DEGREE PROGRAM IN TECNOLOGIE E LINGUAGGI DELLA COMUNICAZIONE - TECHNOLOGIES AND LANGUAGES OF COMMUNICATIONS (LM-59) CURRICULUM IN INTERACTION DESIGN

A.Y. 2023/2024

Course Gamification Strategies
SDS M-PED/03
ETCS 6
Course modules (if any) 5 ETCS Prof. Brunella Botte,
1 ETCS Prof. Riccardo Mancini

Year I year
Semester I semester
Professor(s) Brunella Botte, Riccardo Mancini
e-mail b.botte@unilink.it; r.mancini@unilink.it
Office hour At the end of the lesson or by appointment agreed by e-mail.

LEARNING OUTCOMES

The course aims to provide students with the basic knowledge and application tools useful to understand and exploit the potential of games in non-gaming contexts. Gamification, in fact, means the application of game mechanics and elements to solve real problems. During the course will be presented case studies of particular relevance, to highlight how the game has been successfully exploited to modify behaviours, motivate and engage users. In addition, the course will allow students to put their acquired knowledge into practice by designing a gamified system.

More in detail, the teaching aims to have the student achieve the following learning outcomes.

1. **KNOWLEDGE AND UNDERSTANDING SKILLS**:
   At the end of the course, the student must be able to...
   - Understand how and for what purposes it is possible to use gaming in contexts other than entertainment.
   - Understand the basic mechanisms of human motivation, the difference between intrinsic and extrinsic motivation, and the relationship between intrinsic motivation and flow state;
   - Know the professional skills that are typically present in a team that deals with the implementation of gamified solutions and the related competencies;
   - Know the steps in the process of designing a gamified system and the activities involved in each step.

2. **APPLIED KNOWLEDGE AND UNDERSTANDING SKILLS**:
   At the end of the course, the student must be able to...
   - Be able to apply the knowledge gained during the course to the design of original gamified solutions.

3. **AUTONOMY JUDGMENT:**
   At the end of the course, the student must develop a critical and analytical vision...
   - Of the target of a gamified solution;
   - Of the context to be gamified;
   - Of how to best deploy gamification principal to achieve their objective;
   - Of other gamified solutions.

4. **COMMUNICATION SKILLS:**
   At the end of the course, the student must acquire the fluency in the specialized language

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of the subject as well as develop the ability to argue...
- About an original gamified solution in a professional and convincing manner;
- About the subject using the appropriate technical language.

5. **LEARNING ABILITY:**
   The student must prove to be able to...
   - Acquire the main knowledge about gamification theories;
   - Put into practice the theoretical principles acquired.

DETAILED PROGRAM

The course aims to trace the fundamental steps of the design process of a gamified solution. Students, lesson after lesson, will be guided in putting into practice the theoretical notions learned in the development of an original group project.

In this way, theory and practice will proceed in parallel, facilitating both the learning of course content and the acquisition of soft skills crucial in the world of work, such as the ability to work in teams, to manage time according to the achievement of specific objectives and to effectively present the results achieved.

The following topics will be specifically addressed:
1. What gamification is
2. The Serius games vs Gamification quadrant
3. The Gamification consultancy team
4. Define the Business objectives
   a. S.M.A.R.T objectives
   b. Construal level theory
5. Understanding and fostering motivation
   a. Intrinsic vs extrinsic motivation
   b. The Self-determination Continuum
   c. The Self-determination Theory three basic needs
   d. The Flow theory
6. The overjustification effect
7. The underjustification effect
8. The gamification design process
   a. Delineate target behaviours
      i. The Fogg behaviour model
      ii. The Habit zone
   b. Describe players
      i. Marczewski's User Types Hexad
      ii. Primary target vs secondary target
      iii. The gamification player personas
   c. Devise Activity Loops
      i. Engagement Loops
      ii. Progression stairs
      iii. Amy Jo Kim's the player journey
      iv. The Gamification user journey

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   d. The role of feedback and reward system
      i. The R.I.M model
      ii. Reward quality over quantity
      iii. Challenge, feedback, reward cycle
   e. How to design the reward schedule
      i. Delayed gratification and effort
      ii. The Marshmallow test
      iii. Reward schedule in a gamified system
      iv. Perceived value of a reward
   f. Don't forget the Fun
      i. Nicole Lazzaro 4keys2fun
   g. Deploy the appropriate tools
      i. Dynamics
      ii. Mechanics
      iii. Components
      iv. To each player type the most appropriate reward
9. Focus on Educational gamification: The Chronicles of Knowledge case study

RECOMMENDED PRE-REQUISITES (IF ANY)
None

TEACHING METHODOLOGIES
The educational activities will be carried out through both frontal teaching activities and interactive moments, in which students put into practice the theoretical principles learned and discuss what they have developed with the class.

