



Human Factors and Ergonomics Society

**Accreditation Self-Study
Report Guide**

Revised 3 November, 2010

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Overview

The requirements/guidelines that follow set forth the information required from graduate programs for application for accreditation by the Human Factors and Ergonomics Society. This document deliberately avoids defining the set of competencies in terms of a core set of courses required for accreditation because this approach would take too narrow a view of how knowledge and skills are achieved. For example, the written communication skills discussed might be acquired by building in proper feedback to such written course work as term papers, theses, and papers for publication. Further, the degree of emphasis on particular areas may vary from program to program. Thus one program may provide familiarity with concepts and techniques of analysis and design methodologies as separate pieces in multiple courses, whereas another program may emphasize this area in a specialized, two-course sequence. It is incumbent on each program for which accreditation is sought to show a sufficient degree of education and training in each of the areas identified.

It is recognized that the core requirements for the master's degree set –with only minimal allowance for satisfying other requirements relating to the organization housing the program (e.g., engineering or psychology) – will probably exceed 30 semester hours. This seems fully justified for the interdisciplinary field of human factors. The intent of the approach described has been to allow flexibility and diversity; however, it is not intended to imply that this flexibility should permit the accreditation of a program that is weak or minimal in all or most of the six core areas.

With few exceptions, human factors programs in the United States are found as an emphasis in some traditional academic departments. This, in addition to the multidisciplinary applications and origins of human factors, has resulted in a diversity of educational and professional backgrounds for human factors professionals. In many cases the HF/E faculty member's discipline will be determined by the discipline of the department offering the program. This diversity has played and probably will continue to play an important role in the dynamic growth and widening application of human factors.



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Requirements

Accreditation shall be awarded to graduate programs of human factors and ergonomics rather than to specific degrees within the university. Therefore, a human factors and ergonomics program may be composed of a cadre of courses offered from several departments and colleges within the university. Degree requirements of the applying or university may differ from the requirements/guidelines outlined in the document. However, the criteria in the sections on curriculum (Section A), practical experience (Section B), and staffing (Section C) outlined in this Human Factors and Ergonomics Society Self-Study Report Guide must be satisfied for accreditation.

Prerequisites

Accreditation shall be possible only after at least six students have graduated from the program. Advance accreditation of programs shall not be granted.

Accreditation Decisions

Accreditation of a program shall be for a basic unit of six years. The decision following an accreditation review may be one of the following:

- a. Full six-year accreditation.
- b. Accreditation for a period of three years, at which time evidence of progress toward satisfying the requirements for full-term accreditation is required.
- c. Immediate “show cause” notice that accreditation will be denied or revoked unless specified steps are taken.
- d. Notification of denial or revocation of accreditation. This decision may be appealed to the Executive Council.

The information required for accreditation is requested in the form of a self-report instrument. Sections A, B, and C identify the criteria to be used by the Accreditation Review Panel in evaluating the qualifications of a program for approval. The contents of this report should largely follow the engineering accreditation (ABET) model; differences take into account the multidisciplinary nature of human factors and the flexible nature of the core-plus-specialization curriculum requirements described in Section A.

Documentation is required whenever it is likely to be available (e.g., examinations, transcripts, sample lab reports) and may also be provided as a URL. In preparing the self-report, care should be taken to provide all the information requested in this document in order to satisfy the criteria for accreditation set forth in Sections A-C. A site visit will be necessary only in cases that cannot be resolved by the self-report

If you believe you have documentation not specifically requested which demonstrates the quality of your program, please attach it with an explanation of its relevance.

Procedural Issues

Applicants should send electronic copies of all materials to the HFES Central Office for distribution to the current Chair of the Accreditation Review Committee in an electronic form. Contact the Central Office Executive Director to determine the appropriate medium. Any paper-only documents should be scanned into PDF form for electronic submission. Electronic documents should be typed in Microsoft Word to enable insertions by reviewers. Sections on the table of contents must correspond to the sections specified in the self-study report guide because they allow:

- you to easily modify your package, and
- reviewers to easily insert updates and clarifications, which you may provide.

