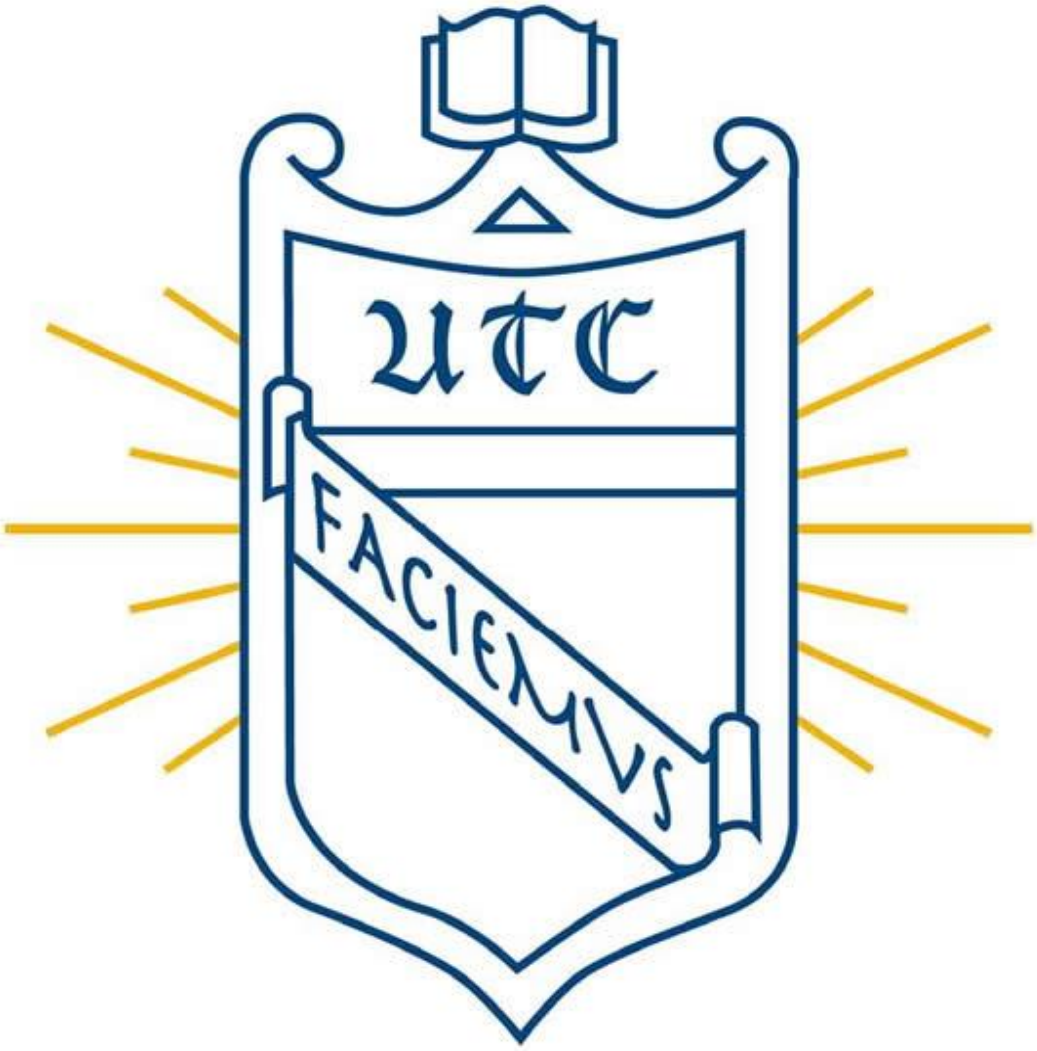
Academic Program Review



THE DEPARTMENT OF PSYCHOLOGY

The University of Tennessee at Chattanooga

Graduate Programs

Academic Years: 2013-2018

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Preface & History

Brief History of Graduate Programs in Psychology

Graduate study in the Psychology Department (PSY) at The University of Tennessee at Chattanooga (UTC) began in 1975 when the department created three Master's of Science (MS) degree programs in Clinical, School, and Industrial-Organizational (I-O) Psychology. These programs were initiated while Dr. Edward J. Green served as department head. The programs were coordinated by Dr. Irene (Nicky) Ozbek, Dr. George Helton, and Dr. Lynn Ourth, respectively. In 1979, a fourth degree involving a Research Masters (RM) in Psychology was added. This research program was created as a vehicle for students who wished to pursue study in psychology beyond the undergraduate level and for those who wished to pursue doctoral degrees.

The Psychology Department offered these four programs through the 1985-1986 academic year at which point the department decided it could no longer support the Clinical MS program, and also opted to transfer the School Psychology program to the College of Education. From 1987 to the present, the department has offered the MS degree with two programs, I-O and RM where each program has its own focused curriculum (Appendix A and Appendix B, respectively) but there are several core learning activities and courses that students from both programs take together.

The past five years within PSY have been a period of program stability and mild growth in terms of full-time faculty for the department. As of Fall 2018, the roster of full-time faculty, who are also members of graduate faculty, for the department is as follows:

Table P.1. Full-Time Faculty in PSY (2018-2019)

Faculty Member	Rank	Primary Field	Appointed
Dr. Ralph Hood	Full	Research: Psych of Religion	Fall 1971
Dr. Nicky Ozbek	Full	Research: Clinical	Fall 1977
Dr. Paul Watson	Full	Research: Personality	Fall 1977
Dr. Amye Warren	Full	Research: Developmental	Fall 1984
Dr. David Ross	Full	Research: Social	Fall 1995
Dr. Brian O'Leary	Associate	I-O: Diversity	Fall 2001
Dr. Christopher Cunningham	Full	I-O: Occupational Health	Fall 2007
Dr. Amanda Clark	Associate	Research: Biological	Fall 2012
Dr. Jill Shelton	Associate	Research: Cognitive	Fall 2013
Dr. Kate Rogers	Assistant	Research: Personality	Fall 2015
Dr. David Ferrier	Assistant	Research: Developmental	Fall 2016
Dr. Alex Zelin	Assistant	I-O: Gender in Workplace	Fall 2016
Dr. Kristen Black	Assistant	I-O: Occupational Health	Fall 2017
Dr. Preston Foerder	Assistant	Research: Comparative	Spring 2013

Recent Changes and Developments

Since the review of our graduate programs in 2012, several notable events and changes have occurred, all of which have positively impacted our graduate programs.

I-O Program

The following changes and developments are particularly noteworthy. First, Dr. Cunningham took over as graduate program coordinator in Fall 2015, upon the departure of Dr. Bart Weathington in December 2015. Second, thanks to the support of our college dean at that time (Jeff Elwell), we were able to quickly initiate a search for a replacement for Dr. Weathington's line. We were able to follow this with another search the subsequent year to help us address the reduced teaching loads of Dr. O'Leary (Department Head) and Dr. Biderman (phased retirement). Through these faculty searches, we were able to hire two new, female tenure-track assistant professors, Dr. Kristen Black and Dr. Alex Zelin. Both were selected after competitive searches and bring a tremendous combination of research, teaching, and service capabilities to support the I-O graduate program, the Department of Psychology, and the broader university. Third, since the hiring of Dr. Black in 2017, the I-O program has entered into a period of strength and stability. This has allowed us to engage in an in-depth curriculum review and revision (detailed elsewhere in this report) and has helped to increase our recruitment and overall program rankings within the broader I-O graduate education community. Although the past five years have brought many challenges to the I-O program, these challenges have been navigated well and the I-O graduate program is stronger than it has ever been.

RM Program

The breadth and strength of the RM program has grown tremendously since 2012 with three new faculty members joining our team. The departure of Dr. Richard Metzger led to Dr. Jill Shelton joining our deparment in Fall 2013. Dr. Shelton is a UTC RM program alum, whose research in the area of cognitive aging has stemmed collaborations with nearby medical centers. In addition, Dr. Kate Rogers joined our department in Fall 2015 when a faculty line was vacated by Dr. Michael Johnson. Dr. Roger's research in the area of personality focuses on impression and interpersonal interactions and she also came to us highly skilled in quantitative methodology. Finally, in Fall 2016 we were approved to add a new tenure-track line to our faculty, something that we had not been permitted to do in over a decade. Dr. David Ferrier was hired into this new line in Fall 2016. Dr. Ferrier brings expertise in the social and emotional development of preschoolers and frequently collaborates with early educators and other community partners. Having these three new faculty members join our department has increased our ability to provide research mentorship opportunities for our graduate students.

Leadership of the RM program has also recently changed. Upon being tenured and promoted to the associate rank, Dr. Amanda Clark assumed the RM program coordinator position in July

2018. This position had been held by Dr. Warren almost exclusively since 1987 and, while the program grew substantially under her leadership, we anticipate the coming two years to involve a curriculum review and revision to ensure continued success.

Another recent change that impacted our ability to provide quality graduate education in both of our programs was our move from very limited physical space in our former offices in Holt Hall on the north side of campus to a more expansive and flexible space in 540 McCallie on the south side of campus. Though this move relocated us to a less central campus location in January 2017, we now benefit from more numerous laboratory spaces, refurbished office and classroom spaces, and dedicated computer labs. While we are still unable to provide office spaces for graduate students, most graduate students use faculty research labs as a work space. The move to the south side of campus has also invigorated research collaborations with other UTC faculty more concentrated in the health sciences, as Physical Therapy, Occupational Therapy, and the School of Nursing are located nearby.

Trends in Graduate Program Enrollments and Completions (2013-2018)

Over the past five years, growing interest in our graduate programs has resulted in a net increase in applications and enrollments. Application, enrollment, and completion numbers differ between programs, as can be expected given their differing missions, and the trends for each program are explained below.

I-O Program Enrollments

The I-O program receives between 50 and 80 completed applications each year. From these applications, a cohort of between 15 and 23 students is admitted each year. The following table summarizes enrollments over the past four years (admissions data for 2013 and 2014 are omitted from this table because the GRE test score data were lost when the I-O program coordinator from that period left the university and academia more generally).

Table P.2. I-O Program Completed Applications and Enrollments, 2015-2018

	F15	F16	F17	F18
Total Applications (selected + rejected)	**79**	**63**	**64**	**66**
Median GPA	3.38	3.40	3.47	3.53
Median GRE-Quantitative	38.52%	34.44%	40.10%	37.85%
Median GRE-Verbal	54.53%	51.71%	59.15%	56.52%
Median GRE-Writin	50.15%	50.86%	58.82%	60.94%
Enrollments (selected only)	**17**	**16**	**15**	**18**
Median GPA	3.57	3.66	3.55	3.73
Median GRE-Quantitative	42.06%	48.31%	43.60%	38.94%
Median GRE-Verbal	63.35%	74.56%	66.87%	60.56%
Median GRE-Writing	53.18%	65.88%	65.80%	67.56%

Note. The numbers summarized above refer to the applicants and enrolled students for their respective start year (e.g., F15 = Class of 2017, F16 = Class of 2018).

Within each of these cohorts, the I-O program has a consistent record of diversity with respect to African American, Asian, Hispanic, and Indian students. Over these past five years, we have also had a handful of international students complete the program. For nearly the past 30 years, the I-O program has admitted at least one minority student within each cohort.

With respect to program completion, the I-O program has an average time-to-degree of two years. Since Spring 2013, no students have taken longer than this timeframe to complete their MS degree in I-O.

RM Program Enrollments

The RM program is based on a mentoring model. Consequently, faculty members associated with this program typically have no more than two mentees under their direction at any given time. With these small numbers in mind we are relatively selective in our admission decisions. Indeed, students coming into our program have a mean GPA of 3.57 and 33% of our students have a GPA over 3.8. While we generally admit more students than we enroll (those who decline generally cite our inability to provide guaranteed graduate assistantships or in-state tuition), between 4 and 10 students enroll each year from a pool of 11 to 23 applicants. Because of our small number of applicants and admits, breakdown by race or ethnicity would not be meaningful, however it is informative to share that our male to female ratio of admitted students over the last 5 years has been 22 females to 21 males.

With respect to program completion, the RM students who complete the program have generally done so in 4 (n = 12) to 5 (n = 4) semesters. However, there are four students in the program currently who are not going to complete within that timeframe and three of those four are off-cycle due to part-time status and/or accommodation due to disability. It is important to note that not all students who enroll in the RM program complete it. During the Fall 2013- Spring 2018 time period, program completion rates ranged from 50% to 70%. Among the reasons for non-completions, one student transferred to another graduate program, four withdrew for personal reasons, and two were dismissed with cause.

Table P.3. RM Program Completed Applications and Enrollments, 2013-2018

	F13	F14	F15	F16	F17	F18
Total Applications (selected + rejected))	**14**	**19**	**14**	**19**	**22**	**23**
Median GPA	3.25	3.49	3.51	3.53	3.50	3.69
Median GRE-Quantitative %	35 %	34 %	44 %	37 %	29 %	30 %
Median GRE-Verbal %	65 %	68 %	52 %	71 %	64 %	56 %
Median GRE-Writing %	49 %	35 %	38 %	56 %	59 %	60 %
Enrollments (selected only)	**3**	**11**	**4**	**9**	**8**	**8**
Median GPA	3.45	3.55	3.65	3.66	3.48	3.88
Median GRE-Quantitative %	77 %	37%	62 %	37 %	59 %	44.5 %
Median GRE-Verbal %	83 %	70 %	77.5 %	63 %	85 %	80 %
Median GRE-Writing %	30 %	54 %	47 %	56 %	70.5%	82 %

Note. The numbers summarized above refer to the applicants and enrolled students for their respective start year.

Response to Previous Review and Recommendations

From our previous program review in 2012, the external reviewers noted that the major strengths of our undergraduate and graduate programs are our faculty and students. The reviewers noted that, "Faculty give students one-on-one attention and have an open door policy. Students value the diversity in faculty interests and teaching styles. Faculty give students a variety of opportunities to teach, engage in research, present at psychology conferences, and develop other professional skills." These observations were accurate then and continue to be accurate today.

Our external reviewers in 2012 also identified a small set of areas for improvement that affect both our undergraduate and graduate programs. Those reviewers noted, "The major weaknesses of the program are inadequate resources for increasing the number of GAs and for student and faculty travel…We recommend that the department set the following goals: Faculty Development, critically examine curricular offerings, and maintain the high quality of faculty/student interaction." Below is our response to these recommendations from the 2012 external review, framed in terms of our two graduate programs.

Recommendation 1: Improve/Increase Faculty Development

Our external reviewers in 2012 noted that the faculty in our department could improve their impact and reach if provided with more resources enabling them to "be more effective in their teaching and research." Also noted by reviewers was a need for an, "increase in the number of GAs" to help faculty manage all aspects of their roles and to provide additional positive role models and mentors for undergraduates in this department. Several more concrete suggestions were offered in support of this general recommendation:

- Consider directing some of the funds for adjunct salaries to support more GAs.
- Grant release time to faculty who are writing grant proposals (in which they can budget for a GA)
- Engage existing GAs to help with the writing of grant proposals.
- Increase travel funding (above the current amount of $500 per faculty member) to facilitate faculty development through conference and workshop attendance.
- Develop a mechanism to effectively mentor new faculty.
    - New faculty report that senior faculty have an open door policy and willingly respond to questions.
    - New faculty, however, may not know which questions to ask (i.e., the problem of the "unknown unknown").
    - Possibly the department could develop a faculty handbook with clear expectations of faculty, guidelines for interacting with thesis students, and other relevant information (e.g., Faculty Development Council support of travel, $400 - $1,000).

    - Informal events often help new faculty integrate more smoothly into a new system.

Over the past five years, we have done a great deal within the Department of Psychology to respond to this first recommendation and its component parts. More specifically, in response to each of the points in this recommendation, the following steps have been taken:

- *To improve effectiveness in faculty teaching and research*
    - We have adopted a mentoring program for all junior, tenure-track faculty, pairing them with a senior faculty member who can serve as a resource and advocate for the junior faculty member at all departmental tenure and promotion review committee meetings. Periodic mentor-mentee conversations also help to ensure junior faculty members understand what resources are available to support their teaching and research efforts. Mentoring also takes place via informal conversations during office drop-ins, departmental social events, and impromptu group lunch outings.
    - The department has established what is essentially a policy of funding one conference attendance per year for each faculty member. This is done with the help of faculty securing outside funding through college and university level resources, but is also supported as much as possible through the department's operating budget. Travel funds are still extremely limited, but there are real efforts being made by everyone to facilitate faculty involvement on a national and international level at these types of events.
    - We have incorporated a formal peer review of teaching practices for all tenure-track faculty. This review is conducted every two-three years (and by request) while the junior faculty member is working toward tenure.
        - This process is supported by a recently revised set of university- and college-level bylaws pertaining to tenure and promotion reviews. Within our department, these evaluations are typically conducted by faculty members who have experience teaching the course in which a tenure-track faculty member is being evaluated.
- *To increase support for faculty teaching and research efforts*
    - We have done our best to spread the graduate assistant (GA) resources as much as possible. Typically this is done by splitting all available full-time GA roles into half-time roles, so that twice as many graduate students receive some level of financial support and so that all faculty members in our department can count on 10 hours per week of assistance.
    - The number of GA roles has not increased in any consistent or long-lasting way over the past five years, despite our efforts to secure resources through our college and university-level administrators.

- We have increased our use of undergraduate teaching assistants (TAs) to help faculty manage increasingly large course sections. This is a win-win for the faculty and students, as it provides another mechanism for our undergraduate students to earn credit toward the applying psychology portion of their curriculum.

Although the preceding points clearly indicate that we have taken positive steps to respond to this first recommendation, there is still room for improvement. The greatest limiting factors for us since our last review have been limited departmental funding (and no dedicated operating budget for either graduate program) and limited personnel resources. There is the possibility that a relatively new stream of funding linked to online courses could be used to support some forms of faculty development and teaching, but at present there are many restrictions on how these funds can be used. There is also a lack of clarity regarding whether and how long these funds will continue to accrue (i.e., the online fees may change in the near future).

In addition to these limitations, we have been unable to address some of the elements to this recommendation (e.g., release time for grant writing, re-allocation of GA to support grant pursuits) without damaging the quality of our course offerings and teaching/mentoring relationships. Moreover, while our students do get grant writing experience through mentorship with their advisors, GA supervisors, and in their course work, we might be able to do this with greater impact and success if we had additional faculty and more funding in general. These resources would help us to flexibly support graduate students who are assisting faculty with grants, contracts, and other types of special funded and unfunded projects.

Recommendation 2: Critically Examine Curricular Offerings

Our 2012 external reviewers also suggested that we undertake a critical examination of our curricular offerings to ensure an appropriate match and fit with available departmental resources. Partially in response to his recommendation, but also out of necessity internally, we have been engaged in continuous curriculum review and planning for the past five years. At the graduate level especially, and as documented in other sections of this report, we have engaged in a complete review and reconfiguration of the I-O program curriculum as well as realignment and focusing of several elective courses within the RM program. Additional curricular revisions are planned for the coming years.

Recommendation 3: Add an I-O Faculty Member

A third recommendation offered by external reviewers in 2012 was to, “acquire an additional faculty member in the I-O area.” This recommendation supported a strategic need within the department to help us manage growth in enrollment and the demand for I-O related knowledge and skills within the department and the broader community. Although the department has hired

two excellent junior, tenure-track I-O psychology professors since 2013, both of these hires have been replacements for existing I-O faculty lines. We have repeatedly requested administration support to hire an additional I-O faculty line, but have been denied this request several times. As a result, we have been unable to address this recommendation from our previous program review.

