Course Title: Product Design and Development

<table>
<thead>
<tr>
<th>Semester*</th>
<th>Code</th>
<th>Program**</th>
<th>No of hours per week: lectures + exercises</th>
<th>Total</th>
<th>ECTS credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>18696</td>
<td>Bachelor</td>
<td>2</td>
<td>3</td>
<td>3</td>
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Lecturer: Dorian Marjanovic, Mario Štorga

**Course objective:**
The goal of the course is to give an introduction to multidisciplinary aspects of product development and innovation. Students will familiarize themselves with basic methodology and tools that can be used in product development projects. Practical problems will be considered in cooperation with companies in order to simulate real product development situations.

**Prerequisite:** Computer literacy

**Learning outcomes:** Students will be:
1. able to understand the technical and business aspects of the product development process
2. skilled in implementation of gathering data from customers and establish technical specification
3. able to understand product functional decomposition
4. be able to participate in engineering problem solving
5. be able to understand the principles behind product modularization, to be able to understand intellectual property issues in product development
6. be able to understand ethical issues in product development

**Course contents**

**Lecture/Topic:**

1. Introduction to product development. Real example of PD process from well known international company
2. General development process. PD process adaptation based on product type. Different kinds of PD projects.
3. Technical and business aspects of PD process organization. Product planning. PD process resources definition
8. Project preparation week
9. Mid term exam
10. Combining solution principles. Concept generation, selection and testing.
12. Detail design, testing and refinement.
13. Patents and intellectual property. Engineering ethics
14. Final project preparation week
15. End-term presentation and exam
**Recommended literature:**

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publisher</th>
<th>Date</th>
<th>ISBN</th>
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**Type of exercises:**

- x auditory;
- laboratory;
- x practicum;
- x design;
- other

**Examination:**

- x final exam;
- x continuous testing;
- other

**Language:**

- Croatian or English

**Tutorials in English for incoming students:**

YES

* Bachelor program: Semester 1-7, Master program: Semester 8-10
** ME – Mechanical Engineering, NA – Naval Architecture, AE – Aeronautical Engineering