

## **Tárgytematika / Course Description** **Packaging Design Project**

**AJNB\_LSTA033**

**Tárgyfelelős neve /**

**Teacher's name:** dr. Böröcz Péter János

**Félév / Semester:** 2024/25/1

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 0/3/0

**Tárgy féléves óraszám /**

**Teaching hours(sem.):** 0/0/0

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### **OKTATÁS CÉLJA / AIM OF THE COURSE**

In this course, students will independently create a packaging project using the knowledge they have learned. In carrying out the task, they will be required to use the main theoretical contexts of the theoretical design and usability of logistics packaging. The task is to be solved in two parts. In the first part, the design of a given product and its associated consumer and bulk packaging is to be carried out, followed by the construction of the necessary transport packaging system (with unit load mapping where appropriate) using QPM software. In the second part of the exercise: select the machines and equipment required to package a predefined quantity of a previously selected product and then perform a production/packaging/unit load simulation based on the parameters of the selected machines using PlantSimulation software.

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### **TANTÁRGY TARTALMA / DESCRIPTION**

The student can choose a free topic from the pre-defined topics.

The student will design a product-consumer-collection-delivery packaging system, with full details (raw materials, dimensions, closures)

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Feature and skill in QPM software

Packaging system building with QPM software

The parameters of the designed product-packaging system are simulated using the QPM software and the optimized version is finalized from the possible variants.

Present the different indicators of the final version

Selection of the machines required for the preparation - filling - packing (Primary, Collector, Transport) - unit load formation of the product-packaging system (with technical specifications!)

Setup & installation of Plant Simulation (PS)

Introduction to Moving Units in PS.

Planning basic layout, modelling.

Definition of bottlenecks in the model.

Improvement in the throughput of the model.

Control of content of assignment.

Submission of assignments.

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## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD**

### **Order of accountability:**

Mandatory assignment to be completed and submitted by the last week of the semester. The assignment should include a description of the product packaging system, packaging designs and simulations.

### **How to evaluate:**

End of semester, based on the submitted Project task.

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## **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

QPM Manual

Plant Simulation manual

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## **AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL**