides a strong foundation in scientific methods, management of human resources, and applying strategies and training techniques to make organizations more effective. With predicted growth of 53 percent for I-O psychologists between 2012 and 2022, this career field is in high demand (*Occupational Outlook Handbook*, U.S. Bureau of Labor Statistics). Requirements for the program are listed on our website, <https://psych.mst.edu/academic-programs/graduate/>. The M.S. program is offered on campus and via distance education. Additional information about our distance education program can be found at the distance and continuing education website, <https://distance.mst.edu/distance-programs/distance-graduate-degrees/industrial-organizational-psychology/>.

Master of Science in Industrial-Organizational Psychology

Admission Requirements

Students interested in the M.S. in I-O psychology program should review the admissions requirements listed on our website (<https://psych.mst.edu/academic-programs/graduate/admission-requirements/>).

Program Requirements

The M.S. in industrial-organizational psychology requires 37 credit hours which includes a thesis or non-thesis option. Students will complete 21 credit hours of core courses, 10 hours of methods courses, and either 6 hours of elective credits or 6 hours of thesis credits. Applied internship experiences are suggested, but not required as part of the program. The program will take at least 2 years to complete and classes are offered both on-campus and via distance.

Core Courses (21 hours)

PSYCH 5020	Introduction to Industrial-Organizational Psychology
PSYCH 5601	Small Group Dynamics
PSYCH 5700	Job Analysis and Performance Management
PSYCH 6610	Leadership, Motivation, and Culture
PSYCH 6702	Personnel Selection
PSYCH 6602	Organizational Development & Employee Perspectives
PSYCH 6700	Training and Development

Methods Courses (10 hours)

PSYCH 5201	Psychometrics
PSYCH 5210	Advanced Research Methods
PSYCH 5012	Ethics and Professional Responsibilities
PSYCH 5202	Applied Psychological Data Analysis

Electives from list below or Thesis (6 hours)

PSYCH 5710	Advanced Human Factors
PSYCH 5600	Advanced Social Psychology
PSYCH 5740	Occupational Health and Safety
PSYCH 5001	Special Topics

Students completing a thesis would need to complete the following in place of electives:

PSYCH 6099	Research
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Applied Workplace Psychology

The applied workplace psychology graduate certificate is designed to serve as a recruitment tool for the industrial-organizational psychology MS program. This program will offer students a set of foundational

courses in industrial and organizational psychology. Students who pass all four courses with a cumulative GPA of 3.0 or better can gain entry to the I-O psychology MS program with the other application requirements being waived. The included courses cover an introductory I-O course, an advanced research methods course, a course on job analysis and performance appraisal and a small group dynamics course which will examine groups and teams in organizations.

All four courses included in the applied workplace psychology certificate curriculum will be offered once per year. All of these courses are available both on-campus as well as via distance.

Fall Courses:

PSYCH 5020	Introduction to Industrial-Organizational Psychology	3
PSYCH 5210	Advanced Research Methods	3

Spring Courses:

PSYCH 5601	Small Group Dynamics	3
PSYCH 5700	Job Analysis and Performance Management	3

Admissions requirements for the applied workplace psychology certificate are available at <https://psych.mst.edu/academic-programs/graduate/admission-requirements/>

Students admitted to the applied workplace psychology certificate program will have non-degree graduate status, however, they will earn graduate credit for the course they complete. If the student completes the four-course sequence with a cumulative GPA of 3.0 or better, they, upon application, will be admitted to the M.S. degree program in industrial organizational psychology. The certificate credits taken by the students admitted to the M.S. degree program will count towards their master's degrees. Students who do not have all of the prerequisite courses necessary to begin the courses in the applied workplace psychology certificate program will be allowed to take "bridge" courses at either the graduate or undergraduate level to prepare for the formal certificate courses.

Human Factors Psychology Certificate

This certificate is designed to give students expertise in how people interact with engineered systems and devices. Students will increase their understanding of how to engage in human-centered design and better support interactions between humans and technology. This certificate will help advance multiple career paths including human-focused paths to better understand technology and technology-focused paths to better understand human perspective.

Students will have greater expertise understanding and critically analyzing the intersection of technology design and implementation with human capacity and approaches, including the use of technology for communication, occupational health and safety standards, understanding and use of information systems, and using technology to connect to customers/the market.

Course requirements include the following:

PSYCH 5710	Advanced Human Factors	3
And 3 of the following:		
PSYCH 4720	Psychology of Social Technology	
PSYCH 5740	Occupational Health and Safety	

TCH COM 5530	Usability Studies
IS&T 5885	Human-Computer Interaction and User Experience
BUS 5150	Customer Focus and Satisfaction

This program is open to all persons holding a bachelor's, master's, or doctorate degree in psychology, business, or a related field, with a preferred minimum of one year of professional employment experience. Minimum undergraduate GPA is 3.0.

