INTERACTIVE AND DIGITAL TOOLS

GRADO EN DISEÑO
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Academic year: 19-20
Degree course: SECOND
Semester: 1º
Category: COMPULSORY
Number of credits: 6.0
Language: English

PREREQUISITES

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SUBJECT DESCRIPTION

“Interactive And Digital Tools” is a course that introduces second year students to the broad range of conceptual techniques and digital tools relevant to the creative thinking and visual communication in contemporary design practice.

The course offers a three pronged approach:

Students are introduced to a conceptual framework for successful visual communication and interaction design, which can be considered an extended two-way communication with user feedback. This framework is based on the psychology of perception, information processing and decision making: in other words, students will get an understanding of how we perceive the world, understand and act in it.

Second element to the course is practical advice on how to use the a combination of digital tools and manual techniques to obtain a professional level of proficiency and reliability in the areas of creative thinking and visual communication.

Third, broader, objective of the course is to instill in students the growth mindset: productive, playful and inquisitive relationship with the world around us and the technology in particular, that would be a solid foundation for student's further diverse academic and professional development.
OBJECTIVES AND SKILLS

Objectives

- To master the medium of drawing as a communication tool.
- To develop the capacity for graphic imagination, description and analysis of the space and the human body that inhabit it, in relation to the digital techniques and information technologies appropriate to the design practice.
- Acquire knowledge of graphic analysis tools to visualize complex pieces of information.
- Learn to use the infographic design for the visualization of data with a narrative structure.
- Know how to choose and apply different multimedia procedures and techniques according to the communicative and expressive needs of the design project (image, layout, animation, text, video, audio, etc.)
- Use the procedural techniques of digital expression (programming, interaction and multimedia resources) to develop design projects.
- Know how to combine traditional techniques with digital media.

Skills

Conceptual Skills

- Understanding of the formal, methodological and aesthetic characteristics derived from the application of digital technologies in contemporary design practice.
- Development of a critical sensitivity for the aesthetic biases inherent to all digital media.
- Introduction to the visual narrative tools associated with representation of the environment and its spatial features.
- Introduction to critical analysis of studio work.
- Abilities oriented to improving individual and collective performance in studio environments.

Professional Skills

This course aims to provide the students with following skills that are fundamental for their day to day work:

- Ability to apply design tools in the process of design, production and communication of media, objects and environments.
- Capacity to choose among the wide range of digital tools the most suitable ones for the task in hand, in order to improve productivity and the quality of the final output.
- Ability to direct own’s professional growth by being able to independently and continuously learn new digital tools and techniques.

Learning Results

- Ability to conceptually develop, produce and communicate design projects by means of two- and three-dimensional digital tools.
- Ability to critically evaluate such designs, as well as the methodologies and tools that inform them.
- Ability to develop individual criteria regarding the opportunistic use and combination of several digital tools during conceptual design, production and communication processes.
METHODOLOGY
The teaching method is based on following aspects:

- **Project-based learning**: as is the case with any design-related methodology, the work that students are required to do will be a primary learning method. This work will be framed as a sequence of short-term (class exercise) and long-term assignments (projects) that span multiple sessions. Class exercises will offer a quick opportunity to apply the theory learned to daily practice. Projects are expected to be developed in the classroom and completed at home. They will span multiple sessions to end with the final critique session where students will present their work in public and engage in constructive critique. Students will work on projects in an iterative way: students will be expected to continuously give informal presentation of their work in progress in order to be able to keep on working. The professor will give advice and make corrections, both individually and with the whole group. This process is intended to create a frame of critical dialogue involving the participation of all the students in order to learn one from each other.

- **Class / home work balance**: We will make clear distinction between in-class (face to face) and home (online) activities, and organize both in such way to optimize student engagement.

- **At home**, students be guided to learn independently technical aspects by leveraging the infinite potential of online learning resources. In addition to that, students will be able to work on their projects at home and get the frequent feedback from the tutor in between the class session. Key for productive work at home is a dedicated online platform specifically tailored for the requirements of this class; it will provide all the required resources and the communication tools.

- **Class sessions** will integrate theoretical lectures, technical training, the individual work on exercises and projects, and the public revision and criticism of such work. All the different activities will be organized in the form of quick-paced micro-sessions to increase productivity and help maintain student attention.

The course is focused around practical knowledge that students will achieve by applying the processes and methodologies explained by the professor in completing the short- and long-term assignments. Therefore, it is a must to follow the rhythm of the assignments (class exercises and long-term projects) given by the professor, and show the work in progress so it could be discussed and improved. All the work that a student submits has to be original and made by the student: not copied, downloaded from the internet, unless students are specifically instructed to copy other’s work as a part of the actual exercise. Doing otherwise will lead the student directly to the final extraordinary exam.

Students are also expected to contribute to and actively participate in the studio environment, either by working individually in class, or by taking an active role in the critical analysis of both their own and their fellow students’ work. This way, the studio should provide a critical collective environment that informs and guides the professional and artistic development of the group as a whole.

Additionally, an online communication between the students and the tutors will be set up. This virtual space is a collectively built website that serves both as a primary mean of communication between students and professor, as well as an online repository of student work and common knowledge base, aimed at the global enrichment of the learning experience. Both the instructor and the students will critically and actively contribute to this collective database.

**CLASS ELECTRONIC REQUIREMENTS**
Most of the class work will require a WI-FI connected laptop. Please note that the use of Wi-Fi for activities not related to this class will be penalized and hinder your grade on participation.
<table>
<thead>
<tr>
<th>Teaching methodology</th>
<th>Weighting</th>
<th>Estimated time a student should dedicate to prepare for and participate in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>10.0 %</td>
<td>15 hours</td>
</tr>
<tr>
<td>Discussions</td>
<td>10.0 %</td>
<td>15 hours</td>
</tr>
<tr>
<td>Exercises</td>
<td>26.67 %</td>
<td>40 hours</td>
</tr>
<tr>
<td>Group work</td>
<td>13.33 %</td>
<td>20 hours</td>
</tr>
<tr>
<td>Other individual studying</td>
<td>40.0 %</td>
<td>60 hours</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0 %</td>
<td>150 hours</td>
</tr>
</tbody>
</table>
PROGRAM

SESSION 1
Class introduction, presenting the WHO?, WHAT?, HOW? and WHY? of the course.

SESSIONS 2 - 6
Unit 1: Communication
In this learning unit we will introduce the framework based on psychology of perception that will help you gain a practical knowledge for successful visual communication. You will learn graphic design in terms of user experience and how to use visual composition to control the time and pacing of the presentation. Technically, we will use vector drawing software to combine images, photos and drawings into one large scale poster and prepare it for printing.

SESSIONS 7 - 8
Project 1 Presentation
Students will present the final version of their Project #1, which we will discuss in class.

SESSIONS 9 - 16
Unit 2: Behavior
This learning unit will build upon the framework established for visual communication to include the more general view of how we perceive, understand and interact with the world around us. You will learn how our living is shaped by the way we interact with physical and virtual objects, and the psychology behind efficient and pleasurable interaction. You will apply that knowledge in a practical way by introducing a new digital product that emphasises pleasure or relieves pain point in people's daily life, and creating user flows that represent the stories of people using that product successfully.

SESSIONS 17 - 18
Project 2 Presentation
Students will present the final version of their Project #2, which we will discuss in class.

SESSIONS 19 - 28
Unit 3: Interaction
This learning unit will be focused on intricacies of successful user interaction and related design patterns and design systems. Conceptually, you will learn how to apply, in different professional situations, this framework that sees interaction as a continual two-way communication with feedback. Practically, you will learn how to create a high fidelity interactive prototype of your digital product and build an effective product presentation around it, using the software tools for interaction design and video production.

SESSIONS 29 - 30
Project 3 Presentation
Students will present the final version of their Project #3, which we will discuss in class.
BIBLIOGRAPHY
There is no mandatory bibliography for this course. All relevant material will be provided to students on a need-to-know basis.
EVALUATION CRITERIA

Evaluation is continuous, which implies that all the work produced by the students along the semester will contribute to the final grade. Technical competence and conceptual value of the submitted work will be evaluated with equal importance, as will be the case with maturity of student's critical view inside the context of the collective work of the class. Additionally, development and growth of these capacities throughout the semester will form an important element during evaluation.

The primary evaluation material will be projects (long-term assignments), each of them directly related to one learning unit. Projects deliveries are scheduled for the following sessions:

<table>
<thead>
<tr>
<th>Project 1</th>
<th>Session #7</th>
<th>September 23, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 2</td>
<td>Session #17</td>
<td>October 28, 2019</td>
</tr>
<tr>
<td>Project 3</td>
<td>Session #29</td>
<td>September 23, 2019</td>
</tr>
</tbody>
</table>

Projects are to be completed by the student over the course of multiple sessions, developed in class and finished at home. They will be presented in public and subject to critique. Projects are to be completed by the student over the course of multiple sessions, developed in class and finished at home. They will be presented in public and subject to critique. The timely submission of all projects is mandatory. Late submission will result in the dismissal of the given project as evaluation materials, resulting in an project score of 0.0.

Since each project is related to one learning unit, the grade for each project represents evaluation of all the work the student has done during the course of that learning unit, including the quality of work student has been doing for class exercises, homeworks and discussions in class.

Distribution of main criteria for each of the project's grades:

<table>
<thead>
<tr>
<th>Project</th>
<th>Quality</th>
<th>Activity</th>
<th>Evolution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Correct conceptual, graphical and technical execution of the project deliverables.
Active participation during class and programmed activities, including in-class exercises and homework assignments.
Improvement of the quality of submitted project related to the previous work in class.

The evaluation system will be elaborated in more detail at the beginning of the course. Detailed criteria for evaluation of assignment quality will be presented to students at the introduction of each respective project and be included in the project description.

Extra: Student may get additional 10% added to their final grade by doing the relevant extra curricular activities (such as, but not limited to, design competitions, workshops, individual or group exhibitions ...) if the professor concludes that:

- the quality of such extra-curricular work is outstanding and/or substantially contributes to student's development
- the nature of the extra-curricular work relates to this course
- the extra-curricular work does not in any way hinder student's performance in school, in this or any other course

Please refer to the following table for the estimate on how much each project will contribute to the final grade:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percentage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 1</td>
<td>30 %</td>
<td></td>
</tr>
<tr>
<td>Project 2</td>
<td>30 %</td>
<td></td>
</tr>
<tr>
<td>Project 3</td>
<td>40 %</td>
<td></td>
</tr>
</tbody>
</table>

14th June 2019
First Evaluation Session
In order to pass the course during first evaluation session, the overall evaluation grade of the student should be at least 5.0 points on a scale between 0.0 and 10.0.

As stated above, the primary evaluation material will be projects (long-term assignments), each of them directly related to one learning unit.

Attendance
According to the current attendance policy of IE University, class attendance is mandatory: students must attend at least 70% of all class sessions. Students who do not meet this minimum percentage will automatically fail both first and second evaluation session, and pass directly to the third enrollment (re-taking the course).
When re-taking the course, attendance must be of at least 50%, but the student must accomplish 100% of the assignments. If this level is not reached, the student will have to do the 4th and last exam session to pass the course.
Partial attendance to a session or repeated late arrivals to class will be considered as sessions missed by the student.

Second and Fourth Evaluation Sessions
Those students whose studio work has not been positively evaluated will be required to pass an extraordinary evaluation session, except for the students that do not meet the minimum percentage attendance - according to IE University attendance policy, such students do not qualify for the subsequent evaluation session.
The content, format and evaluation criteria of these additional examinations (2nd and 4th evaluation) will be adjusted according to the specific studio performance and coursework situation of each individual.
Because of this, students falling under these circumstances will be responsible for contacting the instructor at least three weeks prior to the expected examination submission date in order to be notified about the specific requirements for their satisfactory fulfillment of the course.
No claims will be accepted if the student fails to contact the instructor within the time frame set above, as it will then be understood that he/she declines the opportunity to pass the course within the current evaluation session.
After the second and fourth evaluation sessions, and according to the current IE University policy, the student will be graded according to both his/her performance in the exam and his/her performance during the course.
The second and fourth evaluation sessions will only be considered satisfactorily complete with a grade of 5.0 or more. According to the general regulations of IE University, students cannot earn a grade higher than 8.0 in the second and fourth evaluation sessions.