FINAL EXAMINATION METHODOLOGIES
The final exam consists in a written test, including closed questions, open questions and graphs to be completed. Each question assigns a variable number of points, depending on its difficulty. The points awarded for each question are highlighted in the test.
Attending students can participate in two mid-terms, each one referred to half of the course programme. The final grade consists in the sum of the two grades.
Students that consistently worked on the project-work during the course, can decide to present it to increase their final grade (maximum 3 grades, depending on the quality of the project).

EVALUATION CRITERIA
At the end of the course, the following skills of the student will be evaluated:
1. **KNOWLEDGE AND UNDERSTANDING SKILLS**: having acquired the basic knowledge the fundamental theoretical notions related to the topics covered in the teaching program.
2. **APPLIED KNOWLEDGE AND UNDERSTANDING SKILLS**: being able to apply the theoretical notions addressed in the teaching program in order to design an original gamified solution.
3. **AUTONOMY JUDGMENT:** having acquired a capacity of highlight the relevant information necessary to the Gamification design and to understand other Gamified

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solutions.
4. **COMMUNICATION SKILLS:** being able to mastery the terms of the specialized language of the subject, the ability to effectively expose the topics studied and the ability to effectively and convincingly present an original gamified solution.
5. **LEARNING ABILITY:** being able to use the conceptual and methodological tools acquired to design an original gamified solution.

FINAL GRADING INFORMATION AND CRITERIA

The final score is expressed in thirtieth grade, with the possibility of honors. The final score reflects the student's preparation as follows:

Score	Description
< 18 not sufficient	Fragmentary and superficial knowledge of contents, errors in applying concepts, insufficient exposure.
18-20	Sufficient but still general knowledge of contents, elementary exposure, uncertainties in the application of theoretical notions.
21-23	Appropriate, but not deep, knowledge of contents, good ability in applying theoretical notions as well as presenting them in a simple way.
24-25	Appropriate and vast knowledge of contents, discrete ability in applying them, good ability in presenting notions in a comprehensive way.
26-27	Precise and comprehensive knowledge of the topics, good ability in applying the acquired knowledge, good analytical skills, clear and correct exposure.
28-29	Extensive, comprehensive and deep knowledge of contents, good applicative skills, good ability of analysis and synthesis, confident and correct exposure.
30 30 with honors	Very broad, comprehensive and deep knowledge of the contents, well-established ability to apply the acquired notions, excellent ability of analysis, synthesis as well as ability to create interdisciplinary links, fluency of exposure.

COURSE MATERIAL

For the preparation of the exam, in addition to the material provided during the lessons, the following **mandatory texts** are needed:
1. Kevin Werbach and Dan Hunter, For the Win: How Game Thinking Can Revolutionize Your Business, Wharton School Press, 2012.

The following **supplementary texts** provide support to the students who are unable to take part in the lessons as well as in all the teaching activities:
1. Kevin Werbach and Dan Hunter, For the Win: How Game Thinking Can Revolutionize Your Business, Wharton School Press, 2012.

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2. Marczewski, A. (2018). Even Ninja Monkeys Like to Play: Unicorn Edition. Gamified UK.

Other **suggested texts**, in order to delve into the treated topics, are the following:
1. Marczewski, A. (2018). Even Ninja Monkeys Like to Play: Unicorn Edition. Gamified UK.
2. Eyal, N. (2014). Hooked: How to Build Habit-Forming Products, Portfolio.
3. Csikszentmihalyi, M. (1990). Flow: The Psycology of Happiness. Random House ebooks.

OTHER ADVICES

Students belonging to the 'part-time/workers' category or being unable to take part in the lessons are suggested to directly contact the professor in order to analyze, together, specific training needs.