Carleton University

School of Industrial Design
Course Outline
Fall 2025

IDES 4001A • INDUSTRIAL DESIGN SEMINAR

Instructor: **Juan Jimenez Garcia**
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Office Location: 2496 ME
Office Hours: **Wednesday from 9:00 am to 11:00 am by scheduled appointment**

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Course Time and Location

Course locations are no longer displayed on the public class schedule and are subject to change. For the latest information please refer to Carleton Central under Student Services – Registration – Student Timetable.

Course Description

Topics vary yearly and address key contemporary industrial design issues. There is a focus on writing, discussion, and debate. Students organize a seminar with design professionals and other community experts including student and professional presentations, interaction, and discussion.

Prerequisite(s): IDES 3302 or permission of the School of Industrial Design.
Seminar three hours a week.

Course Overview

In an era where data permeates every aspect of life, understanding its role in design is no longer optional, it is foundational. Yet, the conversation around data must move beyond quantification and optimization alone. **Data Humanism** offers a new paradigm: one that reintroduces empathy, subjectivity, and interpretability into the data discourse. Rather than seeing data as neutral or objective, this course embraces its entanglement with human values, experiences, and complexities.

This seminar explores how designers can move from merely using data as evidence to **designing with and through data as a medium for human insight, agency, and empowerment**. Whether you are working in industrial design, interaction design, healthcare, or civic innovation, data should be treated not just as input for design decisions but also as a material for meaning-making.

Course Focus

DATA HUMANISM: Human-Centered Approaches from Big to Small Data and Beyond explores the interplay between Data Humanism, personal informatics, and human-centered design practices. The course traces how data, when used reflectively, can foster more inclusive, ethical, and empowering design outcomes.

Data is often framed as a strategic asset for institutions, corporations, and governments, where it drives policy, optimization, and control. However, the same data, if thoughtfully recontextualized, can support individual autonomy, shared understanding, and collective action. This Seminar Course challenges students to analyze and reflect beyond using data for efficiency and begin designing tools and systems that **return data to users in expressive, comprehensible, and humane ways**.

Through a series of thematic discussions, readings, and case-based design critiques, students will explore how designers can leverage data not simply to predict behavior, but to **support people in understanding themselves and others**, leading to more thoughtful, intentional lives.

Course Topics and Structure

The course is organized around **four interrelated themes**, framed through the lens of Data Humanism and HCD:

1. From Big Data to Personal Data: Rethinking Scale, Meaning, and Relevance

This opening topic reexamines the dichotomy between **Big Data** and **Small Data** through the lens of **Data Humanism**. Rather than treating them as opposing forms, we investigate how each can be humanized and situated. We ask:

What kinds of questions are each type of data good at answering?

How do we shift from “data about people” to **“data for and with people”**?

Designers will explore case studies that foreground ethical tensions, power dynamics, and creative potentials in navigating large and small-scale data, emphasizing the need for **contextual sensitivity, interpretive plurality, and participatory ethics**.

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2. The Quantified Self and Beyond: Critiquing Self-Tracking as Design Practice

Students will investigate the motivations and consequences of self-tracking technologies, such as fitness trackers, sleep apps, and mental health platforms. Critical perspectives on the **Quantified Self Movement** will be introduced asking not just how people track themselves, but **why**, **for whom**, and **to what end**.

Topics include:

The impact of metrics on self-perception

Tensions between motivation and surveillance

Self-experimentation as a design practice

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3. Personal Informatics Systems: Designing for Reflection and Meaningful Engagement

This module focuses on the design of **Personal Informatics** systems that enable users to collect, make sense of, and act on their data. The emphasis will be on creating **reflective systems**, tools that help people understand their patterns, habits, emotions, and contexts rather than simply optimize performance.

We will study:

The five-stage model of personal informatics (Li et al.)

Emotional data and subjective states

Case studies of systems designed for self-care, behavior change, and well-being

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4. Data in the Hands of Users: Visual, Tangible, and Situated Representations

The final theme explores how data is delivered back to users not just via screens and dashboards, but through **physical, spatial, and multisensory formats**. We will examine how data visualization, data physicalization, and tangible user interfaces (TUIs) can be used to foster **interpretability, agency, and dialogue**.