Recommendation 4: Maintain Healthy Student-Faculty Ratio

This recommendation was primarily targeted at our undergraduate program, but because our faculty perform double duty, supporting both undergraduate and graduate level students, this recommendation needs to be addressed here as well. As noted by the external reviewers in 2012, "If enrollments at the undergraduate level continue to increase, however, the one-on-one interactions between students and faculty may suffer unless additional GAs and/or faculty lines are forthcoming." The challenge of maintaining a healthy student-faculty ratio is being felt at the graduate level as there is increasing pressure to at least maintain and preferably grow the size and reach of our graduate programs. With our current resources, no such growth is possible. Our faculty are already stretched to provide adequate supervision, research experiences, and mentorship to the large undergraduate body and our strong, but demanding graduate student population. In short, the quality of our interactions with students is already being negatively impacted and we perceive internally a need to add multiple additional tenure-track faculty lines to improve the balance and provide more professional resources to our students.

1. Learning Outcomes

Criterion 1: Learning Outcomes
1.1 Program and student learning outcomes are clearly identified and measurable.
1.2 The program uses appropriate evidence to evaluate achievement of program and student learning outcomes.
1.3 The program makes use of information from its evaluation of program and student learning outcomes and uses the results for continuous improvement.
1.4 The program directly aligns with the institution's mission.

Departmental goals/outcomes statements

The two graduate programs in the Department of Psychology have very different foci and ultimate career pathways for students. As a result, each program necessarily focuses on its own set of learning outcomes, and evaluation methods and standards. Overarching these program-specific outcomes, however, there is a department-wide emphasis on equipping our graduate students with the necessary knowledge, research-related skills, and communication skills and abilities to be successful as a professional in their chosen fields. In the following subsections, we present evidence pertaining to these and other program-specific learning outcomes for each graduate program.

I-O Program

The mission of the industrial-organizational (I-O) psychology MS degree program at UTC is to provide students with the training necessary to pursue a variety of I-O related careers. These include, but are not limited to, positions in human resources departments in work organizations (e.g., job analyst, testing specialist, trainer, compensation analyst, organizational development specialist, generalist), and human resource management consultant. In addition, our I-O program can be used as a preparation for the pursuit of doctoral training in I-O or related fields of study. As with any educational program, many graduates have found work in other fields based on some combination of their interests and circumstances.

The fundamental educational philosophy of our program is to train students to think in a logical and critical manner. This skill is useful to anybody in any endeavor. The curriculum is organized around specific core competency domains needed for success as an I-O psychology practitioner and/or applied researcher. As is evident in the I-O label for this area of psychology, there are two domains pertinent to I-O psychology. The industrial (I) domain includes content such as job analysis, selection, tests and measurements, and training. The organizational (O) domain includes content such as work motivation, organizational development, culture, and conflict management. A third domain, research and statistical methodologies and skills, includes content

such as univariate and multivariate statistical analysis, experimental design, survey research and scale construction. In summary, our I-O MS degree program is designed to prepare you to apply I-O psychology knowledge and methods, to engage in critical reasoning, to apply and effectively share scientific knowledge in challenging work-related situations, to practice formal scientific methods and thinking, and utilize appropriate evaluation and statistical analysis techniques.

From 2013 through 2017, the I-O program curriculum stayed in the same form that was reviewed in 2012. The historical development of this curriculum is summarized in Appendix C. The learning outcomes over this period, therefore, were restricted to the department-wide outcomes outlined in the previous section (i.e., knowledge, research-related skills, and professional communication skills/abilities). Beginning in 2016 and running through 2017, we engaged in a complete review and overhaul of our I-O program curriculum to align with new guidelines for graduate education in I-O psychology put forth by the Society for Industrial and Organizational Psychology (SIOP, 2017). These new guidelines emphasize 26 competencies associated with professional capabilities as an I-O psychology professional. Within the I-O program, these new guidelines triggered a complete critical evaluation and revision/updating of our curriculum and associated learning outcome evaluation strategy. This revised curriculum (Appendix A) and evaluation plan (Appendix F) was fully implemented for the Fall 2018 semester. The competency focus now makes it possible for us to evaluate Student Learning Objectives (SLO) at the competency level, rather than in an abstract sense. Unfortunately, SIOP has not offered clear guidance on evaluating SLO associated with their new competency framework. A related challenge is that the SIOP competencies for graduate education are not level-specific, and apply to both doctoral and master's level programs. This being the case, we have developed our own master's level SLOs, summarized along with the competencies and their definitions in Appendix F.[1]

I-O Program Outcomes and Goals

As outlined in the previous section, a more comprehensive plan for learning outcome evaluation has been implemented beginning with the Fall 2018 semester. At the time of writing this report, however, our available learning outcomes data for the I-O program are therefore limited to the more general department-wide learning outcomes of knowledge, research-related skills, and professional communication skills/abilities that were gathered up to this point.

With respect to *knowledge outcomes*, the I-O program requires students to either (a) successfully pass a four-hour comprehensive exam in their final semester, or (b) successfully propose, carry out, and defend an in-depth thesis research project over their final two or three semesters. Until

[1] We are hoping to share our work along these lines with the I-O psychology community through a SIOP-reviewed publication sometime in 2019 or 2020.

the revised and expanded course offerings were implemented in 2018, approximately 80% of students regularly opted for the comprehensive exam. Now that additional elective courses are available, we anticipate closer to 85-90% of students will opt for the comprehensive exam going forward.

The comprehensive exam requires students to choose and fully respond to four of six integrative questions, with at least one coming from two major sections of questions, one pertaining to I-O theory, research, and evidence, and the other section pertaining to I-O related statistics and methodology. To facilitate preparation for this examination, students are given (approximately 3 months ahead of the exam date) a list of 20 exam-type questions, broadly covering these two main assessment domains. The actual questions on the exam are not pulled from this review list, but instead are more holistic and integrative, requiring students to interpret and construct a detailed and appropriate response on the test day, within a tight time limit. These conditions mimic common work-related pressures these students will face after graduation. The pass-rate on this exam over the past five years has been 100%, but not without a handful of students needing to present an oral defense to address one or more insufficiencies in their initial written answers. We have permitted this two-stage process (i.e., written first, followed by oral defense if required) as a mechanism for holding students accountable, but not derailing their progress toward degree completion. In the past five years we have had no issues with students performing at or above a sufficient level on this overall comprehensive exam process.

Students who do not opt to complete the comprehensive exam are required to complete a thesis research project under the supervision of one I-O faculty chair and two other graduate faculty members (the three faculty members together constitute the student's thesis advisory committee). These projects are primarily student-initiated, within an area of expertise that is supported by one or more of our I-O program faculty members. These projects are typically not based on existing data sets and, therefore, require students to engage not only in study design and analyses, but also in sampling, data collection, and data cleaning and management. It is an expectation also with every thesis project that efforts will be made to present and ultimately publish at least one manuscript based on each project. Our success rate as a program in this regard is rather high, with more than 75% of completed theses within the past five years earning presentation spots at refereed conferences and/or peer-reviewed publication status in a variety of outlets. If interested, you can review a list of recent (since 2014, when the system replaced printed theses) I-O focused thesis projects through the university's online UTC Scholar system.

With respect to *research-related skills*, I-O students are challenged to interpret, present, translate, and apply theory-driven, empirical research related to I-O psychology topics in every core course. The methodological and analytical skills are directly taught and assessed in the first year methods and statistics course sequence (PSY 5100/5130). Written applications and translations

of applied psychological research in a work-related context are required in that first year methods and statistics course sequence as well as the organizational psychology seminar (PSY 5060) and occupational and organizational health elective (PSY 5210). Beginning in Fall 2018, we have initiated an online repository for top-quality student work on these and similar working papers. Only one paper is included in this collection as of the writing of this report, but we expect to post at least 3-4 new papers each year beginning in 2019, as a way of demonstrating student learning and providing continuing education for our program graduates and other friends of the program.

In addition to completing written assignments, students work in teams and as individuals to complete applied projects demonstrating their ability to gather, analyze, report, and act on data from an organizational setting in the following courses: employee performance and development (PSY 5120), human resources training (PSY 5160), the uses of groups in work organizations (PSY 5200), core business skills for I-O psychologists (PSY 5250), organizational development and change management (PSY 5260), job/work analysis and personnel selection course (PSY 5270). This means that a writing component is a requirement in all eight core content courses in the I-O program. Beyond the research emphases in the classroom for all students in our program, a thesis option is available to I-O students who opt not to complete the alternative comprehensive examination. Typically, no more than 20% of the students in each cohort may take this option, though the numbers vary from year to year. Thesis project work begins in the spring of students' first year in the program and continues through all of the second year, culminating in a defense in the spring, approximately one month before the end of classes.

With respect to *professional communication skills and abilities*, the opportunities for learning and evaluation are incorporated into every course, as detailed in the included course syllabi (Appendix E), and the two capstone options in our curriculum. Beginning with the capstone options, comprehensive exams clearly provide the opportunity for I-O students to demonstrate their ability to communicate in writing. I-O thesis students must also successfully pass an oral thesis proposal meeting and also an oral defense of their thesis. In the context of the other core courses and electives, students are regularly assigned to present and/or co-facilitate portions of weekly class meetings. In most courses these presentations are evaluated by a large subset of peers and the course instructor. In some cases, external stakeholders from the local business community are also involved in evaluating these presentations. Beginning in 2017, students have also been completing the core business skills for I-O psychology course (PSY 5250) in which there are two high stakes presentations evaluated for communication clarity, one a stakeholder pitch to gain buy-in to move forward with a new organizational initiative and the other is a role play presentation in which a challenging HR-related situation is presented and discussed interactively with the rest of the class. A third professional communication assignment in this course is a concept map review that students build in teams around a core organizational challenge for which I-O knowledge is applicable. Students are also externally evaluated by their

practicum supervisors with respect to their professionalism and communication abilities within their respective practicum situations (as part of the course requirements for PSY 5360).

I-O Course Syllabi

Course syllabi for all I-O courses are available via hyperlinks included in Appendix E.

I-O Placement of Students and Graduates

For students enrolled in the I-O program, internship placement rates are 100%, driven by our requirement that all students complete a minimum of 300 hours of supervised practicum before graduation. For a list of recent organizations who have employed our students as interns (during practicum) and as full-time employees post-graduation, please refer to this table from our regularly updated program website.

The I-O psychology program also has a long history of excellent job placement rates for students who complete the MS degree. Although no formal surveying mechanisms yet exist for graduate-level students within the university, our recent efforts to stay connected with alumni and to maintain an active LinkedIn group for our current students and alumni (currently with 345 members) enables us to estimate with great confidence that our placement rates within 3 months of graduation are at or above 99%. It is our experience that the students who are not employed by this point are individuals who are either being very picky about the type of opportunity they choose to pursue (either for location reasons or possess certain personality characteristics or styles that pose challenges to them when interviewing). Even these individuals do ultimately land employment, though, which is a testament to the overall high employability of our graduates. In general, graduates of our program are employed in roles that involve performing some or all of the following types of work on a regular basis:

- Job/work analysis and job description updating; identifying essential job functions
- Design/implementation/evaluation of workforce training programs; program delivery; policy development
- Survey design and administration; exit/stay interviews; customer satisfaction reviews
- Development and administration of performance evaluation and management systems/programs
- Assessment validation and evaluation
- Recruitment and retention planning
- Organizational development/change management projects

A brief, but representative summary of example job/position titles and associated organizations for program graduates is provided in Table 1.1.

Table 1.1. Example I-O Job Placement Titles and Organizations

Job/position title	Organization
Associate Implementation Specialist	HealthcareSource
Executive Compensation Consultant	Unum
Assessments and Employee Engagement Analyst	HCA Healthcare
Human Resources Manager	Shaw Industries
Talent Development Specialist	Signal Energy Constructors
Director, Learning, Growth & Management	Tennessee Valley Authority (TVA)
Talent Analytics	The Dow Chemical Company
Corporate Business Partner	TVA
OD Practitioner	Erlanger Health System
Divisional Training & Development Manager	Shaw Industries
HR Project Manager	BlueCross BlueShield of Tennessee
HR Analytics Professional	Unum
Manager, Research Translation	Society for Human Resource Management
HR and Compensation Consultant	Gallagher

Employer Satisfaction with I-O Program

Employers of I-O students and program alumni are extremely satisfied with the talent that we recruit and train in this program. We have long-standing relationships with most of our internship sites and we are recruiting sources of choice for many regional organizations (i.e., they come to us first when looking to fill critical HR and organizational development roles). The following employer quotes illustrate the type of feedback we frequently receive from employers working with our students on practicum or with our alumni in full-time positions:

> *"It was great having [Student] join our team in Dallas for the summer. She helped us analyze the effectiveness of our flagship leadership development program, and because of her we've overhauled some of our evaluation processes. You all are doing something right with the program, because she hit the ground running here and added value quickly."*

> *"[Student] went above and beyond my expectations for her. She did necessary research to become knowledgeable on topics that were not in her field of study. She related well with those she worked with and she provided very beneficial insight to her tasks at hand. She was able to compile years worth of information and run statistical analyses on the benefits of our fitness programs vs. the medical claim and prescription costs of the participants before and after their engagement in the programs. This information was presented and is currently being used to*

> *justify the possibility of new positions to be created. [Student] also did analyses for [company CEO] that looked at the relationships between heart rate and glycogen burn. This compliments of efforts as a company to develop a consistent message and recommendation when it comes to health and exercise. She has been a huge help and a wonderful individual to work with. I am going to miss her presence and insight."*
>
> *"[Student] has been a tremendous asset to [company]. He is always seeking challenges and ways to enhance his knowledge in the various avenues of Human Resources. He has helped with recruiting, 401K audit, health benefit billing/reconciliation etc...[Student] handles himself professionally at work and treats all with respect. He is well liked by all levels here at [company] and continues to grow with the company. We are very fortunate to have such a well rounded intern working with us."*

In addition to quotes like these, employers complete a standardized formal evaluation of student performance while on internship. This is a relatively new component to our evaluation of practicum performance, but the following table summarizes the ratings from employers over the past three years. As shown in these data, I-O students are perceived very positively by their practicum supervisors, even as graduate students still working toward completion of their degrees. It is very common for students to receive full-time employment offers from the organizations in which they complete their practicum work.

Table 1.2. Summary of Employer Practicum Performance Evaluations

	Class of 2017	Class of 2018	Class of 2019
# of employer ratings	16	21	23
M rating of written and oral communication skills (Demonstrates ability to express ideas and information to others clearly and concisely)	1.50	1.67	2.00
M rating of interpersonal skills (Demonstrates ability to interact with coworkers and supervisors in a fashion that contributes to overall productivity)	1.44	1.57	1.74
M rating of technical expertise (Demonstrates thorough knowledge and understanding of the theories and techniques involved in the practice of I-O psychology covered by the practicum)	1.56	1.67	1.74
% of employers who would definitely choose to work with the same student again in the future	94%	81%	87%

Note. Ratings in this evaluation are provided on the following scale: 1=Outstanding, 2=Above average, 3=Average, 4=Below average, 5=Poor

RM Program

The mission of the RM program is to prepare students for careers in research and teaching. With that in mind, our three main goals are to 1) develop critical thinking and methodological skills, 2) foster healthy collaboration with faculty and peers, and 3) instill pedagogical skills and confidence for future psychology educators. Each of these goals is achieved through various mechanisms within our curriculum including seminar based course work, experiential learning within the university and greater Chattanooga community, and perhaps most importantly through a mentoring model in which each student works closely with a faculty mentor. In this way, the RM program is specifically designed for students who wish to pursue doctoral work or applied research positions in areas of psychology that do not include I-O or clinical psychology.

RM Program Outcomes and Goals

The strength of the RM program is in the faculty's commitment to personalized mentorship of students toward their individual career goals. Therefore, students in our program are engaged in not only generalized training in conducting research, but also training that occurs within a variety of specific content areas including the following: psychology and law, psychology of religion,

developmental psychology, cognitive aging, comparative psychology, neuropsychology and psychometry, biological psychology, and personality. Applicable to all graduate students however, regardless of program or specialty, are goals associated with knowledge outcomes, research competencies, and professional communication skills and abilities.

With respect to *knowledge outcomes*, the RM program requires students to successfully propose, carry out, and defend an in-depth thesis project under the direction of their faculty mentor and two other graduate level faculty committee members. The self-initiated thesis project is designed to assess the student's ability to identify a gap and problem in the existing literature, develop hypotheses, design a research methodology that will allow for testing of those hypotheses, execute the designed study, and communicate the work in an oral defense to a committee of faculty and a written thesis. While not a component of the thesis project assessment itself, students in the RM program are strongly advised to seek opportunities to present, and ultimately publish at least one manuscript based on their research. This is particularly encouraged for those students who report an intention to pursue doctoral training.

In addition to demonstrating competency in research methodology and mastery of knowledge in the specific area of the thesis, RM students are also required to demonstrate breadth of knowledge in areas of psychology outside of their specialty. To this end RM students must complete three topical seminar-style courses where one topical seminar must be in an area of biological/cognitive specialty (PSY 5950) and another must be in an area of social/developmental/personality specialty (PSY 5960). Breadth of knowledge is assessed in these courses through the student's ability to identify and critically analyze literature in the seminar topic area, and develop/propose novel and independently derived research idea(s) that would further the state of literature in the seminar topic area.

With respect to *research competencies*, the core competencies of identifying, critically analyzing, and presenting empirical research, as well as developing hypotheses and designing novel research questions and methodologies are learning objectives for every course within our program. The methodological, experimental design, and analytical skills are taught and assessed in the first year methods, statistics, and design course sequence (PSY 5100/5130/5140). Moreover, written proposals of novel, theoretically-driven research are required in each topical seminar course, the methods and statistics courses, and (by definition) in any independent study/research/thesis course. RM students are also expected to develop their research presentation competency by presenting papers and/or posters at professional conferences. While this competency is not assessed at a program level, more than 98% of RM students do present at at least one national or international conference, and several students have published their thesis data in peer-reviewed journals.

Beyond the research competencies developed through coursework and the thesis (primarily focused in the second year of the program), most students also engage in additional research activities directly upon beginning the program. This is possible because faculty mentors are identified and matched as best as possible to the student's background and interests during the program application process. This early identification and alignment generally means that students engage in a first-year research project and support more senior graduate students in their research from 'day-one', rather than delaying such experiences until the thesis process begins in earnest in the spring semester of the first year (in the PSY 5140 course).

Finally, with respect to *professional communication skills and abilities*, opportunities for learning and evaluation of both written and oral communication skills are incorporated into every course within the RM program (employing various methodologies, see syllabi in Appendix E) and thesis project. Specifically, thesis students' written communication skills are assessed in their written proposal draft in PSY 5140, the formal proposal document and final thesis documents; their oral communication skills are assessed in their oral thesis proposal draft in PSY 5140, the oral proposal with their meeting and also in an oral defense of their thesis. The Teaching of Psychology (PSY 5020) course is another asset in the development of professional communication skills as it requires that students prepare and deliver at least two lectures. Through the completion of PSY 5020, many RM students also instruct an undergraduate section of PSY 1010 during their second year. In addition, students engage in development of grant-writing skills in the PSY 5140 course, and they are encouraged to engage in grant-writing and manuscript reviewing with their faculty mentor. As discussed above, almost all RM students engage in the oral presentation of their research at UTC's ReSEARCH Dialogues as well as at national and international conferences.

RM Course Syllabi

Course syllabi for all RM courses are available via hyperlinks included in Appendix E.

