MAResearch
HANDBOOK OF THE MASTER OF ARTS, RESEARCH OPTION
Spring 2005

Department of Psychology • California State University, Long Beach
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The Master of Arts program began in 1951 and has continued successfully since that time. The MA-Research (MA-R) program has been built around a core of seminars in the traditional areas of psychology, including cognition, development, emotion and motivation, learning, perception, personality, physiology, research methods and social psychology. In addition, it has been distinguished by the requirement of a thesis research project.

Doctoral programs frequently prefer students with the training and experience provided by the MA-R program. More than half of the students completing the MA-R degree enter doctoral programs throughout the country. Of those graduates who elect not to pursue a doctoral degree the majority hold positions that make use of their training in psychology. These include positions in community colleges, laboratories using physiological and behavioral research methodologies, social service agencies, business, industry and government.

The MA-R program seeks to provide an environment in which students learn the skills necessary to independently conceive, conduct and publish sound research in the psychological disciplines. The program is therefore designed to prepare students for doctoral level studies, college teaching, and a variety of other career paths which require a disciplined approach for success.

The intensive-training program is designed to provide students with:

♦ Knowledge: an in-depth examination of a selected group of core areas within Psychology, as chosen by the student

♦ Skills: experience in all phases of scientific investigation, and implementation of the skills necessary to make meaningful contributions to the field

♦ Immersion: students are expected to participate in and contribute to an atmosphere of scientific inquisitiveness and collegiality

I. INTRODUCTION

A. Overview of the MA-Research Program

B. Goals of the MA-R Program
II. GENERAL PROCEDURES

1. Orientation
   After acceptance into the graduate program, students will be invited to attend an orientation session. The orientation session is held prior to the student’s first semester in the program.

2. Registration
   Prior to registration each semester, students will receive information from the University regarding registering for courses; instructions are listed in the Schedule of Classes. A tentative list of Psychology graduate level courses will be posted on the department web site.

3. WPE
   Every degree candidate must pass the Writing Proficiency Examination (WPE) to be certified proficient in written composition in English. It consists of a 75 minute essay. Students who meet/fulfill the WPE requirement during their baccalaureate degree program at CSULB or at another CSU campus are exempt from retaking the WPE as a graduate student. Confirmation from other CSUs is required. CSULB also recognizes scores of 4 or higher on the essay portions of both the GRE and GMAT (submit a copy of your GRE/GMAT scores to Enrollment Services). Graduate students should attempt the WPE on the first test date of their first semester. Instructions are on the CSULB web site (www.csulb.edu/centers/testing/wpe_bulletin.htm) and in the Schedule of Classes (available online and at campus bookstore).

4. Advancement to Candidacy
   Advancement to Candidacy is the filing of an approved Program (formal listing of required coursework or “Advancement to Candidacy” form) with the Graduate Coordinator. This form will be forwarded to Enrollment Services and is the document that is used to perform the student’s “grad check.” After the student completes a minimum of 6 units towards fulfillment of the MA-R degree, and successfully passes the WPE, the student should advance to candidacy. (This is usually at the beginning of the second semester in the program.) Program coursework listings are available from the Graduate Office and also appear on the last page of this handbook. MA-R students should make themselves familiar with their required coursework. Students should make an appointment to meet with the Graduate Coordinator to complete the Advancement to Candidacy form. A student must be advanced to candidacy before the last semester of his or her coursework and prior to filing for a “grad check.”

5. Grad Check
   At least one year prior to graduation, the student must file a graduation check through the University. Students wishing to graduate in May or August should file between May 1 and October 1 of the previous year. Those wishing to graduate in December or January should file between December 1 and March 1 of the previous year. This process will inform and advise the student of progress made toward completing graduation requirements. Request to Graduate forms are available at Enrollment Services, BH-101. Complete instructions are in the Schedule of Classes.

6. GPA
   All students must maintain a cumulative 3.0 GPA throughout the program. Students whose cumulative GPA falls below this level will be placed on academic probation (see CSULB Catalog for details).