Arrange the course material by Departments (Psychology, Industrial Engineering, etc) and within Departments arrange the material by increasing course number. This procedure will also facilitate your preparation of material for subsequent reviews at the three or six year review point.

Applicants should mail the nonrefundable application fee of \$200 along with any materials that are not amenable to electronic submission to the Human Factors and Ergonomics Society at P.O. Box 1369, Santa Monica, CA 90406-1369.

Please attach a copy of the payment check to the original Self-Study Report Guide or a credit card number with authorizing signature.



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Application Format

1. Cover Page

The cover page should include at least the following information:

- University name
- Name of Program for which accreditation is being sought
- Major Academic unit (e.g., college, school, and department)
- Dean/director/chair of this major unit
- Name of director of the human factors program
- Address for correspondence
- Submission Date
- Type of Submission: Original or Renewal

2. Description of the Program Environment

- 2.1 Describe the university in general terms (e.g., size, Colleges/Schools location). Provide material, not a series of links. However specific URLs can be provided so the reviewers can access the most current information.

If a program resides at an institution that is accredited by an educational accrediting body, a letter from the department chair or dean stating as such can be used in place of this description.

Relevant portions of text from a program's recent accreditation application can be used as the core document for the accreditation application with the stipulations that (a) supplemental materials necessary to fully answer all of the components requested in the Self-Study Guide are provided, (b) there is sufficient information about how each accreditation requirement is met, (c) the document provides a concise overview of the program

- 2.2 Describe the major unit(s) within which your human factors program resides (e.g., school and department). In addition, indicate all degrees and programs offered by this unit.
- 2.3 Describe resources available to the human factors program from the local area (e.g., libraries, other universities and human factors employers) and how these are utilized.
- 2.4 Specify any university/college overall entrance requirements that are in addition to your human factors program entrance requirements.

3. Human Factors Specifics

- 3.1 Provide a general description of your human factors program, including (brochures are welcome):
 - 3.1.1 Degrees offered
 - 3.1.2 Number of graduates in the graduate program over the past six years
 - 3.1.3 Focus of the program

- 3.2 Specify the admission requirements for each of your human factors programs.

- 3.3 Program History:
 - 3.3.1 New applications: For the year preceding the self-report year, provide the number of applicants (from within and outside of the university), number of students accepted for admission in the human factors program, and number enrolled (i.e. started classes). Indicate whether these are full- or part- time students. Also indicate the number admitted in “special” or “non degree” categories. If these data are available for more than the previous year please provide them.

 - 3.3.2 Renewing applicants: For the years since your last application provide the number of applicants (from within and outside of the university), number of students accepted for admission in the human factors program, and number enrolled (i.e. started classes). Indicate whether these are full-or part-time students. Also indicate the number admitted in “special” or “non degree” categories.

- 3.4 Include actual course of studies for students in each of the degree programs for which accreditation is sought.

- 3.5 List and describe the specific requirements for graduation for each degree. Include courses, exams, projects, etc. Indicate any sequence or time limitations required in fulfilling these requirements.

- 3.6 If faculty outside the program advises students, provide an elaboration of this arrangement.

- 3.7 For each program for which accreditation is sought, complete a separate copy of Table 1 in these guidelines. Lines may be added to this table if necessary, but please retain the format shown

3.8 For each course offered by your unit (or other participating units), and which is considered to have significant human factors content, provide the following information:

- 3.8.1 Title
- 3.8.2 Credit hours
- 3.8.3 Course objectives
- 3.8.4 Course description
- 3.8.5 How often the course is offered
- 3.8.6 Most recent syllabus including course outline and texts

It is important that the course outline for each human factors course be sufficiently detailed to permit assessment of breadth and depth of coverage of topics. Adequate description is particularly critical for those courses listed in Table 1 as contributing to meeting core curriculum requirements. Include laboratory work; indicate the number of laboratory hours required during a semester/quarter.