RM Graduate Trajectory

Consistent with the RM program mission to prepare students for rewarding applied research careers and/or doctoral training psychology, more than 62.5% of the RM students who completed the MS degree during the 2015-2018 timeframe were successful in gaining admission to a PhD program or securing an applied research position within 3 months of graduation (see Table 1.3). Specifically, 6 of 7 were successful in gaining admission to a Doctoral program in their first application year, and 4 of 7 secured an applied position relevant to their specialty area (i.e., psychometry) within 3 months of graduation. Of the RM graduates who are not in a PhD program or applied research position, their challenges are frequently related to persisting in the pursuit of a clinical PhD and/or restrictions to PhD programs or careers within a restricted geographical region for personal reasons.

Table 1.3. 2013-2018 RM Graduate PhD / Career Placements

Graduate	PhD Program/Applied Setting
Kayla Polk	PhD – Indiana Univeristy
Jessica McKinney	PhD – East Tennessee State University
Carrie LeMay	PhD – East Tennessee State University
Matthew McCurdy	PhD – University of Illinois at Chicago
Dominick Atkinson	PhD – Iowa State University
Joe Jones	PhD – University of North Dakota
Edward Christopher	PhD – Purdue University
Christopher Branson	Psychometrist
Allen Nida	Psychometrist – St. Luke's Hospital
Robert Arrowood	PhD – Texas Christian University
Thomas Coleman	PhD
Joseph Heaton	Law - Lousiana State University
Shane Littrell	PhD – University of Waterloo
Katherine Pendergast	Research Associate
Jessica Hacker	PhD – Lousiana State University
Jacob Strimaitus	PhD

Graduate Success in Academia after Completing the RM Program

Though no standard mechanism exists at the university level to track the trajectory of graduates, we attempt to stay connected with RM alumni through social media and sustained relationship with faculty mentors. Because of this relationship we are able to share that many of our RM graduates have successfully joined the academy. Though certainly not an exhaustive list, Table 1.4 presents the names, graduate years, and current titles of UTC RM program graduates.

Table 1.4. RM Graduate Positions in Academia and Clinical/Applied Settings

Graduate	Grad. Year	Academic/Clinical Position
Kathy Hulse Trotter	1990	Full Professor – Chattanooga State
Jeff Swartwood	1990	Associate Professor – SUNY Cortland
Tabitha Payne	1997	Associate Professor – Kenyon College
Emily Dunlap	1997	Associate Professor – Chattanooga State
Jodi Price	2001	Associate Professor – University of Alabama Huntsville
Jill Shelton	2003	Associate Professor – University of Tennessee Chattanooga
Christopher Silver	2003	Lecturer - University of Tennessee Chattanooga
Jessica Logan	2005	Assistant Professor – Ohio State University
Brandy Mangan	2005	Lead School Psychologist
Libby Byers	2010	Lecturer - University of Tennessee Chattanooga
Emily Pica	2012	Assistant Professor
Kimberly Fasczewski	2012	Assistant Professor
Lindsey Ogle	2012	Post Doctoral Fellow – University of Kentucky

2. Curriculum

Criterion 2: Curriculum
2.1 The curriculum content and organization is reviewed regularly and the results are used for curricular improvement.
2.2 The program has developed a process to ensure courses are offered regularly and that students can make timely progress towards their degree.
2.3 The program reflects progressively more advanced in academic content than its related undergraduate programs.
2.4 The curriculum is aligned with and contributes to mastery of program and student learning outcomes identified in 1.1.
2.5 The curriculum is structured to include knowledge of the literature of the discipline.
2.6 The curriculum strives to offer ongoing student engagement in research and/or appropriate professional practice and training experiences.
2.7 Programs offered entirely through distance education technologies are evaluated regularly to assure achievement of program outcomes at least equivalent to on-campus programs.
2.8 The program incorporates appropriate pedagogical and/or technological innovations that advance student learning into the curriculum.

Both PSY graduate programs include comprehensive, quality, curricula to prepare students for their respective careers and/or further educational pursuits. Both programs are also designed to be presented as two-year programs where students commence, and progress, as a cohort beginning the fall semester. Although each program has its own focused curriculum, as detailed in the following subsections, there are several core courses and some electives that students from both programs take together. The courses that the RM and I-O students take together allows for efficiency in course schedule but more importantly helps to create a degree-wide cohort. As examples:

- All graduate students complete PSY 5100 and 5130 during their first year in the program
- Many RM and I-O students elect to take Advanced Research Methods and Statistics I (PSY 5510) and Advanced Research Methods and Statistics II (PSY 5220)
- I-O students intending to complete a thesis take Applied Research II (PSY 5140)

Both programs within the MS degree emphasize the offering of high quality Master's level courses. Indeed, for those MS graduates who pursue PhD training, many of their research methods and statistics requirements are satisfied with the course work they had completed at UTC. Similarly, the majority of UTC MS graduates who entered PhD programs that require a MS thesis before commencing with doctoral work have had their UTC-based thesis accepted as meeting their new program's degree requirements.

I-O Program Curriculum

The I-O program began with just one full-time faculty assigned to it, Dr. Lynn Ourth. The remaining courses were taught by adjunct faculty. In 1982-1983, a second I-O faculty member was added. Soon after that, Dr. Mike Biderman began teaching half-time in the I-O program after taking courses in I-O and in research methods relevant to I-O at the University of Tennessee at Knoxville. Since 1992, an average of three to four faculty members have covered all of the required coursework and graduate student supervision for this program.

The curriculum in the I-O program has gone through eight basic incarnations since its inception in 1975. Over this time, the curriculum for this program has also expanded and been revised to align with current and best-practice guidelines for graduate education in I-O psychology as outlined by the Society for Industrial and Organizational Psychology (most recently updated to align with the 2017 guidelines). A summary of how this curriculum has evolved over this time is available in Appendix C. Prior to our most recent curriculum revision in 2016-2018, the I-O program's curriculum was fairly constant from the 1993-1994 academic year. Then and now, the program curriculum conforms closely to the Guidelines for Graduate Education in I-O Psychology developed and endorsed by SIOP. The current curriculum is outlined in Appendix A. There are 11 required courses (denoted with an * in Appendix A), with the remaining credit hours being earned through completion of approved graduate-level electives offered either within the department or in other relevant departments at UTC (e.g., Management, Public Administration). Within our current curriculum the following points are also especially notable:

- Our core required courses and electives cover the full spectrum of critical I-O content areas at a level of depth that is rarely found in master's level programs. In part this is because of our 48 minimum credit requirement, but it is also a testament to the thoughtfulness with which our curriculum has been designed.
- We require graduate students to complete two advanced statistics/research methods courses (PSY 5110, 5130) and regularly offer three additional advanced electives in this domain (5140, 5510, 5520). This level of emphasis on statistics and research methods is rare for a master's level program, but really helps our students become proficient in research/evaluation methodologies and associated data analysis methods.
- We have a strong emphasis on occupational health and organizational development and changement. This is also not common within master's level programs, but has been done to meet the demands and interests of incoming students and ultimate employers.

I-O Program Curriculum Management, Review, and Revision

The primary responsibility for ongoing curriculum management, review, and revision rests with the I-O graduate program coordinator (Dr. Cunningham). He is well-connected with both the academic and practitioner arenas, given his outside consulting work in the personnel assessment and applied evaluation domain. Dr. Cunningham supplements these connections and his

experience by gathering exit-interview data from graduating students regarding how the curriculum did or did not prepare them for their internships and job searches. Dr. Cunningham also engages in regular discussions with regional business leaders and program alumni to ensure that the I-O program curriculum is current and focused on addressing the needs that exist now and are developing for the near future. A final element to our ongoing curriculum review is Dr. Cunningham's participation in the annual meeting of graduate program coordinators at the annual Society for Industrial and Organizational Psychology (SIOP) conference. This meeting brings together program coordinators for most of the top I-O master's and doctoral level programs. The agenda for these annual program coordinator meetings involves sharing of updates to graduate education guidance from SIOP and the American Psychological Association are discussed, as well as best-practices and common challenges/resolution strategies faced by other programs.

I-O Course Syllabi

Course syllabi for all I-O courses are available via hyperlinks included in Appendix E. Please note that over the past 5 years, significant changes have been made to university requirements for information and formatting of all course syllabi at UTC. In particular, there are now required statements pertaining to accommodation, course learning management system requirements, technology requirements, and more detailed learning outcome statements. However, because not all of these courses are offered every semester, it is possible that some of these formatting changes have not yet been applied to all of the syllabi available through these links.

SACSOC Outcomes for I-O Program

All programs at UTC are required to engage in an ongoing process of student learning outcome (SLO) review. This process is managed through the Compliance Assist system for the university by the Office of Planning, Evaluation, and Institutional Research. All programs must enter outcomes assessment data pertaining to each of these SLO at least once within a five year period. Because both PSY graduate programs currently function as concentrations within a single MS degree (in the eyes of the university), a shared set of SLO are applied to both programs for the purposes of this form of curriculum review. A summary of these SLOs and targeted proficiency levels per course for the I-O program is provided in Table 2.1. Refer to Appendix E for details on courses listed in this table. Note that these general SLOs are monitored in addition to the new, course-specific and competency-based SLOs noted in section 1 of this report and Appendix F. Here is a definition of the five general SLOs for the I-O program:

> *SLO1 - Application of I-O concepts:* Students will apply their knowledge in a practicum/internship with tasks and responsibilities related to the I-O discipline.
> *SLO2 - Core knowledge of I-O domain:* Each of the courses in our I-O MS curriculum add to core knowledge – either theoretical, statistical, or applied

SLO3 - Core knowledge of psychological discipline: Within the I-O program, courses focus on people in the workplace, so this SLO broadly applies to all courses in the I-O curriculum.

SLO4 - Proficiency in evaluating, designing, and conducting research: Every course in the I-O curriculum emphasizes interpreting research literature. Several courses also focus specifically on research development and statistical analytics skill development.

SLO5 - Proficiency in professional writing and presentations: The I-O program prepares students to perform as professionals in business settings; professional/technical writing and presenting skills are developed in all courses in the curriculum.

SLO6 - Statistical and methodological proficiency: The I-O program requires completion of at least two statistics and research methodology courses, and offers several other elective courses designed to help students progress toward mastery of this SLO.

Table 2.1. Summary of General SLO for the I-O program

Course	SLO1	SLO2	SLO3	SLO4	SLO5	SLO6
PSY 5020	R	I	I		I	
PSY 5060	I, R	I	I	I	I	I
PSY 5100	I, R	I	I	I	I	I
PSY 5120	I, R, M	I, R	I, R	R	I, R	R
PSY 5130	I, R	I, R	I, R	I, R	R	I, R
PSY 5140	R	R	R	R	R	R
PSY 5160	R	R	R	R	R	
PSY 5200	R	R	R		R	
PSY 5210	R	I, R	I, R		R	
PSY 5250	I, R, M	I, R	I, R	R	R	R
PSY 5260	R, M	R	R	R	R, M	R
PSY 5270	I, R, M	I, R	I, R	R	R	R
PSY 5300	I, R, M	I, R	I, R		R	
PSY 5360	R, M	R	R	R	R, M	R
PSY 5510/5520	R	R	R	R	R	R
PSY 5997/5998	R, M	R	R	R, M		R, M
PSY 5999	R, M	R	R	R, M		R, M

Note. I = introduced, R = reinforced, M = mastery

I-O Catalog Information

Catalog entries for all I-O courses are available in Appendix E.

I-O Curricular Research Opportunities

Although the primary emphasis pertaining to research in the I-O program is on translation and application, there are several students within each cohort who opt to be more extensively engaged in the research process. This is done through the completion of a supervised thesis project (PSY 5999) and/or through participation in either Independent Study (PSY 5997) or Independent Research (PSY 5998) electives with one or more faculty members (not always within psychology).

Table 2.2. Recent frequency of I-O Students in PSY 5997/5998/5999

		2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
PSY 5997	# of students (% of cohort)	1 (7%)	1 (7%)	0	1 (6%)	0
PSY 5998	# of students (% of cohort)	0	0	0	0	0
PSY 5999	# of students (% of cohort)	3 (21%)	7 (50%)	8 (50%)	5 (31%)	3 (20%)
	Total # of students	4	8	8	6	3

Note. % calculated in the table above are based on the size of the second year cohort in each of these years, given that these courses have historically been taken as electives by second year students.

RM Program Curriculum

The RM program is designed to assure a strong research background, taught in the context of a mentored introduction to a specialty area. The curriculum for the RM program is designed to provide students with both depth and breadth in the science of psychology as well as ample skill and experience in research design and statistics. When originally created in 1979, the RM program drew on the resources of all the faculty in the department. In more recent years however, some faculty in the department have come to align more closely with RM graduate student supervision (a summary of how the RM curriculum has evolved over this time is available in Appendix D). During the period from Fall 2007 through Spring 2012, these faculty were primarily Dr. Richard Metzger, Dr. Amye Warren, Dr. Ralph Hood, Dr. David Ross, Dr. Nicky Ozbek, and Dr. Paul Watson. Those faculty were able to provide not only generalized training in conducting research, but also training that occurs within a variety of specific content areas including the following: Psychology and Law, Health Psychology, Psychology of Religion, Developmental Psychology, and Sports Psychology.

Since 2012, a retirement (Dr. Metzger), and five other Department faculty who are strongly engaged in graduate student mentorship have changed the landscape of the program's specific content areas. Dr. Amye Warren, Dr. Ralph Hood, Dr. David Ross, Dr. Nicky Ozbek, and Dr.

Paul Watson continue to supervise, act as committee members, and teach within the RM program actively and Dr. Amanda Clark (currently RM program coordinator), Dr. Preston Foerder, Dr. Jill Shelton, Dr. Kate Rogers, and Dr. David Ferrier also bring their expertise areas to the program. These additions have widened the program's breadth of curriculum by offering training in neuropsychology and assessment, comparative psychology, cognitive aging, interpersonal relationships and person, as well as social and emotional development. All faculty associated with the RM program hold the terminal degree and adjunct faculty have not been used in the past 5 years.

The RM-associated faculty support the mission of the RM program through a combination of elements, a) teaching the 21 required core course hours, b) supervising the 6 required thesis hours, and c) teaching/mentoring students for their 9 elective hours (described in more detail in Appendix B). Five required courses have been part of the program since 1983: Applied Research I (PSY 5100), Applied Research Design (PSY 5140; focuses on research design and thesis preparation, dealing with topics and issues that students will likely face in the preparation of their theses), and three sections of Advanced Seminar (PSY 5950 and PSY 5960). The PSY 5950 and PSY 5960 courses are topical seminar-style courses dealing with topics of the instructor's choosing. PSY 5950 is used for topics within the biological/cognitive specialty. PSY 5960 is used for topics within the social/developmental/personality specialty. The seminar topics taught by the RM faculty are similar to the list of previously mentioned research interests. Topics have recently included: Memory/Cognition (Dr. Foerder; Dr. Shelton), Chemical Senses (Dr. Ozbek), Neuropsychological Assessment (Dr. Clark), Psychology of Religion (Dr. Hood), Topics in Personality (Dr. Rogers).

In the more recent past, the RM program expanded to include Teaching of Psychology (PSY 5020) as a required course in the first semester. This class is encouraged for all graduate students and is required for those in the RM program, particularly those who wish to teach undergraduate, usually Introduction to Psychology, classes in the department during their second year of enrollment.

Students are encouraged to use their elective hours to focus more deeply in a specific research area, through additional statistics courses, seminar courses, or more commonly independent studies/research. These independent studies/research courses are not always completed with the faculty mentor but sometimes with another faculty member from the department with whom the student's interests and desire for growth align. In addition, students may choose to take graduate courses from other departments that complement their professional development (e.g., classes in Program Evaluation, etc.).

RM Program Curriculum Management, Review, and Revision

The primary responsibility for ongoing curriculum management, review, and revision rests with the RM graduate program coordinator. Up until July 2018, that coordinator was Dr. Amye Warren, and it is now Dr. Amanda Clark. Both Drs. Warren and Clark engaged in regular review of the curriculum with other members of the faculty. This review is primarily based on what the interests are of the current students enrolled in the program (e.g., if 30-50% of students are intending to pursue doctoral training in social psychology, we will select a social psychology topic for PSY 5960). Though our course offerings are few, they are consistent with our focus on mentorship and engagement in independent research projects and students who are delayed in their graduation are never delayed due to the number, or breadth, of course offerings (those who encounter delays often need only to complete their thesis project).

Because many of the RM students go on to Ph.D. programs, we work to assure that the course preparation of these students is seen as appropriate. One indication of success in maintaining this level of instruction is that the vast majority of students who entered Ph.D. programs in other institutions since 2000 have had their thesis accepted as meeting their new program's degree requirements.

RM Course Syllabi

Course syllabi for all RM courses are available via hyperlinks included in Appendix E. Please note that over the past 5 years, significant changes have been made to university requirements for information and formatting of all course syllabi at UTC. In particular, there are now required statements pertaining to accommodation, course learning management system requirements, technology requirements, and more detailed learning outcome statements. However, because not all of these courses are offered every semester, it is possible that some of these formatting changes have not yet been applied to all of the syllabi available through these links.

SACSOC Outcomes for RM Program

The RM concentration shares a set of SLOs with the I-O concentration (because we function as a single MS degree). A summary of these SLOs and targeted proficiency levels per course for the RM program is provided in Table 2.3. Refer to Appendix E for details on courses listed in this table. Here is a definition of the four general SLOs for the RM program:

> *SLO1 - Core knowledge of psychological discipline:* Students work with an individual faculty member toward the completion of a thesis in one of the many sub-disciplines of psychology. Students also complete no fewer than 3 topical seminar courses that span developmental, social, personality, cognitive, biological, philosophical areas.
> *SLO2 - Proficiency in evaluating, designing, and conducting research:* Every course in the RM curriculum emphasizes interpreting research literature. PSY 5100/5130/5140

focus specifically on skill development in the area of research design and statistical analysis.

SLO3 - Proficiency in professional writing and presentations: The RM program prepares students to perform as professionals in academic and applied settings. Consequently, all courses within our curriculum emphasize and develop academic writing and presentation skills.

SLO4 - Statistical and methodological proficiency: The RM program requires completion of PSY 5100, PSY 5130 and PSY 5140, all designed to help students master a variety of statistical methodologies and research design approaches

Table 2.3. Summary of General SLO for the RM program

Course	SLO1	SLO2	SLO3	SLO4
PSY 5020	I	-	I, R	-
PSY 5100	I, R	I	I	I
PSY 5130	I, R	I, R	I, R	I, R
PSY 5140	R	I, R	R	R
PSY 5510/5520	R	R	R	R
PSY 5950	I, R	R	R	R
PSY 5960	I, R	R	R	R
PSY 5997/5998	R, M	R	R	R, M
PSY 5999	R, M	R, M	R, M	R, M

Note. I = introduced, R = reinforced, M = mastery

RM Catalog Information

Catalog entries for all RM courses are available in Appendix E.

RM Curricular Research Opportunities

Engagement and progression in independent research is central to both graduate student and faculty success in the RM program. As described elsewhere, RM students are encouraged to focus more deeply in specific research areas, through independent studies/research. These independent studies/research courses are not always completed with the faculty mentor but sometimes with another faculty member from the department with whom the student's interests and desire for growth align. All RM faculty have course listings for PSY 5997/5998 each semester and almost all of our faculty supervise independent studies or research each year. Independent studies and research under these faculty member's direction have ranged from conducting a systematic review and developing a knowledge mobilization plan, to engaging in

scale development and refinement, to conducting an eye-tracking study to demonstrate prospective memory ability.