7. Communication
   Be sure to keep your mailing and email addresses current with the Psychology Graduate office (as well as Enrollment Services). Information will be disseminated via mailings, and also posted on the Grad office bulletin boards and our web site (http://www.csulb.edu/~psych/).
Applicants must have a bachelor’s degree with a major in psychology that includes the following courses (or a bachelor’s degree with a major other than psychology and 24 units of upper division psychology courses that are substantially equivalent to those required for the baccalaureate degree at this university, including the following):

(1) Intermediate statistics (equivalent to two semesters or three quarters of statistics)

(2) Two from the following group: (Note that only one course may be counted from any one section to fulfill requirement)

  Section 1: Sensation & Perception or Cognition or Psychology of Learning

  Section 2: Psychology of Emotion or Psychology of Motivation

  Section 3: Physiology of Behavior or Neuropsychology or Psychopharmacology or Psychophysiology

(3) One of the following: Social Psychology or Personality or Child & Adolescent Development or Psychology of Adult Development & Aging

The prerequisite courses listed above are required in addition to the 30-unit graduate program. If not taken previously, these courses should be completed by the end of the first year of the graduate program. Unit credit will not be counted towards the Masters degree.
B. Graduate Program Requirements

The MA-Research is a 30-unit degree that includes the following:

(1) Required Courses

- One of the following:
  - Psy 511 Statistical Design & Analysis
  - Psy 512 Multivariate Statistical Analysis

- One of the following RESEARCH Courses: (These courses involve laboratory work)
  - Psy 518 Computer Applications
  - Psy 527 Human Factors
  - Psy 533 Cognition & Learning
  - Psy 541 Physiological Psychology
  - Psy 551 Social Psychology
  - Psy 556 Personality

- Four of the following SEMINAR Courses:
  (696 plus three other MAR Seminar courses listed below.)
  - Three comprehensive exams are required: one in 696 and two in any other of the remaining Seminar courses.
  - Psy 631 Perception/Physiological Psychology
  - Psy 632 Learning
  - Psy 633 Perception/Attention
  - Psy 634 Cognition
  - Psy 637 Emotion & Motivation
  - Psy 651 Social Psychology
  - Psy 656 Personality
  - Psy 661 Developmental Psychology
  - Psy 696 Research Methods in Psychology (Required)

- Six units of Thesis (Psy 698)

- Six units of graduate-level work to total 30 units (i.e., additional statistics course, additional research course, additional seminar or graduate-level courses in related fields outside Psychology with approval of the MA-R Program Committee).

(2) Comprehensive Examinations

Comprehensive examinations taken in three of the four required graduate seminars. (See section IV for details.)

(3) Thesis Requirements

Each student must complete an original thesis research project. As part of this process, each student must pass a preliminary oral examination on the thesis proposal and a final oral examination in defense of the completed thesis document. (See section V for details.)

(4) Attendance at Department Colloquia

Students must attend a minimum of 6 departmental colloquia during their graduate study at CSULB. Four colloquia must be attended before preliminary orals can be scheduled; all six prior to final orals. (See section VI for details.)
In order to ensure basic graduate education and breadth in the field, a core of courses is prescribed with some choice permitted. All students are required to take at least four graduate seminars; everyone is required to take PSY 696, Research Methods. The remaining three may be an individual choice from the following list:

- Psy 631 Seminar in Perception/Physiological Psychology
- Psy 632 Seminar in Learning
- Psy 633 Seminar in Perception/Attention
- Psy 634 Seminar in Cognition
- Psy 637 Seminar in Emotion & Motivation
- Psy 651 Seminar in Social Psychology
- Psy 656 Seminar in Personality
- Psy 661 Seminar in Developmental Psychology

Of the four graduate seminars selected, three must be taken with a Comprehensive Examination component. One comp exam is required in Psy 696, Research Methods. The other two required comp exams may be taken in courses from the remaining 600-level MAR seminars. In the fourth seminar, a regular final exam will be taken instead of a comprehensive exam. (You are limited to three comps -- please keep this in mind when choosing the courses in which to take your comprehensive exams.) Besides the customary seminar assignments, students receive a reading list and study guide at the beginning of each core seminar to prepare for the comprehensive examination given at the end.

Faculty members will differ in their expectations. However, it is not unusual nor unreasonable to expect students to read 100-150 pages of text/journal material per week. The reading leads to discussion, and intelligent discussion requires familiarity with the content.

**IMPORTANT:** Final orals can only be scheduled the semester or summer session after successful completion of the three comprehensive exams specified on your MA program of studies.
V. THESIS

The thesis is the capstone event in the graduate student’s educational experience. It allows the student to work relatively independently on a major project and to demonstrate his/her ability to utilize psychological knowledge and skills in planning, conducting and reporting research. An original empirical investigation is required for the thesis.