Denise Baker, Assistant Professor
PHD Arizona State University

Amy Belfi, Assistant Professor
PHD Univeristy of Iowa

Devin Burns, Associate Professor
PHD Indiana University

Jessica L. Cundiff, Associate Professor
PHD Pennsylvania State University

Amber M Henslee, Associate Professor
PHD Auburn University Main Campus

Merilee A. Krueger, Teaching Professor
EdD University of Missouri

Clair Kueny, Associate Professor and Interim Chair
PHD Saint Louis University

Frances H Montgomery, Emeritus Professor
PHD Florida State University

Susan L Murray, Professor and Chair¹
PHD Texas A&M University

Vahe Permezadian, Assistant Professor
PHD University at Albany, State University of New York

Daniel Shank, Associate Professor
PHD University of Georgia

Ting Shen, Assistant Professor
PHD Michigan State University

Nancy J Stone, Professor Emerita
PHD Texas Tech University

PSYCH 5000 Special Problems (IND 0.0-6.0)
Problems or readings on specific subjects or projects in the department. Consent of instructor required.

PSYCH 5001 Special Topics (LEC 0.0-6.0)
This course is designed to give the department an opportunity to test a new graduate level course. Variable title.

PSYCH 5010 Seminar for Industrial / Organizational Psychology (RSD 3.0)
A seminar course for general overviews of the most recent research in Industrial-Organizational Psychology. Prerequisite: Graduate standing.

PSYCH 5012 Ethics and Professional Responsibilities (LEC 1.0)
Case studies examining the ethical practice of psychology in organizations will be discussed. This will include covering both the legal and ethical standards surrounding the consulting and practice of I-O psychology and personnel management in organizations. Prerequisite: Graduate standing.

PSYCH 5020 Introduction to Industrial-Organizational Psychology (LEC 3.0)
Review of the most recent theoretical and applied research in advanced personnel and organizational psychology. Topics will include personnel selection, training and performance appraisal, job attitudes, motivation, work groups and teams, leadership, organizational culture, and organizational development. Prerequisites: Graduate Standing.

PSYCH 5040 Oral Examination (IND 0.0)
(Variable) After completion of all other program requirements, oral examinations for on-campus M.S./PH.D students may be processed during intersession. Off-campus M.S. students must be enrolled in oral examination and must have paid an oral examination fee at the time of the defense/comprehensive examination (oral/written). All other students must enroll for credit commensurate with uses made of facilities and/or faculties. In no case shall this be for less than three (3) semester hours for resident students.

PSYCH 5200 Theories and Practice of Psychological Measurement (LEC 3.0)
An overview of psychological tests and batteries used in a variety of disciplines. An emphasis is placed on the proper development and use of these tests and test batteries. Tests examined will include tests of intelligence, aptitude, personality, and psychopathology. Prerequisite: Psych 4200 or graduate standing.

PSYCH 5201 Psychometrics (LEC 3.0)
An examination of statistical methods used to develop and refine measures of human performance, aptitudes, and personality. Topics include reliability and validity, data reduction, measuring inter-relationships among variables (e.g., factor analysis, multiple regression), and testing group differences. Prerequisite: Psych 5202.

PSYCH 5202 Applied Psychological Data Analysis (LEC 3.0)
This course will focus on those statistical methods most useful for advanced research in psychology. We will learn to use R, a powerful, open-source statistical programming platform, and work through examples with psychological data sets including such techniques as correlation, ANOVAs, regression, and chi-squared. Prerequisite: Graduate standing.

PSYCH 5210 Advanced Research Methods (LEC 3.0)
Research methods and techniques, with an emphasis on conducting psychological research in organizational settings. Topics discussed include: ethics, reliability and validity in measurement and application, proper uses of experimental, quasi-experimental, and survey methodologies, as well as advanced methodologies IRT, SEM, HLM, and Meta-Analyses. Prerequisite: Graduate standing.

PSYCH 5600 Advanced Social Psychology (LEC 3.0)

An advanced study of the behavior of individuals in interaction within groups. Consideration will also be given to the experimental literature dealing with the formal properties of groups, conformity and deviation, intergroup relations, and attitude formation and attitude change. Prerequisite: Psych 4600 or graduate standing.

PSYCH 5601 Small Group Dynamics (LEC 3.0)

This course covers group perception, identification, leadership, structure, conflict, cohesion, commitment, performance, norms, roles, influence, and decisions, and groups' relations, networks, and work teams. Students consider both theory and applications to their lives and organizations through observational, research, team and applied assignments. Prerequisite: Psych 4601 or graduate standing.

