Courses offered in foreign countries by individual or group instruction.

International Cultures (IL)

HCDD 199: Foreign Studies
1-12 Credits/Maximum of 12
Courses offered in foreign countries by individual or group instruction.

First-Year Seminar

HCDD 297: Special Topics
1-18 Credits/Maximum of 18
Supervised student activities on research projects identified on an individual or small-group basis.

HCDD 296: Independent Studies
1-18 Credits/Maximum of 18
Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

HCDD 297: Special Topics
1-9 Credits/Maximum of 9
Formal courses offered infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

HCDD 299: Foreign Studies
1-12 Credits/Maximum of 12
Courses offered in foreign countries by individual or group instruction.

International Cultures (IL)

HCDD 340: Human-Centered Design for Mobile Computing
3 Credits
The course will provide students with an appreciation for the importance of mobile computing in modern life. It will also provide an introduction to the technical aspects of mobile computing including input modalities, sensors and sensing, wearable and smart home devices, and virtual/augmented reality. It will provide an introduction to established design concepts as well as explore emerging ideas and new concepts in the domains of mobile computing, and explore some of the most important domains where mobile computing is having a significant impact including health and wellness and computing in the developing world. The latter
part of the course will include an analysis, design, and development project for students to work on individually or in groups.

**Enforced Prerequisite at Enrollment:** HCDD 264 and IST 311

**HCDD 364W: Methods for Studying Users**

*3 Credits*

This course focuses on concepts, methods, and techniques for studying users and evaluating technology in the context of use. It will provide students with methods and tools they can use to incorporate knowledge of users and their settings into the design and evaluation of interactive systems. These methods will include both qualitative and quantitative techniques, as well as how to combine and sequence multiple techniques to gain a more holistic understanding. Students will learn to select and use appropriate data gathering and analysis methods and how to assemble these into a coherent user research design. The course also provides an overview of the most important statistical analysis methods employed in user research. This is a hands-on, practical course designed for HCDD undergraduate students, and others as an elective.

**Enforced Prerequisite at Enrollment:** HCDD 264 and IST 311

**Writing Across the Curriculum**

**HCDD 399: Foreign Studies**

*1-12 Credits/Maximum of 12*

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International Cultures (IL)

**HCDD 440: Human-Centered Design and Development Capstone Course**

*3 Credits*

The Human-Centered Design and Development Capstone course develops the research orientation and creative problem solving necessary for successful careers. The capstone develops these skills in the context of a semester long project, the solution to which requires integration of knowledge, skills and analytic techniques taught in the core curriculum. The capstone will also give student a real world experience in which they will need to work in teams and will be coached on ways to translate analytic outcomes into meaningful and actionable information for decision makers. The course is intended for seniors who have successfully completed the core courses. The capstone projects will integrate knowledge gained in technical subjects such as usability engineering, software construction and engineering, and mobile computing as well as general information technology topics such as machine learning, data mining, data integration and visualization, and privacy and security. Students will also hone their presentation and technical writing skills, generating effective reports that not only explain their analytic processes, assumptions underlying the processes and outcomes, but also communicate the limitations of their approach and potential alternate strategies.

**Enforced Prerequisite at Enrollment:** (IST 261 or IST 361) and HCDD 364W. Recommended Preparations: HCDD 340

**HCDD 494: Research Project**

*1-12 Credits/Maximum of 12*

Supervised student activities on research projects identified on an individual or small-group basis.

**HCDD 496: Independent Studies**

*1-18 Credits/Maximum of 18*

Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

**HCDD 497: Special Topics**

*1-9 Credits/Maximum of 9*

Formal courses offered infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

**HCDD 499: Foreign Studies**

*1-12 Credits/Maximum of 12*

Courses offered in foreign countries by individual or group instruction.

International Cultures (IL)