The Thesis includes the following five steps:

1. Proposal

Committees differ in what they require in the proposal, but in general they usually include Introduction and Methods sections, as well as a plan for statistical analysis. A proposal should specify clearly what you propose to do for your thesis so that you and your thesis committee can discuss the details and arrive at definite decisions and agreement. A proposal outline is available in the Psychology Graduate Office for guidance in organizing the proposal. Examples of past proposals are also available. The approved proposal is a contract between you and the department.

2. MA-R Thesis Committee

The student must ask three members to serve on his/her thesis committee. The committee serves to coordinate the thesis process, and to serve as a resource through all stages of the process. While the other members will provide assistance, the Thesis Chair will be the major contact point with the student and will oversee the other committee members’ work with the student. The Thesis Chair will establish guidelines for the student and timetables to be followed to ensure completion of the thesis in a reasonable time. It becomes very important to ask a professor to chair your committee who has similar research interests and with whom you work well.

An MA-R thesis committee shall consist of at least two tenured/tenure-track faculty members from Psychology (including the Thesis Chair) and one other individual who holds at least a Masters degree.

If there are compelling academic reasons, a student may petition the MA-R Program Committee to approve a thesis committee that includes a tenure-track faculty member from Psychology, one of whom shall serve as the Thesis Chair, a tenure-track faculty member from another department or program and other individual(s) from the community who hold(s) at least a Masters degree.

The thesis committee must be approved by the department graduate advisor and the college associate dean.

3. Preliminary Orals

When the thesis committee believes your proposal is ready, you will schedule preliminary orals. This step involves getting your entire committee together at a meeting lasting approximately one hour. Here you will discuss the background, design (including the methodologies), planned analysis and expected outcomes of your thesis proposal. Any problems that can be foreseen in your methodology will be ironed out at this session. This step must be completed before actually implementing the project. Submit an orals announcement to your thesis chair as an email attachment, as well as a photocopy of your proposal to the Graduate Coordinator, one week prior to the orals meeting. Instructions (with a visual example) for the preparation of the orals announcement are contained in the Graduate Office’s Psychology Thesis Guidelines, and a Word template is on the department web site.
4. IRB/AWB Approval

After successfully passing preliminary orals, the student must file an application for approval (protocol) with the University Institutional Review Board (IRB) or the Animal Welfare Board (AWB), as appropriate. Additional approval is necessary if the PSY 100 subject pool is to be used. After gaining the approvals, the student may implement the project agreed upon. The IRB or AWB paperwork is downloadable from the Office of University Research’s web site: http://www.csulb.edu/divisions/aa/research/our/compliance/irb/.

5. Final Orals

Once you have collected the data, you will analyze it and prepare the final thesis draft. This will include the Literature Review, Methods, Results, and Discussion sections. The student will schedule another one-hour meeting, where a formal presentation of the project will be made to the committee for the purpose of the thesis defense. Any revisions required by the committee must be formalized at this meeting. You should announce your final orals via your thesis chair (again, an email attachment) and submit a draft of your thesis to the Graduate Coordinator one week prior to the final orals meeting.

If you are unsure about a project or about the format of the written materials, previous theses are available in the Graduate Coordinator’s office. A complete list of thesis guidelines is also available from the Graduate Coordinator as well as a list of faculty areas of research interests and typists who may be contracted to prepare theses -- this information is also available on the department web site. The University Thesis Reviewer has prepared a handbook which should be purchased or downloaded prior to beginning your thesis.

The official Department Guidelines for Faculty/Student Responsibility for MA thesis are listed below.

It is recognized that both the faculty members on a thesis committee and the student have obligations related to the smooth conduct of the MA process. To that end, it is expected that the following guidelines will be observed:

1. The committee should be given a minimum of one week to read and review the thesis proposal before the date of preliminary orals can be officially announced. If a committee member cannot meet this deadline, she/he must inform the student and the Chair immediately and negotiate an alternative acceptable to all parties.

2. The proposal should contain the introduction, which includes a literature review, statement of the problem to be investigated and the methods and analyses to be used.

3. The distributed abstract for preliminary orals should contain a clear statement of the problem, methodology and planned analyses of the study.

4. The preliminary oral should review the proposal.

5. The preliminary oral signature page should contain the abstract, the format of the required analyses and a general statement regarding expected outcome(s) of the study.
1. It is the responsibility of the student to inform her/his faculty committee during the first week of the semester that she/he intends to submit a thesis during that semester.

