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Human factors (also known as ergonomics or human engineering) examines human perception, cognition, and behavior within a work setting. It looks at human behavior and capabilities in order to find the best ways to design products, equipment and systems for maximum safe, effective, satisfying use by people.

The Option in Human Factors under the MS in Psychology at CSULB 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. The MS-Human Factors option program is designed as a terminal MS degree, but is also provides excellent preparation for advanced graduate work.

Students in the CSULB Human Factors program acquire a background in experimental psychology and research methods as they are trained in the application of the material through courses in human factors, computer applications and interface design. Special topics seminars, in areas such as large-scale simulation and usability testing, complement the core program of study. Finally, students complete a thesis in their chosen area of human factors.

At the end of the program, students should have the ability to:

1. Apply knowledge of psychology to the design of jobs, information systems, consumer products, workplaces, and equipment to improve user performance, safety and comfort.

2. Apply methodologies that are used in the design of human-machine systems.

3. Design research to answer basic and applied issues in Human Factors.

I. INTRODUCTION

A. Overview of the MS in Psychology, Option in Human Factors Program

B. MSHF Student Learning Outcomes
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. Students will be introduced to members of the program faculty and be provided with documentation and handouts. Coursework and other program requirements and opportunities will be discussed.

Prior to registration each semester, students will receive information from the University regarding registering for courses; instructions are provided via the student’s MyCSULB account. A tentative list of Psychology graduate level courses will be posted on the department web site as soon as available.

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 4.0 or higher on the essay portions of both the GRE and GMAT. Graduate students should satisfy the WPE requirement by the end 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 via the campus web site).

Advancement to Candidacy is the filing of an approved Program (formal listing of required coursework via an “Advancement to Candidacy” form) with the Graduate Advisor. This form will be forwarded to Enrollment Services and is the document used to perform the student’s “grad check.” After completing a minimum of 6 units towards fulfillment of the MSHF degree, and successfully passing the WPE, the student should advance to candidacy. (This is usually accomplished during 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. MSHF students should make themselves familiar with their required coursework. The Graduate Advisor will schedule Advancement to Candidacy workshops throughout the academic year. A student must be advanced to candidacy before the last semester of his or her coursework and prior to filing for a “grad check” (AKA “Request to Graduate”).

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 15 of the previous year/semester. 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 and online via the campus web site. Complete instructions are included via the paperwork.

All students must maintain a minimum cumulative 3.0 GPA throughout the program. Students whose cumulative GPA falls below this level will be placed on academic probation (see online CSULB Catalog for details). There is no “repeat/delete” for graduate students. A minimum 3.0 GPA in MS-Human Factors program coursework, as set by the Advancement to Candidacy procedure, is required to graduate.
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) PSY 310 - Intermediate Statistics (equivalent to two semesters or three quarters of statistics)

(2) PSY 331 - Sensation and Perception

(3) PSY 332 - Cognition

The prerequisite courses listed above are required in addition to the 36-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 Master’s degree.

Recommended Prerequisite Coursework (CSULB courses or equivalents):

One or more of the following three courses:

PSY 340 - Physiology of Behavior
PSY 341 - Neuropsychology
PSY 342 - Psychopharmacology

Students are responsible for information covered through university publications, including the Catalog and Schedule of Classes. These publications cover such topics as plagiarism, GPA requirements, educational leave, academic probation and disqualification, registration instructions and deadlines, and much, much more. Both the CSULB Catalog and the Schedule of Classes are available on-line at www.csulb.edu. The MS-Human Factors program adheres to CSU Executive Order #970 (Student Conduct Procedures: http://www.calstate.edu/eo/EO-970.html).

Be sure to keep your mailing and email addresses current with the Psychology Graduate office (as well as with the university through your MyCSULB account). Information will be disseminated via email and mailings, and also posted on the department web site: www.csulb.edu/psychology

7. Communication

8. Student Responsibility

III. DEGREE REQUIREMENTS

A. Prerequisites for the MS-Human Factors Degree
The MS-Human Factors is a 36-unit degree that includes the following:

(1) Required Courses:

1. PSY 511 Statistical Design and Analysis of Experiments
2. PSY 518 Computer Applications in Psychology
3. PSY 527 Human Factors
4. PSY 533 Research in Cognition and Learning
   Or
   PSY 634 Seminar in Cognition
5. PSY 627 Research/Simulation in Aviation
6. PSY 633 Seminar in Perception and Attention
7. PSY 635 Seminar on Situation Awareness
8. MAE 508 Systems Engineering and Integration
9. CECS 448 User Interface Design
10. PSY 698 Thesis (6 units)

And one course chosen from the following:

- PSY 512 Multivariate Analysis
- PSY 544 Cognitive Neuroscience
- PSY 696 Research Methods
- PSY 697 Directed Research
- ENGL 419 Writing in Science and Technology

(2) 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 IV for details.)
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 online via the guidance in organizing the proposal. Examples of past proposals are also available for checkout. The approved proposal is a contract between you and the department.

