

LSC Use Only  
Number: \_\_\_\_\_  
Submission Date: \_\_\_\_\_  
Action-Date: \_\_\_\_\_



UWUCC USE Only  
Number: 95-20  
Submission Date: App 1/16/96  
Action-Date: Send App 2/6/96

**CURRICULUM PROPOSAL COVER SHEET**  
University-Wide Undergraduate Curriculum Committee

I. **CONTACT**  
Contact Person Christine Wilson Kesner Phone 357-2395/2336  
Department Human Development and Environmental Studies

II. **PROPOSAL TYPE (Check All Appropriate Lines)**

CS 310 COURSE Human Factors in ID  
Suggested 20 character title

New Course\* CS 310 Human Factors in Interior Design  
Course Number and Full Title

Course Revision  
Course Number and Full Title

Liberal Studies Approval+ \_\_\_\_\_  
for new or existing course Course Number and Full Title

Course Deletion  
Course Number and Full Title

Number and/or Title Change  
Old Number and/or Full Old Title

\_\_\_\_\_  
New Number and/or Full New Title

Course or Catalog Description Change  
Course Number and Full Title

**PROGRAM:**  Major  Minor  Track

New Program\*  
Program Name

Program Revision\* \_\_\_\_\_  
Program Name

Program Deletion\*  
Program Name

Title Change  
Old Program Name

\_\_\_\_\_  
New Program Name

III. **Approvals (signatures and date)**

Mary E. Swisher 4.5.95  
Department Curriculum Committee

[Signature] 5.2.95  
Department Chair

Mia M. Moore-Amutge 4.24.95  
College Curriculum Committee

[Signature] 3 MAY 95  
College Dean

+ Director of Liberal Studies (where applicable)

\* Provost (where applicable)

**I. Catalog description****CS 310 Human Factors in Interior Design****(3c-0l-3sh)****Prerequisite: Jr. standing**

**The study of human and technology systems interface as related to interior design; Emphasis on user ergonomic and economic decision making to minimize stress and maximize efficiency.**

**CS 310 Human Factors in Interior Design**  
**New course proposal**

**II. Catalog description****CS 310 Human Factors in Interior Design**

**3 credits**  
**3 lecture hours**  
**0 lab hours**  
**(3c-0l-3sh)**

**Prerequisite: Jr. standing**

The study of human and technology systems interface as related to interior design; Emphasis on user ergonomic and economic decision making to minimize stress and maximize efficiency.

**III. Course objectives****A. Upon completion of the course, the student will be able to:**

- 1. define basic human factors terminology.**
- 2. demonstrate an ability to understand the importance of human factors (especially proxemics, anthropometrics, and ergonomics) to interior design.**
- 3. apply human factors theory to design problem solving, work flow, product enhancement, and interior planning.**
- 4. apply the Americans with Disabilities Act (ADA) to interior design.**
- 5. describe the relationship of laws, codes, standards, and ordinances (e.g. universal accessibility guidelines, life safety, fire) to interior design human factors.**
- 6. evaluate construction systems, building systems, and other components of the built environment to interior design human factors.**
- 7. identify major environmental concerns (e.g., energy) and their relationship to interior design human factors.**
- 8. demonstrate competency in applying information gathering techniques to evaluate the effectiveness of interior design.**
- 9. demonstrate an awareness of interior design human factors research.**

#### **IV. Course outline**

- A. Introduction to human factors (.5 lecture hour)**
- B. Universal access (ADA) and its relationship to interior design (6 lecture hours)**
- C. Systems (5 lecture hours)**
  - 1. Introduction
  - 2. Problem solving
  - 3. Decision making
  - 4. Basic motor processes
  - 5. Basic physiological processes (including aging)
- D. Subsystems design (7 lecture hours)**
  - 1. Subsystem introduction
  - 2. Architectural entryways and parking
  - 3. Doors and equipment closures
  - 4. Windows
  - 5. Walkways and hallways
  - 6. Ramps and stairs
  - 7. Elevators and escalators
  - 8. Dining and food service
  - 9. Offices
  - 10. Other
- E. Component and product design (4.5 lecture hours)**
  - 1. Introduction to product design
  - 2. Visual and auditory displays
  - 3. Controls and fasteners
  - 4. Tools
  - 5. Furniture
- F. Human factors data (16 lecture hours)**
  - 1. Introduction
  - 2. Anthropometrics (human dimensions)
    - a. Anthropometric theory
    - b. Anthropometric data/application
    - c. Elderly/physically disabled populations
  - 3. Proxemics
  - 4. Ergonomics
    - a. Work flow
    - b. Fatigue
    - c. Storage design
  - 5. Physical environmental factors affecting human performance
    - a. Illumination
    - b. Noise and temperature
    - c. Space