Topics include:

Data legibility and literacy

Designing for slow data and reflection-in-action

Multimodal interfaces and inclusive data experiences

Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate ability to research contemporary design issues.
2. Apply critical thinking skills.
3. Discuss and debate theoretical and critical design perspectives with classmates and community experts.
4. Apply course resources to support the opinions expressed.
5. Effectively communicate ideas through written work and/or oral presentations.
6. Cooperate with team members in working through class exercises, assignments, and seminar logistics.
7. Organize, participate in, and produce a seminar with design professionals and other community experts.
8. Design and produce some form of published record or proceedings document.

Course Deliverables

These are the deliverables for this course. For more detailed information, please see the Course Schedule, **IDES 4001A INDUSTRIAL DESIGN SEMINAR F25 - Juan Jimenez Garcia - Course Schedule**, in Brightspace.

Assignment 1: Initial Understanding

Due Date: Monday, September 22nd by 11:59 pm

Weight: 10%

Description: An initial group report that consolidates early-stage research, observations, and preliminary insights into the chosen topic. This collaborative document serves as a foundation for deeper exploration, capturing the team's first interpretations, working assumptions, and emerging lines of inquiry.

Drawing from literature reviews, case studies, contextual analysis, and early discussions, the report synthesizes diverse perspectives into a coherent overview. It highlights key initial themes, identifies potential opportunities and challenges, and outlines areas requiring further investigation.

Beyond simply documenting findings, the report reflects on the group's evolving understanding, acknowledging uncertainties, questioning assumptions, and setting the stage for subsequent phases of research. This deliverable acts as both a record of the team's starting point and a strategic guide for moving forward.

Word Limit: 2,000 words

APA

Assignment 2: Reflection on Data-Driven Design

Due Date: Monday, October 13th by 11:59 pm

Weight: 10%

Description: A collaborative and critically engaged reflection exploring the multifaceted role of data in contemporary design practice. This group-based inquiry moves beyond surface-level discussions to interrogate how data shapes design decisions, influences creative processes, and impacts users and society at large.

Through shared analysis, debate, and synthesis, participants adopt a deliberately critical stance, questioning dominant narratives about data as inherently objective or beneficial. The reflection examines tensions between quantitative evidence and qualitative insight, the risks of over-reliance on data-driven decision-making, and the ethical responsibilities of designers working in a data-saturated world. The outcome is a collective position statement that not only critiques current practices but also envisions alternative, human-centered approaches to engaging with data in design. T

Word Limit: 2,000 words

APA

Assignment 3: Individual Reflective Report on Data for Behavior change and Self-Data Collection

Due Date: Monday, November 10th by 11:59 pm

Weight: 20%

Description A reflective and analytically rigorous report documenting the lived experience of self-data collection and its implications for understanding the quantified self. It chronicles the process of systematically capturing personal data, detailing the tools, methods, and contexts used, and critically examines the patterns, anomalies, and insights that emerge through analysis.

More than simply presenting the data, the report engages in an in-depth exploration of how self-tracking influences self-perception, behavior, and decision-making. It reflects on the emotional, ethical, and societal dimensions of quantifying one's own life, questioning how personal data both can empower and constrain. By combining analysis with reflective commentary, the work situates the quantified self within broader discussions of personal informatics, digital wellbeing, and data humanism.

Word Limit: 2,500 words

APA

Assignment 4: Final Presentations on Data Humanism

During sessions November 25th (first group) and December 2nd (second group)

Weight Final Presentation: 30%

Presentation Length: 8 minutes

Description: A group presentation delivered during the sessions. These presentations will showcase key insights and outcomes from the Final Report. The session will be attended by a panel of scholars who will offer feedback, pose critical questions, and share relevant perspectives. Presentations selected during this seminar will be featured in the SID Special Event, providing an opportunity for broader exposure and engagement with the School of Industrial Design community.