Table 2.4. Recent frequency of RM Students Completing PSY 5997/5998/5999

		2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
PSY 5997	# of students	1 (Fa) ; 3 (Spr)	2 (Fa) ; 2 (Spr)	7 (Fa) ; 3 (Spr)	2 (Fa) ; 1 (Spr)	5 (Fa) ; 4 (Spr)
PSY 5998	# of students	3 (Fa) ; 0 (Spr)	0 (Fa) ; 0 (Spr)	0 (Fa) ; 0 (Spr)	1 (Fa) ; 2 (Spr)	1 (Fa) ; 2 (Spr)
PSY 5999	# of students	10 (Fa) ; 8 (Spr)	4 (Fa) ; 3 (Spr)	11 (Fa) ; 9 (Spr)	7 (Fa) ; 5 (Spr)	9 (Fa) ; 7 (Spr)
	Total # of students	**14 (Fa) ; 11 (Sp)**	**6 (Fa) ; 5 (Sp)**	**18 (Fa) ; 12 (Sp)**	**10 (Fa) ; 8 (Sp)**	**15 (Fa) ; 13 (Sp)**

3. Student Experiences

Criterion 3: Student Experience
3.1 The program ensures a critical mass of students to ensure an appropriate group of peers.
3.2 The program provides students with the opportunities to regularly evaluate the curriculum and faculty relative to the quality of their teaching effectiveness.
3.3 The program provides adequate professional development opportunities, such as encouraging membership in professional associations, participation in conferences and workshops, and opportunities for publication.
3.4 The program provides adequate enrichment opportunities, such as lecture series, to promote a scholarly environment.
3.5 The program seeks to include diverse perspectives and experiences through curricular and extracurricular activities.
3.6 Students have access to appropriate academic support services.

The reputation of both of our graduate programs attracts diverse applicants from all over the world. This reputation is for the quality of our curricular offerings and research opportunities, as much as it is for the quality of our student experience. The following subsections illustrate why this is the case.

General Academic Support Services

Section III of the undergraduate report details the student evaluation of faculty procedure, which is followed for all undergraduate and graduate courses, as well as enrichment opportunities available to all students in our department. In addition, all UTC students have excellent access to full text journals through several online databases including SAGE Research Methods. When students do not have direct access to the full text of a journal article of interest, our interlibrary loan service is generally able to secure and share the full text within 48 hours. With respect to other general academic support services, all UTC students have access to our Counseling Center, Career Services Center, Women's Center, an Athletic and Recreation system, regular enrichment through activities in the fine arts and sporting events, as well as a variety of nearby campus ministries that are affiliated with UTC.

I-O Student Experiences

The program coordinator (Dr. Cunningham) serves as the official advisor to students in the I-O program, although students are encouraged to seek advice from all I-O faculty prior to making curricular decisions. We are continuously working to maintain and improve the quality of our student experiences in the I-O program. Over the past five years, major improvements have been made to our application process (moving fully online, through a self-service portal system that facilitates applicant management of all materials). Once admitted, our ability to advise students

has also been improving thanks to new technology affecting undergraduate and graduate student registration and advising processes. In particular, with the recent curriculum overhaul, detailed in section 2 of this report, we were able to also move to a more streamlined process of monitoring and advising student progress through a customized internet-based MyMocsDegree interface. This has streamlined several elements of the advising and student progress documenting processes in the department and with UTC's Graduate School.

We have also developed a sustainable peer mentoring program through which second year students are matched to incoming first year students every August. This combined with a detailed orientation helps to ensure a smooth transition into the program for our new students. The mentorship also helps our second year students develop valuable competencies for their future careers.

To further facilitate interaction among students in the program, we have removed some restrictions for several of our electives, enabling cross-listing of first and second year students in many of the electives. This helps to improve access to diverse experiences and perspectives, while strengthening the overall collaborative culture of the program.

Student Enrollment

The actual I-O program enrollment trends are summarized in in the Preface section of this report (see Table P.2). These trends clearly show our consistent ability to attract and admit a healthy cohort each year. This cohort provides the critical mass of students necessary to ensure smooth and consistent operation of the I-O program. The cohort nature of our program enables us to maintain a strong, collaborative and supportive program culture. This helps us to maintain high levels of student engagement in curricular and extracurricular activities.

Related to our enrollment trends, however, it is important to note that the I-O program is and has been operating at or above comfortable capacity for at least the past 10 years. This conclusion is based on our student:faculty ratio, which averages approximately 10:1, given the part-time program support status for Dr. O'Leary who also functions as PSY department head. For perspective, two of our closest and primary competing master's level I-O programs have consistent student:faculty ratios of 4:1 or 5:1.

Student Evaluation

Students in the I-O program sincerely appreciate (and regularly comment on) the positive, open-door culture that we maintain when it comes to sharing feedback and ideas for program improvement with program faculty. All I-O students have at least two 1:1 meetings with the program coordinator (Dr. Cunningham) every academic year, and while the primary focus of these meetings is on student advisement, there is opportunity to discuss ideas for ways to

improve the program. Similarly, the final 1:1 includes a more structured exit interview in which graduating students are asked to share thoughts on program strengths and weaknesses. In addition to these person-to-person forms of evaluation from students, there are of course the end of semester course evaluations administered by the university; these target general perceptions of instructional quality in course settings. Most of our I-O faculty supplement these with mid-semester teaching quality evaluations and a pre/post-course assessment of the competency-based SLOs mentioned in section 2 of this report on I-O program outcomes and goals.

Student Enrichment and Professional Development Opportunities

Students in the I-O program have a number of enrichment opportunities available to them every semester. Many of these opportunities even extend to alumni of the program. Each of these opportunities aligns well with the competency-focused nature of the I-O program curriculum, detailed elsewhere in this report.

First, within the required program curriculum, all students must complete at least 300 hours of supervised practicum work (to earn the 6 required credit hours of PSY 5360). For at least the past 10 years, students have been required to complete the first batch of these credit hours during the summer terms between their first and second years in the program; the remaining credit hours of PSY 5360 can then be completed either in the fall or spring of students' second year. Most students obtain one internship and complete at least 300 hours in that position. Many of our students find that these practica assignments convert into part- or full-time employment throughout their second year in the program. Sometimes, these positions then turn into full-time job offers post-graduation. Most of the internship sites are in local organizations, although students are encouraged to seek sites outside the immediate area. Each year, a handful of our students completes at least a portion of their practicum requirement at a site outside of the Chattanooga metropolitan area. Practicum sites include experienced supervision for student efforts and students are encouraged to get involved with multiple projects or applications of their I-O knowledge and skillset while working in this capacity. I-O students report that, for the most part, their practicum activities are professionally relevant and helpful to them as they work on forming personal future career aspirations. Practicum requirements for students include:

- Detailed documentation of time and effort
- A detailed reflection paper addressing ways in which the practicum enabled or challenged students to apply their I-O knowledge, skills, abilities, or other characteristics
- At least one supervisor evaluation of student performance (using a standardized form distributed via internet survey)
- A brief presentation to the entire I-O program in which students present their experiences on practicum as well as the process by which the practicum was established/secured.

The I-O students also self-manage a student-focused professional development group, Chattanooga Area I-O Psychologists (CHAIOP), supervised by Dr. Zelin. This group is managed by an executive leadership team composed of a balanced mixture of first and second year students. Membership is optional to current students, but generally more than 90% of students participate. The CHAIOP group functions as ambassadors for the I-O program and also develops and manages its own professional development programming throughout the academic year including job-site visits, discussions with alumni, and other relevant workshops and service activities.

Every October since 2008, the I-O program has also hosted the River Cities Industrial-Organizational Psychology Conference (RCIO). This event provides incredible opportunities for graduate students from our program and other programs throughout the region to present research and network with students, faculty, and practitioners. The easiest way to understand the emphasis and focus of this conference series is to review the conference website and the online conference proceedings.

Students in the I-O program regularly present thesis and independent study projects at the RCIO event, as well as other research-focused conferences regionally and internationally. Common presentation venues for I-O student and faculty research include UTC's annual Research Dialogues, the annual conference of the Society for Industrial-Organizational Psychology (SIOP), and the bi-annual International Conference on Work, Stress, and Health. Funding to support student participation in off-site conferences is very limited. The PSY Department does all that it can to help, but every year we rely on generous donations of grant funds by faculty, solicited funds from various university administrative offices, student-earned travel funding through the Graduate Student Association, and donations from I-O program alumni to make conference travel a reality for more of our students.

RM Student Experiences

Student Enrollment

The RM program enrollment trends are summarized in in the Preface section of this report (see Table P.3). These show our enrollment for 2013 and 2015 was quite low, while our enrollment for 2014 was quite high. Our faculty has generally agreed that we function best when enrollment is around 7-9 students. This cohort size provides the critical mass of students necessary to ensure regular course offerings, while not exhausting the mentorship resources of the faculty. With this cohort size we also note that students are highly engaged with each other as an academic, but also social, support network.

Student Evaluation

RM graduate students engage often with their thesis advisors but also the other faculty in the department. Faculty are generally on campus at least four out of five days per week and most maintain an open-door policy so that they are accessible to graduate, and undergraduate, students alike. All students have at least two 1:1 meetings with the program coordinator (Dr. Clark) every academic year, and while the primary focus of these meetings is on student advisement, there is opportunity to discuss ideas for ways to improve the program, as well as plans and concerns about the future after completing the program.

Student Enrichment and Professional Development Opportunities

Students are provided a variety of enrichment opportunities throughout their academic careers through participation in activities sponsored by the Department, UTC, and external organizations. Graduate students in the RM program routinely provide support on the various grants awarded to faculty such as Dr. Hoods's Developmental Change in Spirituality project with Universitat Bielefeld, Dr. Warren's Project Ready for School program with the United Way, and Dr. Foerder's grant to explore animal behavior enrichment as a pedagogical tool within STEM.

The department began hosting monthly research 'brownbags' in Fall 2017. The purpose of these meetings is for faculty and students to present their current research projects to fellow RM graduate students and departmental faculty. While IO graduate students are always invited to attend, they are often engaged with internships and employment during the scheduled times. To further encourage enrichment, we have been able to host a guest presenter at least once per semester. During the weeks not engaged in the brownbag (these meetings are only once per month) we have just began hosting weekly RM cohort professional development sessions. These sessions are generally led by the RM Coordinator and revolve around a topic that is pertinent to the RM students at that particular point of the semester. Topics have included: harnessing the power of EndNote, preparing for the publication submission process, finding and protecting time for writing, becoming part of the peer review process, self-care and stress reduction, etc…

In addition to engaging in grant-writing and data collection activities, our students are regulary encouraged to present their work at professional conferences. As indicated, 98% of our RM students presented their research at least once at a regional, national, or international conference. These conferences included: the Southeastern Psychological Association (SEPA), the American Psychological Association (APA), Psychonomics, the International Neuropsychological Society (INS), Cognitive Aging Conference, the Society for Personality and Social Psychology (SPSP) conference, the American Psychology-Law Society conference, and others. In addition, the university sponsors an annual ReSEARCH Dialogues conference in which students and faculty can share their research across disciplines in poster format, presentation format, and a Three-Minute Thesis format. The department has recently committed to a moderate financial reimbursement to graduate students who travel to present at conferences for the 2018-2019 academic year but this funding is not guaranteed for subsequent years. As such, support for attending conferences is often comes through generous donations of grant funds by faculty and encouraging students to apply for SEARCH awards and other funding sources.

4. Faculty

Criterion 4: Faculty
4.1 All faculty, full-time and part-time, meet the high standards set by the program and expected SACSCOC guidelines for credentials.
4.2 The faculty teaching loads are aligned with the highly individualized nature of graduate instruction, especially the direction of theses or dissertations.
4.3 The faculty strives to cultivate diversity with respect to gender, ethnicity, and academic background, as appropriate to the demographics of the discipline.
4.4 The faculty engages in regular professional development that enhances their teaching, scholarship and practice.
4.5 The faculty is actively engaged in planning, evaluation and improvement processes that measure and advance student success.
4.6 The program uses an appropriate process to incorporate the faculty evaluation system to improve teaching, scholarly and creative activities, and service.

Within the Department of Psychology, all faculty support all programs (undergraduate and graduate level). That said, faculty hired with graduate-level teaching responsibilities are generally aligned most strongly with either the I-O or the RM program. The following subsections summarize information about the quality, productivity, evaluation, and service of our faculty that is common to both PSY graduate programs.

Faculty Evaluation

All full time faculty and staff within the University of Tennessee at Chattanooga are evaluated on a yearly basis through the Evaluation and Development by Objectives (EDO) process. The EDO process involves two steps: 1) faculty describe a set of objectives around their teaching, research, and service activities during the coming year (generally drafted in September) and 2) faculty self-evaluated their performance by discussing achievement of their teaching, research and service objectives. While not mandated, faculty who engage in graduate-level teaching and mentorship responsibilities specifically highlight goals and achievements around their graduate-level involvement alongside goals for their undergraduate-level teaching. Both the objective-setting and performance evaluation steps of the EDO process are reviewed by the department head and he/she responds with comments and suggestions for revision, when appropriate. Upon finalizing the EDO documents, the department head assigns faculty to one of three categories: meets expections for rank, needs improvement for rank, or unsatisfactory for rank. In addition, the department head can nominate faculty for a fourth category: exceeds expectations for rank. This nomination is submitted to the Dean and is subject to endorsement from the Dean, Provost, and Chancellor. Over the past 5 years, all of the faculty in our department have fully met or exceeded expectations.

Pre-tenure faculty are also assessed during an annual reappointment review that is conducted by the department's Reappointment, Tenure, and Promotion (RTP) committee, led by Dr. Nicky Ozbek. All tenured faculty, except for the Department Head, are members of this committee and they review a dossier from each pre-tenure faculty member each year. Said dossier includes a current CV, a teaching statement with accompanying course evaluations, and a research statement. Faculty being considered for reappointment are encouraged to highlight their involvement with the graduate programs in their dossier. After review of the dossier the RTP committee votes to make a recommendation about that individual's reappointment and that recommendation is forwarded to the Department Head, Dean, Provost, and Chancellor, who makes the final reappointment decision.

Faculty Credentials and Experience

All full-time tenured or tenure-track faculty in the Department of Psychology are current members of UTC's graduate faculty. Conditions of membership to the graduate faculty include providing evidence of an appropriate terminal degree, evidence of on-going scholarly and professional work, documented commitment to graduate education, and a commitment to professional and ethical behavior. Graduate faculty membership is necessary for supervising theses or being a member of a thesis committee.

With respect to evidence of an *appropriate terminal degree*, the Department of Psychology has 14 full-time faculty, 4 most clearly aligned with the I-O program and 10 most clearly aligned with the RM program. All 14 faculty have the Ph.D. degree, 3 in I-O (Black, Cunningham, Zelin), 1 in Organizational Behavior (O'Leary), 1 in Clinical Psychology (Ozbek), 1 in Applied Developmental Psychology (Ferrier), 1 in Personality (Rogers), 2 in Cognitive and Behavioral Neuroscience (Clark, Foerder), 2 in Social Psychology (Hood, Ross), and 3 in Experimental Psychology (Shelton, Warren, Watson). The various areas of expertise among our faculty help to ensure an excellent breadth to the research and teaching environment within the department.

With respect to evidence of *on-going scholarship and professional work*, Section IV of the undergraduate report clearly demonstrates that our faculty in the Department of Psychology represent various expertise areas and are all clearly dedicated to excellence and continued development in teaching, scholarship, and related service activities. A brief description of each faculty member's work and interests is fully explored in Section 4.1 of the undergraduate report as well as a summary of the faculty's research outputs, external funding, and service contributions.

Faculty Professional Development Opportunities

Though UTC in general, and our department more specifically are able to provide only limited financial support for participation in professional organizations and conferences, as evident in the table above, our faculty regularly engaged in professional development activities, including travel and participation in professional organizations, conferences, workshops, and other learning activities.

Because our annual travel authorization per faculty member is limited $500, faculty often self-supplement travel and registration for professional development. Despite these funding limitations, most faculty regularly attend professional meetings. The department also attempts to support as fully as possible (through its operating budget) faculty travel to one conference per year. As examples, Dr. Warren attends and presents her work at the American Psychology Law Society, the Society for Research in Child Development, and the Association for Psychological Science. Dr. Hood regularly presents with his students at the International Association for the Psychology of Religion and the Conference of Religion and Spirituality (Division 36, American Psychological Association). Dr. Ozbek has presented her research at the International Symposium on Olfaction among several other venues, Drs. Cunningham, Zelin, and Black also regularly present with their students at the Society for Industrial and Organizational Psychology and the bi-annual Work, Stress, and Health conference.

In addition to professional development associated with our individual research expertise areas, many faculty in our department have also taken advantage of professional development opportunities provided through the university (mostly funded by the Office of Research and Sponsored Programs and the Walker Center for Teaching and Learning). These events have included Quality Matters certification (Clark, Ferrier, Rogers, Zelin, Cunningham), UTC hosted grant-writing workshops for the National Institutes of Health and the National Science Foundation (Clark, Shelton, Ozbek, Cunningham). Indeed, Amanda Clark also attended a national meeting for NIH external funding that was funded entirely by the the Office of Research and Sponsored Programs.

I-O Program Faculty

There are currently 4 faculty in the PSY department who are primarily aligned at the graduate level with the I-O program (Black, Cunningham, O'Leary, and Zelin). All but Dr. O'Leary are full-time faculty; Dr. O'Leary's teaching load is limited to some degree by his role as department head (though he regularly carries an overload to cover needed courses). Two of these faculty are junior faculty, hired between 2013 and 2018. Specifically, Dr. Zelin joined for Fall 2016 and Dr. Black joined for Fall 2017. Both are tenure-track and both have successfully passed at least one departmental RTP committee review. From 2013 to 2016, the I-O program was also fully

supported by Dr. Biderman. He began to phase out from teaching in 2017 and fully retired in 2018. For the 2018-2019 Academic Year, Dr. Biderman is still teaching one graduate elective course each semester, but his final course is scheduled for Spring 2019.

Faculty Workload

Each I-O faculty member teaches at least two of the required courses in the I-O curriculum and often one or more graduate-level electives. The current distribution of courses by faculty member is evident in the schedule summarized in the second part of Appendix A. Courses are assigned to faculty based on expertise and interest.

RM Program Faculty

There are currently 10 faculty in the Department of Psychology who most clearly align with the RM program. During the period of 2013-2018 the RM program faculty has grown by 1 and the composition of the faculty has changed somewhat. In July 2012, Dr. Richard Metzger retired from his position at UTC and Dr. Lisa Cothran also left the RM program at that time. To fill those vacancies, Dr. Jill Shelton and Dr. Brenda McDaniel were hired for the 2013-2014 academic year. When Dr. McDaniel left the department in July 2014, a search was initiated and was completed with the hire of Dr. Kate Rogers who began in the 2015-2016 academic year. After a brief period of stability, the department was granted sufficient operating budget to hire an additional faculty line. The conclusion of that search was with the hire of Dr. David Ferrier, who joined in Fall 2016 and already is engaged in the supervision of 2 graduate students.

Faculty Workload

The faculty teaching load within the RM program is consonant with the highly individualized nature of graduate instruction, especially the demands associated with supervising theses. To this end, our department head is quite flexible and creative in assigning teaching loads, but the Psychology faculty all hold a teaching load of four courses per semester, with the typical semester load consisting of two single section courses (either at undergraduate or graduate-level), and one double section undergraduate course. This flexibility in allowing larger sections to count as two sections in our overall load helps to take into account the extra requirements involved in teaching graduate courses and the sometimes extraordinary amount of time required to supervise theses and independent studies**.** However, it is pertinent to note that supervision of graduate (or undergraduate) students in independent study, research, or thesis does not factor into our teaching loads.

