UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

December 9, 2011

Dean Matthew O'Donnell
College of Engineering
Box 352180

Dear Matt:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of revised admission and program requirements for the Bachelor of Science in Human Centered Design and Engineering degree; and the revised program requirements for the options in Technical Communication and Human-Computer Interaction within the Bachelor of Science in Human Centered and Engineering degree. A copy of the changes is attached.

I am writing to inform you that the Department of Human Centered Design and Engineering is authorized to specify these requirements beginning autumn quarter 2012.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

Michael K. Young
President

Enclosure

cc: Ms. Stephanie White (with enclosure)
Mr. Gian Bruno (with enclosure)
Mr. Robert Corbett (with enclosure)
Dr. Deborah Wiegand (with enclosure)
Ms. Virjean Edwards (with enclosure HCDE-20111005)

301 Gerberding Hall • Box 351230 • Seattle, Washington 98195-1230 • 206-543-5010 • FAX: 206-616-1784

NOV 1 1 2011

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UNIVERSITY OF WASHINGTON

CREATING AND CHANGING UNDERGRADUATE ACADEMIC PROGRAMS

After college/school/campus review, send a signed original and 8 copies to the Curriculum Office/FCAS, Box 355850.

For information about when and how to use this form: http://depts.washington.edu/uwcr/1503instructions.pdf

College/Campus Engineering	**Department/Unit** HCDE	**Date** 10/5/2011

New Programs

- ☐ Leading to a Bachelor of ___ in ___ degree.
- ☐ Leading to a Bachelor of ___degree with a major in ___.
- ☐ Leading to a ___ Option within the existing major in ___.
- ☐ Leading to a minor in ___

Changes to Existing Programs

- ☐ New Admission Requirements for the Major in ___ within the Bachelor of ___.
- ☒ Revised Admission Requirements for the Major in Human Centered Design & Engineering within the Bachelor of Science.
- ☒ Revised Program Requirements for the Major in Human Centered Design & Engineering within the Bachelor of Science.
- ☒ Revised Requirements for the Option in Human-Computer Interaction within the major in Human Centered Design & Engineering. & Technical Communication
- ☐ Revised Requirements for the Minor in ___.

Other Changes

- ☐ Change name of program from ___ to ___.
- ☐ New or Revised Continuation Policy for ___.
- ☐ Eliminate program in ___.

Proposed Effective Date: **Quarter:** ☒ Autumn ☐ Winter ☐ Spring ☐ Summer **Year: 20 12**

Contact Person: Stephanie White	Phone: 1-6230	Email: whitesj@uw.edu	Box: 352315

EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (*Use additional pages if necessary*).

Please see attachment 1

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit:	Chair/Program Director:	Date:

Department/Unit:	Chair/Program Director	Date:

CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

Please see attachments 2 and 3

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications). **Please note:** all copy will be edited to reflect uniform style in the General Catalog.

Please see attachments 2 and 3

APPROVALS

Chair/Program Director:	Date: 10/31/11
College/School/Campus Curriculum Committee:	Date: 11·3·11
Dean/Vice Chancellor:	Date: 11-7-11
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date: DEC. 2, 2011

POST TRI-CAMPUS APPROVAL (when needed)

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date:

Attachment 1

Explanation or and Rationale for Proposed Changes

Two years after changing the name of our department and making major curricular changes, HCDE is once again re-envisioning its curriculum. Over the last two years, our faculty have worked with an executive advisory board, alumni, and current students to identify any gaps in our curriculum. The proposed changes reflect the changes in academic research and industry in the field of Human Centered Design & Engineering. In addition to the course changes and additions, we are adding course sequencing to assist students efficient completion of the degree.

The curricular changes are as follows:

1. HCDE 231 will no longer be required for admissions.

2. Better sequence of courses. Historically, students could progress through the BS program in any sequence of courses, with a few exceptions. The faculty have decided to change certain courses to 300-level from the 400-level (HCDE 400 will now be 300 and HCDE 403 will now be 303) as they were always intended to be completed in a student's third year and to signify a clear entry point into the curriculum. We have also added prerequisites so that students are required to take courses in a desired sequence. This will help students progress through the program in a more efficient way.

3. Change program requirements. The department is adding two required courses that focus on areas of strength in our department and reflect changes in industry. We will now require that all students take User Research (HCDE 313, 5 credits) and Portfolio (HCDE 321, 2 credits). We are also updating the courses that can count towards the HCI degree option.