Assignment 5: Final Reflective Report

Due Date: Monday, December 1st by 11:59 pm

Weight Final Reflective Report: 20%

Description: A comprehensive and critically engaged report that articulates a bold and thought-provoking stance on Data Humanism within the field of design. It explores the evolving role of data in shaping design processes, methodologies, and outcomes, positioning data not merely as a quantitative resource but as a medium for human-centered interpretation, creativity, and ethical reflection. The report examines how data-driven practices intersect with cultural, social, and political contexts, challenging reductive narratives and advocating for inclusive, situated, and value-driven approaches to data use.

In addition to mapping current applications, the report anticipates and debates the future implications of Data Humanism for design practice, education, and society at large, considering its potential to transform design's agency, redefine designer–user relationships, and influence public discourse. By weaving together theoretical perspectives, case studies, and speculative scenarios, it provides a framework for critically rethinking the designer's role in a data-saturated world.

Word Limit: 4,000 words

APA

Seminar Special Event: SID community event

Weight: Bonus

Date: TBD

Description: Selected student presentations will be showcased at this event, with selection based on the depth and quality of their contributions, the strength of their critical reflections, and their ability to provoke meaningful discussion on Data Humanism and its role in design. Consideration will be given to presentations that articulate compelling future stances and propose thoughtful strategies for addressing the challenges posed by the pervasive presence of data in contemporary society and design practice.

This event will be fully conceived and organized by the student group. The final reports from the selected presentations will be compiled into a digital publication and shared with the SID academic community, ensuring the dissemination of their insights and contributions beyond the event itself.

Professionalism – Ground rules

Weight: 10%

Description: Assessment of participation in class activities, teamwork, and contributions to discussions.

Please, refer to the “Professionalism” section, down below

Student Access to Exam

No Exam

Cost of Educational Materials

All materials required for the course and their costs are listed below. Please note some materials costs are dependent on the project and the materials chosen so a range listing minimum and maximum values will be given.

Students are not required to purchase textbooks or other learning materials for this course.”

Technology Requirements

Please refer to the technology requirements on the School of Industrial Design Website (https://carleton.ca/id/student-info/it-support/technology-requirements/). You may be asked by your instructor to refer to Brightspace for other information or requirements related to coursework.

Individual/Group Work

Courses may include individual and group work, and the majority of the grade must reflect individual work. This will support the assessment of individual performance, which may be difficult to determine in group projects. It is also important in collaborative work that students clearly demonstrate their individual contributions.

Review/Presentation Attendance

Attendance at scheduled SID Reviews/Presentations is mandatory. These are equivalent to exams when indicated in the course outline. Failure to attend the Review/Presentation without reasonable cause will result in a grade of F. Students arriving late for the Review/Presentation or not remaining for the complete session without approval from the instructor, will be addressed on a case-by-case basis at the instructor’s discretion.

If you are unable to attend a Review/Presentation, foresee arriving late, or need to leave before it is complete, please email your instructor in advance explaining the reason for the situation. It is important that you provide a reasonable rationale for your absence, late arrival, or early departure.

Late Submission of Assignments

Students who do not hand in assignments on time will have their earned grade reduced by **10%** per day at the instructor's discretion with a maximum of three days late. After this period, late work will only be accepted with a justified reason. If you foresee not meeting the submission due date and are requesting an extension, please provide your instructor with a minimum of 24 hours' notice.

Participation and Professionalism

Individual and group active participation, attendance, punctuality, and professional conduct (e.g. class discussion, consultations with instructors, work ethic, etc.) are important in lecture and studio courses and may be formally evaluated by a grade. Professionalism also includes Carleton’s Policy on Academic Integrity described in more detail below with links to content that you are required to review

Health and Safety

Students must participate in training to access all the SID Labs and Maker Space. Apart from this training, students are required to follow the health and safety standards of the School of Industrial Design as well as Carleton's health and safety standards. All materials related to SID health and safety are available here Health and Safety and it is expected that students review and understand these materials and apply these standards throughout their studies.

