NEW PRODUCT DEVELOPMENT

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| Course code | *GRAI014* |
| Compulsory in the programmes | *Innovations and Technology Management* |
| Level of studies | *Graduate* |
| Number of credits | *6 ECTS (32 contact hours + 2 consultation hours, 124 individual work hours)* |
| Course coordinator (title and name) | *Dr. Eigirdas Žemaitis* |
| Prerequisites | *-* |
| Language of instruction | *English* |

**THE AIM OF THE COURSE:**

This course is designed to provide knowledge of the new product development process. This course surveys issues related to opportunity selection, concept generation, and project evaluation, among others, from the marketing perspective. We will recognize in this course that there is no exact process that guarantees a new product’s success however, we will learn the tools that will help to guide a new product development team leader an upper hand in evaluating the situation they are presented with. This course is designed to provide an understanding of the new product development process and tools that can be used, build critical thinking skills by applying this information in a course project, develop teamwork, problem solving, as well as written and oral communication skills.

**MAPPING OF COURSE LEVEL LEARNING OUTCOMES (OBJECTIVES) WITH DEGREE LEVEL LEARNING OBJECTIVES (See Annex), ASSESMENT AND TEACHING METHODS**

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| Course level learning outcomes (objectives) | Degree level learning objectives (Number of LO) | Assessment methods | Teaching methods |
| CLO1. Critically evaluate a new product development environment, and its importance to a firm. | LO 1.1, LO 1.2 | Case analysis, Group work, Online lectures | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO2. Be able to apply a new product development process and tools. | LO 1.2. | Online lectures, Case analysis, group project | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO3.Obtain the skills to develop and analyze a new product offering. | LO 2.1, LO 1.1. | Group work, online lectures | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO4. Identify and evaluate information related to a new product development steps. | LO 2.1., LO 1.2 | Online lectures, reading and analysis of cases, group work | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO5. Develop critical thinking ability and problem-solving skills through experiential learning. | LO 1.3., LO 3.1, LO 3.2 | Group work presentations | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO6. Strengthen creative and writing skills by experiencing a new product development process. | LO 3.2 | Reading and analysis of cases, group work | Active participation in online discussion, small assignments, case analyses assessment, and group project. |
| CLO7. ~~To~~ communicate and ~~to~~ work effectively in an interdisciplinary group | LO 3.1 | Group work | Active participation in online discussion, small assignments, case analyses assessment, and group project. |

**ACADEMIC HONESTY AND INTEGRITY**

Interactive teaching methods, interim knowledge assessment and self-evaluation, case study, seminars, and whole class discussions, individual and group work assignment will be employed to enhance the quality of studies.