#### IV. EVALUATION METHODS

The final grade for this course will be based on the following items:

##### A. TESTS

1. Three @ 200 points each
2. Total 600 points
3. 60% of grade
4. Exams consisting of a combination of true/false, multiple choice, and potentially, matching, completion, or short answer essay

##### B. ANALYSIS/OBSERVATION ASSIGNMENTS

1. Three @ 100 points each (covering such topics as Storage design, Seating review, Product review, Universal access review)
2. Total 300 points
3. 30% of grade

##### C. IN-CLASS ACTIVITIES (minimum of three)

1. Total 50 points
2. 5% of grade

##### D. UNANNOUNCED QUIZZES

1. Total 50 points
2. 5% of grade

##### E. FINAL POINT SCALE

A = 900-1000 points	( $\geq 90\%$ )
B = 800-899	(80-89.9%)
C = 700-799	(70-79.9%)
D = 600-699	(60-69.9%)
F = <600	(<60%)

#### V. REQUIRED TEXTBOOKS, SUPPLEMENTAL BOOKS, AND READINGS

Woodson, W.E., Tillman, B., & Tillman P.L. (1992). Human factors design handbook. New York: McGraw-Hill.

#### VI. SPECIAL RESOURCE REQUIREMENTS

None

## VII. BIBLIOGRAPHY

American Institute of Architects. Ramsey, C.G. & Sleeper, H.R. (1994). Architectural graphic standards, 9th ed.. New York: John Wiley.

Blackburn, G. (1990). Creative ideas for household storage. Mount Vernon, NY: Consumers Union.

Evan Terry Associates. (1992). Americans with disabilities act facilities compliance: A practical guide. New York: John Wiley & Sons.

Illuminating Engineering Society of North America (IES). (1993). Lighting handbook. New York: IES.

Lighting the Workplace. (1988). Editors of PBC International, Inc. New York: PBC International, Inc.

NCIDQ examination guide. (1989). New York: Whitney Library of Design.

Neal, H. (1990). Low vision. New York: Simon and Schuster, Inc.

Preiser, W.F.E. (ed.) (1989). Building evaluation. New York: Plenum Press.

Preiser, W.F.E., Rabinowitz, H. Z., & White, E. T. (1988). Post-occupancy evaluation. New York: Van Nostrand Reinhold Co., Inc.

Sunset Books. (1988). Bedroom and bath storage. Menlo Park, CA: Lan Publishing Co.

Sunset Books. (1991). Ideas for great kitchens. Menlo Park, CA: Sunset Publishing Co.

Terry, Evan Associates. (1993). Americans with disabilities act facilities compliance. New York: John Wiley and Sons.

White, E.T. (1991). Building evaluation in professional practice. Tucson: Architectural Media Ltd.

White, E.T. (1989). Post-occupancy evaluation from the client's perspective. Tucson: Architectural Media Ltd.

## HISTORICAL REFERENCES

(1985 or earlier)

Billmeyer, Jr., F. W. and Saltzman, M. (1981). Principles of color technology (2nd ed.). New York: John Wiley & Sons.

Bechtel, R.B. (1977). Enclosing behavior. Stroudsburg, PA: Dowden, Hutchinson & Ross, Inc.

Boyce, P.R. (1981). Human Factors in Lighting. New York: Macmillan Pub. Co.