2. It is the responsibility of faculty to inform their graduate students of plans to be on a leave of absence or sabbatical leave as soon as those plans are known, and no later than the end of the semester prior to the period of absence. A faculty member’s “graduate students” are defined as all of those individuals for whom the faculty member has agreed to serve as either a Thesis Chair or a committee member.

3. It will be the responsibility of the Thesis Chair to see that the thesis draft for final orals contains all the required analyses and appropriate interpretations prior to distribution to the thesis committee.

4. The committee should be given a minimum of two (2) weeks to read and review the thesis draft before the date of final orals is officially announced. If a committee member cannot meet this deadline she/he must inform the student and the Thesis Chair immediately and negotiate an alternative acceptable to all parties.

5. The committee members should write and submit to the student their comments, suggestions, changes, etc., regarding the thesis draft so that the student may go over them with the committee Chair prior to orals. Any substantive changes required by committee members should be presented at this time. (Substantive changes will include any of the following: extensive new data analysis, extensive alternative data analysis or extensive alternative interpretations.) It is the student’s responsibility to provide the committee members with a current draft of the thesis prior to final orals.

6. Committee members may make specific suggestions for changes in your thesis. Be sure you agree with and understand these suggestions, because you will have to make them before final approval is granted. However, do not hesitate to discuss fully any changes you don’t understand or agree with.

7. Final orals should be primarily a review of the Results chapter and the Discussion chapter of the thesis.
The requirement of attendance at department colloquia is designed to expose students to examples of on-going scholarship, and to encourage community. Importantly, this provides opportunities for students and faculty to interact and to generate ideas for potential thesis or other research projects. Colloquia events will include time for informal discussions between faculty and students.

It is expected that the student will attend a minimum of two to three colloquia each semester, for a total of six. Students must have attended four colloquia before preliminary orals can be scheduled. All six colloquia must be attended before scheduling final orals.

A schedule of the current semester’s colloquia series is posted on the department web site, and flyers announcing individual colloquia are posted around the Psychology building.

The MA-AE/HF Track is designed to prepare students to apply knowledge of psychology to the design of jobs, information systems, consumer products, workplaces and equipment in order to improve user performance, safety and comfort. Designs can be applied at both the individual and systems level of analysis.

Students in the program acquire a background in the core areas of experimental psychology, research design and methodology. These seminars provide a conceptual framework for the development of new applications in the workplace. Courses in human factors, computer applications and research methods in industrial psychology provide students with skills in systems design and analysis in the work setting.

Special topics seminars, in areas such as knowledge engineering, environmental design, expert skills development and human decision-making will complement the core program of study. Finally, students complete a practicum and thesis in their chosen area of applied experimental psychology.

The MA-AE/HF track is designed as a terminal MA degree, but it also provides excellent preparation for advanced graduate work. A copy of the requirements is located at the end of this handbook.

NOTE: With the exception of specific coursework required by the MA-AE/HF track, all other requirements of the MA-R program are to be met, including comprehensive examinations, colloquia attendance and thesis.

The MA-AE/HF track is being phased out and replaced by the MS Human Factors degree, effective Fall 2005. If you are interested in obtaining an MS in Human Factors rather than the MA degree, please see the Graduate Coordinator.
Information regarding the computer facilities housed in the Psychology building may be found on the department web site: www.csulb.edu/~psych/facility/computerlab/computerlab.shtml

Room 300:
- Open to all students. Availability: Monday thru Thursday*
- Workstations: 60 PC workstations running Windows.
- Internet Access: Yes. These workstations can also access PsycINFO and other CD-ROM databases in the Library.
- Software: MS Word, SPSS, SAS, Visual Basic
- Support: Graduate students knowledgeable in statistical computing are frequently on duty.

* This room can be reserved for research projects with faculty approval.

Room 332:
- Availability: This room is used for classes only.**
- Workstations: 12 Pentium workstations
- Internet Access: Yes
- Software: MS Word, SPSS, SAS, Visual Basic

** This room can be reserved for research projects with faculty approval.

Campus Computing Facilities:

There are many open computer labs on campus. The largest and most frequently available are located in the Horn Center (http://www.csulb.edu/divisions/aa/academic_technology/acs_lab/) and in the basement of the Main Library. These labs are open weekends (check hours via their web sites: http://www.csulb.edu/divisions/aa/academic_technology/acs_lab/open_access/hours/, http://www.csulb.edu/library/guide/hours/hrs-main.html).

