

**Colorado State University
College of Natural Sciences
Department of Psychology
Synopsis of Proposed Plan C (Professional) Master's Degree in Applied
Industrial/Organizational Psychology**

1. Overview of Proposed Program

Name: Applied Industrial/Organizational Psychology
Degree Type: Master's of Science – Distance Degree
Department/School: Psychology
College of Natural Sciences
Colorado State University
Five-Year Expected Enrollment: 30 steady-state after 4th year

Proposed Degree, Rationale and Summary

Summary of program:

Industrial/Organizational (I/O) psychology is the study of human behavior in the workplace. I/O psychologists focus on research and consulting that results in tools and systems that improve individual job satisfaction and organizational effectiveness. The Department of Psychology and the Division of Continuing Education are proposing to offer an online Master's degree in Applied I/O Psychology beginning in August, 2009. Key characteristics include:

- The program will prepare students to work as applied researchers in the areas of human resource management and organizational management. Graduates work in consulting firms, organizations with large human resource departments, or city, state, and federal governments. Typical responsibilities for Master's-level research psychologists include:
 - Supporting talent management programs by developing and validating selection tests;
 - Supporting training and development programs by conducting needs assessments and evaluating training effectiveness;
 - Supporting organizational development efforts by conducting, analyzing, and feeding back employee attitude surveys;
 - Supporting leadership development programs by developing and monitoring 360-style assessment programs.
- All courses will be designed to embody emerging principles in web-based instruction. Courses will feature authentic learning environments (e.g., embedded simulations) and provide not only critical core knowledge, but skill development through applied projects and exercises.
- Courses in the program will also be available to on-campus students enrolled in any graduate program at Colorado State University, thus expanding curriculum options for these students.

Program rationale: CSU's Department of Psychology focuses on applied graduate degrees and the specialty in Industrial/Organizational Psychology is integral to the identity and mission of the department. The department currently offers a Ph.D. in Industrial/Organizational Psychology. The program is annually recognized as one of the top 15 in the country, and one of the best in the western United States. Students enrolled in the doctoral program receive a Master's degree in pursuit of their doctorate, but the program is designed to teach skills and knowledge across four to five years of academic study. Thus,

while many potential applicants desire a terminal Master's degree from CSU, they would not be accepted into the doctoral program if their stated goal was a Master's degree, nor would they be adequately prepared for a practitioner job with a Master's degree earned as a requirement towards the doctorate. Many of the specific skills required of I/O practitioners are taught in the latter years of the Ph.D. program (and so would not be covered in courses taken by doctoral students prior to earning their Master's).

- Within psychology, I/O is one of few sub-disciplines with a strong job market for practitioners trained at the master's level. For example, in traditional sub-disciplines such as cognitive and social psychology (for which the department offers doctoral degrees), jobs are almost exclusively for Ph.D.s. In counseling and clinical psychology, there are jobs for master's level practitioners, but these jobs are heavily restricted due to the care-giving aspects of the job (diagnosing and treating mental health disorders), and many states have licensing laws that further restrict these jobs. In I/O psychology, however, students who graduate with a master's degree compete successfully for jobs in private organizations, consulting firms, and government agencies.
- 25 years ago, there were only a handful of terminal master's I/O programs, now there are well over 100, with almost three times as master's programs as doctoral programs. There is clearly a market for such programs. It is important to note however that at present, there are only three fully online master's programs in I/O psychology in the U.S. Further, none have the reputation for excellence that CSU enjoys (two are at schools that only offer online programming, and the other is at Kansas State University). Thus, this is an opportune time in the marketplace to offer an attractive online graduate training program in Applied I/O Psychology.
- The online Master's program would very likely attract a different type of applicant than those applying to the Ph.D. program. While job opportunities are abundant for students graduating w/ a Master's degree, they tend to differ from opportunities afforded graduates of doctoral programs in terms of scope of responsibility and pay. Entry requirements into Ph.D. and Master's programs also differ in terms of level (e.g., mean GPA, mean GRE scores). Thus, most potential applicants have a good understanding of their career goals and aptitude for graduate school and are likely to apply to one program versus another.
- An additional benefit to having both a terminal Master's and on-campus Ph.D. program is that students in both programs will have opportunities to take classes in the other program.
- Finally, the opportunity for on-campus faculty and students to partner with master's students interested in research is an important side benefit of the online program. It is likely that a large number of online students will be employed part or full-time. These students bring a unique perspective to the research design process.
- Courses in general will be similar to those offered in the doctoral program. The emphasis of each course will differ, however. In a master's program, greater emphasis is placed on application from the start. At a course level, students are exposed to theory, but receive much more immediate training on applied aspects of the content.
- It is important to understand that application, in the context of a master's degree in Applied I/O psychology, means research to support human-oriented interventions in organizations. Typical job functions of a master's level I/O psychologist were defined above. There are other graduate programs on campus that train students to implement programs in organizations to improve employee-organization fit, or improve employee satisfaction (e.g., training programs, job re-design). These programs reside in the College of Business (MBA) and the School of Education (Master's in Organizational