3.9 Show in Table 1 how each course contributes to fulfilling the curriculum requirements stated in Section A: Curriculum Requirements.

3.10 Identify any listed course that is a joint graduate/undergraduate course (i.e., meets in the same room at the same time regardless of numbering techniques). For each such course, state the measures taken to ensure a “graduate experience” for the graduate students.

3.11 Describe specializations available in your program and the title, credit hours, and course descriptions for each specialization (follow the format in item 2.8 above).

3.12 Specify individual study requirements (e.g., thesis, dissertation, comprehensive examination and internships). Indicate whether graduate students have a non-thesis option. In addition, indicate how many theses, dissertations, etc. have been published or presented at professional meetings in the last five years.

3.13 Provide any materials that reflect the quality of your program and/or its graduates (e.g., dissertations, theses, research reports, university/grants/contract funding and videotapes of promotional materials).

4. Facilities

4.1 Describe any special facilities and services that support the human factors program, including:

- 4.1.1 Research facilities

- 4.1.2 Instructional facilities
- 4.1.3 Computational facilities
- 4.1.4 Simulation facilities
- 4.1.5 Library facilities (include a listing of journals regularly acquired that are relevant to human factors, include electronic journals from which students can download articles)
- 4.1.6 Student financial support (e.g., fellowships and internships)

This may be accomplished or supplemented by brochures, photos, etc. if suitable.

5. Faculty

5.1 Provide detailed information on faculty qualifications and experience. This section should specify how your program meets the staffing requirements discussed in Section B: Staffing Guidelines, including:

- 5.1.1 List all full- and part-time faculty and current curriculum vitae for each. The vitae should include professional affiliation, refereed and manuscript publications, research, consulting and teaching experience.
- 5.1.2 Indicate who are considered “core” faculty in the program and give details of their roles and responsibilities. Specify the percentage of time devoted to teaching as opposed to research as opposed to outside consulting.
- 5.1.3 List the courses taught by all full- and part-time faculty for the last academic cycle preceding the self-study year.
- 5.1.4 Describe how teaching evaluation is handled in your unit.
- 5.1.5 Describe the administrative and academic responsibilities for the human factors program.
- 5.1.6 Specify the teaching load in your unit.
- 5.1.7 Specify the promotion and tenure policies of your unit.

5.2 List and indicate the duties of nonacademic staff who support the program (e.g., computer support personnel, laboratory technicians).

6. Other Participating Departments

- 6.1 List and describe other departments that participate in your program.
- 6.2 Indicate the nature of their participation and how it contributes to your program. Also indicate how many students are involved.

7. Practical Experience

- 7.1 For doctoral programs or master's programs, which require practical experience, indicate how your program satisfies the requirements outlined in Section C: Practical Experience Requirements.
- 7.2 List any university units either directly or indirectly affiliated with your program which provide collaborative professionals, or student work opportunities, or which contribute in other ways to the development of human factors specialists.

8. Plans

- 8.1 Describe any plans that are under way to expand laboratory facilities.
- 8.2 Describe any plans that are under way to expand the faculty.

9. Summary

- 9.1 Describe the strengths of your program, including the best indicators of its quality.
- 9.2 Describe the areas of your program that need strengthening, if any. Indicate the resources (faculty, laboratories, etc.) that would provide this strength.

Section A Curriculum Requirements

This section contains the criteria used in evaluating the curriculum of programs for which accreditation is sought. The results of several surveys and focus groups were reviewed during the formulation of these criteria. Some of the general conclusions from the results of the surveys are summarized below.

- Graduate education in this field takes place in the organizational context of a variety of academic disciplines. The majority, however, are located in either departments of industrial engineering or in departments of psychology, with a somewhat larger number in the former.
- Human factors specialists are employed in a variety of settings, including different types of businesses and industries, government organizations, and academic institutions.
- Human factors specialists engage or participate in a broad range of activities, including designing equipment, environments, and jobs; analyzing systems (task analysis, mission analysis, etc.); research; teaching; writing proposals, reports, and other technical documents; selling ideas, plans and people; managing human factors projects; and training operators.
- Graduates of human factors programs should have a broad range of knowledge, skills, and experience.
- There are a considerable variety of current graduate programs regarding the breadth and depth with which topics relevant to human factors are covered.