PSYCH 5602 Organizational Development (LEC 3.0)

Examination of the field of organizational development theories and interventions. An emphasis is placed on research methods and application of practices related to individual processes, group processes, and organizational structures and functions that impact change and development strategies and interventions. Prerequisite: Psych 4602 or graduate standing.

PSYCH 5603 Advanced Social Influence (LEC 3.0)

An in-depth review of the principles and procedures that affect the process of social influence, with consideration given to attitudinal, compliance inducing, and perceptual influences. Students will consider the theoretical implications and practical applications of topics in social influence in the form of independent reading, research proposals and/or projects, and observational assignments. Prerequisite: Psych 4603 or graduate standing.

PSYCH 5700 Job Analysis and Performance Management (LEC 3.0)

A focus on the scientific measurement of job performance. An in-depth discussion of the science and methods of appropriate job and task analysis will be discussed. Additionally, students will focus on current issues in performance management and appraisal including scientific findings related to both objective and subjective measures of performance. Prerequisite: Psych 4700 or graduate standing.

PSYCH 5710 Advanced Human Factors (LEC 3.0)

An in-depth review of the foundations of human factors, focusing on the interaction of people with various forms of technology in a variety of environments. Topics include research and evaluation methods, displays (e.g., visual, auditory), attention and information processing, decision making, motor skills, anthropometry, and biomechanics. (Co-listed with ENG MGT 5330).

PSYCH 5720 Advanced Psychology of Social Technology (LEC 3.0)

This course covers research, theory, and practice from psychology and other social sciences for understanding the psychological and social effects of interactions with and through technology including personal, work, organizational, and societal use of technology. Topics includes social media, artificial intelligence, ethical algorithms, and cyberpsychology. Prerequisite: Psych 1101 or graduate standing.

PSYCH 5730 Environmental Psychology: Research and Practice (LEC 3.0)

An in-depth review of the theoretical perspectives in environmental psychology and the psychological effects of various environments. An emphasis is placed on the review and integration of the research to explain the psychological issues related to various environments as well as to understand ways to effectively design living, educational, work, and recreational environments. Prerequisite: Psych 4730 or graduate standing.

PSYCH 5740 Occupational Health and Safety (LEC 3.0)

This course will cover the ethical, legislative, technical, behavioral and management aspects of health and safety practices in human resources. Topics include workplace safety, ergonomics, accident investigation, occupational stress, government regulatory agencies, employee assistance programs, wellness programs, and behavioral based safety. Prerequisites: Graduate standing.

PSYCH 6085 Internship (IND 0.0-6.0)

Students will apply critical thinking skills and discipline specific knowledge in a work setting based on a project designed by the advisor and employee. Activities will vary depending on the student's background and the setting. Requires a major report. Prerequisites: Completed Core and Methods courses; instructor consent.

PSYCH 6099 Research (IND 0.0-6.0)

Investigations of an advanced nature leading to the preparation of a thesis or dissertation. Prerequisites: Consent of instructor required.

PSYCH 6602 Organizational Development & Employee Perspectives (LEC 3.0)

Students will learn about change management theory, different organizational development interventions, their uses, and how to implement them in an organizational setting. Additionally, theory and research surrounding employee attitudes, emotions, and behaviors, particularly as they relate to organizational change and development, will be covered. Prerequisite: Psych 5020, and either preceded or accompanied by Psych 5202.

PSYCH 6610 Leadership, Motivation, and Culture (LEC 3.0)

Examination of research related to leadership, motivation, and the impact of organizational culture on organizational performance will be discussed. The course will focus on the application of psychological theories to enhance organizational functioning and to promote positive workplace behaviors. Prerequisite: Psych 5020.

PSYCH 6611 Leadership for Engineers (LEC 3.0)

Provides engineers with a background in leadership concepts and principles; enables students to develop practical skills in leading and managing through multiple personal assessment. Topics include leadership styles, managing commitments, conflict resolution, change management, emotional intelligence, team dynamics and business ethics. Prerequisite: Eng Mgt 5110 or Psych 4602.

PSYCH 6700 Training and Development (LEC 3.0)

Psychological theories of learning will be covered. Students will learn how evaluate training needs in an organization as well as how to subsequently develop, implement, and validate a training program in an organizational context. Prerequisite: Psych 5700.

PSYCH 6702 Personnel Selection (LEC 3.0)

Current trends and methods in personnel recruitment and selection including classification, and promotion will be examined. An emphasis will be placed on legal and methodological considerations that can impact proper testing and assessment procedures. Cognitive abilities, personality, physical abilities, and other non-cognitive assessments will be discussed. Prerequisite: Psych 5700, Psych 5202, Psych 5201.