Performance and Change). In essence, graduates of these programs become the future clients of a graduate of an applied I/O master's program.

2. *Fit with CSU Role and Mission and University's Most Current Strategic Plan*

The primary objective of the program is to prepare students to work as applied researchers in the areas of human resource management and organizational management. A secondary objective is to complement and support the existing doctoral program in I/O psychology. Offering an applied, research-oriented Master's program creates clearer graduate training opportunities for prospective applicants, lessening the likelihood of accepting a doctoral student better suited for a different program. Additionally, the training of doctoral students will be greatly enhanced by affording them opportunities to support the Master's program through course design and graduate teaching assistant (TA) positions.

The proposed online Master's program directly supports the mission of the University by blending teaching, research, and extension in the design of the program. By offering the program online, the program can reach a broader constituency inside Colorado, outside Colorado, and on an international basis. The proposed program supports the most current university strategic plan as follows:

- *Assure Excellence in Academic Education; Goal 2, improve the access, retention and graduation rates for all students....*
By offering the program online, the Master's program is accessible to students who lack the flexibility or finances to attend a campus-based university.
- *Graduate Enrollment; Goal 10: Refine existing and selectively create new graduate degree programs consistent with the institution's strengths and demands of society.*
The proposal creates a new graduate program consistent with a specific strength of the institution – a high caliber doctoral program in I/O Psychology – and more generally consistent with the applied research and instructional focus of the Department of Psychology. There is considerable interest in the proposed program in multiple departments of the state government, as master's level training in Applied I/O Psychology is ideal training for many analysts' jobs.

3. *Evidence of Need for the Program.*

In the spring of 2006, an online needs assessment was made available to 1200 Colorado Human Resource members and 567 undergraduate students from CU-Boulder. In addition, the survey was posted to the SIOP student listserv (800 members). The needs assessment revealed:

- Out of 154 respondents, 59% answered that getting a master's degree in I/O was important
- 46% indicated that a Master's degree would be beneficial to their career plans
- At the time of the survey dissemination, respondents were moderately interested in taking courses in Denver and I/O Psychology in general; respondents preferred an online format.

Additionally, the program director for the Division of Continuing Education has received 20 direct inquiries from individuals who want to start an I/O distance program and continues to receive inquiries on a weekly basis. Because there are only three other online master's programs in I/O and a national demand (as evidenced by the large number of resident-based options), there is likely large demand from both U.S. and international students.

According to the US Department of Labor Bureau of Labor Statistics, occupations for psychologists are expected to grow faster than average (27% or more) and “Industrial-organizational psychologists will be in demand to help to boost worker productivity and retention rates in a wide range of businesses. Industrial-organizational psychologists will help companies deal with issues such as workplace diversity and antidiscrimination policies. Companies also will use psychologists’ expertise in survey design, analysis, and research to develop tools for marketing evaluation and statistical analysis.” See <http://www.bls.gov/oco/ocos056.htm#employ> for more information.

According to the Occupational Outlook handbook, graduates with a master’s degree in psychology qualify for positions in school and industrial-organizational psychology. Graduates of master’s degree programs in school psychology should have the best job prospects, as schools are expected to increase student counseling and mental health services. Master’s’ degree holders with several years of business and industry experience can obtain jobs in consulting and marketing research. Other master’s degree holders may find jobs as psychological assistants or counselors providing mental health services under the direct supervision of a licensed psychologist. Still others may find jobs involving research and data collection and analysis in universities, government, or private companies. See <http://www.umsl.edu/services/qovdocs/ooh20022003/ocos056.htm> for more information.

According to Colorado Labor Market Information (LMI Gateway) at <http://www.coworkforce.com/lmi>, a labor market analysis of long-term statewide occupational employment projections state that I/O jobs will increase 28% between now and 2015.

4. Evidence of Student Demand

As noted earlier, 10 – 20 students are expected to enroll in year one, and 20 - 25 in subsequent years, with a steady state of 30. Applicants would be screened on the basis of GPA (3.0 or greater), GRE scores (V+Q), prior coursework, personal statements, and letters of recommendation. Nationally, about 70% of graduate students in I/O psychology programs are female. U.S.-born ethnic minorities make up a smaller percentage of all I/O graduate students (about 10%). International students comprise an increasingly higher percentage of the total student population. Presumably, because of the online format, a large percentage of applicants would be older and more likely to be working part- or full-time than applicants to the doctoral program in I/O psychology.

Evidence from surveys, interviews, or other sources that indicate students would enroll in this program. As noted above, a spring 2006 survey indicated that a large number of human resource professionals and graduating psychology majors were interested in a Master’s program in Applied I/O psychology, and most preferred an online format to a weekend-based program.

The Division of Continuing Education continues to receive weekly inquiries about the possibility of an online Master’s program. Good applicants who are not accepted into the Ph.D. program can be referred to the Master’s program (this would be about 12 – 15 referrals per year). The anticipated number of acceptances per year is in line with the typical size of incoming classes in most master’s level I/O programs. Few of these other programs have Colorado State’s reputation. Kansas State University, the most comparable institution with an online master’s program in I/O, graduates between eight and 10 students per year, presumably accepting a larger number.

Finally, student numbers for Walden University, the largest online program, are difficult to attain. However, Walden University notes that their graduate programs are ranked in the top 15 nationally for the number of Hispanic and African-American students graduated per year.

5. Duplication/ Similar Programs in the State

There are no other similar programs at other Colorado universities. At Colorado State University, the most closely-related graduate program is the Ph.D. in I/O Psychology, also offered by the Psychology Department. The differences between the doctoral program and proposed Master's program in terms of potential applicants, coursework, and likely employment were delineated above. There is some overlap in course content between the proposed program and the Master's in Organizational Performance and Change (OPC) offered through the Division of Continuing Education for the School of Education. However, there are clear and important differences between the two programs.

Minimal resources will be shared with other CSU programs. Courses will be designed so that all instructional material is available online through the course or virtual entry into the CSU library system. The online courses can be accessed by other graduate students in the CSU system for the same cost as their on-campus courses. Thus, graduate students in the I/O doctoral program, the OPC program, various management programs, are welcome to take online I/O courses to augment their studies as approved by an advisor from that program.

6. Student Body

It is anticipated that 10 to 20 students are expected to be enrolled in the entering class with a steady-state enrollment of 30 total students after the 4th year. Revenue projections are based on enrollments of 20 – 25 per year beginning in year two. We are currently estimating that we would graduate 10-15 students per year at our ideal size. As noted earlier in this proposal, advanced students from our I/O doctoral program will be hired as teaching assistants to support course instruction, at a planned ratio of 1 TA for each 10 enrolled M.S. students. At 20 to 30 M.S. students enrolled per year, there is a sufficiently large pool of graduate students available to support the instructional needs of the proposed program.

7. Admission Requirements

In addition to at least a 3.0 undergraduate degree, we will require a grade of B or higher on relevant coursework undergraduate (e.g., Industrial Psychology or Organizational Psychology). We hope that admissions will be highly competitive and we will be able to set higher than minimum cutoff scores on both GPA and GRE scores. In our experience, applicants who do not have prior related coursework often struggle in graduate level courses. This coursework requirement helps ensure that the applicant has a good understanding of the topic domain and career options available to them.

8. Course of Study

Note that all courses listed below will be new courses to be offered through our Distance program. Over half of them parallel, or are rooted in, existing courses in our doctoral program. The primary difference between a proposed new M.S. course and an existing, similar Ph.D. course is that the former places less emphasis on comprehensive knowledge of a topic, less emphasis on understanding research issues related to the topic, and greater emphasis on applied research skills related to the topic.

PSY 647: Applied Industrial Psychology
PSY 662: Applied Psychological Research Methods I
PSY 648: Applied Organizational Psychology
PSY 605: Applied Measurement Theory
PSY 663: Applied Psychological Research Methods II
PSY 665: Applied Psychological Issues and Methods
PSY 666: Succession Planning and Leadership Development
PSY 667: Competency Modeling and Criterion Development
PSY 668: Workforce Training and Development
PSY 660: Applied Cross-Cultural Industrial/Organizational Psychology
PSY 661: Applied Organizational Development
PSY 669: Capstone: Practicum and Skills Development

All courses will be taught online/at a distance; this is one of the key differentiators between this and most other I/O master's programs in the marketplace. The Plan C (Professional) non-thesis option is intended for non-traditional students who do not wish to pursue a Ph.D. As the target audience is non-traditional students, the most appropriate course format is one that is flexible with respect to instructional time and geared towards hands-on application.