One thing is very clear from the foregoing observations: the field is broad in virtually all respects. It is to be expected that graduate programs will vary a great deal in their specifics. This line of reasoning leads to considering the accreditation in terms of what should be basic or common to all programs: in academic terms, what level of preparation across core areas is sufficient to provide a general background in HF/E, and what are the appropriate specializations that may be present in varying degrees of breadth and depth among programs.

A.1 - CORE

Human Factors is concerned with the application of what we know about people, their abilities, characteristics, and limitations to the design of equipment they use, environments in which they function, and jobs they perform. Therefore, the core of education in this field must include instruction on the following six core areas:

1. Human Properties
2. Research Methodologies
3. Analysis and Design Methodologies
4. Quantitative Skills
5. Communication Skills
6. Teamwork Experience

The objective of the core is to be sufficient, not exhaustive. Recommended breadth and depth for each area will be further explored below.

1. Human Properties Requirements

Requirement 1: The core curriculum should include study of the human as a physical engine that addresses (a) anatomical descriptive terms, (b) the skeletal and muscular systems, (c) anthropometry and its application in design, (d) workplace design (including a section on computer workstations), (e) work physiology (including its application to occupational tasks, musculoskeletal disorders and their prevention and treatment), and (f) occupational biomechanics (including manual material handling, risk factors and prevention, available guidelines and NIOSH equations).

Requirement 2: The core curriculum should include study of the human as a cognitive system that would address the areas of attention, perception, memory, learning, decision-making, stress, and workload. Frameworks and methods in these areas include signal detection, naturalistic decision making, situation awareness, situated cognition, cognitive task analysis, human-computer interaction and human system integration and socio-technical system analysis.

Requirement 3: Because many HF/E programs focus heavily on one or the other of these human properties dimensions, and associated faculty members will have different areas of expertise, HFES does not require that both of these areas be covered in depth. However, there are many HF/E problems which require an integration of both approaches (e.g., psychosocial influences on musculoskeletal pain, and the interaction of biomechanical and cognitive factors on usability of hand-held medical devices.) Consequently, graduates of accredited programs should have at least a working knowledge of critical concepts concerning the human as physical engine and as cognitive system. Students may be provided minimum instruction on the non-emphasized dimension directly or indirectly via

other departments in the university. At a minimum every program should include training that gives a broad overview of the non-emphasized dimension of human properties.

Regardless of whether a program emphasizes the human as a cognitive system or the human as a physical engine, there should be an emphasis on addressing practical problems with a human-systems approach or human-systems integration. That is, students should comprehend the importance of the human-machine system rather than simply the interaction between the human and the machine.

Minimum Requirements in Non-Emphasized Area

Assumption

The committee started with the assumption that graduation from an HFES-accredited program provides assurance that certain standards have been met. That is, we believe that “consumers” (i.e., employers) interpret accreditation of a program to mean that students graduating from an HFES-accredited program are taking a curriculum that has been agreed upon by experts in HFES as being fundamental to the field.

Purpose

The purpose of the minimum requirements is to assure that graduates from HFES-accredited programs have a comprehensive knowledge of the field, including expertise in an area of emphasis (the “emphasized area”) as well as an overview of the other core components of the field (the “non-emphasized area”), which will enable them to:

- a) recognize potential human performance problems that might originate in cognitive human systems, physical human systems or the interaction between the cognitive and physical systems, and be able to find more information about those problems when needed
- b) converse with experts in the non-emphasized area to develop solutions for human performance problems
- c) share a common language when talking with clients about human factors related issues and when working with other human factors professionals on interdisciplinary teams
- d) have knowledge about the relevant limitations and capabilities in both the cognitive and physical systems of the human when analyzing an applied problem, and be able to explain these capabilities and limitations at an overview level to clients and colleagues

Depth And Breadth

Graduates will not be expected to be experts in the non-emphasized area or have the same depth of knowledge as in the emphasized area. Graduates are expected to have an understanding of the non-emphasized area at the level of an introductory textbook.