Note: A graphic that summarizes the entire Bachelor of Science in Human Centered Design & Engineering degree after all changes are finalized can be found in attachment 3.

Currently enrolled students will not be penalized or negatively impacted in any way by the proposed changes. They will be able to complete their program under the old requirements without issue. All changes apply to new incoming students or current students who meet the new program requirements.

Catalog Copy As Currently Written

Undergraduate Program

Adviser
14 Loew Hall, Box 352195
206-543-1798 or 206-616-0797
tcadvise@u.washington.edu

The Department of Human Centered Design & Engineering offers the following programs of study:

- The Bachelor of Science in Human Centered Design & Engineering degree
  - Transcripted option in Human-Computer Interaction
    ~or~
  - Transcripted option in Technical Communication
    ~or~
  - Non-transcripted, individualized course of study
- A minor in technical Japanese

Bachelor of Science in Human Centered Design & Engineering

Suggested First-Year College Courses: ~~HCDE 231~~, approved math or statistics (see list on HCDE website), approved science (see list on HCDE website)

Department Admission Requirements

Applicants are considered in two groups--Early Admission and Upper-Division Admission. Admission is competitive. Completion of minimum requirements does not guarantee admission. All applicants have the right to petition and appeal the department's admission decision.

Early Admission

1. *Course requirements:* ~~38~~ credits to include 10 credits of approved mathematics or statistics; 15 credits of approved natural science; and ~~13~~ credits of approved written and oral communication (~~including HCDE 231~~). All courses must be completed prior to the July 1 application deadline.
2. Applicants must be currently enrolled at the UW and must have completed a minimum of 15 credits taken in residence at the UW. Application deadline is July 1 for autumn quarter only.
3. *Grade requirements:* Minimum 3.00 GPA in written and oral communications courses and minimum 2.00 cumulative GPA.

Upper-Division Admission

1. *Course requirements:* 10 credits of approved mathematics or statistics; 15 credits of approved natural science; and ~~13~~ credits of approved written and oral communication (~~including HCDE 231~~). All courses must be completed prior to the July 1 or February 1 application deadlines.
2. 60 credits completed by application deadline: July 1 for autumn quarter and February 1 for spring quarter.
3. Students applying in their senior year must spend a minimum of four quarters in the program.
4. *Grade requirements:* Minimum 3.00 GPA in written and oral communications courses and minimum 2.00 cumulative GPA.

Students may also declare into the Human Centered Design & Engineering degree program through the College of Engineering Advanced Admission program (see the College of Engineering section for Advanced Admission entrance and continuation requirements).

Graduation Requirements

180 credits as follows:

General Education Requirements (~~93~~ credits)

1. *Written and Oral Communications (13 credits):*
    a. 5 credits of English composition from the University list
    b. HCDE 231
    c. 5 credits of oral/written communication from HCDE list (see adviser).
2. *Visual, Literary, & Performing Arts (VLPA), and Individuals & Societies (I&S) (30 credits):*
    a. *Visual, Literary, & Performing Arts* (minimum of 10 credits)
    b. *Individuals & Societies* (minimum of 10 credits)
3. *Math and Natural Science (50 credits):*
    a. *Mathematics (minimum 15 credits; see list of qualifying courses on HCDE website)*
    b. *Science (minimum 15 credits; see list of qualifying courses on HCDE website)*

Make website consistent

Major Requirements (~~82~~ credits)

1. *Human Centered Design & Engineering Core (~~43~~ credits)*: HCDE 310, HCDE 400, HCDE 403, HCDE 411, HCDE 417, HCDE 418, HCDE 437, HCDE 493, HCDE 495 (3), HCDE 496 (2)
2. *Technical/Analytical (12 credits):* Must include either CSE 142 ~~or PHIL 120~~.

3. Area of concentration ~~(27~~ credits). Students can optionally obtain a transcriptable option in either Human-Computer Interaction (HCI) ~~or Technical Communication (TC).~~ Alternatively, students can work with their adviser to select a coherent and relevant list of approved electives to create a non-transcripted, individualized area of specialization that is aligned with their personal interests or career goals.