- Deasy, C.M. (1985). Designing places for people. New York: Whitney Library of Design.
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- Meyer, W.T. (1983). Energy economics & building design. New York: McGraw-Hill Book Co.
- National Research Council. (1983). Video Displays, Work and Vision. Washington D.C.: National Academy Press.
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- Panero, J. (1979). Human dimension and interior space. New York: Whitney Library of Design.
- Reznikoff, S. (1979). Specifications for commercial interiors. New York: Whitney Library of Design.
- Rubin, A. & Elder, J. (1980). Building for people. (NBS Special Publication #474) Washington, D.C.: National Bureau of Standards.
- Sorensen, R.J. (1979). Design for accessibility. New York: McGraw-Hill Book Co.
- Sunset Books. (1981). Ideas for kitchen storage. Menlo Park, CA: Lan Publishing Co.
- Zeisel, J. (1984). Inquiry by design. New York: Cambridge University Press.
-

## Course Analysis Questionnaire

### A. Details of the course

- A1. This course will be a free elective for students in the Human Development and Environmental Studies Department. The course is not intended for inclusion in the Liberal Studies program.
- A2. This course does not require changes in the content of any existing courses.
- A3. This course was offered as a Special Topic, called CS 481 Human Factors in Interior Design, during Fall 1994.
- A4. This course is not intended to be dual level.
- A5. This course is not to be taken for variable credit.
- A6. Similar courses are offered at these FIDER-accredited institutions: (Descriptions in Appendix A)
  - 1. University of Tennessee: ID 200 Human-Environment Systems
  - 2. Michigan State University: HED 313 Interior Design - Human Dimensions
  - 3. Arizona State University: DESIGN 344 Human Factors in Design
- A7. The accrediting body of Interior Design programs, the Foundation for Interior Design Education Research (FIDER), states that interior design majors have the highest achievement level (i.e. "*competency*" as compared to "awareness" or "understanding") in human factors for its accreditation standards (Appendix B, p. 7).

### B. Interdisciplinary Implications

- B1. This course will be taught by one instructor from the Human Development and Environmental Studies Department.
- B2. This course does not overlap with any other courses at the University (Appendix C).
- B3. One seat in this course will be reserved for a student in the School of Continuing Education.

### C. Implementation

- C1. No new faculty are needed to teach this course. At least one section of this course can be accommodated in C. W. Kesner's teaching schedule one semester per year.



**C2. Other resources**

- a. Current space allocations are adequate to offer this course.
- b. No new equipment is needed to teach this course.
- c. Supplies are sufficient; however the purchase of 25 oven mitts to use in a limited-mobility simulation would be helpful and could be purchased using the instructor's departmental course supply allocation.
- d. Library holdings are adequate.
- e. No travel funds will be needed to offer this course.

**C3. No grant funds are associated with this course.**

**C4. This course will be offered at least once each year.**

**C5. At least one section of the course is expected to be offered once per year.**

**C6. Forty students can be accommodated in this course.**

**C7. Relevant excerpts from the 1995 FIDER curriculum guidelines are attached to this proposal (Appendix B).**

**D. Miscellaneous**

**No additional information is necessary.**

**Appendix A**  
**Course Descriptions**

- 1. University of Tennessee: ID 200 Human-Environment Systems**  
Role of culture in defining environment; Physical, social, and conceptual aspects of human-environment systems; impact of environment on human behavior, feelings, and values; Mutual-casual properties of behavior-environment systems.
  
- 2. Michigan State University: HED 313 Interior Design - Human Dimensions**  
Human dimensions as determining factors in human environments and their design.
  
- 3. Arizona State University: DESIGN 344 Human Factors in Design**  
Man-machine environment systems, human characteristics and behavior applied to design of products, systems, and their operating environment.

**Appendix B**

**Excerpts, 1995 FIDER Standards and Guidelines, Professional Level Programs, FIDER Form 402R (attached)**

RECEIVED MAR 1 1995

# FIDER

## Standards and Guidelines Professional Level Programs

Revised 1995

2.8 Theory

Thorough knowledge of the elements and principles of design, design theories, and their evolution enables designers to understand the interrelationship between human beings and the environment. This knowledge stimulates depth of thought and a more creative approach to problem solving.