**COURSE OUTLINE**

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| **Topic** | **In-class hours** | **Readings** |
| Contemporary challenges and new product development needs. New thinking paradigm.  **Learning objectives:**  **(1)** Be able to identify the challenges companies are facing. How new product development (NPD) could help to overcome these challenges?  (2). Define and gain skills of NPD professionals.  *In class group activities. NPD professionals’ skills. How these skills could be developed*? | 3 | Video: Dan Pink. A whole new mind: <https://www.youtube.com/watch?v=ZGWHPMEUWek> |
| Global technology and consumer behavior trends for a new product development. Opportunity identification and selection.  **Learning objectives:**  (1)Critically evaluate opportunity field for NPD.  (2). Be able to identify sources for technology trends.  (3) Obtain the skills to use macro insights for NPD. | 4 | Course book page 60-95  Gartner Hype Cycle model: (<https://www.gartner.com/en/research/methodologies/gartner-hype-cycle>)  Strategic technological trends for NPD: <https://www.gartner.com/smarterwithgartner/gartner-top-strategic-technology-trends-for-2021/> |
| The strategic elements of new product development.  **Learning objectives**:   1. To dentify and evaluate main elements of new product development. 2. Acquire critical knowledge and understanding of the discipline and main success factors. | 2 | Course book, pages 5-25. |
| New product development process. Innovation sources for new product development.  **Learning objectives**:   1. Critically evaluate innovation sources and possibilities. 2. How different innovation types could be used to develop new products? | 3 | Reading:  Course book pages 25-60  Sawhney, M., Wolcott, R. C., & Arroniz, I. (2006). The 12 different ways for companies to innovate. *MIT Sloan management review*, *47*(3), 75  **Additional media:**  Professor Joe Tidd identifies different sources of innovation & tools to help to search for these:  <https://www.youtube.com/watch?v=lFck3eOwPnQ>  [Where good ideas come from](https://www.ted.com/talks/steven_johnson_where_good_ideas_come_from?language=en) Steven Johnson |
| Design thinking concept for a new product development. Problem identification. Innovative research tools. Rapid prototyping.  **Learning objectives:**   1. Critically evaluate creative new product development processes. 2. Be able to use innovative customer research tools. 3. Be able to apply design thinking approach in different technological contexts. | 6 | Reading:  Brown, T. (2008). Design thinking. *Harvard business review*, *86*(6), 84.  Liedtka, J. (2018). Why design thinking works. *Harvard Business Review*, *96*(5), 72-79.  Kolko, J. (2015). Design thinking comes of age. *Harvard Business Review*  Course book, pages 130-154.  Online sources:  [www.ideo.com](http://www.ideo.com)  [www.designkit.org](http://www.designkit.org) |
| Structured processes for tnew product development. Implementation of Stage- Gate methodology.  **Learning objectives:**   1. Critically evaluate the structured NPD processes. 2. Ability to critically analyse how to design Gates and Stages. 3. Acquire critical knowledge and understanding of strategic decisions for NPD. | 4 | Cooper, R. G. (2006). Winning at new products: pathways to profitable innovation. In *Proceedings Project Management Research Conference, Montreal, Canada*.  Cooper, R. G., & Kleinschmidt, E. J. (1996). Winning businesses in product development: The critical success factors. *Research-technology management*, *39*(4), 18-29.  Cooper, R. G. (2019). The drivers of success in new-product development. *Industrial Marketing Management*, *76*, 36-47.  Cooper, R. G., & Edgett, S. J. (2010). Developing a product innovation and technology strategy for your business. *Research-Technology Management*, *53*(3), 33-40.  Internet resource:[www.stage-gate.com](http://www.stage-gate.com). |
| Knowledge management systems for a new product development.  **Learning objectives:**   1. Critically evaluate the knowledge management for the NPD. 2. Critically analyze the different NPD strategies and knowledge dimensions. | 3 | John Bessand. [Knowledge dimensions and space](https://johnrbessant.files.wordpress.com/2015/03/tidd1-c07sim.pdf)  Harvard case Moingeon, B., Dessain, V., Edmondson, A., & Jensen, A. D. (2011). *Global Knowledge Management at Danone* .  Nonaka, I., & Konno, N. (1998). The concept of “Ba”: Building a foundation for knowledge creation. *California management review*, *40*(3), 40-54. |
| Building networks for new product development. Technology scouting, technology intelligence.  **Learning objectives:**   1. Critically evaluate the networking importance for the NPD. 2. Acquire critically knowledge of the technology scouting methods. 3. How to organize technology intelligence activities? | 3 | Dahlander, L., & O’Mahony, S. (2017). A study shows how to find new ideas inside and outside the company. Harvard Business Review Digital Articles, 2-5.  [Technology Scouting – a case study on the Deutsche Telekom Laboratories](https://mpra.ub.uni-muenchen.de/5699/1/MPRA_paper_5699.pdf) |
| Launching new products into the market  **Leaning objectives:**   1. Acquire critical knowledge and understanding of the Go-to- Market activities. 2. Apply digital tools for the new product marketing. | 4 | Course book Part 5. |
|  | **Total: 32**  **hours** |  |
| CONSULTATIONS | 2 |  |
| FINAL EXAM | 2 |  |

**FINAL GRADE COMPOSITION**

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| **Type of assignment** | **%** |
| *Group Components 60 %* |  |
| Group project paper | 40 |
| Group project presentation | 20 |
| *Individual Components 40%* |  |
| Examination. Case analysis. | 30 |
| Participation in lectures, ad hoc exercises | 10 |
| **Total:** | **100** |

**DESCRIPTION AND GRADING CRITERIA OF EACH ASSIGNMENT**

*(Provide short descriptions and grading criteria of each assignment)*

Final examination

The students will be asked to analyse a business case. Examination is in open book format. Students should demonstrate individual analytical skills and also use various sources to prove their proposition. Also students should be able to apply a new product development process to solve specific company problems. Note: in those tasks individual critical skills are evaluated, not general overview of the Internet sources.

Group project

The task is designed to implement Design Thinking methodology in practice and prepare a new product development process case. The project should be written in English and be no longer than a maximum of 5000 words (except the List of content, references and appendices). Although appendices are not included in the limit, be sure to include only what is relevant for understanding your conclusions. Additional information can be added to an appendix, but this is not a part of the report being assessed. A project group must be composed of 5-6 students.