All faculty teach, and excel at teaching, both undergraduate and graduate courses. Indeed, several of our current faculty, Dr. Ralph Hood, Dr. Mike Biderman, and Dr. Paul Watson, as well as Professor Libby Byers have won the Student Government Association’s Outstanding

Professor award. In 2016 Dr. Clark won a ThinkAchieve Faculty Teaching award and in 2012 Dr. Amye Warren was honored with the American Psychology-Law Society's Outstanding Teaching and Mentoring award.

Beyond the teaching load, all RM faculty maintain an active research group supported by graduate students. Many RM faculty are active reviewers and editors for professional journals, as well as serving on grant review committees. The faculty have community consulting activities that bring them into direct contact with the needs of the region in education, medical, and legal settings.

Faculty Scholarly Activity Specific to RM Specialty

All RM faculty regularly engage in scholarly activities that include attending conferences, presenting papers, and publishing journal articles. Moreover, most faculty involve their graduate students in these scholarly activities, often encouraging graduate students to present and/or publish as first-author on the knowledge products.

In addition to presenting and publishing, our RM faculty are also highly engaged in the pursuit of research funding, both internally and externally. Despite net reductions in the availability to grant funds to institutions like UTC, our faculty has been highly productive in seeking grants to support the research of our research programs. A total of 21 external funding applications were submitted in the 2013-2018 timeframe where an RM faculty member was listed as PI. These applications requested funds exceeding two million dollars. Nine external grants were awarded to our RM faculty as PIs and those were in the total amount of $643,397. In addition to those external funding requests where RM faculty were PI, there are many more where our faculty were Co-PI or Co-Investigators. Where allowed by the funding mechanism we do request external funds for the support of graduate assistantships, provision of tuition waivers and graduate student stipends, and when budgets are small, applications generally request more restricted funds to allow for hiring graduate students on an hourly basis to support the research project.

5. Learning Resources

Criterion 5: Learning Resources
5.1 The program regularly evaluates its equipment and facilities, encouraging necessary improvements within the context of overall institutional resources.
5.2 The program has access to learning and information resources that are appropriate to support teaching and learning.
5.3 The program provides adequate materials and support staff to encourage research and publication.

Both graduate programs in PSY share the same learning resources and all graduate students have access to these resources. Please refer to Section V of our undergraduate report for a summary of the offices, laboratories, classrooms, technology, library resources, and meeting rooms that support both of all of our programs. In addition to the general learning resources available to all PSY department faculty, there are a few specific details worth noting that particularly affect our graduate programs.

Equipment and Facilities

We have all the available statistical software needed to perform the statistical analyses appropriate for the program. Library resources are adequate, including an automated interlibrary loan facility (ILLIAD) and electronic delivery of many of the borrowed articles and book chapters. The library staff is very helpful, receptive, and forward-looking.

There are no dedicated offices that I-O or RM graduate students can call their own either collectively or individually. However, many are able to work within one or more of the faculty lab spaces. There is a dedicated graduate student lounge centrally located within the PSY department office suite and students use this on a daily basis for meetings, studying, and general socializing between classes.

The department (primarily through the university system's IT licenses and faculty software purchases) has sufficient computer resources to train students appropriately for use in teaching, statistical analysis, and data collection purposes. The core graduate coursework includes training in SPSS, with the opportunity in electives to develop advanced skills with SPSS and Excel.

Students in the research program, and those I-O students completing a thesis, are encouraged to generate some of the funds necessary for their thesis using the SEARCH award program (previously known as the Provost Student Research Award). This competitive, university-wide program allows students to gain experience in preparing a grant proposal and in obtaining up to $1000 in support of their work. Between 2013 and 2018, 31 graduate student projects, supervised

by 10 unique faculty members from the Department, secured over $22,000 in funding through this mechanism. These awards to students in the psychology department account for 20% of the awards given across the entire university during this time frame.

Table 5.1. Summary of SEARCH Grantees (2013-2018)

Student Name	Project Title	Faculty Sponsor
Manier, Aaron	A Taxonomy of Employee Perceptions of Wellness Programs	Cunningham
Nordbrock, Meredith	Predictors of the Coach-Athlete Relationship	Weathington
Salerno, Susan	Statistical Evaluation of Longitudinal Data (1978-2011) from a Regional Crisis Call Center for Gender and Crisis Call Category Differences	Hood
Buford, Charles	Cognitive Ability and Advanced Simulation	O'Leary
Cooper, Ashley	Self-Leadership Training: A Method for Improving Academic Performance and Retention	Cunningham
LeMay, Carrie	Fluctuations of Olfactory Functioning Throughout the Menstrual Cycle and During Pregnancy	Ozbek
Nida, Allen	Characterization of Attention-Deficit Disorder with the Slip Induction Task	Amanda Clark
Whitson, Naomi	The Effects of Hunger vs Satiation on Olfactory Performance in a Healthy Population	Ozbek
Branson, Raylan	Examining the Functional Impact of Executive Dysfunction in Individuals with Stroke	Clark
Gormley, Robert	Investigation of the Evolutionary Origins of Intelligence Through the Comparison of Four Otter Species	Foerder
Howard, Olivia	The Impact of Pro-Social vs. Self-Interested Motivation on Prospective Memory in the Laboratory and in the Real World	Shelton
Vijayakumar, Pooja	Work-Balance in Indian Expatriates in the US IT Industry	Cunningham
Arrowood, Robert	Scared to Death: An Examination of Underlying Terror in Death Awareness	Hood
Branson, R Chris	Examining the Utility of Embedded Executive Function Measures in Detecting Suboptimal Effort	Clark
Maeser, Lydia	Perceived Supervisor Support in Virtual and Face-to-Face Employees	O'Leary
Nida, Allen	Engaging Chattanooga Community Members at UTC	Clark/Shelton
Scott, Iain	The Effects of Context on Prospective Memory Commission Errors	Jill Shelton
Whitson, Naomi	Remember to Stop and Smell the Roses	Ozbek
Pendergast, Katherine	Variation in Resilience, Salivary Cortisol, and Olfaction Sensitivity in Response to Stress Induction	Ozbek
Slayton, Trevor	Climactic Interruptions and Their Effects on Prospective Memory and Purchasing Decisions	Shelton
Dempsey, Margaret	The Twelve Tribes: Ethnographic Conversion Stories of Current Members	Hood

Dirghalli, Jared	Quantifying and Qualifying the Links that Bind: A Conceptual Map of the Workplace Experience	Cunningham
Hacker, Jessica	Motivation and Environmental Cues: Predictors of Prospective Memory Performance	Shelton
Terry, Drake	A Noble Task: Work Stress, Sense of Coherence, and Work- Nonwork Conflict in Christian Ministers	Cunningham
Warner, Amanda	Detecting Deception: The Accuracy of the Good Judge	Rogers
Andrews, Morgan	Perceptions of juvenile confessions	Warren
Fogo, Lydia	The benefits and methods of increasing the perceived attractiveness of a workplace	Cunningham
Graeff, Kathryn	Perspective-taking and perceptive accuracy in first impressions	Rogers
Mackey, Cameron	Concealment of atheist identity: Scale construction and validation	Hood
Maynard, Erin	College students knowledge and perceptions of malingering attention-deficit/hyperactivity disorder	Clark
Rogers, Kaila	Heart rate variability: a physiological indicator of cognitive control	Clark

6. Support

Criterion 6: Support
6.1 The program's operating budget is consistent with the needs of the program.
6.2 The program has a history of enrollment and/or graduation rates sufficient to sustain high quality and cost-effectiveness.
6.3 The program is responsive to local, state, regional, and national needs.
6.4 The program regularly and systematically collects data on graduating students and evaluates placement of graduates.
6.5 The program's procedures are regularly reviewed to ensure alignment to institutional policies and mission.

We address some of the evidence for Support with respect to each graduate program, separately. The two exceptions to this pertain to the dimensions of Support Staffing and Alignment with Institutional Policies.

Support Staffing

The Department of Psychology is currently supported by an Administrative Assistant, Allison Stone, and an Office Manager, Judy Gallagher. This administrative support is consistent with the resources we have had in the past however, we have experienced considerable turnover in these roles in the time period from 2012-2018. Indeed, we have had 3 different office managers during that time frame, and 3 different administrative assistants as well. Our current administrative support, Allison and Judy do an excellent job of supporting the department with the limited resources we have available. Allison lifts advisement holds for our graduate students, processes course overrides when necessary, manages internal and external grants that support the graduate students' research, and also maintains the departmental books, travel reimbursements, and other expenses. Judy provides the day to day support for students and faculty regarding schedules, departmental communication, printing, and procurement. We are also fortunate to have a work-study student who supports the department 10 hours a week. Given the high level of research productivity in the department, we consider these resources to be adequate.

Alignment with Institutional Policies

Both graduate programs in our department adhere to all institutional policies regarding admission and management of graduate student progress toward graduation.

With respect to admission, both graduate programs in our department routinely exceed (by a wide margin) the university and graduate school minimium requirements for undergraduate GPA and GRE scores. Our admissions procedures are also among the most comprehensive and among

the only truly validated procedures on campus. The net effect is that our two graduate programs end up having a disproportionate number of the strongest graduate students on campus.

With respect to management of graduate student progress, both graduate programs adhere to graduate school academic and nonacademic continuation standards. In addition, all students in our programs submit a Program of Study or have an updated online MyMocsDegree profile by the end of their first semester. Progress toward this plan is monitored by the respective graduate program coordinator on a semesterly basis and in advance of the final semester of enrollment, and final degree audit process is initiated by the graduate program coordinators in conjunction with the graduate school (as per institutional policy).

For the past four years we have been experimenting with a graduate student performance evaluation that is designed to gather information beyond the academic performance of our graduate students. This goes beyond institutional requirements, but helps us to document evidence for/against compliance with non-academic continuation requirements for the university, graduate school, and department. Students identified as having a potential problem are approached to assure that they have adequate assistance to complete the degree.

I-O Program Support

In terms of enrollment, the size of the I-O program has fluctuated from a high of 26 first-year students in 2005 to a low of 13 first-year students in 1999, 2001, 2006, and 2012.

Operating Budget

Although the broader psychology department has an operating budget each year, through the College of Arts & Sciences, this budget is extremely limited and inflexible. The lack of a program-specific budget has created challenges when it comes to recruiting and retaining students and faculty. Lack of dedicated funds to support the I-O program has also generally limited our ability to grow as a program and take advantage of opportunities for consulting, conference travel and workshop attendance, and program-related events.

Since taking over as program coordinator in 2015, Dr. Cunningham has worked to increase the amount of flexible funding available to support I-O program operations. This includes the following:

- Shoring up our annual funding model for the RCIO conference series to the point where this program is nearly turning a profit that can support other I-O program educational initiatives.
- Increasing the connection to the program's vast alumni base and the number of yearly connections with alumni through annual update messages, the annual networking social event, program get-togethers at our annual SIOP conference, and our annual conference series.

- Increasing the relevance of our student-led professional development group (CHAIOP), which sustains itself and other program-related events through student-paid membership dues.
- Increased consulting projects in the community, for which at least one graduate student from the program is always linked for hourly pay associated with work on the project.

The I-O program also has a long and established reputation throughout UTC for providing high quality talent to support the functioning of many critical areas through GA placements. Students in the I-O program compete every year for these positions, but have a tremendous track record of securing half and full GA positions. This is summarized in the following table for the past few years, to illustrate this trend:

Table 6.1. Summary of Recent I-O GA Placements (2016-Present)

Office/Department	Years (# students Y1/Y2)
Office of Research Integrity	2018-2019 (1 Y1)
Walker Teaching Resource Center	2018-2019 (2 Y1, 1 Y2) 2017-2018 (1 Y1, 1 Y2) 2016-2017 (1 Y1)
Honors College	2018-2019 (1 Y1, 1 Y2) 2017-2018 (1 Y1)
Dean of Students	2018-2019 (1 Y1) 2017-2018 (3 Y2) 2016-2017 (3Y1)
University Career Services	2018-2019 (1 Y1) 2017-2018 (1 Y2) 2016-2017 (1 Y1)
Office of Civic Engagement	2018-2019 (1 Y1)
Undergraduate Research and Creative Endeavors	2018-2019 (2 Y1)
Office of Student Conduct, Outreach, and Support	2018-2019 (1 Y1)
Office of Research and Sponsored Programs	2018-2019 (1 Y1) 2017-2018 (1 Y1, 1 Y2)
Office of Planning, Evaluation and Institutional Research	2018-2019 (1 Y2) 2017-2018 (1 Y1, 1 Y2) 2016-2017 (1 Y1)
Women's Center	2018-2019 (1 Y2) 2016-2017 (1 Y2)
Residential Life	2017-2018 (1 Y2) 2016-2017 (1 Y1, 1Y2)
Graduate School	2016-2017 (1 Y1)
Office of the Chancellor	2016-2017 (1 Y2)

A simple way of making the value of these administrative GA positions more tangible is to consider that the average cost of employing a non-student to fill one of these roles is likely to be around $20,000 per year for a part-time role (not including benefits, if applicable). The cost of a full GA is roughly $12,000 at present ($5000 in-state tuition + $7000 stipend per year), given that most full GA holding students are "classified" as in-state for purposes of tuition coverage. Considering these numbers, the value proposition for just one full GA is that they are able to produce 140% of the value of a non-GA employee who might otherwise be hired into one of these positions. In a typical year, we may place 6 – 8 I-O students in an administrative GA position somewhere on the UTC campus. Using the numbers above, the value produced by just 6 of our administrative GAs likely exceeds $168,000 to the university. The true value to these offices at UTC is likely much greater, given the high quality of I-O students working within these roles. It is frustrating to note here, however, that despite this real value to the university, instead of increasing support for thes types of roles, the limited funding for GA spots is decreasing and being split among a larger number of graduate programs.

There are some downsides for I-O students who take administrative GA roles. The main one is that these students often are so busy with GA-related work, that they cannot be as involved with I-O research and other projects within the program as they would like. There is also a constant recruiting challenge, every year, given that GA positions are not made available or finalized until after admissions decisions are made (often not until summer, long after students must make commitment decisions). This creates unnecessary stress and recruitment challenges that could be ironed out with more strategic assignment of GA positions and potentially alternative funding mechanisms that enable the assignment of GA roles at the time an admissions offer is made. On balance, though, the availability of GAs, any number and any kind of GAs, helps us to recruit and retain top talent for the I-O program.

Enrollment and Graduation

The formula score and other criteria for admission are described on the I-O program's admissions criteria webpage, where we also provide an illustration is presented showing how to compute the formula score. The average formula score and average UGPA, GREV, and GREQ scores of recently admitted students are also presented on the web site. The following statement concerning use of the formula score has been on the I-O web site for the past several years. The process outlined at the top this website is made transparent and followed consistently in every application cycle. In brief, the formual score is considered first, followed by evidence of necessary background knowledge, then inputs from letter of recommendation writers, and the students responses to our statement of purpose questions. Refer to the earlier summary of admissions data (Table P.2) for a sense of the overall quality of the students who have been admitted in recent years.

Probably the best evidence for the consistent application of retention standards in the I-O program is the low attrition rate for the program. The I-O program attracts more than half of its students from out-of-state. These students have typically examined several competing programs and have perhaps applied to two or three of them. When they arrive here, these students are committed to completion of the degree. For that reason, very few have left the program. Within the past 5 years, there have been no departures from the program, except for 1 or 2 linked to personal or family medical emergencies.

Responsiveness

Initially, the I-O program served as a vehicle for persons already employed in what were then called personnel departments. This degree program was designed then to meet the needs of such working students to further their education and to compete for increased salaries by having an advanced degree. The program maintained that kind of focus throughout the 1980s and into the early 1990s. This focus was particularly evident in the offering of I-O coursework to both on-campus students and to managers at companies in neighboring Cleveland, TN, beginning in 1985. Following this period of time, two parallel I-O tracks operated – one for students attending on-campus at UTC and the other for students attending off-campus classes in Cleveland. The off-campus track continued through the 1991-1992 academic year. During those years, the mixture of students enrolled in the program had always included some full-time students, but that changed by 1993 or so, when all but only one or two individuals entered the program as full-time students who had just completed their undergraduate degree. This student demographic has remained essentially constant since the early 1990s, with approximately 80-90% of each incoming class defined as full-time students who recently received their bachelor's degree. From the beginning, all required courses and virtually all elective courses in the program were offered in the evening.

In recent years, and especially since our last program review, the I-O program has gone through a substantial curriculum revision (detailed earlier in this report) and has worked very hard to ensure its continued relevance and applicability within the Chattanooga region and the broader global economy. This work has been successful, as evidenced in the recent rankings of master's program in I-O psychology, in which our program was identified as among the top 10 across multiple criteria, and several different ranking projects. A summary of these telling ratings is available here. These rankings are indicative of the careful attention we have given in our program to ensuring all of our educational content is up-to-date, challenging, and relevant. We are able to ensure this because all of our core faculty are heavily engaged not only as academics, but also as consultants and practitioners in a variety of areas within the field. All of our faculty are also involved in a variety of regional, national, and international service roles, which help to increase our awareness of professional needs, as well as the broader visibility of our program.

Our program has also increased its efforts to provide ongoing education and support to our alumni and other members of our broader community. Two examples of this are our annual RCIO conference series and our online working papers series, both described earlier in this report.

RM Program Support

Students in the RM program work with their mentor as their primary advisor and also confer regularly with the RM Program Coordinator. Together, they plan a program of study that prepares each student for their degree objectives. RM students are encouraged to discuss their plans with other faculty in order to broaden their perspective. Virtually all students complete some of their course work through personalized instruction, in the form of Independent Study (PSY 5998) and Individual Research (PSY 5997) (see Table 2.2 for details regarding enrollments and student credit hour production). In these personalized courses, focused readings are assigned to add depth to the students' content knowledge, typically in support of their thesis research. Students are encouraged to participate in research projects beyond their theses, and PSY 5997/5998. In the fall of their second year, mentors and students systematically consider the student's next step. Those headed to doctoral programs are helped to select appropriate universities, and those heading to an applied setting are supported in their identification of an appropriate area and development of application materials.

During the 2013-2018 cycle, completion rates in the RM program have ranged from 55% to 75%. Indeed, in this cycle, 27 students could have qualified for degree completion (were enrolled in Fall 2016 or earlier) and 16 of them have actually graduated. Of those 9 who have not graduated, 3 have maintained enrollment and are simply delayed due to part-time status and/or accommodation due to disability. The other 8 either were either dismissed (n=2), intend to return to the program in the future when family circumstances allow (n=1), or have chosen another path due to loss of interest in pursuring research expertise (n=5).

Operating Budget

The RM program does not have an independent budget that can be used to support the recruitment, retention, and success of our students. This lack of dedicated funds has made planning for recruitment initiatives challenging. While we are often able to find recruitment options when funds allow, we would be much more successful in our endeavors if we were able to forecast funds and plan accordingly.

Lacking a specific fiscal year budget also affects our ability to forecast GA allocations to students within our program. In each of the past 5 years we have been unable to offer graduate

assistantship contracts at the time of student acceptance; indeed, GA contracts are often not available until summer, long after students must make commitment decisions. This has led several of our best applicants to deny our offer of admission in favor of a similar institution who could guarantee funds. Despite our challenges in forecasting funds, many of our graduate students do eventually secure at least partial funding, either within the department or thorugh graduate assistantships in other colleges and/or administrative offices.

Enrollment and Graduation

The formula score and other criteria for admission are described on the RM (http://www.utc.edu/Academic/Psychology/Research.php) website and an illustration is presented showing how to compute the formula score. The average formula score and average UGPA, GREV, and GREQ scores of recently admitted students are also presented on that site. The following statement concerning use of the formula score has been on the I-O web site for the past several years and we echo this statement to our RM applicants.

> "The probability of admission is lower for applicants with formula scores below 500. Students whose formula scores are below 400 are much less likely to be admitted than those with scores closer to 500. A formula score below 350 is associated with a very low probability of admission. Low formula scores can sometimes be compensated for by exemplary letters of reference, personal statement, or other evidence that a student will be able to perform well in the program."

Since 2000, the RM program has admitted between 4 and 11 students annually. This cohort size is consistent with the mentoring philosophy that drives the curriculum. In most years, the students come equally from UTC and other colleges and universities in the region and around the country. Due to availability of funds, we do very little advertising for the RM program, so students are attracted by the interests of the faculty. To ensure stability in our cohort size and ensure high quality students, we hope to secure resources to engage in more outreach through stronger web presence, and better advertising in the coming cycle.

Generally, the students who enroll in the RM program have a strong academic background and decent GRE scores. However, it is important to note that the students in our program are often those who are interested in pursuing doctoral training but were not successful in gaining admission to such a program immediately after earning their undergradate degree. As noted in Table P.3, RM students during the 2013-2018 cycle had median GPAs ranging from 3.45 to 3.88 and while their GRE quantitative scores are consistently lower (ranging from 37th percentile to 77th percentile), their GRE verbal scores were stronger (ranging from 63rd percentile to 85th

percentile). Overall, their GRE scores plus their GPA usually subtended a formula score of 500 or greater (described here: http://www.utc.edu/Academic/Psychology/Research.php).

The students who come into our program with stronger formula scores are not always the ones who complete the program with higher grades, more publications, or more success in PhD program applications. Instead, it seems that perseverance, and fewer external demands (jobs, family obligations, health concerns) are more predictive of success in our program. That said, we continue to implement procedures to increase timely completion. These procedures include a graduate student evaluation each semester that is used as an advisement tool for both the advisor and the student. We also require completion of PSY 5140 to provide detailed information on the thesis process and timeline in order to keep students on track.

Responsiveness

In the past decade, our faculty have noted changes in the competitiveness of the academic job market and perhaps even more so, the competitiveness of PhD programs. To ensure that our students are uniquely prepared for that competitive market, we made a change in 2012 to require a second statistics course (PSY 5130) and we also separated PSY 5510 and PSY 5520 to allow for greater flexibility in taking these courses as electives. This change in our curriculum has helped our recent graduates be more successful in both doctoral research settings and applied settings where experience with open science approaches as well as newer statistical techniques like multi-level modeling are assets. For example, Kayla Polk (graduated 2012) went on to use her statistics skills as a research assistant at Vanderbilt, and that work landed her acceptance into all 10 doctoral programs to which she applied; Joe Jones recently completed a doctorate in Statistical Psychology at the University of North Dakota; Natalie Kuliesek, William Tewalt, Jennifer Keeney, and Brandy Hemmer use their expertise in program evaluation, data analytics in insurance, trial consulting, and health research, respectively.

With respect to responsiveness to the needs of the university and community beyond, we believe that the Teaching of Psychology course (PSY 5020), where our graduate students become well versed in the scholarly literature on effective college teaching and get practical experiences (syllabus creation, test design, rubric development, lecture development and delivery), leads to more effective college educators. Indeed, after completing their first year (at least 18 hours) and the PSY 5020 course, our students can teach their own sections of PSY 1010 Introduction to Psychology. Having a small army of excited and prepared educators for our PSY 1010 course allows us to offer more, smaller, sections to better serve our undergraduate students, and provides excellent teaching experiences that our RM students carry out to the community (several former RM students are teaching in community colleges) or to their doctoral programs. Given the shift in higher education toward fewer tenure-track positions and more lecturer lines,

our graduate student educators are well prepared and competitive for this changing market. For those who do pursue doctoral work, many RM graduates report that taking this course and teaching PSY 1010 as master's students enables them to obtain a GTA or to waive a similar teaching preparation course required in their doctoral program to begin teaching immediately.

Our graduate program is also making a lasting impression on the greater Chattanooga community through the research projects our students champion. Although a practicum is not required in the RM program, our students often take research and/or independent study courses in which they assist faculty in other colleges (e.g., College of Health, Education, and Professional Studies and College of Engineering and Computer Science) or organizations in the community (United Way, Creative Discovery Museum, Chattanooga Autism Center, Chattanooga Zoo, Tennessee Aquarium, Siskin Hospital for Rehabilition, Erlanger Hospital, Life Care Centers of America) to conduct research and program evaluations. Greater focus nationally on accountability and documenting outcomes means that the research skills we focus on in our program are highly valued.

Appendices

Appendix A: Current I-O Program Curriculum Map

Typical course scheduling for I-O program (* = required, + = optional):

	Fall	Spring	Summer
Y1	[9 hr min] *5060 *5100 +*5406* +*5020* +*5200 +*5250 +5500	[12 hr min] *5130 *5160 *5270 +*5300 +5210 +5140	[3 hr min] *5360 +Elective
Y2	[12 hr min] *5120 +*5200 +*5250 +*5360 +5500 +5510 +5999	[12 hr min] *5260 +*5300 +*5360 +5210 +5520 +5999	

The names of these courses are included in the schedule outline on the next page. To access details about these courses, please review Appendix E, this report.

I-O Course Scheduling Plan (beginning 2018-2019 AY)

Fall (min target = 9 hrs for Y1 and 12 for Y2)

- PSY 5020 - Teaching of Psychology (required for those interested in becoming a TA or instructor here at UTC) (Y1; varies)
- *PSY 5060 - Organizational Psychology (Y1; Cunningham)
- *PSY 5100 - Statistics and Research Methods in Psychology I (Y1; Black)
- *PSY 5120 - Employee Performance and Development (Y2; Zelin)
- *PSY 5200 - The Uses of Groups in Work Organizations (Y1/Y2; Black/O'Leary)
- PSY 5250 - Business skills and the profession of I-O (Y1/Y2; Cunningham)
- *PSY 5360 - Practicum in I-O Psychology (Y2; Cunningham)
- PSY 5406 - Introduction to Industrial Psychology (required for Y1 students w/out I-O intro course; O'Leary)
- PSY 5500 - Strategic I-O Psychology (Y1/Y2; Quattro)
- PSY 5510 - Advanced Methods/Stats (Y2; Biderman, Rogers, Black, Cunningham, other)
- PSY 5999 – Thesis (Y2; all faculty as needed)

Spring (min target is 12 for Y1 and 12 for Y2

- *PSY 5130 - Statistics and Research Methods in Psychology II (Y1; Black)
- PSY 5140 - Advanced Research Design (required for those pursuing a thesis) (Y1; Warren/Clark)
- *PSY 5160 - Human Resources Training (Y1; O'Leary)
- PSY 5210 - Occupational and Organizational Health (Y1/Y2; Cunningham/Black)
- *PSY 5260 - Organizational Development (Y2; Cunningham)
- *PSY 5270 - Job/Work Analysis and Personnel Selection (Y1; Zelin)
- *PSY 5300 - Compensation and Benefits (Y1/Y2; adjuncts)
- *PSY 5360 - Practicum in I-O Psychology (Y2; Cunningham)
- PSY 5520 - Advanced Methods/Stats (Y2; Biderman, Rogers, Black, Cunningham, ?)
- PSY 5999 – Thesis (Y2; all as needed)

Summer (minimum 3 credits)

- *PSY 5360 - Practicum in I-O Psychology (Y1; Cunningham)
- Optional Elective (Y1; varies)

Additional Information and Notes

Total minimum requirement for graduation: 48 hours (27 hours core + 6 hours PSY 5360 + 15 hours electives); core + practicum tagged with "*" in the list above. I-O students are required to register for 3 hours of practicum credit in the summer following their first year of course work.

Periodically, special electives numbered PSY 5950r or 5960r may be offered. I-O students are encouraged to take these courses to fulfill an optional program elective. Students may also be approved by the program coordinator to take certain courses through the business school to fulfill an optional program elective.

Appendix B: Current RM Curriculum Map

Typical course scheduling for RM program (* = required, + = optional):

AY	Fall	Spring
Y1	[9 hr min] * PSY 5100: Statistics & Research Methods I * PSY 5950: Advanced Studies * PSY 5020: Teaching of Psychology	[9 hr min] * PSY 5130: Statistics & Research Methods II * PSY 5140: Applied Research Design * PSY 5960: Advanced Studies
Y2	[9 hr min] * PSY 5999: Thesis +/* PSY 5950: Advanced Studies One or Two of the below: + PSY 5510: Advanced Methods & Stats I + PSY 5997: Independent Research + PSY 5997: Independent Studies + Other Approved Elective course	[9 hr min] * PSY 5999: Thesis +/* PSY 5960: Advanced Studies One or Two of the below: + PSY 5520: Advanced Methods & Stats II + PSY 5997: Independent Research + PSY 5998: Independent Studies + Other Approved Elective course

The typical instructors for each of these courses are included in the schedule outline on the next page. To access details about these courses, please review Appendix E in this report.

RM Course Scheduling Plan

Fall (min = 9 hrs)

- * PSY 5100 - Statistics and Research Methods in Psychology I (Y1; Black)
- * PSY 5020 - Teaching of Psychology (Y1; Warren)
- * PSY 5950 – Advanced Studies (Y1/Y2; varies but biological/cognitive specialty)
- PSY 5510 - Advanced Methods/Stats (Y2; varies depending on faculty availability and student need)
- PSY 5997 – Independent Research (Y2; all as needed)
- PSY 5998 – Independent Studies (Y2; all as needed)
- * PSY 5999 – Thesis (Y2; all as needed)

Spring (min = 9 hrs)

- * PSY 5130 - Statistics and Research Methods in Psychology II (Y1; Black)
- * PSY 5140 - Advanced Research Design (Y1; Warren/Clark)
- * PSY 5960 – Advanced Studies (Y1/Y2; varies but social/developmental/personality specialty)
- PSY 5520 - Advanced Methods/Stats (Y2; varies depending on faculty availability and student need)
- PSY 5997 – Independent Research (Y2; all as needed)
- PSY 5998 – Independent Studies (Y2; all as needed)
- * PSY 5999 – Thesis (Y2; all as needed)

Additional Information and Notes:

- **RM students are not expected to enroll in course work during the summer but they are expected to be highly productive with thesis project to progress toward graduation on time.**

- **Total minimum requirement for graduation:** 36 hours (21 core course hours + 6 thesis hours + 9 elective hours)

- Students may also be approved by the program coordinator to take certain courses through other colleges at UTC to fulfill an optional program elective.

Appendix C: Historical I-O Curricula

As noted in section 6 of this report, the I-O program initially was designed in the mid-1970s to meet the continuing education needs of working professionals in what were then called personnel departments. We have never lost this focus, but the focus has evolved over time, particularly through the early 1990s. This focus was particularly evident in the offering of I-O coursework to both on-campus students and to managers at companies in neighboring Cleveland, TN, beginning in 1985. Following this period of time, two parallel I-O tracks operated – one for students attending on-campus at UTC and the other for students attending off-campus classes in Cleveland. The off-campus track continued through the 1991-1992 academic year. During those years, the mixture of students enrolled in the program had always included some full-time students, but that changed by 1993 or so, when all but only one or two individuals entered the program as full-time students who had just completed their undergraduate degree. This student demographic has remained essentially constant since the early 1990s, with approximately 80-90% of each incoming class defined as full-time students who recently received their bachelor's degree. From the beginning, all required courses and virtually all elective courses in the program were offered in the evening.

In recent years, and especially since our last program review, the I-O program has gone through a substantial curriculum revision (detailed earlier in this report) and has worked very hard to ensure its continued relevance and applicability within the Chattanooga region and the broader global economy. This work has been successful, as evidenced in the recent rankings of master's program in I-O psychology, in which our program was identified as among the top 10 across multiple criteria, and several different ranking projects. A summary of these telling ratings is available here. These rankings are indicative of the careful attention we have given in our program to ensuring all of our educational content is up-to-date, challenging, and relevant. Table C1 below presents the essential curricula since the program's inception.

Table C1. Summary of I-O Program Curricula since Program Inception

AY	Class Year	Fall	Spring
1975-77	1st	PSY 506: Industrial Psychology PSY 507: Human Behavior in Orgs PSY 448: Theories of Personality BUSA 545: Behavioral Aspects of Administrations	PSY 517: Industrial Counseling PSY 521: Theories of Therapy PSY 516: Industrial Training Elective
	2nd 37 HRS	ENGR 454: Work Measurement & Design PSY 536: Practicum in Training PSY 537: Practicum in Counseling Elective	

AY	Class Year	Fall	Spring
1977-79	1st	PSY 506: Organizational Psychology PSY 507: Industrial Psychology PSY 510: Applied Research Elective	PSY 516: Organizational Training PSY 517: Organizational Interviewing PSY 509: Work Motivation Elective
	2nd 36 HRS	PSY 536: Practicum in Organizational Processes PSY 527: Current I-O Psych Elective Elective	
1979-81	1st	PSY 506: Organizational Psychology 1 PSY 507: Industrial Psychology I PSY 401: Intermediate Statistics Elective	PSY 509: Organizational Psychology II PSY 512: Industrial Psychology II Elective Elective
	2nd 48 HRS	PSY 511: Testing and Education Research PSY 516: Training PSY 517: Interviewing Elective	PSY 526: Current Topics in Organizational Psychology PSY 527: Current Topics in Industrial Psychology PSY 536: Practicum Elective
1983-85	1st	PSY 506: Industrial/Organizational Psychology I PSY 511: Research Methods Elective Elective	PSY 507: Industrial/Organization Psychology II PSY 513: Advanced Research Techniques Elective Elective
	2nd 48 HRS	PSY 516: Training PSY 517: Interviewing PSY 512: Job and Performance Measurement Elective	PSY 526: Organization Development PSY 527: Personnel Selection PSY 536: Practicum Elective
1985-89	1st	PSY 506: Industrial/Organizational Psychology I PSY 511: Research Methods PSY 536: Practicum Elective	PSY 507: Industrial/Organizational Psychology II PSY 513: Advanced Research Techniques PSY 536: Practicum Elective
	2nd 48 HRS	PSY 516: Training PSY 517: Interviewing PSY 512: Job and Performance Measurement Elective	PSY 526: Organization Development PSY 527: Personnel Selection PSY 536: Practicum Elective
1989-93	1st	PSY 506: Industrial/Organizational Psychology I PSY 511: Research Methods Elective Elective	PSY 513: Advanced Research Techniques PSY 536: Practicum Elective Elective

AY	Class Year	Fall	Spring
	2nd 48 HRS	PSY 516: Training PSY 517: Interviewing PSY 512: Job and Performance Measurement PSY 536: Practicum	PSY 526: Organization Development PSY 527: Personnel Selection PSY 536: Practicum Elective
1993-2017*	1st	PSY 5060: Organizational Psychology PSY 5110: Research Methods Elective	PSY 5120: Job and Performance Measurement PSY 5130: Advanced Research Techniques PSY 5160: Training Elective Summer: PSY 536: Practicum
	2nd 48 HRS	PSY 5200: Uses of Groups PSY 5270: Selection PSY 5360: Practicum Elective	PSY 5260: Organization Development Elective Elective Elective
*Courses were renumbered from three to four digits in 2011. For simplicity, the revised course numbers are presented here.			

Appendix D: Historical RM Curricula

The RM curriculum has always required 36 hours and the successful proposal and defense of a thesis project. Five required courses have been part of the program since 1983 – Applied Research I (PSY 5100), Applied Research II (PSY 5140), and three sections of topical seminar-style courses title Advanced Studies (PSY 5950 or 5960). While the topic of focus differs depending on the instructor's expertise ares, PSY 5950 provides coverage of the social/developmental/personality specialty. In 2001 the Teaching of Psychology course was added to the curriculum to address a gap in the preparation of our students. Finally, in 2012 RM students were required to complete PSY 5130 (an additional statistics and research design course). Beyond those required courses our program has consistently concentrated on the thesis and 6 credit hours in the thesis course is a required component of the curriculum. We hope to be able to offer additional statistics and research design courses as electives in the future, namely, our students would benefit from a course focused on program evaluation being offered regularly.

Table D1. Summary of RM Program Curricula since Program Inception

AY	Class Year	Fall	Spring
1979-81	1st	PSY 401: Intermediate Statistics PSY 510: Applied Research PSY 595r or 596r: Advanced Studies	PSY 513: Advanced Research Techniques PSY 595r or 596r: Advanced Studies Elective
	2nd 36 HRS	PSY 595r or 596 r: Advanced Studies PSY 599: Thesis Elective	PSY 599: Thesis Elective Elective
1983-2000	1st	PSY 510: Applied Research – I PSY 595r or 596r: Advanced Studies Elective	PSY 514: Applied Research –II PSY 595r or 596r: Advanced Studies Elective
	2nd 36 HRS	PSY 595r or 596r: Advanced Studies PSY 599r: Thesis Elective	PSY 599r: Thesis Elective Elective
2001-12	1st	PSY 510: Applied Research – I PSY 595r or 596r: Advanced Studies PSY 501: Teaching of Psychology	PSY 514: Applied Research –II PSY 595r or 596r: Advanced Studies Elective
	2nd 36 HRS	PSY 595r or 596r: Advanced Studies PSY 599r: Thesis Elective	PSY 599r: Thesis Elective Elective
2012-present	1st	PSY 5100: Statistics & Research Methods I PSY 5950: Advanced Studies PSY 5020: Teaching of Psychology	PSY 5130: Statistics & Research Methods II PSY 5140: Applied Research Design PSY 5960: Advanced Studies
	2nd 36 HRS	PSY 5999: Thesis PSY 5950 or Elective Elective	PSY 5999: Thesis PSY 5960 or Elective (whichever not in Fall) Elective

Appendix E: List of PSY Courses Linked to Syllabi

Below is a listing of all graduate-level courses offered within the PSY department. Each listed course is a hyperlink that leads to the current (2018-2019) Graduate Catalog details for the course. As noted elsewhere in this report, some of these courses are specific to each of our two graduate programs, while some of these courses are open to students enrolled in either graduate program (as well as a few select and well-qualified graduate students from other, similar graduate program at UTC on a case by case basis).