Free Electives (5 credits)

Transcriptable Options:

Human-Computer Interaction (HCI) Option (~~27 credits~~). The notation "Human-Computer Interaction" is indicated on the permanent record, or transcript, of a student who graduates with a degree of Bachelor of Science in Human Centered Design & Engineering and who completes the following requirements.

1. Takes a minimum of four classes from the list below.
2. Take at least one foundations course
3. Takes at least one class in two of the four course areas (other than Foundations): i.e., User Interface Software and Technology; Design; Usability and User Research; Social and Ethical Dimensions.
4. Takes at least one class in the list below from a participating department outside Human Centered Design & Engineering.
5. Takes at least seven to nine additional approved elective credits.

Course Areas:

Foundations
ART 383 Introduction to Interaction Design (5)
CSE 440 Introduction to HCI: User Interface Design, Prototyping, and Evaluation (5)
HCDE 419 Concepts in Human-Computer Interaction (5)

User Interface Software and Technology
CSE 441 Advanced HCI: Advanced User Interface Design, Prototyping, and Evaluation (5)
INFO 344 Web Tools and Development (5)
HCDE 438 Web Technologies (5)

Design
ART 483 Fundamentals in Interface Design (5)
ART 484 Advanced Projects in Interaction Design (5)
INFO 424 Information Visualization and Aesthetics (5)
HCDE 455 User Interface Design (4)

Usability and User Research
INFO 310 Individual Perspectives on Information Systems (5)

HCDE 407 Software User Assistance (5)

Social and Ethical Dimensions
INFO 444 Value Sensitive Design (5)
INFO 447 Computer Supported Cooperative Work (5)

The following courses may be approved within any of the course areas on an individual and per-course basis, depending on the topic matter and its suitability to an area within the HCI option.

INFO 498 Special Topics in Informatics
HCDE 496 Directed Research in Technical Communication (1-3)
HCDE 498 Special Topics (1-5)

Technical Communication Option (~~27 credits~~). The notation "Technical Communication" is indicated on the permanent record, or transcript, of a student who graduates with a degree of Bachelor of Science in Human Centered Design & Engineering and who completes the following requirements.

1. Takes HCDE 401 Style in Scientific and Technical Writing (5).
2. ~~Takes three of the HCDE courses listed below.~~
3. Takes at least ~~7 to 10~~ additional approved elective credits.

~~Additional HCDE Courses:~~

~~HCDE 402 Scientific and Technical Editing (5)~~
~~HCDE 407 Software User Assistance (5)~~
~~HCDE 412 Print Production (5)~~
~~HCDE 415 Production Editing (4)~~
~~HCDE 435 Introduction to Content Management (3)~~

Undesignated Path (~~27 credits~~). Students who choose to complete the Bachelor of Science in Human Centered Design & Engineering without a transcripted option will complete the following requirements.

1. Takes two of the HCDE courses listed below.
2. Takes ~~17 to 21~~ additional approved elective credits. Must demonstrate a coherent and relevant area of specialization.

Additional HCDE Courses:

HCDE 401 Scientific and Technical Writing (5)
~~HCDE 402 Scientific and Technical Editing (5)~~
HCDE 407 Software User Assistance (5)
~~HCDE 412 Print Production (5)~~

~~HCDE 415 Production Editing (4)~~
HCDE 419 Concepts in Human-Computer Interaction (5)
~~HCDE 435 Introduction to Content Management (3)~~
HCDE 436 Design and Authoring of CAI (3)
HCDE 455 User Interface Design (5)

Catalog Copy As Proposed

Adviser
423 Sieg, Box 352315
206-543-2567
hcdehelp@uw.edu

The Department of Human Centered Design and Engineering (HCDE) offers the following programs of study:

- Bachelor of Science in Human Centered Design and Engineering degree
- Bachelor of Science in Human Centered Design and Engineering degree with options in Human-Computer Interaction and Technical Communication
- A minor in technical Japanese

Bachelor of Science in Human Centered Design and Engineering

Suggested First-Year College Courses: at least 5 credits of composition and approved math or statistics (see list on HCDE Website), approved science (see list on HCDE Website)

Department Admission Requirements

Applicants are considered in two groups: Early admission and upper-division admission. Admission is competitive. Completion of minimum requirements does not guarantee admission. All applicants have the right to petition and appeal the department's admission decision.

