**DESIGN PROJECT PROPOSAL FORM**

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| **Academic Year** | **2024 -2025** | **Semester** | Fall Spring X |
| **Project Type** |  **Research**  |  **Application** |
|  ME 411 Thermal & Fluid Design | X ME 412 Thermal & Fluid Design |
|  ME 413 Mechanical Design |  ME 414 Mechanical Design |
|  ME 415 Robotics & Control Design |  ME 416 Robotics & Control Design |
| **Advisors** | Assoc. Prof. Sercan ACARER, Assoc. Prof. Şahin GÜNGÖR, Assoc. Prof. Umut CEYHAN |

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| **Project Title** | Investigations on pumping power and thermal performance of an industrial BPHE |
| **Purpose and Scope** | Main objectives of this work are:* having additional information on industrial heat exchangers,
* investigating main types of brazed plate heat exchangers (BPHE) and their industrial applications,
* having skills on the calculation strategies and BPHE physics,
* understanding the pressure losses and total pumping power need,
* evaluation on the overall performance.
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| **Work Packages** | WP1: Introduction – Literature Survey (1st semester)WP2: Proposing/Designing 3 different BPHE flow structures (1st and 2nd semesters)WP3: Analytical-theoretical calculations for the proposed designs (2nd semester)WP4: Numerical analyses for the thermal and hydraulic performance of the BPHEs (2nd semester)WP5: Post-processing, data analyses, and preparation of the final documentation. (2nd semester) |
| **Max Number of Students** | 12 |
| **Student info** | Student ID | Name/Surname | Signature |
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