Overlapping courses

- PSY 5020 - Teaching of Psychology
  - Syllabus
- PSY 5100 - Statistics and Research Methods in Psychology I
  - Syllabus
- PSY 5130 - Statistics and Research Methods in Psychology II
  - Syllabus
- PSY 5140 - Advanced Research Design
  - Syllabus
- PSY 5510 - Advance topics in Psychological Statistics
  - Syllabus
- PSY 5520 - Advanced Statistical Modeling
  - Syllabus
- PSY 5997r - Individual Studies
  - No standard syllabus
- PSY 5998r - Research
  - No standard syllabus
- PSY 5999r - Master's Thesis
  - No standard syllabus
- PSY 5010r - Group Studies
  - No current syllabus available; not offered within past 5 years
- PSY 5040 - Qualitative Methods for Applied Research and Evaluation
  - No current syllabus; not offered within past 5 years

Typically I-O courses

- PSY 5060 - Organizational Psychology
  - Syllabus
- PSY 5120 - Employee Performance and Development
  - Syllabus
- PSY 5160 - Human Resources Training
  - Syllabus
- PSY 5200 - The Uses of Groups in Work Organizations
  - Syllabus
- PSY 5210 - Occupational and Organizational Health
  - Syllabus
- PSY 5250 - Core Business Skills for I-O Psychologists
  - Syllabus
- PSY 5260 - Organizational Development and Change Management
  - Syllabus
- PSY 5270 - Job/Work Analysis and Personnel Selection
  - Syllabus
- PSY 5300 - Compensation and Benefits
  - Syllabus
- PSY 5360 - Practicum in I-O Psychology
  - Syllabus
- PSY 5406 - Introduction to Industrial-Organizational Psychology
  - Syllabus
- PSY 5500 - Strategic I-O Psychology and Human Resource Management
  - Syllabus

Typically RM courses

- PSY 5950r - Advanced Studies in Experimental Psychology
  - Syllabus is different for each course/instructor. Sample syllabus from Fall 2018
    - Fall 2013 – Dr. Amanda Clark, Cognitive Aging & Assessment
    - Fall 2014 – Dr. Jill Shelton, Prospective Memory
    - Fall 2015 - Dr. Preston Foerder, Consciousness
    - Fall 2016 – Dr. Nicky Ozbek, Resilience
    - Fall 2017 – Dr. Jill Shelton, Prospective Memory
    - Fall 2018 – Dr. Amanda Clark, Neuropsychological Assessment

- PSY 5960r - Advanced Studies in Developmental/Personality/Social Psychology
    - Syllabus is different for each course/instructor. Sample syllabus from Spring 2017Spring 2013 – Dr. Nicky Ozbek, Chemical Senses
    - Spring 2014 – Dr. Brian O'Leary, Health Psychology
    - Spring 2015 – Dr. Ralph Hood, Psychology of Religion
    - Spring 2016 – Dr. Amanda Clark, Executive Function over the Lifespan
    - Spring 2017 – Dr. Kate Rogers, Personality
    - Spring 2018 – Dr. Ralph Hood, Psychology of Religion

Appendix F: I-O Learning Assessment Plans

From 2013 to 2017, the evaluation of learning outcomes was primarily driven by student performance in classes, on internship, and on capstone comprehensive exam/thesis projects. With respect to courses specifically, the primary assessment plans revolved around students demonstrating the core learning objectives for our department of knowledge, research-related skills, and professional communication skills/abilities. This was observed in class-related writing assignments, pressentations, group-facilitation activities, and from work/internship supervisors' observations of student performance on the job.

As noted in the body of this report, a comprehensive review and revision to the I-O program curriculum was done between 2016 and 2018, with a new course assessment plan implemented beginning Fall 2018. Within this new plan, the previously used mechanisms for evaluating student learning are retained, but supplemented with an additional evaluation of competency-related SLO specific to the areas of emphasis in each course. Specifically, instructors identify the core competencies from the SIOP (2017) Competencies for Graduate Education in I-O Psychology that are most strongly addressed in a given course. Instructors then select 1-2 of the developd SLO statements for these competencies and engage students to rate their confidence in their ability to do what is outlined in each SLO at the beginning of each course (pre-evaluation) and at the end of each course (a post-evaluation, also including a retrospective pre-evaluation, to account for response shift bias).

The table beginning on the next page is a summary of the SIOP (2017) Competencies for Graduate Education in I-O psychology, their definitions, and associated SLO statements for the UTC I-O MS Degree program

SIOP Competencies	Definitions	Master's level manifestations (AKA, suggested SLOs)
GENERAL KNOWLEDGE AND SKILLS		
1. Ethical, Legal, Diversity, and International Issues	This domain has to do with the various contexts within which the I-O psychologist operates. I-O psychologists gain knowledge of and abide by relevant ethical guidelines when consulting as well as teaching, conducting research, and mentoring (e.g., Ethical Principles of Psychologists and Code of Conduct, 2002, Amended 2010, and the Ethical Principles in the Conduct of Research with Human Participants, 1973, 1982). I-O psychologists seek to understand relevant federal, state, and local laws, statutes, regulations, and legal precedents (e.g., the Equal Employment Opportunity Commission's Guidelines on Employee Selection Procedures). They should also be knowledgeable about the accommodations required by the Americans with Disabilities Act and be familiar with the principles of universal design. Since a fair amount of professional work done in organizations is covered by negotiated labor contracts, competency in this domain would also include an awareness of opportunities and restrictions imposed by such agreements, as well as an appreciation of the labor/management dynamics associated with them. I-O psychologists endeavor to gain knowledge about the various and latest professional norms, standards, and guidelines relevant to their profession (e.g., Standards for Providers of Psychological Services, 1987; Principles for the Validation and Use of Personnel Selection Procedures, 2003; Standards for Educational and Psychological Testing, 2014). I-O psychologists strive to be sensitive to and have the interpersonal skills to interface with a diverse audience in a multicultural, global environment (e.g., Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists, 2002) and knowledgeable about best practices to address diversity in organizations. I-O psychologists are concerned about the well-being of individuals, human rights, and working conditions for individuals worldwide as reflected by SIOP's prosocial agenda, non-governmental organization with consultative status to the United Nations and an official United Nation's Global Compact participant.	1.1) Apply psychological ethical guidelines to decisions in a work-related context. 1.2) Explain relevant federal, state, local laws and regulations pertaining to recruitment, selection, and employment of individuals. 1.3) Practice up-to-date professional norms, standards, and guidelines for professionalism in the I-O profession. 1.4) Demonstrate cultural competence, openness, and tolerance when working with others who may be different from oneself.

2. Fields of Psychology	I-O psychology is the scientific study of working and the application of that science to workplace issues facing individuals, teams, and organizations. I-O psychology is a context-centered discipline. This focus differentiates it from fields of psychology that study basic processes (e.g., perception, memory, learning), from fields that study particular populations of individuals (e.g., children, the mentally ill), and from fields that study mechanisms of behavior (e.g., physiological psychology, brain research). Although the populations of individuals and the locations are diverse, we are eclectic. Because we borrow ideas, procedures, and paradigms from the other fields of psychology, it is important that we have an understanding of the strengths, weaknesses, and sources of our borrowings. While we draw freely from other fields of psychology, we may not borrow equally from all fields. We share a great deal with social psychology, psychometrics, motivation, learning, and personality. Historically, the discipline has borrowed less heavily from clinical and developmental psychology. The importance of these fields of psychology to the I-O area changes over time and obviously varies with the particular interests of the individual I-O psychologist. It is difficult to predict which of the related fields will develop research leads and findings in the near and distant future that will have an impact on I-O psychology. In any event, to be consistent with APA recommendations (American Psychological Association Committee on Accreditation, 2013), exposure should reflect competency in the following broad areas: biological aspects of behavior, cognitive and affective aspects of behavior, and social aspects of behavior. Students in graduate programs in I-O psychology should be able to read and to comprehend the issues and controversies involved in basic research published in journals in at least a subset of these related areas. The specific fields of competency and journals read will vary among individuals, but I-O psychologists should be able to understand historical and new developments in other areas of psychology that impact their areas of research and practice.	2.1) Explain how biological, cognitive/affective, and social factors effect human behavior. 2.2) Identify and discuss methodological and/or conceptual issues and controversies associated with applied psychological research. 2.3) Recognize the strengths, weaknesses, and sources of our borrowings from other fields of psychology. 2.4) Differentiate I-O psychology from other fields of psychology that study more basic cognitive/emotional processes or behaviors.

3. History and Systems of Psychology	If I-O-psychology graduate students know how the discipline of psychology developed and evolved into its present configuration, then each generation will share the common bonds and language of the discipline. They will also possess knowledge of the intellectual heritage of our field. Such common knowledge is important for the pragmatic functional role it plays in communication and in preventing frequent repetitions of the mistakes and dead ends of the past. Many historical schools and systems of psychology have contemporary representatives, either in a pure or a diluted form; knowledge of the roots of these different theoretical positions is important. For example, many contemporary debates about theoretical perspectives appear dysfunctional when viewed against the background of historical developments in our field. Knowledge of our history enables us to appreciate these different approaches both for their unique contributions to psychology and for the alternatives they provide for an understanding of observable phenomena. An understanding of history and systems of psychology allows integration of I-O psychology into the broader discipline by tracing our roots back to American functionalism, radical behaviorism, views of Freud, Titchener, Tolman, Spearman, and Cattell and other perspectives that have shaped the thinking of psychology. Such integration is important to foster an attitude among I-O psychologists that places high value on the development of theoretical approaches to the I-O psychology problems that are well integrated with psychology as a whole. In addition, there is the specific history of the field of I-O psychology to consider. Understanding one's roots as an I-O psychologist and our more recent past is essential.	3.1) Explain the general development/trajectory of the field of psychology in terms of its areas of focus. 3.2) Identify and describe key individuals who have shaped the field of psychology in general and I-O psychology more specifically. 3.3) Demonstrate a thorough knowledge of the specific history of the field of I-O Psychology.

4. Professional Skills (Communication, Business/Research Development, Consulting, and Project-Management Skills)	In all employment sectors, success as an I-O psychologist requires the development of a variety of professional skills. Communication, business development, and project management represent broad categories capturing some of the most-essential professional skills. Effective communication is critical and required to interact with and to influence others regardless of the context. Communication skills encompass using technology, writing, and presenting. They also involve interpersonal, negotiation, and conflict-management skills in order to build and maintain relationships and an ability to navigate relationships in a politically savvy way. Communication skills are particularly important in team contexts. An understanding of how individual efforts facilitate group performance and the ability to contribute as a member of a group are essential. I-O psychologists must be able to effectively translate scientific research to professional and layperson audiences. Business writing is characterized by brevity, action orientation, attention to the audience, and link to the organization's bottom line. Business presentation involves the development and delivery of information to a professional audience that clearly articulates key messages in terms that the audience can understand, along with skills in responding to questions. Academic writing involves summarizing theory, previous research, study design and procedures, statistical results, conclusions, and theoretical and applied implications. Effective business and research proposal development depend on the ability to create a vision and package ideas and requests in a fashion that leads to their acceptance, which results in securing funds and support to provide services or to conduct studies. Many good ideas are rejected because they are poorly communicated or inadequately justified in terms of their benefits. A practical problem-solving approach is frequently required in a business or consulting setting. Relevant content and methodological skill or knowledge, regardless of its source or discipline, along with creative "outside-the-box" thinking, is often required to address and solve practical business problems. This involves understanding how elements relate to a larger whole (e.g., the effect of a change in compensation on employee productivity, satisfaction, and turnover). Effective consulting encompasses problem-solving and decision-making skills, communicating solutions in layperson's terms, selling products and services, developing and maintaining relationships with clients, and providing high quality customer service. Project-management skills focus on the details of organizing work. This may include budgeting, scheduling, delegating, and managing/coaching others so that work is accomplished in an efficient and effective manner. Project management often requires the integration and utilization of information from several sources. Success is contingent upon being able to attend to detail while maintaining a view of the "big picture."	4.1) Effectively translate scientific research and/or theory into a form understandable to non-psychologist audiences. 4.2) Demonstrate the ability to write appropriately for business and academic audiences. 4.3) Identify and apply core professional skills for effective communication, consulting business development, and project management. 4.4) Deconstruct organizational elements into individual functions and identify how these functions interact and/or depend on one another.

5. Research Methods	I-O psychologists apply the scientific method to investigate issues of critical relevance to individuals, businesses, and society. The research-methods domain includes the procedures, techniques, and tools useful in the conduct of empirical investigations of phenomena of interest in I-O psychology. The specific areas encompassed by research methods include the scientific method (with attention to issues in the philosophy of science); inductive and deductive reasoning, the generation and articulation of problem statements, research questions, and hypotheses; literature review and critique; the nature and definition of constructs; study designs (experimental, quasi-experimental, and non-experimental); and psychometrics. At an operational level, research methods includes, but is not limited to, the manipulation of variables (in experimental research), the concepts underlying and methods used for the assessment of the reliability and validity of measures, the administration of various measures (questionnaires, interviews, observations of behavior, projective measures, etc.), the use of various sampling procedures (probability- and non-probability-based) especially as applied to survey research, the conduct of research in the laboratory and the field with various strategies (experiment, survey, simulation, case study, etc.), the use of statistical methods to establish relationships between variables, causality, and the formulation of research-based conclusions. Specific knowledge about relative strengths and weaknesses of different research strategies, an understanding of qualitative research methods, and an appreciation of the benefits of alternative strategies must be developed. Information-technology-related skills remain important for gathering and analyzing data and specific technology-related skills (e.g., programming) may be particularly useful. Finally, an understanding of the ethical standards that govern the conduct of all research involving human participants is essential. A solid foundation of knowledge in research methods will ensure that I-O psychologists are savvy consumers and producers of I-O-psychological research, with well-honed critical thinking skills.	5.1) Apply scientifically-oriented procedures, techniques, and tools to conduct empirical investigations in I-O Psychology. 5.2) Demonstrate ability to deconstruct organizational phenomena into independent and dependent variables, as well as conditioning factors when appropriate. 5.3) Assess the relative strengths and weaknesses of different qualitative and quantitative research strategies. 5.4) Understand and adhere to ethical standards that govern the conduct of all research involving human participants.

6. Statistical Methods/Data Analysis	This domain has to do with the various statistical techniques that are used in the analysis of data generated by empirical research. The domain includes both descriptive and inferential statistical methods, spans both parametric and nonparametric statistical methods, and includes both quantitative and qualitative research methods and data analysis. Among the specific topics included in the domain are: estimates of central tendency, estimates of variability, sampling distributions, point and interval estimates, inferences about differences between means and proportions, univariate and multivariate analyses of variance (fixed, random, and mixed effects models), and linear and non-linear regression and correlation. Some more-advanced statistical techniques include but are not limited to path analysis, multiple-discriminant function analysis, multiple and canonical regression, factor analysis, components analysis, cluster analysis, pattern analysis, structural-equation modeling, multilevel modeling, latent growth modeling, dyadic/social-network analysis, and meta-analysis. Knowledge of this domain implies a basic understanding of the statistical foundation of such methods, asymptotic sampling variances of different statistics, the assumptions underlying the proper use of the same methods, and the generalizations, inferences, and interpretations that can legitimately be made on the basis of statistical evidence. It is also important to be able to translate research findings into theoretical and applied implications in layperson terms. Students should be skilled in using at least one of the major statistical software packages designed for social science research.	6.1) Identify and use appropriate statistical techniques for a given set of data. 6.2) Differentiate between generalizations, inferences, and interpretations that are guided by statistical evidence. 6.3) Translate research findings into theoretical and application-oriented implications relevant to non-psychologists in work settings. 6.4) Understand and adhere to ethical standards and best practices governing the analysis of data.
CORE CONTENT		
7. Attitude Theory, Measurement, and Change	Attitudes, opinions, and beliefs are important for quality of work life, for diagnosing problems in organizations, and in regards to their relation to behavioral intentions and behaviors at work. Some of the job attitudes typically studied by I-O psychologists include, but are not limited to, engagement, job satisfaction (general and facets), job involvement, organizational commitment, and perceptions of support and fairness. I-O psychologists should also be aware of the extensive literature on attitude theory, measurement, and change. In particular, I-O psychologists must know how attitudes are formed and changed and how they relate to behaviors. With respect to the latter, knowledge of the literature on the relationship between attitudes and behavior is important if for no other reason than to know the limitations of the connections between these two sets of constructs.	7.1) Use applied psychological theories to explain job- and work-related attitude development and change. 7.2) Explain the linkage between attitudes and behavior change in a work context. 7.3) Develop a plan to evaluate employee attitudes that is consistent with I-O psychology's best practices. 7.4) Explain why attitudes at and about work are important to employee and organizational functioning.

8. Career Development	Theory and research regarding career development are concerned with the interplay between individuals and environments and attempt to describe the nature of the patterns of positions held and resultant experiences during an individual's lifespan. Included in this domain are models and explanations of the origin and measurement of individual aptitudes and vocational interests; how individual, social, environmental, and chance factors shape educational and training experiences; specific-skill training and development; early work history; occupational choice; organizational/job choice and switching; the sequence of jobs taken after organizational entry; work/family issues; midcareer plateaus; and retirement planning. I-O psychologists should be familiar with general workforce trends and patterns as well (e.g., protean careers, job crafting) as well as factors affecting adjusting to retirement. Knowledge in this area would reflect an understanding of these processes, events, or phenomena as they are considered both by the individual employee and from the perspective of the employing organization. Knowledge of how organizational practices such as recruitment, selection, job placement, socialization, training, performance appraisal, and career-planning programs enhance or retard career development is also necessary, as is an understanding of the special career issues and challenges faced by particular groups (e.g., older workers, women, ethnic minorities, the disabled, workers with a low socioeconomic status).	8.1) Explain the importance of person-environment fit to career development. 8.2) Discuss current workforce trends and patterns with non-psychologist colleagues. 8.3) Describe the role and interrelatedness of various people-related functions included in talent management within organizations. 8.4) Identify and describe career-related challenges faced by members of special and/or protected populations (e.g., older workers, women, racial/ethnic minorities, disabled).
9. Criterion Theory and Development	Almost all applications of I-O psychology (e.g., selection, human resources planning, leadership, performance appraisal, organization design, organization diagnosis and development, training) involve measurements against criteria (standards) that indicate effectiveness and well-being of individuals, groups, and/or organizations, as well as inferences drawn from measures used to assess those entities. The selection of criteria is not a simple issue and represents a significant area of concern for I-O psychologists. The knowledge base of this domain incorporates understanding the theoretical issues such as single versus multiple criteria, criterion dynamics, the characteristics of good and acceptable criteria (relevance, reliability, practicality), and criteria as a basis for understanding human behavior at work and in organizations. Common criteria of interest include but are not limited to work performance including task and contextual performance, withdrawal (lateness, absenteeism, turnover), counterproductive behavior, and health and well-being. Beyond this knowledge, the I-O psychologist should have the skills necessary for developing valid criteria and methods of measuring them. These include skills in many of the other domains identified in the document (e.g., Job/Work Analysis, Research Methods).	9.1) Describe the characteristics of good/acceptable performance criteria (including relevance, reliability, and practicality). 9.2) Explain the pros/cons of evaluating single versus multiple criteria. 9.3) Use performance-related theories to explain human behavior at work. 9.4) Develop appropriate criteria and methods of measuring them, for a given work context.

10. Groups and Teams	Much of human activity in organizations takes place in the presence of other people. This is particularly true of work behavior. The pervasiveness of interpersonal and task interdependence in organizations demands that I-O psychologists have a good understanding of the behavior of people in work groups. It is also critical to have a familiarity with the growing teamwork literature. This requires an understanding that extends beyond familiarity with research and theory related to interpersonal behavior in small groups. The body of theory and research concerning groups and teams draws from social psychology, organizational psychology, sociology, and organizational behavior. A good background in group theory and team processes includes, but is not limited to, an understanding of leadership, motivation, interpersonal influence, group effectiveness, conformity, conflict, role behavior, and group decision making. Contemporary issues include but are not limited to multi-team systems, virtual teams, and cross-cultural teams.	10.1) Critically evaluate current trends in the literature regarding interpersonal behavior in small groups/teams. 10.2) Describe how theories and research from social psychology, organizational psychology, sociology, and organizational behavior all contribute to our understanding of group/team phenomena. 10.3) Develop an appropriate group/team effectiveness model for a given work context. 10.4) Identify and influence personal and social factors associated with group/team effectiveness.
11. Human Performance	Human Performance is the study of limitations and capabilities in human skilled behavior. Skill is broadly construed to include perceptual, motor, memory, and cognitive activities, and the integration of these into more-complex behavior. Emphasis is on the interaction of human behavior and tools, tasks, and environments, ranging from detection and identification of simple events to problem solving, decision-making, human errors, accidents, and control of complex environments. The variables that affect human performance include individual differences, disabilities, organismic variables, task variables, environmental variables, and training variables.	11.1) Analyze the interaction between human behavior and tools, tasks, or environments. 11.2) Identify limitations and capabilities in human skilled behavior in a given workplace. 11.3) Identify variables that affect human performance including individual differences, task variables, environmental variables, and training variables.

