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| **Faculty Information** | **Name** | Ryan Jongwoo Choi |
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| **Home University** | Hanyang University ERICA |
| **Department** | College of Design, Industrial/Convergence Design |
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| **Course Information** | **Class No.** |  | **Course Code** | ISS1204 | **Credits** | 3 |
| **Course Name** | Designing the Future: Creativity with Generative AI |
| **Lecture Schedule** |   |
| **Course Description** | This course aims to deepen students' understanding of design by integrating fundamental design concepts and processes with the power of AI. Students will learn how to use AI as a tool throughout the design process from research to final creation. Through hands-on projects, they will develop the ability to visually express their ideas, fostering their own unique creative expression and problem-solving skills. By the end of the course, students will have a solid foundation to grow as innovative designers, equipped to use AI to enhance their design work.**Course Leader:** * Former Principal Industrial Designer at Logitech
* Former Senior Industrial/Mobility Designer at McLaren
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| **Course Objective** | * Develop a strong grasp of design fundamentals and processes.
* Explore the application of AI in various stages of design, from research to execution.
* Cultivate the skills to visually communicate ideas and creative concepts.
* Build collaborative learning experiences with classmates to enhance creativity.
* Foster problem-solving abilities through practical design challenges.
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| **Prerequisite** | * Basic understanding of design principles or prior coursework in design (preferred but not required)
* No prior knowledge of AI is required, but a curiosity to learn and experiment with AI tools is encouraged.
* Open to students from various disciplines who are passionate about design and innovation.
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| **Materials/Textbooks** |  |
| **Evaluation** | **Attendance** | 10% | **Quiz** | 0% |
| **Assignment** | 0% | **Mid-term Exam** | 15% |
| **Presentation** | 0% | **Final Exam** | 25% |
| **Group Project** | 25% | **Participation** | 25% |
| **Etc.** | **Evaluation Item** | **Ratio** |
|  | % |
|  | % |
| **Daily** **Lecture Plan** | **Day 1** | **Ice-Breaking / Orientation*** Introduction: Overview of course goals, design principles, and AI integration.
* Project Brief Overview: Explanation of how AI will support the design process from start to finish.
* Understanding Design: Introduction to how AI can enhance creativity and problem-solving in design.
* Ice-Breaking Activities: Collaborative activities to build a supportive learning environment.
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| **Day 2** | **Design Research (Discover): Initiating a Successful Design Project*** Field Research Techniques: Using AI tools for data gathering and analysis in the research phase (e.g., AI for trend prediction or user sentiment analysis).
* Introduction to Human-Centered Design Processes (1): How AI can enhance human-centered design by providing insights into user behavior and preferences.
* Integration of AI Tools in Design Research: Exploring AI-powered platforms for design research, such as predictive algorithms or data visualizations.
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| **Day 3**  | **Design Research (Discover): Exploring Korea:** * Field Research: Utilize AI-driven tools for collecting and organizing research data (e.g., image recognition for cultural analysis).
* Brainstorming Sessions to Ideate Solutions: Use AI-powered brainstorming tools to generate creative ideas and explore different directions.
* Human-Centered Design Processes (2): Deeper understanding of integrating AI into design research to focus on user needs.
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| **Day 4** | **Design Research (Define)*** Human-Centered Design Process with AI Tools (3): Defining the design problem using AI tools to analyze and synthesize user research into actionable insights.
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| **Day 5** | **Design Research (Insight)*** Identifying Insights from Research Findings: Leverage AI for pattern recognition in research findings to uncover key insights.
* Formulating Design Objectives: AI-driven tools to assist in the creation of design objectives based on insights and data.
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| **Day 6** | **Design Research (Insight): Idea Generation*** Conceptualizing Design Ideas Through Sketches: Use AI tools to assist in generating rapid design iterations and initial concept visualizations.
* Scenario Development and Storyboarding: Leverage AI to help simulate and predict user scenarios.
* Hands-On Sketching Exercises (1): Introduction to AI tools for automated sketch generation and ideation.
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| **Day 7** | **Design Research (Insight): Idea Generation*** Advancing Ideas with AI Design Tools: Use AI for enhancing or generating new design concepts, aiding in the refinement of initial ideas.
* Iterative Design Process Refinement: AI-powered tools to evaluate and evolve design ideas through feedback loops.
* Hands-On Sketching Exercises (2): Apply AI-assisted sketching tools to refine and iterate design concepts.
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| **Day 8** | **Design Development*** Concept to Reality: Modelling Workshop (1): Use AI tools to assist in 3D modeling, parametric design, or rapid prototyping.
* Hands-On Prototyping Techniques: How AI can support the transition from conceptual sketches to physical prototypes (e.g., generative design, automated modeling).
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| **Day 9** | **Design Development & Final Presentation*** Concept to Reality: Modelling Workshop (2): Use AI tools to assist in 3D modeling, parametric design, or rapid prototyping.
* Hands-On Prototyping Techniques: How AI can support the transition from conceptual sketches to physical prototypes (e.g., generative design, automated modeling).
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