Awareness	Understanding	Competency
-----------	---------------	------------

2.8.1	Theory: elements and principles of design	_____			●		
2.8.2	Theory: color	_____			●		
2.8.3	Theory: 3-D spatial composition	_____			●		
2.8.4	Theory: human environment, e.g. proxemics, behavior, etc.	_____			●		
2.8.5	Theory: design, e.g. planning, stylistic	_____			●		

2.9 Basic and Creative Arts

The basic elements of design and composition and their application are essential to any program of study in interior design. They are the foundation for creative design and require instruction and experimentation through studio work. Awareness of the various media in the visual arts assists and enriches the understanding of the universality of the fundamentals of design.

2.9.1	Studio: two-dimensional design fundamentals	_____				●	
2.9.2	Studio: three-dimensional design fundamentals	_____				●	
2.9.3	Creative arts and crafts, e.g. drawing, painting, sculpture, ceramics, weaving, photography, etc.	_____		●			

2.10 Interior Design

Participation in a wide range of design experiences through studios, lectures, group discussions, seminars, etc., is highly desirable. The development of space planning and problem solving skills is essential and should relate to a broad range of residential and non-residential projects, including all types of habitation, whether for work or leisure, new or old; large and small; for a variety of populations, young and old, of varying physical abilities, low or high income. Problem solving experiences should follow a theory of design process involving physical, social, and psychological factors and reflect a concern for the aesthetic qualities of the built environment.

2.8 Theory

Thorough knowledge of the elements and principles of design, design theories, and their evolution enables designers to understand the interrelationship between human beings and the environment. This knowledge stimulates depth of thought and a more creative approach to problem solving.

Awareness	Understanding	Competency
-----------	---------------	------------

- 2.8.1 Theory: elements and principles of design \_\_\_\_\_ ●
- 2.8.2 Theory: color \_\_\_\_\_ ●
- 2.8.3 Theory: 3-D spatial composition \_\_\_\_\_ ●
- 2.8.4 Theory: human environment, e.g. proxemics, behavior, etc. \_\_\_\_\_ ●
- 2.8.5 Theory: design, e.g. planning, stylistic \_\_\_\_\_ ●

2.9 Basic and Creative Arts

The basic elements of design and composition and their application are essential to any program of study in interior design. They are the foundation for creative design and require instruction and experimentation through studio work. Awareness of the various media in the visual arts assists and enriches the understanding of the universality of the fundamentals of design.

- 2.9.1 Studio: two-dimensional design fundamentals \_\_\_\_\_ ●
- 2.9.2 Studio: three-dimensional design fundamentals \_\_\_\_\_ ●
- 2.9.3 Creative arts and crafts, e.g. drawing, painting, sculpture, ceramics, weaving, photography, etc. \_\_\_\_\_ ●

2.10 Interior Design

Participation in a wide range of design experiences through studios, lectures, group discussions, seminars, etc., is highly desirable. The development of space planning and problem solving skills is essential and should relate to a broad range of residential and non-residential projects, including all types of habitation, whether for work or leisure, new or old; large and small; for a variety of populations, young and old, of varying physical abilities, low or high income. Problem solving experiences should follow a theory of design process involving physical, social, and psychological factors and reflect a concern for the aesthetic qualities of the built environment.

		Awareness	Understanding	Competency
2.10.1	Design process, i.e. programming, conceptualization, problem solving, evaluation			●
2.10.2	Three-dimensional spatial development, e.g. study models, drawings, mock-ups			●
2.10.3	Human factors, i.e. anthropometrics, ergonomics			●
2.10.4	Space planning, residential			●
2.10.5	Space planning, non-residential			●
2.10.6	Furniture selection and layout, residential			●
2.10.7	Furniture selection and layout, non-residential			●
2.10.8	Application of design elements and principles, i.e. color, texture, scale			●
2.10.9	Selection and application of finish materials, i.e. textiles, floor treatments, wall treatments			●
2.10.10	Selection and application of decorative elements, e.g. accessories, artwork, etc.			●
2.10.11	Selection and application of lighting			●

2.11 Technical Knowledge

Interior designers must have technical knowledge and understand related disciplines and the constraints they impose. Interior designers must be competent in the application of laws, codes, regulations, and standards that affect design solutions in order "to protect the health, safety, and welfare of the public."

2.11.1	Detailing/technical drawings for custom furniture, cabinetry, design elements			●
2.11.2	Materials, i.e. surface materials and textiles			●
2.11.3	Laws, codes, standards, and ordinances, e.g. universal accessibility guidelines, life safety, fire, etc.			●
2.11.4	Specifying, estimating, and installation		●	
2.11.5	Construction systems and materials		●	
2.11.6	Building systems, i.e. electrical, acoustics		●	
2.11.7	Building systems, i.e. HVAC, plumbing	●		
2.11.8	Metric system	●		
2.11.9	Environmental concerns, i.e. energy, ecology, indoor air quality, sustainable materials	●		





2.14 History

Interiors reflect an evolution in art, architecture, and design over centuries of past civilizations. Study of the built environments of diverse cultures in conjunction with the economic, social, political, and religious influences that have shaped them enables a designer to anticipate and design for present and future demand.

Awareness	Understanding	Competency
-----------	---------------	------------

- 2.14.1 Interiors, art, and architecture \_\_\_\_\_ ●
- 2.14.2 Furniture, textiles, and accessories \_\_\_\_\_ ●

2.15 Information Gathering Techniques/Research

The use of information gathering techniques and reference materials is necessary to enable designers to accumulate and analyze data to develop a design concept. Students should also be aware of scholarly research as it contributes to the discipline.

- 2.15.1 Information gathering techniques, i.e. survey, literature search, observation \_\_\_\_\_ ●
- 2.15.2 Reference materials, i.e. codes, regulations, and standards \_\_\_\_\_ ●
- 2.15.3 Research contributing to the body of knowledge \_\_\_\_\_ ●

GUIDELINES

- 2.16 The program should maximize potentials appropriate to the institution, its location and resources.
- 2.17 The program should encourage interaction with other disciplines.
- 2.18 The curriculum should reflect the continually expanding requirements of the profession, advancements in knowledge, and contributions of related disciplines.
- 2.19 The program should strive to provide offerings beyond the suggested minimum for graduation.
- 2.20 The program is strongly encouraged to provide a system of field training or internship for the students during the latter part of the program.

**Appendix C**  
**Letter of support (attached)**

Donna 18

COLLEGE OF HEALTH AND HUMAN SERVICES  
HUMAN DEVELOPMENT AND ENVIRONMENTAL STUDIES DEPARTMENT  
207 ACKERMAN HALL, EXT. 2336

DATE: May 2, 1994  
TO: Dr. Carl Schneider, Chairperson  
Psychology Department  
FROM: Donna Streifthau, Chairperson  
SUBJ: CS 310 Human Factors

Attached is the proposal for a new course, CS 310 Human Factors. Please review it as required by Senate Curriculum Committee and indicate your response. If there are questions, please do not hesitate to contact me.

I would appreciate it if you could do this as soon as possible as the course is in the hands of the College Undergraduate Curriculum Committee. Thank you very much.

DS/lk

Attachment

5/9/94

MAY 11 1994

NOTE: This course proposal is being approved with the understanding that the name will be changed to "Human Factors ~~and~~ Interior Design."

Dr. Carl W. Schneider, Psychology Dept. Chairperson

I have reviewed the new course proposal for CS 310 HUMAN FACTORS.

MAY 11 1994

I find no conflict with offerings in our department (college).

I would like to discuss the details further.

5/9/94

Signature

Date

MAIL> extract tt:

From: GROVE::KUZNESKI "JODELL KUZNESKI" 25-JAN-1996 10:03:39.86  
 To: MMCCARTY  
 CC:  
 Subj: please keep with CS proposals

From: GROVE::NHB "NELSON BORMANN" 15-JAN-1996 12:44:58.73  
 To: KUZNESKI  
 CC: ME  
 Subj: Questions about CS 310 and CS468

Jody,

These were the questions posed to C. Kesner about CS 310 and CS 468.

From: GROVE::NHB "NELSON BORMANN" 13-DEC-1995 11:08:40.26  
 To: CKESNER  
 CC: KUZNESKI, ME  
 Subj: CS310 and CS468

Christine Kesner,

The UWUCC previewed the proposals for CS 310 Human Factors in Interior Design and CS 468 Interior Design Professional Practice yesterday and several questions were raised about the proposed courses.