Internet Access:

Students can obtain an account for the CSULB time-sharing computers through the Horn Center’s Technology Help Desk (part of Academic Computing Services). With this account you can send and receive email, participate in online forums, access public databases and explore other areas of the Internet. Information is available via their web site: www.csulb.edu/divisions/aa/academic_technology/thd/ If you own a computer equipped with a modem, you may access your account, COAST (the online library catalog system) and PsycINFO from home through a campus phone number. Instructions on how to connect from off-campus is provided on the Technology Help Desk’s web site: www.csulb.edu/divisions/aa/academic_technology/thd/account/ For further information, stop by their help desk in the Horn Center (student ID required) or visit their web site: http://www.csulb.edu/ACS/
It is almost impossible for a graduate student to successfully complete a thesis without using the library extensively. In order to assist the student, the library has many services that can reduce research time.

A. For psychology students, assistance with journals and other reference material is available at the Reference Desk on the first floor of the library. Students are encouraged to seek help and to inquire about the many abstracts that are available for their topic of interest.

B. A student enrolled in PSY 698 (Thesis) may check out books for a semester at a time, rather than the usual three-week period. To check materials out for this extended time, a card can be obtained in the library. This card must be signed by the Graduate Coordinator.

C. Many research databases are available via the Internet for CSULB students, including PsycINFO and FirstSearch. If accessing from off campus, passwords may be necessary — currently enrolled students may obtain them from the Reference Desk, located on the Library first floor. Electronic journals can be accessed via this web address: http://www.csulb.edu/library/subj/psychology.html

Sharing of resources and information is an important part of the graduate student experience. A lounge is available for use in PSY Room 314.

The Psychology Assessment Materials (PAM) Center has numerous standardized tests available for student research. Students must obtain the signature of the faculty member supervising the research. Signature request cards are available at the Assessment Materials Center (PSY Room 204).

Information on PhD programs, as well as other materials on the subject of graduate school, is available in the Graduate Resource and the Career Resources rooms of the Peer Advising Office (PSY Room 206). Visit their web site for hours: www.csulb.edu/~psyugadv

University Student Services are available in such areas as academic advising, personal and health counseling, and financial assistance.
IX. GRADUATE ASSISTANT POSITIONS

Application

Students interested in serving as a Graduate Assistant (GA) should submit a GA application to the Graduate Coordinator. A new application is required each semester. Positions are open until filled. Review of applications will begin April 15th for the Fall semester and November 15th for the Spring semester. Applications are available in, and should be submitted to, the Graduate Coordinator’s Office.

Types of GA Jobs

Each year the department of Psychology hires approximately 9-13 graduate assistants to perform various activities. The assignments are usually 10 hours per week for 17 weeks in the Fall and 17 weeks in the Spring. Most GA assignments fall into two major categories. Some assignments are to assist with the introductory research methods course (PSY 200). This involves preparing materials, grading papers and assisting students. Other GA assignments support introductory and intermediate statistics courses (PSY 110, 310). These assignments generally involve grading papers, assisting students during the assigned lab time of the course and helping students with various statistical software packages. The statistics GA positions also involve providing support for the department computer lab. An EEO policy is followed.

Benefits of a GA Position

- Financial: If appointed for 10 hours of work each week, for two semesters, a first year GA receives approximately $4500 per year.
- Educational: By teaching, GAs can further develop their own psychological skills (teaching and research).
- Experiential: Working closely with a faculty member can add to a GA’s knowledge and experience.
- Convenience: Having a job on campus can save travel time and study time.

X. DEPARTMENT AND COLLEGE AWARDS

The College of Liberal Arts presents the following awards each Spring to outstanding Master’s students: 1) Graduate Dean’s List of University Scholars and Artists, 2) Best Thesis Award for the College of Liberal Arts. Graduating masters students are selected by faculty committee members through an application process to represent the department in competition for these two awards.

The Psychology department awards the Gilbert J. Padilla Memorial Award, the Outstanding Master’s Students in Psychology Award, the J. Robert Newman Scholarship, and the Boeing Co. University Relations Human Factors Graduate Scholarship.
Late in the fall semester, the Graduate Coordinator distributes to department faculty a memo requesting nominations for the Graduate Dean’s List, on which the College selection criteria are listed. The memo contains a list of students who graduated the previous Fall and Summer semesters and a list of those students who have completed preliminary and/or final orals. Faculty are instructed to only nominate students from the second list who have graduated or will graduate the current Spring or upcoming Summer semester.