   The student must formally 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 MSHF thesis committee shall consist of at least two tenured/tenure-track faculty members from Psychology (including the Thesis Chair) and one other professionally qualified individual who holds at least a Master’s degree.

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

   The thesis committee must be approved by the department Graduate Advisor (as soon as formed) and the college Associate Dean.

   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 hardcopy of your proposal draft to the Graduate Advisor, one week prior to the orals meeting. Instructions (with a visual example) for the preparation of the orals announcement are contained in the online Graduate Office’s Psychology Thesis Guidelines, and a Word template is provided on the department web site.
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

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, as an email attachment) and submit a draft of your thesis to the Graduate Advisor 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 via an online database (link on department and Thesis Office’s web sites). A complete list of thesis guidelines is available via the department web site as well as a list of faculty areas of research interests and typists who may be contracted to prepare theses. The University Thesis Reviewer has prepared a handbook linked from its web site which should be viewed or downloaded prior to beginning your thesis.

The official Department Guidelines for Faculty/Student Responsibility for MS theses 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 MS 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 (provided to the Thesis Chair by the Graduate Advisor) 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 his/her 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.
**Department Computing Facilities:**

Information regarding the computer facilities housed in the Psychology building may be found on the department web site: http://www.csulb.edu/colleges/cla/departments/psychology/newman_lab/

**Room 300/304:**
- Open to all students. Availability: Check department web site*
- 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, if open lab hours available (classroom lab space demand may prohibit open lab).

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

* These rooms may be reserved for research projects with faculty and department approval, when available.

**Campus Computing Facilities:**

There are two open computer labs on campus, in the Steve and Nina Horn Center, north campus, and the Spidell Technology Center located on the first floor of the Main Library. These labs are open the same hours as the campus library. Information may be found at: http://www.csulb.edu/library/guide/computing.html

**CSULB Email and Library Accounts:**

Students can set up their own CSULB “BeachMail” email account via the following web page: http://daf.csulb.edu/email/ Click on the “Activate your BeachMail account” link located at the bottom of the BeachMail box. Click on “Activate Account (First Time Users)” link, then follow the instructions from there. For further information, visit the Academic Computing Services web site: http://www.csulb.edu/divisions/aa/academic_technology/thd/ or email them for assistance at helpdesk@csulb.edu. Academic Computing Services’ help desk phone number is 562-985-4959.

To use PsycINFO and other databases from off site you must set up a Library account via the following web page: https://coast.library.csulb.edu/patroninfo You can also renew books (before they are overdue), request materials not available in the CSULB Library through Interlibrary Services, and sign up for a computer in the Library and Horn Center labs.
In order to assist the student in completing a thesis, the library has many services that can reduce research time, including access via the Internet.

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 may be obtained in the library. This card must be signed by the Graduate Advisor (obtain the card, complete and bring to the Advisor’s office for signature).

C. Many research databases are available via the Internet for CSULB students, including PsycINFO, PsycArticles and Tests in Print. To access on and off campus, you will need to set up a Library Account, complete with password:
   https://coast.library.csulb.edu/patroninfo
   Electronic journals may be accessed via these web addresses:
   http://www.csulb.edu/library/eref/psychology.html
   http://csulb.libguides.com/content.php?pid=100138&sid=751662

Sharing of resources and information is an important part of the graduate student experience. The Student Study Center is located in room Psy 314.

The Psychology Assessment Materials (PAM) Center (located in room Psy 204) has personality inventory tests available for graduate student research. Students can review these tests (if interested in proprietary tests) before purchasing them directly from the test publishers, or borrow them for research use (if interested in non-proprietary measurement scales). The current list of test materials and loan authorization forms are posted outside of room Psy 204. Students must obtain the signature of the faculty member supervising the research on their loan form.

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 (room Psy 206). Visit their website for hours: http://www.csulb.edu/colleges/cla/departments/psychology/peer_advising/

University Student Services are available in such areas as:
   Academic advising through the Disabled Student Services Office (http://www.csulb.edu/divisions/students/dss/support_services/)
   Personal and health counseling through:
      Counseling and Psychological Services (CAPS) Office
      http://www.csulb.edu/divisions/students/caps
      Community Clinic for Counseling and Educational Services
      http://www.ced.csulb.edu/clinic
   Financial assistance via the Office of Financial Aid
      http://www.csulb.edu/depts/enrollment/financial_aid/
Students interested in serving as a Graduate Assistant (GA) should submit a GA application to the Graduate Advisor. A new application is required each semester. Positions are open until filled. Review of applications will begin early to mid-summer for the Fall semester and late fall for the Spring semester. Applications are available via the web site and from the Graduate Advisor’s Office, and should be submitted to the Graduate Advisor’s Office by the announced deadline.