12. Individual Assessment	This domain refers to a set of skills that are needed for assessing, interpreting, and communicating distinguishing characteristics of individuals for a variety of work-related purposes. The two primary purposes of individual assessment can be defined broadly as selection (e.g., hiring, promotion, placement) and development (e.g., career planning, skill and competency building, rehabilitation, employee counseling, coaching). Individual assessment may help attain multiple goals, many of which are aimed at achieving some form of person-environment fit, including assessee fit to a specific job or career track and assessee fit within a specific organizational context (e.g., department, work group). Individual assessment incorporates skill in individual testing, interviewing, and appraisal techniques for the purpose of evaluating ability, personality, aptitude, and interest characteristics. Individual assessment also requires identifying, developing, selecting, and/or using the appropriate means for such assessment, taking into consideration any important individual differences and providing accommodations as needed. It also requires communicating the results and interpretation of assessment accurately in face-to-face and/or written form. In addition, knowledge of the manner in which environmental and contextual factors shape the purpose and use of the accumulated information of individual assessments is necessary.	12.1) Identify and explain the two primary purposes of individual assessment in a work setting. 12.2) Identify and describe the skills needed for effective individual assessment in a work setting. 12.3) Communicate results and interpretation of individual assessment results accurately in a presentation and/or written form.

13. Individual Differences	I-O psychology emphasizes the role and measurement of individual differences in the study of work behavior. Because this emphasis requires accurate assessments of unobservable psychological traits, a sound background in both classical and modern measurement theories and their respective areas of application is essential. The domain of measurement includes theory and assessment of individual differences in skills, abilities, personality, motivation, and interests. This exposure would cover the nature of construct measurement and the philosophy-of-science assumptions underpinning many of our approaches to scale development. Other topics that might be covered are the measurement of attitudes (e.g., job satisfaction) by scaling procedures, the measurement of performance on complex jobs, and the measurement of comparable worth of individuals to organizations. A great deal of what I-O psychologists do in this area is subjected to close scrutiny by courts of law, civil-rights groups, and professional colleagues. Students must be trained to conduct research and to apply measurement principles in conformity with the highest standards of our discipline. Students may also need skills to help communicate their research methods and findings to interested parties outside of the discipline. Although classical test theory offers an accessible introduction to key measurement principles, it is important to recognize alternative approaches to measurement. For example, questions about item and scale bias, test equating, minimum-competence assessments, mastery testing, tailored testing, and appropriateness raise issues that can be addressed by classical test theory, item response theory, and other solutions. Although psychometric applications were originally studied in relation to ability measurement, they have been generalized to other psychological constructs. Key topics in the arena of individual differences measurement include but are not limited to classical test theory, item response theory, psychometrics (reliability and validity), validation, scaling, and scale development.	13.1) Identify and assess individual differences that are meaningful in a work context. 13.2) Differentiate between classical test theory and alternative approaches to measuring individual differences. 13.3) Evaluate the quality and utility of measures of specific individual differences.
14. Job Evaluation and Compensation	This competency area focuses on determining the appropriate compensation level for skills, tasks, and/or jobs. Job evaluation is a process by which the relative value of jobs is determined and then linked to commensurate compensation. It is closely tied to and usually predicated upon sound job/task/work analyses. In general, job evaluation and compensation involve identifying compensable factors, interpreting market data, attending to perceptions of fairness and equity, and considering issues of comparable worth. Proficiency in this competency area is demonstrated by a theoretical and applied understanding of various job-evaluation techniques, compensation strategies (e.g., pay for skills, team-based pay), benefits, and the legal and social issues surrounding compensation.	14.1) Demonstrate an applied understanding of various job-evaluation techniques and compensation strategies. 14.2) Recognize and monitor developing legal and social issues surrounding compensation 14.3) Design and implement sound job/task/work analyses to determine relative value of jobs and commensurate compensation.

15. Job/Task/Work Analysis, Competency Modeling, and Classification	This domain encompasses the theory and techniques used to generate information about what is involved in performing a task, a job, or more broadly, work; the physical and social context of this performance; and the attributes needed by an incumbent for such performance. Tasks are basic units of activity, the elements of which highlight the connection between behavior and result. A job is a grouping of tasks designed to achieve an organizational objective. It is common for jobs to be grouped or classified on the basis of a variety of criteria, depending on the purpose and goals of the classification system. The fundamental concern of job/task/work analysis and competency modeling is to obtain descriptive information to design training programs, establish performance criteria, develop selection systems, implement job-evaluation systems, redesign machinery or tools, and create career paths for personnel. The specific steps taken and the type of information gathered will vary depending on the purpose of the job/task/work analyses and on the classification system. Relevant information includes, but is not limited to: what worker behaviors are involved; the knowledge, skills, and abilities required; personality attributes relevant to targeted outcomes; the standards of performance desired; the tools, machines, and work aids used; the sources of information available to the incumbent; the social, environmental, and physical working conditions; and the nature of supervision. Similarly, some of the steps involved in job/task/work analyses include: identifying the purpose of the analysis; preparing, designing, or selecting a job-analysis system; collecting job/task/work information; summarizing the results; and documenting for future reference the steps taken. The classification of jobs typically entails identifying the purpose and goals of the classification system, designing a classification scheme, categorizing jobs according to the established scheme, and documenting the classification process and outcomes. The individual who is competent in this domain should have knowledge of the different approaches to job/task/work analysis and classification, as well as skill in applying these techniques to real-world situations. This competency area is likely to continue to evolve as the nature of work in our society and the demographics of our workforce continues to change.	15.1) Identify and investigate basic units of job activity, and consider the variety of criteria upon which job/task/work analysis can be based. 15.2) Differentiate between job analysis and competency modelling, in terms of purpose and methods to conduct each technique. 15.3) Execute the necessary procedures when collecting job information, summarizing data, and documenting for future reference the results of a job/task/work analysis. 15.4) Apply different and appropriate methods of job/task/work analysis and/or competency modelling in real-world situations.

16. Judgment and Decision-Making	Judgment and decision-making encompasses an area of research and knowledge that is both prescriptive and normative in its emphases. This area is important because judgment and decision making under conditions of uncertainty probably describes the majority of the decisions managers, psychologists, market forecasters, and budget/policy planners make during the course of their work and research. Knowledge of decision theory, judgment, and problem solving research, and heuristics and biases is important to understanding how information is processed and the quality of the individual-, group-, and organization- level decision outcomes. Many different content areas within the broad area of I-O psychology can be studied explicitly as applications of decision and judgment theory including vigilance and choice behavior, negotiation, employee selection, performance appraisal, and human performance in complex environments. Applications of decision theory to the policies of decision makers allow for a greater understanding of inferential procedures used by individuals. Approaches for describing and predicting judgment and decision-making include Brunswik's lens model, Bayesian inference, subjective expected utility, prospect theory, and the cognitive information-processing paradigm. Knowledge of these approaches and an ability to integrate across the different approaches are indicative of breadth as well as depth of training in judgment and decision theory.	16.1) Understand how information is processed and can influence decisions at the individual-, group-, and organization-level. 16.2) Apply decision and judgment theory to understand and improve choice behavior, employee selection, and human performance in the workplace. 16.3) Integrate different approaches for describing, predicting, and/or improving judgment and decision making at individual-, group-, and organizational-levels.
17. Leadership and Management	Management and leadership can be approached from different levels (e.g., teams, organizations, countries). The study of management and leadership at the macro level involves the influences that senior-level individuals have in the larger organizational context such as setting strategy, directing change, and influencing values. Theory and research may focus on characteristics of leaders and followers, leader style, leader-member interactions, behaviors of leaders, and related phenomena. At a more-micro level, leadership and management involves the day-to-day exchange between formal and informal leaders and followers. This includes challenges faced by line managers in their relationships with subordinates in assigning tasks, evaluating performance, coaching and counseling for improvement, resource planning, and related tasks. Effective leadership and management involve task analysis, motivation, decision-making, career planning, selection, performance appraisal, interpersonal communication, listening, and related skills in a supervisor-subordinate context. Within this domain, it is important to be aware of the advantages and disadvantages of the various objective and subjective/perceptual measures of leadership effectiveness and emergence. Increasingly, attention is placed on team leadership, self-leadership (especially in relation to empowerment), horizontal leadership (i.e., peer-influence processes), and the management of diversity.	17.1) Distinguish between micro and macro level approaches to studying management and leadership at different levels within an organization. 17.2) Know and be able to develop effective leadership and management behaviors to fit a particular organizational context. 17.3) Identify advantages and disadvantages associated with objective and subjective indicators of leadership performance/outcomes.

18. Occupational Health and Safety	Organizations can have significant impact on employee health, safety, and well-being. This competency area requires the study of interactions between human physical capabilities and conditions in the workplace in an attempt to understand the limits of performance and both positive and negative effects on workers. Among the factors considered are hazardous working conditions induced by toxic substances (e.g., chemical, biological, nuclear), loud noises, blinding lights, noxious odors, etc. Other factors considered are related to organizational structure and job design such as shift work or the requirements of particular tasks. Additional sources of organizational stress that may affect performance and attitudinal variables include downsizing, mistreatment (e.g., abusive supervision, harassment, incivility), work-nonwork pressures, and outsourcing. I-O psychologists should be familiar with laws (e.g., Americans with Disabilities Act) and government regulations and standards relating to the workplace (e.g., Occupational Safety and Health Administration law and regulations), as well as with physiological measures of psychological constructs. I-O Psychologists should also have awareness of how these issues play out and are being addressed in the developing world (where standards and legal protections are lacking, where poverty and ill-health are considerably more rampant, and where individuals work within more informal economies).	18.1) Understand the limits of human physical and psychological capabilities within work contexts, based on specific interactions between these abilities and work-related conditions and demands. 18.2) Differentiate between physical workplace conditions and other factors that can affect worker health and safety. 18.3) Recognize laws and other regulations/standards related to the design and management of safe and healthy workplaces. 18.4) Demonstrate awareness of how occupational health and safety issues are being addressed in the developing world and organizations with limited resources.
19. Organization Development	This domain encompasses theory and research relevant to changing individuals, groups, and organizations to improve their effectiveness. This body of theory and research draws from such related fields as social psychology, counseling psychology, educational psychology, vocational psychology, human factors, organizational behavior, and organizational theory. Organization development concerns theory and research related but not limited to individual change strategies (e.g., training, socialization, attitude change, career planning, counseling, and behavior modification), interpersonal and group change strategies (e.g., team building and group training, survey feedback, and conflict management), role- or task-oriented change strategies (e.g., job redesign, role analysis, management-by-objectives, and temporary task forces), and organization-system-directed change strategies (e.g., survey feedback, open–systems-oriented change programs, human-resource accounting, flexible work hours, structural changes, control-system changes, and quality circles). I-O psychologists should know how to diagnose problems and challenges in organizational settings and be able to design and evaluate the outcomes of organization development interventions (e.g., program evaluation).	19.1) Follow best-practice, empirical methods of assessing and identifying challenges and opportunities in organizations. 19.2) Evaluate the outcomes and consequences of organizational development interventions (e.g., program evaluation). 19.3) Demonstrate the ability to integrate a mix of individual, group, and organizational-level theories, models, and perspectives regarding change in organizational contexts. 19.4) Explain the importance of holistic and/or systems thinking when planning and managing organizational development or change initiatives.

20. Organization Theory	It is well accepted that structure, function, processes, and other organizational-level constructs have an impact on the behavior of individuals in organizations. Therefore, it is useful for I-O psychologists to have a thorough understanding of the nature of complex organizations. This understanding should include, but is not limited to, classical and contemporary theories of organizations, organizational structure, organizational design, organizational culture/climate, organizational change including change management, technology, and the process of organizational policy formation and implementation.. Sociologists and those students of organizational behavior who study constructs at an aggregate level of analysis generate much of this theory and research. Multilevel theory acknowledges the importance of levels of analysis and the integration of organizational and individual constructs.	20.1) Recognize and explain how structure, function, processes, and other organizational-level constructs have an impact on worker behaviors. 20.2) Acknowledge the importance of levels of analysis and the need to consider individual and organizational constructs when making sense of workplace phenomena. 20.3) Apply pertinent theories of organizational structure, design, climate, and culture to improve functioning in a given organization.
21. Performance Appraisal/Management	Performance appraisal/management has both a knowledge and a skill base. This area (sometimes also referred to as Talent Management) centers on the methods of measuring and evaluating individuals as they perform organizational tasks, the influence of the social context in which they perform and are evaluated, and on taking action (administrative such as promotion/succession or rewards and/or developmental) with individuals on the basis of such appraisals. The knowledge base includes a thorough understanding of rating-scale construction and use and rater training. Also relevant are the areas of psychometric theory, measure development, data analysis, criterion theory and development, motivation theory, and the factors that underlie interpersonal perception, judgment, and evaluation (i.e., rating). An understanding of the similarities, differences, and inconsistencies among the perceptions and evaluations of performance and feedback provided by peers, customers, subordinates, and supervisors is essential. The skill base includes procedures for communicating performance evaluations to job incumbents and coaching them in appropriate means of improving their performance. Also, skill in designing a complete performance appraisal-/management–and-feedback system that meets organizational needs while maintaining and/or enhancing worker motivation and/or performance is required.	21.1) Apply methods of measuring and evaluating individuals as they perform tasks in a work environment. 21.2) Understand and explain the influence of social and contextual variables on individual performance in an organizational environment. 21.3) Understand and apply best-practices for performance evaluation measure construction and use/rater training. 21.4) Design a complete performance appraisal system that meets organizational needs while maintaining or enhancing worker motivation.

22. Personnel Recruitment, Selection, and Placement	This domain consists of the theory and techniques involved in the effective matching of the needs, preferences, skills, and abilities of job recruits, job applicants, and existing employees with the needs and preferences of organizations. An organization's needs in this context are defined by the jobs assigned to positions in the organization. This domain encompasses theory and research in: human abilities; test theory, development, and use; job analysis; criterion development and measurement; recruitment; classical and decision-theory models of selection and placement; various recruitment strategies; alternative selection devices (e.g., interviews, assessment centers); and legal and societal considerations that affect recruitment, selection, and placement. In particular, the individual should keep current with the legislation and court decisions related to employment-related discrimination, as well as with responses of SIOP to laws and their interpretations.	22.1) Apply theory and empirical evidence to improve talent acquisition (i.e., recruitment and selection) in a given organizational context. 22.2) Assess an organization's talent needs based on the demands and requirements for specific positions. 22.3) Understand and stay current with legislation and court decisions related to employment-related decision making.
23. Training: Theory, Delivery, Program Design, and Evaluation	This domain includes theory and techniques used to design, conduct, and evaluate instructional programs. The instructional process begins with a needs assessment, including organizational, job, task, and person analyses, to determine the goals and constraints of the organization and the characteristics of the job and of trainees. Familiarity with basic phenomena of learning (e.g., modern learning theory, conditioning principles), as well as knowledge of the different approaches to training (e.g., computer-assisted instruction, simulation, behavior modification) are necessary for designing programs and, depending on the I-O psychologist's position and employment sector, skill at delivering training and teaching others may also be required. An ability to develop meaningful and appropriate training objectives is essential. Transfer of training to the desired setting is also an important consideration. In order for programs to be conducted as planned, the instructors must have good instructional skills. Thus, training the trainers is necessary. Both the process and the outcome of a training program may be evaluated to determine if it has been conducted as planned and whether it has had any effect. Knowledge of appropriate training-evaluation criteria and design issues, such as pre- and post-testing and control groups, as well as of organizational constraints is necessary for planning an evaluation strategy.	23.1) Apply theories of training and scientific methods to design, conduct, and evaluate instructional programs. 23.2) Design and conduct a needs assessment to provide the foundation for a workplace training initiative. 23.3) Understand and work to minimize transfer of training challenges associated with work-related training. 23.4) Design, develop, implement, and evaluate a needs-based training program in a work-related setting.

24. Work Motivation	Work motivation refers to the conditions within the individuals and their environment that influence the direction, strength, and persistence of relevant individual behaviors in organizations when individual abilities and organizational constraints are held constant. Increasingly, work motivation is a concern at the group level as well. I-O psychologists need to have a sound background in work motivation in at least three respects. First they should have a thorough understanding of the theories of human motivation including, but not limited to, need theories, cognitive theories, and reinforcement theories. In all cases there should be a thorough understanding of the extensive research and theory that exist outside the domain of work in the basic-psychological literature. At the second level, there should be an understanding of the research and theory in motivationally relevant domains of I-O psychology that represent general applications of one or more motivational perspectives. Such general strategies for work motivation as goal setting, job design, self-regulation, incentive systems, and participative decision-making are relevant here. Finally, there should be an awareness of and an ability to apply very specific, motivationally oriented practices that adapt motivational constructs to specific cases. For example, the effective implementation of many employee development practices involves an application of goal-setting principles and participation.	24.1) Identify conditions within individuals and work environments that influence the direction, strength, and persistence of behaviors. 24.2) Understand and apply theories of human motivation (including need-based, cognitive, and reinforcement theories). 24.3) Recognize and apply motivationally relevant constructs from within the I-O psychology domain (e.g., goal setting, job design, and compensation/incentive systems).
RELATED AREAS OF COMPETENCE		
25. Consumer Behavior	Although consumer behavior is relevant to I-O Psychology, the academic discipline of consumer psychology falls under the purview of Division 23 of APA: The Society for Consumer Psychology. The focus of this area is the systematic study of the relationship between the producers (or distributors) and consumers (actual or potential recipients) of goods and services. Usually this involves many of the following concerns: consumer preferences for product features, consumer attitudes and motivation, buying habits and patterns, brand preferences, media research (including the effectiveness of advertisements and commercials), estimating demand for products or services, and the study of the economic expectations of people. Closely allied to those areas of market research which focus on personal consumption, there is a substantive or content basis to this domain insofar as there is a body of theory and data amassed dealing with the antecedents and correlates of consumer behavior. The skill component of this domain involves the appropriate application of a variety of social science research methodologies (e.g., sampling theory, questionnaire and survey protocol design and execution, individual and group interviewing, stimulus scaling, and mathematical model building). http://www.myscp.org/	25.1) Understand and explain the relationship between producers (or distributors) and consumers (actual or potential recipients) of goods and services. 25.2) Demonstrate knowledge of theoretically and empirically supported antecedents and/or correlates of consumer behavior. 25.3) Apply appropriate scientific research methodologies to evaluate and understand customer behavior.

26. Human Factors	Although the field of human factors is relevant to I-O Psychology, the academic discipline of human factors falls under the purview of Division 21 of APA: Applied Experimental and Engineering Psychology. This discipline "promotes the development and application of psychological principles, knowledge, and research to improve technology, consumer products, energy systems, communication and information, transportation, decision making, work settings, and living environments. The goal is safer, more effective, and more reliable systems through an improved understanding of the user's requirements" (http://www.apa.org/about/division/div21.aspx). Competency in this area assures awareness of issues of experimental design, a grounding in perception, cognition, and physiological psychology, some knowledge of computer programming, and quantitative modeling based on techniques from mathematical psychology, engineering, and computer science. Familiarity in the subject areas of basic experimental psychology should be combined with an awareness of applied research in such areas as work station design, workload measurement, control systems, information display systems, health and safety, and human-computer interactions.	26.1) Understand work-relevant theory and research associated with human perception, cognition, and physiological psychology. 26.2) Integrate experimental psychology and applied research to improve the design of work stations, job-related tasks, and human-computer interactions. 26.3) Develop safer, more effective, and more reliable work-related systems through an improved understanding of user requirements.