When nominations are received by the Graduate Office, the students’ GPAs are checked for eligibility (3.75 min.). The eligible students are then mailed a letter informing them of their nomination and the identity of the faculty person that nominated them. The students are instructed to inform the Graduate Office if they wish to pursue the award. If so, they must secure two (2) letters of recommendation from faculty, return the completed application and supply any additional materials that might support their nomination.

The Psychology department’s Graduate Committee, consisting of three faculty persons, (one from each of our three graduate programs), reviews all the application material submitted. The students are then rank-ordered and the top 2 to 3 nominees are forwarded to the College of Liberal Arts. The number of awardees from each college is limited to one percent of the students pursuing a master’s degree. Five awards were given by the College of Liberal Arts during 2004 Commencement.

The #1-ranked Psychology Graduate Dean’s List nominee receives the Gilbert J. Padilla Memorial Award.

Psychology students who are nominated but not selected by the College for the Graduate Dean’s List receive the Outstanding Master’s Graduate Award for the Department of Psychology.

At the time of final orals, the student’s thesis committee may recommend a thesis for Best Thesis Award. Just prior to the award’s deadline, these rankings are reviewed by the Graduate Coordinator and the high-ranked theses are selected. The Graduate Committee reviews them and selects one thesis to represent the Psychology Department, which is forwarded to the College for consideration of Best Thesis Award (one is awarded per each College of Liberal Arts commencement ceremony).

The MA-R and the MAIO committees each may select one outstanding incoming student as a J. Robert Newman Scholar. Selected eligible recipients receive up to $1250/semester, for a maximum of four semesters.

Scholarships in the amount of $2000 will be awarded every semester, with the total number of scholarships awarded each semester to be determined by the number of qualified students and the availability of funds provided by the Boeing Co. University Relations Human Factors Graduate Scholarship Award program. Students may apply and earn the award for more than one semester. Applications are available via the department web site.

Graduate Dean’s List

Gilbert J. Padilla Memorial Award

Outstanding Master’s Graduate Award

Best Thesis Award

J. Robert Newman Scholarship

Boeing Co. University Relations Human Factors Graduate Scholarship
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>511</td>
<td>Statistical Design and Analysis of Experiments</td>
<td>Psy 310 or 412 or consent of instructor.</td>
<td>Simple and complex designs. Statistical inference in economical experimentation and in scientific inference and prediction. (Lecture 3 hours.)</td>
<td>(3)</td>
</tr>
<tr>
<td>512</td>
<td>Multivariate Statistical Analysis</td>
<td>Psy 310 or 411 or consent of instructor.</td>
<td>Accuracy and cost of inference from multiple predictors. Discovering structural relationships among multiple variables. Theoretical implications of inferred structures. Applications. (Lecture 3 hours.)</td>
<td>(3)</td>
</tr>
<tr>
<td>518</td>
<td>Computer Applications in Psychology</td>
<td>Psy 310 or equivalent or consent of instructor.</td>
<td>Foundations of computer technology and its application to psychology. Emphasis on real-time control by digital computers in psychological research and applications. (Lecture 2 hrs, Lab 2 hrs.)</td>
<td>(3)</td>
</tr>
<tr>
<td>527</td>
<td>Human Factors</td>
<td>Psy 310 and two of the following: Psy 331, 332 or 333.</td>
<td>Systematic application of psychological principles to the design of person-machine systems. Emphasis in the laboratory on the development of skills required of a human factors psychologist. These skills will include systems analysis, cognitive task analysis, rapid prototyping and usability testing. (Lecture 2 hrs, Lab 3 hrs.)</td>
<td>(3)</td>
</tr>
<tr>
<td>533</td>
<td>Research in Cognition and Learning</td>
<td>Psy 200; 310; and 331 or 332 or 333.</td>
<td>Research methods in cognition, learning and perception. Laboratory includes experiments on selected topics. (Lecture 2 hrs, Lab 3 hrs.)</td>
<td>(3)</td>
</tr>
<tr>
<td>541</td>
<td>Research in Physiological Psychology</td>
<td>Psy 200; 310; and 341.</td>
<td>Research methods in psychobiology. Includes fundamentals of neuroanatomy, surgical procedures for stimulation, lesioning and recording, pharmacological procedures used in neuro-psychological research. (Lecture 2 hrs, Lab 3 hrs.)</td>
<td>(3)</td>
</tr>
<tr>
<td>551</td>
<td>Research in Social Psychology</td>
<td>Psy 200; 310; 351 or consent of instructor.</td>
<td>Research methods and problems in social psychology. (Lecture 2 hrs, Lab 3 hrs.)</td>
<td>(3)</td>
</tr>
<tr>
<td>556</td>
<td>Research in Personality</td>
<td>Psy 200; 310; 356 or consent of instructor.</td>
<td>Research methods and problems in personality. (Lecture 2 hrs, Lab 3 hrs.)</td>
<td>(3)</td>
</tr>
</tbody>
</table>
631. Seminar in Perception and Physiological Psychology (3)
Prerequisites: Psy 331 or 340 or 341 or 342 or consent of instructor. Critical examination of selected topics in perception, information processing and neurophysiological correlates of behavior. Student emphasis on either perception or physiological psychology.

