

Michigan Technological University

Minor in Human-Centered Design

Program Code PHCD, Academic Year 2025-2026

Department of Psychology and Human Factors

Minimum Credits Required: 18

List 1 Human-Centered Communication and Design [Communication Intensive] (3 credits)

- HU 2830 Public Speaking & Multimedia (3) *Prereqs: none*
- HU 3120 Technical & Professional Communication (3) *Prereqs: UN1015*
- HU 3130 Rhetoric of Science and Technology (3) *Prereqs: UN1015*
- HU 3845 Human-Machine Communication (3) *Prereqs: UN1015*
- HU 4625 Risk Communication (3) *Prereqs: UN1015*

List 2 Designing for a Just and Inclusive Humanity [Intercultural Competency] (3 credits)

- HU 3261 Communicating Across Cultures (3) *Prereqs: UN1015*
- HU 3401 Gender and Culture (3) *Prereqs: UN1015*
- HU 3710 Engineering Ethics (3) *Prereqs: UN1015*
- HU 3830 Creativity, Culture, & Change (3) *Prereqs: UN1015*
- HU 3850 Cultural Studies (3) *Prereqs: UN1015*
- HU 3860 Cultural Theory and Popular Culture (3) *Prereqs: UN1015*
- MGT 3000 Organizational Behavior (3) *Prereqs: none*
- SS 4211 Ethnographic Methods (3) *Prereqs: UN1015*

List 3A Foundations of Human-Centered Design [SHAPE Courses] (3 credits)

- HF 2000 Introduction to Engineering Psychology (3)

List 3B Human-Centered Leadership, Teaming, and Organizational Dynamics [SHAPE Courses] (3 credits)

- ENG 2060 Facilitating Group Learning (1) *Prereqs: ENG1102(C) or CH1160*
- ENG 3060 Developing Mentoring Skills (1) *Prereqs: none*
- ENG 2961 Teaming in the Enterprise (2) *Prereqs: none*
- ENT 2962 Communication Contexts (1) *Prereqs: none*
- MGT 2000 Team Dynamics and Decision Making (3) *Prereqs: none*
- MGT 3000 Organizational Behavior (3) *Prereqs: none*
- MGT 3100 Leadership Development (3) *Prereqs: none*
- PSY 3700 Industrial Organizational Psychology (3) *Prereqs: PSY2000*

List 4 Human-Centered Design Elective [Unrestricted Courses] (3 credits)