Content will be a combination of instructor notes, carefully selected readings, threaded discussions, chat room discussions, and individual and group projects. As the course content deals with applied topics, the course will rely heavily on projects as an instructional tool, creating authentic learning environments for students. Similarly, the course will use a simulation approach to instruction. Students may be grouped into simulated in-house consulting teams, and given a series of projects to complete over the course of the semester. To complete a project, students must read the background material provided and access information provided through the course or on their own that will allow them to complete the project. For example, a student team may be asked to prepare a presentation to upper management on best practices related to a certain topic, and then make recommendations for adopting a certain practice by the simulated environment. Alternatively, students may be given data sets and asked to conduct empirical analyses or evaluate the effectiveness of a training program.

All regular readings, instructor notes, reference materials, etc. will be available to students either through RamCT or through the CSU library's online resources.

PSY 685 will be designed as a quasi-practicum experience in which students, working in virtual teams, consulting with actual organizations on projects related to the program curriculum.

Proposed course structure:

Year One

Fall

PSY 647: Applied Industrial Psychology (3 credits)

PSY 662: Applied Psychological Research Methods I (4 credits)

Spring

PSY 648: Applied Organizational Psychology (3 credits)

PSY 605: Applied Measurement Theory (3 credits)

Summer

PSY 666: Succession Planning and Leadership Development (3 credits)

PSY 663: Applied Psychological Research Methods II (4 credits)

Total: 20 Credits

Year Two

Fall

PSY 667: Competency Modeling and Criterion Development (3 credits)

PSY 665: Applied Psychological Research Methods II (3 credits)

Spring

PSY 668: Workforce Training and Development (3 credits)

PSY 660: Applied Cross-Cultural Industrial/Organizational Psychology (3 credits)

Summer

PSY 661: Applied Organizational Development (3 credits)

PSY 669: Capstone: Practicum and Skills Development (3 credits)

Total 18 Credits

Program Total = 38 Credits

9. Assessment of Student Learning/Outcomes Evaluation

The Society for Industrial-Organizational Psychology has published recommended competencies for students trained as master's level I/O psychologists (see <http://www.sio.org/guidelines.aspx>). These recommended guidelines serve as the basis for the specific learning outcomes assessed by students completing the proposed program. They are as follows:

1. Demonstrate knowledge of the domain of research methods includes the methods, procedures, and techniques useful in the conduct of empirical research on phenomena of interest in I-O psychology.
2. Demonstrate knowledge of various statistical techniques used in the analysis of data generated by empirical research, including both descriptive and inferential statistical methods.
3. Demonstrate knowledge of the ethical, legal, and professional contexts within which the master's level I-O practitioner will operate after graduation.
4. Demonstrate knowledge of individual differences as determinants of behavior in organizations and knowledge of methods for assessing or measuring individual differences and attitudes.
5. Demonstrate knowledge of criterion dynamics, the characteristics of good and acceptable criteria (relevance, reliability, practicality), and the role of criteria as a basis for understanding human behavior at work and in organizations. Demonstrate knowledge of theory and techniques used to generate information about what is involved in performing a job or task, the physical and social context of this performance, and the attributes needed by an incumbent for such performance.
6. Demonstrate knowledge of theory and techniques involved in the effective matching of individual needs, preferences, knowledge, skills and abilities with the needs and preferences of organizations.
7. Demonstrate knowledge of methods of measuring and evaluating individuals as they perform organizational tasks and on taking action (administrative and/or developmental) with individuals based on such appraisals.
8. Demonstrate knowledge of theory and techniques used to design, conduct, and evaluate instructional programs.
9. Demonstrate knowledge of the extensive literature on the determinants, consequences, and measurement of job satisfaction and related constructs such as involvement and commitment.

10. Demonstrate knowledge of the behavior of people in social groups, including: interpersonal behavior in small groups, leadership and power, interpersonal influence, group effectiveness, role behavior, and group decision making.
11. Demonstrate knowledge of facilitating change in individuals, groups, and organizations to improve their effectiveness.
12. Demonstrate knowledge of cross-cultural differences in human behavior in organizations and the implications of these differences for tools and techniques employed by master's level I/O psychologists.