632. Seminar in Learning (3)
Prerequisites: Psy 333 or consent of instructor. Advanced consideration of selected topics in learning.

633. Seminar in Perception and Attention (3)
Prerequisites: Psy 331 or 332 or consent of instructor. An examination of methods, theories, and experimental evidence in selected topics from the areas of sensation, perception, and attention.

634. Seminar in Cognition (3)
Prerequisites: Psy 333 or 332 or consent of instructor. An examination of method, theory and experimental evidence in selected topics from the area of cognition.

637. Seminar in Emotion and Motivation (3)
Prerequisites: Psy 336 or consent of instructor. Advanced consideration of selected topics in animal and human motivation and emotion.

651. Seminar in Social Psychology (3)
Prerequisites: Psy 351 or consent of instructor. Critical examination of interpersonal relations, social influence, group membership and influence and intergroup relations.

656. Seminar in Personality (3)
Prerequisites: Psy 356 or consent of instructor. Theories of personality structure, dynamics and development. Critical examination of research deriving from different theoretical approaches.

661. Seminar in Developmental Psychology (3)
Prerequisites: Psy 361 or consent of instructor. Consideration of theoretical and methodological issues in life span developmental psychology. Critical examination of research on selected topics, including development of physiological function, intelligence, language, learning processes, sensory processes, perception, personality and social behavior.

696. Research Methods (3)
Prerequisites: Psy 411/511 or 412/512. The nature and function of research in the behavioral sciences. Experimental, correlational and case study methods. Research design and analysis using multiple linear regression model, general probability models and Bayesian inference. This course is offered particularly for Master of Arts students and includes the required comprehensive examination.

698. Thesis (1 – 6)
Prerequisites: Advancement to candidacy, consent of Graduate Coordinator. Planning, preparation and completion of a thesis in psychology. Must be repeated for a total of 6 units of credit.
The following prerequisite courses are required in addition to the 30-unit graduate program. If not taken previously, these courses should be completed by the end of the first year of the graduate program. Unit credit will not be counted towards the Masters degree.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>OR EQUIVALENT (No., Title, School)</th>
<th>COMPLETED Grade</th>
<th>YEAR</th>
<th>TO BE TAKEN Sem/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>310</td>
<td>Intermediate Statistics</td>
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</table>

Two from the Following Group: Note that only one course may be counted per section to fulfill requirement.

Section 1:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>331</td>
<td>Sensation &amp; Perception</td>
</tr>
<tr>
<td>332</td>
<td>Cognition</td>
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<tr>
<td>333</td>
<td>Psy of Learning</td>
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Section 2:

<table>
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<tr>
<th>COURSE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>336</td>
<td>Psy of Emotion</td>
</tr>
<tr>
<td>337</td>
<td>Psy of Motivation</td>
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Section 3:

<table>
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<th>COURSE</th>
<th>TITLE</th>
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<tr>
<td>340</td>
<td>Physiology of Behavior</td>
</tr>
<tr>
<td>341</td>
<td>Neuropsychology</td>
</tr>
<tr>
<td>342</td>
<td>Psychopharmacology</td>
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</tbody>
</table>