- CS 1121 Introduction to Programming I (3) *Prereqs: MA1031(C) or MA1032(C) or MA1120(C)*
- CS 1122 Introduction to Programming II (3) *Prereqs: CS1121*
- CS 3760 Front End Development and Accessibility (3) *Prereqs: CS 2321*
- CS 4760 User Interface Design and Implementation (3) *Prereqs: CS3141*
- DATA 1200 Data Science with Python (3) *Prereqs: MA1030(C) or MA1031(C) or MA1032(C) or MA1160(C) or MA1161(C)*
- ENG 1101 Engineering Analysis and Problem Solving (3) *Prereqs: (MA1031(C) or MA1032(C) or MA1120(C) or MA1160(C) or MA1161(C) or MA1121(C) or MA2160(C) or MA3160(C))*
- ENG 1102 Engineering Modeling and Design (3) *Prereqs: (MA1031 or MA1032 or MA1120 or MA1160(C) or MA1161(C) or MA1121(C) or MA2160(C) or MA3160(C)) and (ENG1101 or ENG1101T or (ENG1001 and ENG1100))*
- ENG 4300 Project Management (3) *Prereqs: BUS2100 or CEE3710 or MA2720 or MA3710 or EE3180 or BE2110 or MA2710 or PSY2720*
- ENG 4515 Introduction to Sustainability and Resilience (3) *Prereqs: none*
- ENT 3953 Ignite: Ideate, Innovate, Create! (1) *Prereqs: none*
- ENT 3958 Ethics in Engineering Design and Implementation (1) *Prereqs: ENG1101*
- ENT 3963 Deliver: Explore, Develop, Execute! (1) *Prereqs: none*
- ENT 3964 Fundamentals of Project Management (1) *Prereqs: none*
- HF 3850 Human Factors (3) *Prereqs: (PSY2000 or HF2000) and UN 1015*
- HF 4880 Usability Assessment (3) *Prereqs: none*
- HON 3300 Innovation through Human-Centered Design (3) *Prereqs: none*
- HU 2645 Graphic and Information Design (3) *Prereqs: none*
- HU 3701 Philosophy of Technology (3) *Prereqs: UN1015*
- HU 4632 Special Topics in Usability and User Experience (3) *Prereqs: UN1015*
- KIP 4250 Ergonomics (3) *Prereqs: none*
- MGT 3800 Innovation & Entrepreneurship (3) *Prereqs: none*
- MGT 4200 Entrepreneurial Management (3) *Prereqs: MGT3800*
- MIS 3000 Business Process Management & Automation (3) *Prereqs: MIS2000*
- MIS 3200 Systems Analysis and Design (3) *Prereqs: MIS2000(C) or MIS2100(C) or CS1122 or CS1131*
- MIS 4100 information Systems Projects (3) *Prereqs: (MIS 2100 and MIS 3100 and MIS 3200) or (CS 2321 and CS 3141 and CS 3425) or (MIS 2100 and MIS 3100 and MA 3720)*
- MKT 3000 Principles of Marketing (3) *Prereqs: none*
- MKT 3200 Consumer Behavior & Culture (3) *Prereqs: MKT3000*
- PSY 2000 Introduction to Psychology (3) *Prereqs: none*
- PSY 2300 Developmental Psychology (3) *Prereqs: PSY2000*
- PSY 2800 Critical Thinking for Social and Behavioral Sciences (3) *Prereqs: PSY2000(C)*
- PSY 3200 Motivation and Emotion (3) *Prereqs: PSY2000*
- PSY 3600 Cognitive Psychology (3) *Prereqs: PSY2000 or HF2000*
- PSY 3800 Environmental Psychology (3) *Prereqs: (PSY2000 or HF2000) and UN 1015*
- SAT 1700 Cyber Ethics (3) *Prereqs: none*
- SS 2100 Introduction to Cultural Anthropology (3) *Prereqs: none*
- SS 2210 Community Development and Planning (3) *Prereqs: none*
- SS 2300 Environment and Society (3) *Prereqs: none*
- SS 3510 History of American Technology (3) *Prereqs: UN 1015*
- SS 3513 History of Making Things: Craft and Industry in America (3) *Prereqs: UN 1015*
- SS 3801 Science, Technology & Society (3) *Prereqs: UN 1015*
- SS 4313 Sustainability Science (3) *Prereqs: UN 1015*

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Minor in AI Ethics

Choose One Option: List 5A or 5B (3 to 4 credits)

List 5A Essential Education Experience (E3) (3 credits)

- HU 3810 Technology and Culture (3) *Prereqs: UN 1015*
- SS 4551 Industrial Communities (3) *Prereqs: none*
- SS 4700 Communities and Research (3) *Prereqs: UN 1015*

List 5B Upper-Level SHAPE course (4 credits)

- UN 3023 Advanced Portfolio for Essential Ed (1) *Prereqs: none*

AND select one course, not already taken (3 credits)

- HF 3850 Human Factors (3) *Prereqs: (PSY2000 or HF2000) and UN 1015*
- HF 4015 Cognitive Task Analysis (3) *Prereqs: (PSY2000 or HF2000) and UN 1015*
- HU 4628 Usability Evaluation and Testing (3) *Prereqs: HU2600 or HU3120*
- HU 4635 Principles of UX Design (3) *Prereqs: UN1015 and HU 2645*
- MGT 4300 Developing Entrepreneurial Ventures (3) *Prereqs: none*
- MGT 4600 Management of Technology and Innovation (3) *Prereqs: none*
- MGT 4650 Commercialization of Advanced Technologies (3) *Prereqs: MGT4600*
- MIS 4000 AI and Emerging Technologies for Business (3) *Prereqs: MIS21000 or CS1122 or CS1131*
- SS 4009 Introduction to Survey Methodology (3) *Prereqs: none*
- SS 4120 Sustainable Development and Communities (3) *Prereqs: UN1015*
- SS 4211 Ethnographic Methods (3) *Prereqs: UN1015*