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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.
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.

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 as soon as available.

3. WPE

Every degree candidate must satisfy the Writing Proficiency Examination (WPE) requirement, certifying proficiency 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 (http://www.csulb.edu/divisions/students2/testing/) and in the Schedule of Classes (available online and at the campus bookstore).

4. Advancement to Candidacy

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 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. MSHF students should make themselves familiar with their required coursework. Students must make an appointment to meet with the Graduate Advisor 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 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. 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). 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 Masters degree.

Recommended Prerequisite Coursework (CSULB courses or equivalents):

CECS 174 - Programming and Problem Solving I

and one or more of the following three courses:
PSY 340 - Physiology of Behavior
PSY 341 - Neuropsychology
PSY 342 - Psychopharmacology

7. Communication

8. Student Responsibility

III. DEGREE REQUIREMENTS

A. Prerequisites for the MS-Human Factors Degree

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 Grad office bulletin boards and the department web site (www.csulb.edu/~psych/).

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, as well as hard copy from the university Bookstore. The MS-Human Factors program adheres to CSU Executive Order #970 (Student Conduct Procedures: http://www.calstate.edu/eo/EO-970.html).
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 697 Directed Research
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
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 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. MSHF 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 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 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 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 provided 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, as 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 Advisor’s office. A complete list of thesis guidelines is also available from the Graduate Advisor 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 downloaded prior to beginning your thesis (via the CSULB Library web site).

The official Department Guidelines for Faculty/Student Responsibility for MS theses are listed below.

Guidelines for Faculty/Student Responsibility for MS Thesis

Preliminary Orals

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 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.
V. FACILITIES

1. Computer Facilities

Department Computing Facilities:

Information regarding the computer facilities housed in the Psychology building may be found on the department web site:
http://karl.papubs.csulb.edu/cla/psychology/?p=fac/newman.html&dd=7&de=1

Room 300:
- 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 approval, when available.

Campus Computing Facilities:

There are many open computer labs on campus. Those closest to the Psychology Department are located in LA-5 and 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/
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 Coordinator (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 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: http://karl.papubs.csulb.edu/cla/psychology/?p=undergrad/center.html&dd=4&de=6

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

Application

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 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.

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 $5300 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.

VII. 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 University Relations Human Factors Graduate Scholarship.
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 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(s) 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 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 2007 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 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 MA–R and the MAIO committees may each select one outstanding incoming student as a J. Robert Newman Scholar. Selected eligible recipients receive up to $2000/semester, for a maximum of four semesters. (Currently MSHF students are not eligible.)

Scholarships up to 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 (awards may be limited to two semesters). 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/.
Courses listed on this page are through the Psychology Department:

511. Statistical Design and Analysis of Experiments (3)
Prerequisites: PSY 310 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 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 2 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, system characteristics, 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.
Name: ______________________________________________________________________

Address: ____________________________________________________________________

Phone: _____________________________  CSULB ID# _____________________________

Prerequisites:

Required: PSY 310 __________           PSY 331 __________          PSY 332 __________

Recommended: PSY 340 __________          PSY 341 __________

PSY 342 __________          CECS 174 _________

REQUIREMENTS: MS-HUMAN FACTORS DEGREE (AS OF FALL 2006)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>UNITS</th>
<th>Completed</th>
<th>SEM/YEAR SUGGESTED TO BE TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 511</td>
<td>Statistical Design &amp; Analysis</td>
<td>3</td>
<td></td>
<td>Spring Semester 1</td>
</tr>
<tr>
<td>PSY 518</td>
<td>Computer App in Psychology</td>
<td>3</td>
<td></td>
<td>Fall Semester 1</td>
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<tr>
<td>PSY 527</td>
<td>Human Factors</td>
<td>3</td>
<td></td>
<td>Fall Semester 1</td>
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<tr>
<td>PSY 533 or PSY 634</td>
<td>Research in Cognition &amp; Learn Sem in Cognition</td>
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<td>Spring 1 or Fall 2</td>
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<td>Spring 1 or Fall 2</td>
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<tr>
<td>PSY 627</td>
<td>Research/Simulation in Aviation</td>
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<td>PSY 633</td>
<td>Sem in Perception &amp; Attention</td>
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<td>PSY 697</td>
<td>Directed Research</td>
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<td>Systems Engineering/Integration</td>
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<td></td>
<td>Fall Semester 2</td>
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<tr>
<td>CECS 448</td>
<td>User Interface Design</td>
<td>3</td>
<td></td>
<td>Summer 1</td>
</tr>
</tbody>
</table>

One course chosen from the following:

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

Six units of Thesis (PSY 698):

PSY 698  Thesis

TOTAL UNITS 36
Name: _____________________________________________________________________

Address: ___________________________________________________________________

Phone: _____________________________  CSULB ID# _____________________________

Prerequisites:

Required:  PSY 310 __________  PSY 331 __________  PSY 332 __________

Recommended:  PSY 340 __________  PSY 341 __________  PSY 342 __________  CECS 174 _________

**REQUIREMENTS: MS-HUMAN FACTORS DEGREE (AS OF FALL 2006)**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>UNITS</th>
<th>Completed Grade</th>
<th>Sem/Year</th>
<th>TO BE TAKEN</th>
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<tr>
<td></td>
<td>The following nine courses:</td>
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<tr>
<td>PSY 511</td>
<td>Statistical Design &amp; Analysis</td>
<td>3</td>
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<td>PSY 518</td>
<td>Computer App in Psychology</td>
<td>3</td>
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<td>PSY 527</td>
<td>Human Factors</td>
<td>3</td>
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<tr>
<td>PSY 533 or PSY 634</td>
<td>Research in Cognition &amp; Learn Sem in Cognition</td>
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<td>PSY 627</td>
<td>Research/Simulation in Aviation</td>
<td>3</td>
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<td>PSY 633</td>
<td>Sem in Perception &amp; Attention</td>
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<td>PSY 697</td>
<td>Directed Research</td>
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<tr>
<td>MAE 508</td>
<td>Systems Engineering/Integration</td>
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<td>CECS 448</td>
<td>User Interface Design</td>
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<td>One course chosen from the following:</td>
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<td>PSY 512</td>
<td>Multivariate Analysis</td>
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<td>PSY 544</td>
<td>Cognitive Neuroscience</td>
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<td>PSY 696</td>
<td>Research Methods</td>
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<td>ENGL 419</td>
<td>Writing in Science &amp; Technology</td>
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<td>Six units of Thesis (PSY 698):</td>
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<td>PSY 698</td>
<td>Thesis</td>
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**TOTAL UNITS**  36