One From the Following Group:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>351</td>
<td>Social Psychology</td>
</tr>
<tr>
<td>356</td>
<td>Personality</td>
</tr>
<tr>
<td>361</td>
<td>Child &amp; Adolescent Dev</td>
</tr>
<tr>
<td>365</td>
<td>Psy of Adult Dev &amp; Aging</td>
</tr>
</tbody>
</table>
**MASTER OF ARTS, RESEARCH PROGRAM IN PSYCHOLOGY**  
**GRADUATE PROGRAM REQUIREMENTS - PROGRAM YEAR BEGINNING 2004/2005**  

Graduate Students are required to complete a minimum of 30 units of graduate-level courses (500/600) which include the following:

<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>COURSE TITLE</th>
<th>OR EQUIVALENT (NO., TITLE, SCHOOL)</th>
<th>CREDIT UNIT</th>
<th>COMPLETED Grade</th>
<th>Sem/Yr</th>
<th>TO BE TAKEN Sem/Yr</th>
</tr>
</thead>
</table>

ONE of the following:

- 511 Statistical Design & Analysis
- 512 Multivariate Statistical Analysis

ONE of the following six RESEARCH courses: (These courses involve laboratory work)

- 518 Computer Applications
- 527 Human Factors
- 533 Cognition & Learning
- 541 Physiological Psychology
- 551 Social Psychology
- 556 Personality

FOUR of the following SEMINAR Courses: 696 plus three additional seminars. Three comprehensive exams are required: one in 696, and the other two from the remaining seminars.

- 696 Research Methods in Psych
- 631 Physiological Psych
- 632 Learning
- 633 Perception
- 634 Cognition
- 637 Emotion & Motivation
- 651 Social
- 656 Personality
- 661 Developmental

Six units of Thesis (Psy 698)

<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>COURSE TITLE</th>
<th>CREDIT UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>698</td>
<td>Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Electives to complete 30 units: 6 units may be in related fields outside Psychology with approval of the Graduate Coordinator and MA-R committee. Limit of 3 units of Directed Research (Psy 697).
### REQUIREMENTS FOR THE MA-APPLIED EXPERIMENTAL/HUMAN FACTORS OPTION

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>OR EQUIVALENT (No., Title, School)</th>
<th>UNIT CREDIT</th>
<th>COMPLETED Grade</th>
<th>Year</th>
<th>TO BE TAKEN Sem/Yr</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>300/400/500</td>
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<td>The following 3 courses:</td>
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<tr>
<td>511</td>
<td>Statistical Design &amp; Analysis</td>
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<tr>
<td>518</td>
<td>Computer Applications/Psych</td>
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<tr>
<td>527</td>
<td>Human Factors</td>
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<td></td>
<td>Complete one of the following sequences (Sequence A or B)</td>
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<tr>
<td><strong>Sequence A:</strong></td>
<td></td>
<td>634 and either 631 or 632 and one from 515, 533 or 582</td>
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<tr>
<td>634</td>
<td>Seminar in Cognition</td>
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<tr>
<td>631</td>
<td>Sem/Perception/Physiological</td>
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<tr>
<td>or 632</td>
<td>Seminar in Learning</td>
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<tr>
<td>515</td>
<td>Test Construction</td>
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<tr>
<td>or 533</td>
<td>Research in Cognition/Learning</td>
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<td></td>
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<tr>
<td>or 582</td>
<td>Research/Industrial/Org/Psych</td>
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<tr>
<td><strong>Sequence B:</strong></td>
<td></td>
<td>631, 632 and 533</td>
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<tr>
<td>631</td>
<td>Sem/Perception/Physiological</td>
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<tr>
<td>632</td>
<td>Seminar in Learning</td>
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<tr>
<td>533</td>
<td>Research in Cognition/Learning</td>
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<td>Complete the remaining 4 courses:</td>
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<tr>
<td>651</td>
<td>Seminar in Social</td>
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<tr>
<td>688</td>
<td>Practicum in Industry &amp; Org</td>
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<tr>
<td>696</td>
<td>Seminar/Research Methods</td>
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<tr>
<td>698</td>
<td>Thesis</td>
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<td></td>
<td>Note: Students who have taken 411, 418 or 427 or who wish to petition out of 688 on the basis of equivalent experience may substitute appropriate courses with the MA-R Program Committee’s approval.</td>
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<tr>
<td></td>
<td>Course substitutions:</td>
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<td><strong>TOTAL UNITS</strong></td>
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</table>

**Important:** Students taking the Applied Experimental/Human Factors Option must complete the comprehensive examination requirement that is required for the General Research Option, i.e., one comprehensive exam taken in each of the three areas. Refer to MA General Research Option program form.