Graduates are expected to have a basic level understanding of all of the topical areas listed in Requirement 1 and Requirement 2. It is understood that there will be a tradeoff between breadth and depth when covering these topics. However, graduates should be exposed to each topical area.

Implementation Of Training

The manner in which graduates are trained in the minimum requirements for the non-emphasized area are diverse and must include one or more of the following which can be accomplished from various departments:

- a) one or more face-to-face courses that cover multiple topical areas within the non-emphasized area
- b) one or more on-line module(s) or course(s)
- c) reading and discussing relevant articles in seminars
- d) independent readings under the direction of a faculty member in or out of the student's home department for which the student earns formal credit
- e) research, internships, and/or project-oriented activities

Ensuring That Minimum Requirements Are Met

Programs must describe in their application for accreditation how they will ensure that students meet the minimum requirements. That is, the program must specify the process used and the accreditation review committee will evaluate whether the process is credible and feasible.

Programs must keep concrete evidence in their program files that students have met the minimum requirements. Examples of such evidence could include examinations, certificate from the completion of an on-line course, and record of any courses a student taught in the non-emphasized area.

2. Research Requirement

The ability to do research is of fundamental importance. Graduate programs must include applied research experience. At the master's level, students of accredited

programs must be trained to execute research projects including the collection and analysis of data and the preparation of technical reports. Master's programs should include a thesis or an equivalent experience that trains research skills.

At the doctoral level, students should be able to formulate research problems and deep strategies to address their solutions. Doctoral programs include a dissertation with an emphasis on theory or conceptual development. No distinction is made between basic and applied research in this context. Rather, the emphasis is on the research experience as a means of developing research competence. At both levels, knowledge of statistical procedures and experimental design is expected.

3. Analysis and Design Methodologies Requirement

Instruction in analysis and design methodologies should include the use of such common criteria as performance, cost, and safety to the design and/or evaluation of various human systems. This requirement focuses on understanding traditional human factors methodologies such as human-centered design, human performance modeling, task analysis, simulation mission analysis, function allocation, function analysis, and task analysis/cognitive task analysis, critical incident techniques and simulation modeling.

4. Quantitative and Computer Skills Requirement

Requirement 1: Quantitative Skills. Students must acquire quantitative skills that are appropriate to their course of study. For example, students trained in an industrial engineering department may complete calculus whereas students trained in a psychology department may complete statistics. These requirements can be met at the upper-division undergraduate level. Programs are encouraged to provide students with opportunities to develop mathematical/statistical modeling skills in areas such as anthropometry, biomechanics, cognition, decision-making, system development, and system evaluations. Programs should ensure that each student has the appropriate quantitative skills to provide the skills that meet the requirements of the student's course of study.

Requirement 2: Computer Skills. Students must acquire computer skills that are appropriate to their course of study. For example, students specializing in website designs may learn html or java programming languages whereas students specializing in simulation may learn higher-level languages such as C++. Other students may simply need to learn how to use computer tools such as MicroSaint, E-Prime, L, Labview, and Matlab. In any case, graduates must demonstrate strong skills in regard to understanding and applying computers to the content area of their choice. However, all students will need to use computer tools (software or hardware) that are relevant to their disciplines. Programs should ensure that each student develops computer skills appropriate to the student's course of study and at the cutting edge of the student's specialization.

Note: While skills such as general computer skills (e.g. web usage, operating systems such as knowledge of PC Operating Systems, presentation software) should have been

acquired at the undergraduate level, supplemental training might be necessary at the graduate level.

5. Communication Skills Requirement

While oral and written communication skills should have been developed at the undergraduate level, supplemental experience may be required at the graduate level. Students must be provided with the opportunity to sharpen their speaking and writing skills at the graduate level.

6. Teamwork Experience Requirement

Ideally, a program should offer an exposure to a multidisciplinary team experience as part of their academic experience. However, it is recognized that there are logistical difficulties in developing and requiring such experiences. Following are suggestions on how this requirement can be met:

- a. Teach team building skills and abilities
- b. Collaborative class assignments and projects
- c. Feedback from fellow students on class presentations
- d. Organize students into workgroups when working on practical problems
- e. Provide feedback on students' abilities to collaborate and cooperate in teams

A.2 SPECIALIZATION

Virtually every graduate program will have its own flavor or emphasis, which will be based on its particular goals. Primarily, the university, department within which it resides, and the cadre of faculty will determine this emphasis. For example, there are a number of differences between the model human factors programs in departments of industrial engineering and departments of psychology. Indeed, given the breadth of the human factors discipline, it would be difficult (from a resources perspective) to offer a comprehensive graduate program. Furthermore, it would require an extended period for a student to achieve competence in all of the variety of topics or specialty areas encompassed by the discipline. Therefore, two requirements are relevant for accreditation:

Students must acquire at least one area of specialization. Programs should be structured in such a way that each doctoral student is required to achieve competence in at least one area of specialization. Programs may have strengths in several areas, and students may develop competencies in more than one area, but a minimum of one area is required.

Areas of specialization must be relevant to HF/E. Specializations should be offered that are relevant to work in the field of human factors and ergonomics. Evaluation of the selected area(s) will be based on its depth and breath. The following list must not be regarded as exhaustive or static but simply as examples that exist in some current graduate programs:

- a. Biomechanics
- b. Cognitive Engineering and Decision Making
- c. Environmental Design
- d. Expert Systems
- e. Healthcare
- f. Human-Computer Interaction
- g. Human-Robot Interaction
- h. Human Performance
- i. Human Systems Integration
- j. Inspection
- k. Macroergonomics
- l. Physical Anthropometry
- m. Safety
- n. Systems Interface (workspace, controls, displays)
- o. Teams
- p. Training and simulation
- q. Transportation
- r. Usability Testing
- s. Work Physiology

Section B

Practical Experience Requirements

Our discipline is an applied field. Although it encompasses research activities in its quest for problem solutions and in turn places a premium on research competence, nevertheless it is still primarily concerned with solving problems. In this regard practitioners should be prepared to identify and define problems and to develop and carry out approaches to solve them.

The lack of such experience has been identified as a weakness of many current educational programs; therefore human factors graduate programs at the doctoral level must include experience in working on practical problems.

Doctoral programs must include experience in working on practical problems; although this requirement is not placed on master's programs, it is strongly encouraged. This type of experience must develop expertise in the application of human factors methodology to real world operational problems. It must integrate (a) problem definition, e.g. through task analysis, error analysis, operational analysis, (b) the design of experiments or the design of equipment, (c) the statistical analysis and interpretation of such data; and (d) the presentation of the results to operational personnel. Therefore, appropriate supervision of relevant practical experiences is required. Suggestions on how to meet this requirement are:

- a. Structured internships in the private or public sector
- b. Formal or informal cooperative assignments in the private or public sector.
- c. Work on projects which take place within the university environment but which have an external "user" who has a need for a solution to a problem involving human factors
- d. Practicum assignments in extra-university organizations
- e. Consultations with industry principals, which involves the application of human factors principles

Section C Faculty/Staff Guidelines

The selection, development, and retention of competent faculty, qualified in their respective fields, in large part determine the quality of an academic program. The number of faculty committed to human factors, their training and professional experience, their involvement in teaching, advisement, and research in the field are all elements that determine whether a department should consider that it offers a viable option or degree in human factors. The interdisciplinary and emergent character of human factors makes it inadvisable, and virtually impossible, to develop highly specific requirements for faculty in this field. Nevertheless, the following four general guidelines have been established and specifically related to the field of human factors.