Use of Studio Spaces

Access to studio space to attend courses and complete assignments is an important part of student success. Students are welcome and encouraged to use available studio spaces to work during non-studio hours. Out of respect for your colleagues, instructors, and Carleton cleaning staff, ensure you leave the space in good condition. This includes cleaning your area and storing your items in your designated storage space whenever you are leaving the space. The school will not be responsible for items that are not stored properly.

Academic Integrity

Carleton's Policy on Academic Integrity is available at: https://carleton.ca/registrar/academic-integrity/ and covers the following violations, but is not limited to:

- *Plagiarism*
    - Submitting work written in whole or in part by someone else
    - Failing to acknowledge sources through the use of proper citations when using another's work
- *Test and Exam Rules*
    - *Attempting to read another student's exam paper*
    - *Speaking to another student (even if the subject matter is irrelevant to text)*
    - *Using material not authorized by the examiner*
- *Other Violations*
    - *Improper access to confidential information such as exams or test questions*
    - *Disruption of classroom activities or periods of instruction*
    - *Misrepresentation of facts for any academic purpose*

This policy governs the academic behavior of students. In industrial design, ideas, and concepts come from a multitude of sources and may be modified and utilized in the design and development process. The student should reference such sources appropriately and it is strongly advised that you read Carleton's Policy on Academic Integrity before conducting any work at the University.

Use of Artificial Intelligence (AI) Technologies

Students may use AI tools for sharing ideas, clarifying challenging concepts, or getting started on projects. Some acceptable uses include:

- Brainstorming ideas (e.g., generating essay topics with ChatGPT, using Microsoft Word's Smart Lookup to find inspiration and related topics)
- Creating outlines (e.g., using AI to structure an essay or presentation flow, using Microsoft Word's Outline View with AI suggestions)
- Providing definitions or explanations of complex concepts (e.g., using AI to explain a difficult theory, e.g., using Microsoft Word's Researcher tool to find relevant information)

Documenting Use of AI It is necessary to document your use of AI in this course, using the following guidelines:

- Clearly identify and cite AI-generated text (e.g., 'The following paragraph was generated by ChatGPT/Microsoft Word's Researcher tool')
- Review, edit, and ensure accuracy and originality of final submissions
- AI-generated content should not exceed 30% of the total assignment length

Why have I adopted this policy? This policy supports the use of AI as a supplementary tool, helping students develop ideas and structure their work while emphasizing the importance of transparency and personal engagement with the content. AI can be used for inspiration and foundational support and can encourage students to critically assess and refine AI-generated material.

As our understanding of the uses of AI and its relationship to student work and academic integrity continue to evolve, students are required to discuss their use of AI in any circumstance not described here with the course instructor to ensure it supports the learning goals for the course. Students can access resources related to citing Generative AI on the MacOdrum Library website. Plus, additional AI resources are also available on Carleton's Artificial Intelligence Hub.

Requests for Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may require special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the *Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances*, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline). The website covers the below topics.

Topics:

- Pregnancy Obligations
- Religious/Spiritual Obligation
- Academic Accommodations for Students with Disabilities
- Survivors of Sexual Violence
- Accommodation for Student Activities
- Academic Considerations for Medical and Other Extenuating Circumstances
- Scheduling and Examination Support

Statement on Student Mental Health

As a university student, you may experience a range of mental health challenges that significantly impact your academic success and overall well-being. If you need help, please speak to someone. There are numerous resources available both on- and off-campus to support you, refer to this link - https://wellness.carleton.ca/ and open the needed section.

Topics:

- *Counselling*
- *Resource Guide*
    - *Thriving on Campus*
    - *Everyday Stress*
    - *Mild Mental Health Concerns*
    - *Moderate Mental Health Concerns*
    - *Complex Mental Health Concerns*
- *Umbrella Project*

Student Responsibility

The student is responsible for knowing the content of this course outline; the schedule of classes, assignments, and/or reviews; and the material that was covered when absent. The studio is a professional environment, and students should be working during the scheduled hours.

Course Schedule

Please refer to Brightspace for a detailed Course Schedule: **IDES 4001A INDUSTRIAL DESIGN SEMINAR F25 - Juan Jimenez Garcia - Course Schedule**.