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 for the applicable semester. Most GA assignments fall into two major categories. Some assignments are to assist with the introductory research methods course (PSY 220). This involves preparing materials, grading papers and assisting students. Other GA assignments support introductory and intermediate statistics courses (PSY 210, 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. Other positions include support for the PSY 301 course, PSY 314, and seasonal courses (fall or spring only) such as PSY 427/527 and PSY 456/556.

- Financial: If appointed for 10 hours of work each week, for two semesters, a first year GA receives approximately $5500 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.

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, awarded through a competitive process. The Psychology department awards the Gilbert J. Padilla Memorial Award, the Outstanding Master’s Students in Psychology Award and the J. Robert Newman Scholarship. (See following page for award descriptions.)
Early in the Spring semester, the Graduate Advisor 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 during the current Spring or upcoming Summer semester.

When nominations are received by the Graduate Advisor, 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(s) that nominated them. The students are instructed to inform the Graduate Advisor 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 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. Eight awards were given by the College of Liberal Arts during the 2011 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 may 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 Advisor 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 MAPR and the MSIO committees may each select one outstanding incoming student as a J. Robert Newman Scholar. Selected eligible recipients receive up to $1750/semester, for a maximum of four semesters. (Currently MSHF students are not eligible.)

Scholarships up to the amount of $3000 may 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 and NASA University Research Center Human Factors Graduate Scholarship Awards program. Students may apply and earn either award for more than one semester. Applications are available via the department web site.

Information on the CSULB Annual Student Research Competition may be found at: http://www.csulb.edu/divisions/aa/projects/grad/research/index.html. MAPR students have done well in the past, including first place in 2009 (Social & Behavioral Sciences category).
Courses listed on this page are through the Psychology Department:

511. Statistical Design and Analysis of Experiments (3)
Prerequisites: PSY 310 or equivalent or consent of instructor.
Focuses on the logic, application, and interpretation of analysis of variance (ANOVA) models in addition to other statistical procedures. Various issues of research design and experimentation are also covered. (Lecture 3 hours.)

512. Multivariate Statistical Analysis (3)
Prerequisite: PSY 310 or equivalent or consent of instructor.
Covers logic, application, and limitations of multivariate (multiple independent and dependent variables) statistics. Topics may include multivariate analysis of variance, single and multiple correlation/regression, logistic regression, factor analysis, and path analysis. (Lecture 3 hours.)

518. Computer Applications in Psychology (3)
Prerequisites: C/ST 200 or equivalent; PSY 310 or equivalent or consent of instructor. 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 3 hrs.)

527. Human Factors (3)
Prerequisites: PSY 310 and two of the following: PSY 331, 332 or 333. Systematic application of psychological principles to the design of person-machine systems. Emphasis in the laboratory on the development of skills required of human factors psychologists. These skills will include systems analysis, cognitive task analysis, rapid prototyping and usability testing. (Lecture 2 hrs, Lab 3 hrs.)

533. Research in Cognition and Learning (3)
Prerequisites: PSY 200; 310; and 331 or 332 or 333. Research methods in cognition, learning and perception. Laboratory includes experiments on selected topics. (Lecture 2 hrs, Lab 3 hrs.)

544. Cognitive Neuroscience (3)
Prerequisites: PSY 332 and one of the following: PSY 340, 341, or 342. Explores brain systems responsible for cognitive processes in normal humans, integrating theory from texts and current research from original sources.

627. Research and Simulation in Aviation (3)
Prerequisite: PSY 527 or consent of instructor. Covers simulation methods and use in human factors investigations, focusing on simulations of National Airspace System and air traffic management principles, from both pilot and air traffic controller standpoints.

633. Seminar in Perception and Attention (3)
Prerequisites: PSY 331 or 332 or consent of instructor. Examination of methods, theories, and experimental evidence in selected topics from the areas of sensation, perception, and attention.
Psychology Department courses continued:

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

696. Research Methods (3)
Prerequisites: PSY 511 or 512, consent of graduate advisor.
Preparation and completion of thesis proposal for preliminary
oral examination. Power calculations, research methods, and
statistical concepts and procedures. Ethics, human subjects
protection and responsible conduct of research. Includes the
required comprehensive examination for MA Research students.