1. Adequate Resources
2. Diverse Qualifications
3. Supporting Faculty
4. Balanced Responsibilities

1. Adequate Resource Guideline:

Faculty resources addresses the number, diversity, and status of faculty assigned to the teaching, counseling, and curriculum aspects associated with the human factors program. The number of faculty dedicated to the human factors program should adequately reflect its size, the breadth of course offerings, degrees offered, teaching loads, administrative requirements, and qualifications of the faculty. This emphasis recognizes that faculty will also be involved in research, administration, consulting, and other professional activities. However, it is essential that these activities do not substitute for the primary responsibilities in the academic program and the important daily contact with students. Rank and tenure of the faculty servicing the human factors program should likewise reflect the program's size, breadth, and importance in the department.

Diverse Qualifications Guideline:

Qualifications of the entire human factors faculty should be considered when assessing the adequacy of a faculty, rather than a narrow focus on specific professors. Within this framework, qualifications should be evaluated in terms of graduate degrees, identification with the field of human factors, relevant professional experience, and program goals. The academic training and experience of the faculty should be appropriate to the diversity and level(s) of degrees offered. It is a reasonable expectation that a majority of the faculty will hold doctoral degrees; however, significant experience may be substituted for academic achievement. The core faculty should identify with the field of human factors by some combination of education, experience, scholarship, and professional recognition. It is important that they be knowledgeable of issues surrounding the policies and

practices of human factors and model a commitment to the professional ethics of the field.

3. Supporting Faculty Guideline:

Adjunct and part-time faculty members are important in most academic programs. They provide program breadth and are valuable links to industrial and related academic professional activities. Their involvement must have continuity and be well integrated into course offerings. A widely accepted guideline is that at least 50% of the course offerings be taught by full-time faculty members. The program may be augmented by the contributions of faculty members whose primarily academic identity is clearly outside the human factors field.

4. Balanced Responsibility Guideline

Full-time faculty workloads should reflect the full range of activities expected of academic faculty (i.e., teaching, research, publications, committee service, and professional society responsibilities). Teaching loads should be consistent with other campus units and allow reasonable time for nonteaching activities. Faculty should remain abreast of new knowledge and contribute to the development and application of human factors through professional leaves and sabbaticals.

Sample Table
Required Program Components

Core Requirement Areas	Master’s Level Degree Required Course Number(s)	Doctoral-Level Degree Required Course Number(s)
Core Area 1: Human as Information Processor		
	Describe non-course <u>requirements</u> contributing to compliance	
Human as Physical Engine		
	Describe non-course <u>requirements</u> contributing to compliance	
Core Area 2: Research Methodology		
	Describe non-course requirements contributing to compliance	

Core Requirement Area	Master's-Level Degree Require Course Number (s)	Doctoral-Level Degree Required Course Number (s)
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**Core Area 3:
Analysis & Design
Methodology**

Describe non-course requirements contributing to compliance

**Core Area 4.1:
Mathematical Skills** **Describe specific requirements, including coursework, which ensures the ability to analyze data, systems, networks, etc.**

**Core Area 4.2:
Computer Skills** **Describe specify requirements, including coursework, which ensures the ability to understand and apply computer technology to the content area**

**Core Area 5
Communication Skills** **Describe specific requirements, including coursework, ensuring the ability to communicate verbally and in writing**

**Core Area 6
Teamwork Skills** **Describe specific requirements, including coursework, ensuring the ability to collaborate as part of a team**

Core Requirement Areas	Master's-Level Degree Required Course Number (s)	Doctoral-Level Degree Required Course Number (s)
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Research Experience	Is master's thesis required? If not, how is research requirement met?	Is dissertation required?
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Specialization	No requirement (but describe if met)	How is requirement met?
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Practical Experience	No requirement (but describe if met)	How is requirement met?
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Add as an Appendix the review sheets.