Group project presentation.

Presentation duration 10 min. The structure of the presentation TBA.

**The group project paper should include these main parts:**

**1. Problem definition.** Describe the selected business area for a new product development, describe the tools and methods for problem identification. Define the process, how to identify problem in selected business area and the define problem.

**2. Research.** Describe how to organize customer research. What kind of tools should be used for customer analysis? Build innovative research case and justify the methodology and collect initial data.

**3. Idea generation.** Based on previous insights, develop the innovative product ideas.

4. **Prototype development.** Build quick prototypes to show the new product ideas.

**Project evaluation criteria:**

* All parts included
* Problem definition. Problem description is complex. Variety of different analytical approaches are used for problem reframing.
* Research. For the research students used variety of different and innovative research tools. Research results are reliable and provided insights are justified
* Idea generation. New ideas have high innovativeness level. Selection of final solution was made from high number of initial ideas.
* Prototype development. How “quick and dirty” prototype was implemented. Demonstration of the Minimum Viable Prototype (MVP).

**Plagiarism.** Plagiarism is considered a breach of academic integrity. In case of plagiarism incident a student/group will result in an automatic failure in this course.

The project is evaluated by the course lecturer (50%) and an innovation expert (50%)

**RETAKE**

In case the group project will not be successfully finished, the opportunity to redo the project may be granted only in exceptional cases (related to health, and extreme situation issues).

**ASSISTANCE**

Do not ever hesitate to request assistance with anything you do not understand.

**PARTICIPATION (10%)**

This is the key part of the course that affects the evaluation. It is imperative for students to have done the readings and the assigned homework before each seminar and to actively participate in the seminar. Without completing all seminar participation tasks (such as homework assignments and in-class work and commentary on research projects), the student cannot be allowed to take the final exam. If the students miss a seminar, they must make up for its assignments. However, late submissions do not get points, so it may not be sufficient to get a passing grade depending on the amount of missed seminars and the lateness and quality of the make-up submissions, therefore you are strongly encouraged to do everything in your power to not miss classes and to make up for whatever you missed within the same week.

During the course students will prepare presentations on their research projects and comments on other students‘ presentations. Seminar participation scorecard will include points for presence and active participation in class exercises, The participation grade cannot be substituted with a retake.

**REQUIRED READINGS**

Course book. Crawford, C.M. and Di Benedetto, C.A. (2015). New Product Management 11th Edition. McGraw-Hill Education.

**ADDITIONAL READINGS**

Sawhney, M., Wolcott, R. C., & Arroniz, I. (2006). The 12 different ways for companies to innovate. *MIT Sloan management review*, *47*(3), 75.

Cooper, R. G. (2006). Winning at new products: pathways to profitable innovation. In *Proceedings Project Management Research Conference, Montreal, Canada*.

Cooper, R. G., & Kleinschmidt, E. J. (1996). Winning businesses in product development: The critical success factors. *Research-technology management*, *39*(4), 18-29.

Cooper, R. G. (2019). The drivers of success in new-product development. *Industrial Marketing Management*, *76*, 36-47.

Cooper, R. G., & Edgett, S. J. (2010). Developing a product innovation and technology strategy for your business. *Research-Technology Management*, *53*(3), 33-40.

Brown, T. (2008). Design thinking. *Harvard business review*, *86*(6), 84.

Liedtka, J. (2018). Why design thinking works. *Harvard Business Review*, *96*(5), 72-79.

Kolko, J. (2015). Design thinking comes of age. *Harvard Business Review.*

**ANNEX**

**DEGREE LEVEL LEARNING OBJECTIVES**

**Learning objectives for the Master of Business Management**

*Programme:*

*International Marketing and Management*

*Innovations and Technology Management*

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| **Learning Goals** | **Learning Objectives** |
| Students will be innovative decision makers | LO1.1. Students will be able to define the business problem and develop **innovative solutions**. |
| LO1.2. Students will become **independent learners** and develop their own comprehension of scientific theories, models, and concepts. |
| LO1.3. Students will be able to demonstrate critical thinking in problem solving. |
| Students will be socially responsible leaders | LO2.1. Students will be able to evaluate past and current practices in their discipline from an **ethical perspective**. |
| Students will be effective communicators | LO3.1. Students will develop and deliver a **coherent oral presentation**. |
| LO3.2. Students will develop and deliver a **coherent written research paper**. |

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