Third Evaluation Session
Those students that do not receive a positive evaluation in the second evaluation session and those students who fail to comply with minimum attendance requirement, will be required to retake the course during the following academic year, where they will produce new design assignments which will constitute their primary evaluation material for the third evaluation session.
The criteria for evaluation for the third evaluation session, are the same as the ones for the first evaluation session.
Students falling under this category will be the subject to a minimum class attendance policy of 70%, which is set by the general regulations of IE University, under same conditions as in the first enrollment.

PROFESSOR BIO

14th June 2019
NENAD KATIC

Nenad Katic is an architect, designer and software engineer, graduated with honors from Faculty of Architecture (Belgrade University) in 2001. His work spans many disciplines: over the course of 20 years he has designed buildings, including experimental housing and a museum, led the groundbreaking development of world’s first digital city and crafted digital media pieces from websites to interactive installations, business apps, video games and virtual reality experiences.

From 2002-2007 he worked as a Director of Technology at Screampoint (now Cityzenith), where he channeled the company vision into a range of digital products, including 5D City, world’s first urban administration software to be officially adopted by a city government, in Wuhan (China) in 2006. Notable list of clients include City of Wuhan, Luwan District Shanghai, IBM, Apple, Nokia and Financial District of Hong Kong.

As a freelance architect, he designed a number of buildings and art installations that won public and critical acclaim, including Serbian National Prize for Art Ranko Radovic for highest achievement in art (2007, with B. Pavic).

In 2015, he founded Nikokoneko, design and development studio that crafts digital experiences for premium real-estate projects such as Apple Park, Chase Center, SFMOMA Extension, Salesforce Tower and San Francisco Ferry Building, to name only the few.

In his personal research, he explores the psychology of creativity and application of mixed reality technologies in business, education and entertainment.

OTHER INFORMATION

Professor Availability

Professor will be available for online consultation Monday to Friday. For all questions related to your work please only the course website (details will be provided to each student at the beginning of the course). Only use email for questions that are not directly related to the work you are doing.

Office hours can be held before or after class sessions but have to be scheduled in advance.
CODE OF CONDUCT IN CLASS

1. **Be on time**: Students arriving more than 5 minutes late will be marked as “Absent”. Only students that notify in advance in writing that they will be late for a specific session may be granted an exception (at the discretion of the professor).

2. **If applicable, bring your name card and strictly follow the seating chart.** It helps faculty members and fellow students learn your names.

3. **Do not leave the room during the lecture**: Students are not allowed to leave the room during lectures. If a student leaves the room during lectures, he/she will not be allowed to re-enter and, therefore, will be marked as “Absent”.

   Only students that notify that they have a special reason to leave the session early will be granted an exception (at the discretion of the professor).

4. **Do not engage in side conversation.** As a sign of respect toward the person presenting the lecture (the teacher as well as fellow students), side conversations are not allowed. If you have a question, raise your hand and ask it. If you do not want to ask it during the lecture, feel free to approach your teacher after class.

   If a student is disrupting the flow of the lecture, he/she will be asked to leave the classroom and, consequently, will be marked as “Absent”.

5. **Use your laptop for course-related purposes only.** The use of laptops during lectures must be authorized by the professor. The use of Social Media or accessing any type of content not related to the lecture is penalized. The student will be asked to leave the room and, consequently, will be marked as “Absent”.

6. **No cellular phones**: IE University implements a “Phone-free Classroom” policy and, therefore, the use of phones, tablets, etc. is forbidden inside the classroom. Failing to abide by this rule entails expulsion from the room and will be counted as one absence.

7. **Escalation policy: 1/3/5.** Items 4, 5, and 6 above entail expulsion from the classroom and the consequent marking of the student as “Absent.” IE University implements an “escalation policy”: The first time a student is asked to leave the room for disciplinary reasons (as per items 4, 5, and 6 above), the student will incur one absence, the second time it will count as three absences, and from the third time onward, any expulsion from the classroom due to disciplinary issues will entail 5 absences.