CS 310 Human Factors in Interior Design

Questions: 1. The proposed prerequisite is Junior Standing. Can any student at IUP who is a junior take this course? Any major in the department? Only a Consumer Affairs major?

2. In the catalog description (page 2 and 3 of the proposal) the second sentence was not clear. Is "...user ergonomic.." one type of decision making? Or two? Are commas necessary to clarify? We assumed that "...economic decision making..." was one of the types of decision making. Correct?

3. On pages 4 and 5 of the proposal, the total number of class sessions add to 39 hours, which is not a full semester. Are you counting three examinations as the remainder of the hours? Are you counting the final two-hour exam in the hours? Please clarify.

4. You state that CS 310 will be a FREE ELECTIVE. Will this course meet the FIDER requirements if it is only a free elective? Would it need to be a required course?

5. If CS310 and CS 468 are both approved that would be two new courses on your workload. Will you have room in your teaching schedule for two new courses?

CS 468 INTERIOR DESIGN PROFESSIONAL PRACTICE

Questions: 1. As a prerequisite you state "Junior or senior standing". Do you need the provision for "senior standing"? Prerequisites are minimal qualifications and so if a student has achieved junior standing, the senior standing provision does not seem to be necessary.

2. On page 5, in the section Evaluation Methods, there was confusion as to where the 1000 points came from. The exams seem to be worth 600 points. Please explain about the other 400 points.

3. On page 4 of the proposal, in the Course Outline, there is a section of 12 class hours that seems to be heavily business oriented. The UWUCC thinks that a supporting note for the Dean of the College of Business is necessary. We

assume that your content is very specific to your profession. A review of the College of Business seems indicated however.

4. Same as Question 5 for CS 310.

The UWUCC will be meeting next January 16. We would like to have your responses in time for us to act on your proposals then. If you have any questions or comments contact me, Nelson Bormann, or the Chair of the UWUCC, Jody Kuzneski.

Hope Holidays!

Nelson Bormann (email: NHB Phone: x2736 or 2450)

MAIL>

New mail on node MAPLE from GROVE::KUZNESKI "JODELL KUZNESKI" (10:04:04)

MAIL> extract tt:  
From: GROVE::KUZNESKI "JODELL KUZNESKI" 25-JAN-1996 10:04:04.14  
To: MMCCARTY  
CC:  
Subj: please keep with CS proposals

From: GROVE::NHB "NELSON BORMANN" 15-JAN-1996 12:46:41.36  
To: KUZNESKI  
CC: ME  
Subj: Answers to questions about CS310 and CS468

Jody,

These are the answers received. Nelson

From: GROVE::CKESNER "CHRIS KESNER" 14-JAN-1996 18:25:35.38  
To: GROVE::NHB  
CC: CKESNER,CKESNER  
Subj: RE: CS310 and CS468

I offer the following information in response to your questions:  
CS310 HUMAN FACTORS

- 1. Yes, any student who is a junior can take this course.
- 2. The catalog description should read, "The study of human and technology systems interface as related to interior design; Emphasis on ergonomic and economic decision making to insure that the user can function with a minimum of stress and a maximum of efficiency."
- 3. Yes. There will be a culminating activity scheduled during finals week.
- 4. The Interior Design Curriculum Revision package is forthcoming, requiring this course.
- 5. Yes. I have taught this course and CS 468 ID Professional Practice as special topics courses. We hired a new ID faculty member this year to handle some of my previous courses.

CS 468 INTERIOR DESIGN PROFESSIONAL PRACTICE

- 1. "Senior standing" can be deleted.
- 2. Resume (100 pts.), Executive Summary Career Paper (200 pts.), Quizzes/In-class activities (100 pts.)
- 3. I contacted Bob Camp, but have not yet received a reply. I know he's tied up with the COB move. I'll try to contact him again tomorrow (1/15/96).
- 4. See response to Question 5 above.

Please contact me if you have additional questions.

Chris Kesner (CKESNER)