697. Directed Research (1-3)
Prerequisites: Consent of graduate advisor and department.
Theoretical and experimental problems in psychology requiring
intensive analysis.

698. Thesis (1-6; a total of 6 required for MSHF degree)
Prerequisites: Advancement to candidacy, consent of graduate
Advisor. Planning, preparation and completion of a thesis
in psychology. Must be repeated for a total of 6 units of credit.

CECS 448. User Interface Design (3)
Prerequisites: CECS 323 (or 421), and any one of CECS
471, 475, 481. Evaluation, design and programming of
user interface systems. Fundamentals of human cognition,
and the interaction between humans
and systems. Usability methods and user/task-centered
design. Tools for designing and building user interfaces,
with emphasis on rapid applications development.
(Lecture 2 hours, Lab 3 hours.)

ENGL 419. Writing in Science, Social Science, and Technology (3)
Intensive practice in writing on topics in science and
literature. Contemporary examples will be studied as
models.

MAE 508. Systems Engineering and Integration (3)
Prerequisite: Consent of instructor.
Tools and methods employed by systems engineers in
aerospace industry. Development of system functions,
requirements, verification and validation, and interfaces in
context of integrated product teams and the product life
cycle. Trade studies and risk management. Projects
assigned, written reports and oral presentations are
required. Additional projects required for MAE 508.

Dual Numbered Courses
A number of the courses in the MSHF program are dual numbered,
i.e., while course material is the same there is a separate numbering for
graduate (500-level) and undergraduate (400-level). All graduate
students are to enroll in the 500-level courses (university requirement).
The specific courses that are double numbered are as follows:
PSY 411/511; PSY 412/512; PSY 418/518; PSY 427/527; PSY 433/
533; PSY 444/544; MAE 408/508.
Objective: The research project is designed to ensure that students can design, develop, execute, analyze and write up an experiment in human factors, thus preparing him/her for thesis and other research work. Unlike a thesis, the project topic is not chosen by the student, but assigned by the faculty supervisor.

Credit: The project credit is obtained through PSY 697 - Directed Study. Each student must receive credit for a total of 3 units of 697. Although the units may be taken in one semester, the project can take two semesters (e.g., Fall and Spring).

Experiment: The experiment for the project will be assigned by the faculty supervisor (and the faculty supervisor may be assigned by the MSHF Program Committee). The faculty will provide some key readings on the experiment, but the student is expected to go beyond these when preparing the Introduction Section of the report.

Grade: To help you stay on track (a critical skill in thesis and future research work!), we have devised the following schedule, for your project (dates below are based upon a fall semester start). Your grade in PSY 697 will be based, in part, on whether you meet these deadlines. NOTE: When you hand in draft sections of your report, the faculty may take up to one week to provide feedback.

Due Dates

Fall Semester

November 1st: Complete penultimate draft of the Introduction Section (this means the faculty supervisor has seen several drafts of the introduction before this date).

November 10th: IRB completed with faculty and submitted to the Office of University Research.

December 1st: Experimental apparatus and materials completed.

End of Finals Week: Complete Method Section.

Spring Semester

February 15th: Data collection is completed.

April 1st: Results Section.

End of Finals Weeks: Complete APA Style Paper.
MSHF Program Check List

Please refer to expanded information located elsewhere in this handbook regarding the items listed below:

___ Complete outstanding prerequisite courses

___ Fulfill WPE requirement

___ Complete PSY 697 Elective Project (optional)

___ Advance to Candidacy

___ File for Graduation ("Request to Graduate")

___ Complete Thesis Project (refer to Psychology Thesis Guidelines)
   ___ Ask faculty member to be Thesis Chair
   ___ Preliminary Orals
   ___ Final Orals
   ___ Submit Thesis

___ Complete Program Coursework
   ___ Thesis units
Name: _________________________________________________ WPE_______________
Address: ___________________________________________________________________
Phone: ________________________________  ID# ________________________________

Prerequisites:
- Required: PSY 310 _________ PSY 331 _________ PSY 332 _________
- Recommended: PSY 340 _________ PSY 341 _________ PSY 342 _________

REQUIREMENTS: MS-HUMAN FACTORS DEGREE (AS OF FALL 2011)

<table>
<thead>
<tr>
<th>COURSE</th>
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<th>Completed Sem/Year</th>
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The following nine courses:

One course chosen from the following:

- PSY 512 Multivariate Analysis
- PSY 544 Cognitive Neuroscience
- PSY 696 Research Methods
- PSY 697 Directed Research
- ENGL 419 Writing in Science & Technology

Six units of Thesis (PSY 698):

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**TOTAL UNITS** 36