Methods above describe specific strategies to assess outcomes while students are enrolled in the program. Students who graduate from the program will complete an online exit survey that will provide formative feedback about specific courses and the program in general. Alumni surveys will be developed and used to track graduate evaluations of the extent to which learning outcomes were maintained after graduation, as well as strengths and weaknesses of specific courses and the program in general.

10. "Snapshot" of Faculty Resources

A set of dedicated faculty with professional experience and interests in applied industrial and organizational psychology exists in the department. These faculty will participate in the instruction of the degree program:

Dr. Zinta Byrne

Ph.D. in Industrial/Organizational Psychology.

Areas of specialization: Organizational justice, organizational politics, organizational behaviors and attitudes.

Dr. Peter Chen

Ph.D. in Industrial/Organizational Psychology.

Areas of specialization: Emotion/personality and work behavior; occupational health and return to work; performance evaluation and feedback.

Dr. Alyssa Mitchell Gibbons

Ph.D. in Industrial/Organizational Psychology.

Areas of specialization: Assessment centers, performance consistency, airline safety culture, advice and feedback.

Dr. Stefanie Johnson

Ph.D. in Industrial/Organizational Psychology.

Areas of specialization: Leader behaviors and leader effectiveness, gender stereotyping, emotional contagion.

Dr. Kurt Kraiger

Ph.D. in Industrial/Organizational Psychology.

Areas of specialization: Learning and training in organizations, games and simulations in training, teams, cross-cultural applications of I/O psychology.

Dr. George Thornton

Ph.D. in Industrial Psychology.

Areas of specialization: Industrial psychology, management assessment and development, personnel selection, employment discrimination.

11. Impact of Program Request on Curriculum and Students

There will be no adverse impact on students in other program and areas, and several positive impacts. The proposed M.S. program would attract applicants from a different applicant pool than the Ph.D. program, so there will be no adverse effect on enrollments.

Courses will be covered in the summer by current faculty and can be covered during the fall and spring semesters by adjunct faculty or ABD graduate students.

All M.S. courses will be staffed by graduate teaching assistants (TAs) drawn from students in the doctoral I/O program. TA positions will be paid from tuition revenues, and courses will be staffed with one TA for each 10 M.S. students. Thus, the new program will create additional funding opportunities for graduate students in I/O. The I/O area will then return departmental TA positions to the department to be re-allocated to other graduate programs, thus providing more support for students in all graduate program areas. Additionally, some revenue from the proposed program will be allocated to support graduate student travel to conferences, regardless of whether the student was a program TA.

We plan to hire one Graduate TA for each 10 students enrolled in the M.S. program. Based on previously provided enrollment estimates, this would result in about four to six new positions to the I/O program. We currently turn down highly qualified applicants (to the Ph.D.) because we do not have adequate funding. So, the number of doctoral students enrolled each year could be increased slightly if necessary. Alternatively, most other graduate programs in psychology are short one or more funded positions

All Graduate TA positions in the proposed program will be funded from tuition revenue generated by the program. All courses will be developed prior to being offered. TAs will have responsibilities for holding virtual office hours, mentoring M.S. students on projects, answering M.S. students' questions, grading tests and projects, and monitoring and moderating online discussions. Graduate TAs will also have the opportunity to suggest course improvements at the end of each course. These assistantships should have no adverse affect on undergraduate access to regular faculty.

12. *Library Reference Sources:*

Our department currently offers a Ph.D. in Industrial/Organizational Psychology, and the library collection as it exists is fine for our needs. There is currently adequate student and faculty access to library and department resources relevant to the proposed program. Based on a Library evaluation of the current holdings, no additional financial support will be required to provide additional access to reference materials necessary for students to complete the degree program.

13. *Facilities, Equipment, and Technology*

No additional unique resources are necessary to offer a quality program in this field. This is because the Department of Psychology already offers a doctoral degree in I/O Psychology and the Division of Continuing Education has adequate resources to develop technology-distributed courses.

14. *Summary of Budget Needs*

The proposed Applied Industrial/Organizational Psychology Master's degree program will be an enterprise degree program taught through the Division of Continuing Education at Colorado State University. No additional resources have been requested to maintain this program. Resources generated from tuition revenue will be applied to the costs of the program including supporting faculty, teaching assistants, and program development.