Early Admission

1. *Course requirements:* 35 credits to include 10 credits of approved mathematics or statistics; 15 credits of approved natural science; and 10 credits of approved written and oral communication. All courses must be completed before the July 1 application deadline.
2. Applicants must be currently enrolled at the UW and must have completed a minimum of 15 credits taken in residence at the UW. Application deadline is July 1 for autumn quarter only.
3. *Grade requirements:* Minimum 3.00 GPA in written and oral communications courses and minimum 2.00 cumulative GPA.

Upper-Division Admission

1. *Course requirements:* 10 credits of approved mathematics or statistics; 15 credits of approved natural science; and 10 credits of approved written and oral communication. All courses must be completed prior to the July 1 or February 1 application deadlines.

2. 60 credits completed before the application deadline: July 1 for autumn quarter and February 1 for spring quarter.
3. Students applying in the senior year must spend a minimum of four quarters in the program.
4. *Grade requirements:* Minimum 3.00 GPA in written and oral communications courses and minimum 2.00 cumulative GPA.

Graduation Requirements

180 credits as follows:

General Education Requirements (93 credits)

1. *Written and Oral Communications (13 credits):*
    a. 5 credits of English composition from the University list
    b. HCDE 231
    c. 5 credits of oral/written communication from HCDE list (see adviser).
2. *Visual, Literary, & Performing Arts (VLPA), and Individuals & Societies (I&S) (30 credits):* Minimum of 10 credits is required in each area.
3. *Mathematics and Natural Science (50 credits):*
    a. *Mathematics (minimum 15 credits; see list of qualifying courses on HCDE website)*
    b. *Science (minimum 15 credits; see list of qualifying courses on HCDE website)*

Major Requirements (82 - 87 credits)

1. *HCDE Core (52 credits)*: HCDE 300 (5), HCDE 303 (5), HCDE 310 (5), HCDE 313 (5), HCDE 321 (2), HCDE 411 (5), HCDE 417 (5), HCDE 418 (5), HCDE 437 (5), HCDE 493 (5), HCDE 495 (3), HCDE 496 (2).
2. *Technical/Analytical (12 credits):* Must include CSE 142.
3. *Area of Concentration (19 - 23 credits):* Students may choose a transcriptable option in Human-Computer Interaction (HCI) -or,- students may work with the adviser to select a coherent and relevant list of approved electives to create a non-transcripted, individualized area of specialization, aligned with their personal interests or career goals.

Free Electives (1 - 5 credits)

Transcriptable Options:

Human-Computer Interaction (HCI) Option (19-23 credits). The notation "Human-Computer Interaction" is indicated on the permanent record, or transcript, of a student who graduates with a degree of Bachelor of Science in Human Centered Design & Engineering and who completes the following requirements.

1. Takes at least one course in **Foundations**
2. Takes at least one course in two of the four course areas (other than Foundations): i.e., **User Interface, Software, and Technology**; **Design**; **Usability and User Research**; **Social and Ethical Dimensions**.
3. Takes at least one course in the list below from a participating department outside Human Centered Design & Engineering.
4. Takes at least seven to nine additional **approved elective credits** from list of qualifying courses on HCDE website.

Course Areas

Foundations

- ART 383 Introduction to Interaction Design (5)
- CSE 440 Introduction to HCI: User Interface Design, Prototyping, and Evaluation (5)
- HCDE 419 Concepts in Human-Computer Interaction (5)

User Interface, Software, and Technology

- CSE 190 Current Topics in Computer Science and Engineering (1-5)
- CSE 441 Advanced HCI: Advanced User Interface Design, Prototyping, and Evaluation (5)
- INFO 343 Web Technologies (5)
- INFO 344 Web Tools and Development (5)
- HCDE 438 Web Technologies (5)
- INFO 463 Input and Interaction (5)

Design

- ART 483 Fundamentals in Interface Design (5)
- ART 484 Advanced Projects in Interaction Design (5)
- INFO 424 Information Visualization and Aesthetics (5)
- HCDE 455 User Interface Design (4)
- INFO 461 Cooperative Aspects of User Centered Design (5)

Usability and User Research

- INFO 310 Individual Perspectives on Information Systems (5)
- HCDE 407 Software User Assistance (5)

Social and Ethical Dimensions

- INFO 444 Value Sensitive Design (5)
- INFO 447 Computer Supported Cooperative Work (5)

Depending on the topic, the following courses may be approved for a specific HCI course area- *User Interface, Software, and Technology, Design, Usability and User Research, Social and Ethical Dimensions.*

- INFO 498 Special Topics in Informatics
- HCDE 496 Directed Research in Human Centered Design & Engineering (1 – 5)
- HCDE 498 Special Topics (1 – 5)

Technical Communication Option (19-23 credits). The notation "Technical Communication" is indicated on the permanent record, or transcript, of a student who graduates with a degree of Bachelor of Science in Human Centered Design & Engineering and who completes the following requirements.

1. Takes HCDE 401 Style in Scientific and Technical Writing (5).
2. Takes at least 14 to 18 additional approved elective credits from list of qualifying courses on HCDE website.

Undesignated Path (19-23 credits). Students who choose to complete the Bachelor of Science in Human Centered Design & Engineering without a transcripted option will complete the following requirements.

1. Takes two of the HCDE courses listed below (6 – 9 credits).
2. Takes 12 to 17 additional approved elective credits from list of qualifying courses on HCDE website. Must demonstrate a coherent and relevant area of specialization.

Additional HCDE Courses

- HCDE 401 Style and Editing in Scientific and Technical Writing (5)
- HCDE 407 Software User Assistance (5)
- HCDE 419 Concepts in Human-Computer Interaction (5)
- HCDE 455 User Interface Design (4)
- HCDE 496 Directed Research in Human Centered Design & Engineering (1 – 5)

Approved Math and Science Courses (updated)

Math

- MATH 111, 112, 120, 124, 125, 126, 144, 145, 146, 170, 171 or any course numbered 200 or any 300-or 400-level courses
- STAT 220 or 311, or any 300-or 400-level courses
  (STAT 220 and 311 cannot both be taken for credit)
- Or other approved courses: EDPSY 490, QMETH 201, QSCI 291, 292, 293, 381, 392

Science

- ASTR 211, 301, 321, 322, 323, 423, 480, 481
- ATM S 211, 301, 321, 358, 370, 451, 452, 458, 460, 480
- BIOL 118, 119, 180, 200, 220, 250 or any 300-or 400-level courses
- BIOL STR 300- or 400-level courses
- CHEM 120, 141, 142, 144, 145, 152, 154, 155, 162, 164, 165, 220, 221, 223, 224, 237, 238, 239, 241, 242, or any 300-or 400-level courses
- ENVIR 200, 300, or any 300-or 400-level courses
- ESS 210, 212, 213, 313,or any courses numbered 400 and above
  (ESS 101 and 210 cannot both be taken for credit)
- GENOME 371
- GEOG 205
- MICROM 300- or 400-level courses
- PHYS 114, 115, 116, 117, 118, 119, 121, 122, 123, or any course numbered 224 or above
  (PHYS 114 and 121 cannot both be taken for credit)
- PSYCH 202

Human Centered Design & Engineering Program Summary

Admissions Requirements

Admission Requirements (35 credits)

10 Written & Oral Communication Credits
10 Math Credits
15 Natural Science Credits

Graduation Requirements

College & University Requirements (92 credits)

12 Written & Oral Communication Credits
50 Math & Science Credits
30 VLPA & I&S Credits

Core Course Requirements (52 credits)

HCDE 300 (5), HCDE 303 (5), HCDE 310 (5), HCDE 313 (5), HCDE 321 (2), HCDE 411 (5), HCDE 417 (5), HCDE 418 (5), HCDE 437 (5) , HCDE 493 (5), HCDE 495 (3), HCDE 496 (2)

Degree Options (19 π- 23 credits)

Human-Computer Interaction Option	Technical Communication Option	No Option Selected
•4 courses from the list below (see the proposed catalog copy for complete details of allowed course combinations) ART 383, 483, 484 CSE 440, 441 HCDE 407, 419, 438, 455, 496 INFO 310, 343, 344, 424, 444, 447, 461, 463, 498	•Must take HCDE 401 •14 to 18 additional approved elective credits	•2 courses from list below (9 to 10 HCDE credits) •10 to 14 additional approved elective credits HCDE 401, 407, 419, 455, 496

Technical/Analytical (12 credits)

Required : CSE 142
Remaining credits from: AA 101, AA 210, CSE 143, CHEM E 260, CIVE 220, EE 215, HCDE 496, INDE 250, IS 300, ME 123, ME 230, MSE 170, Phil 120