

 OSTİM TECHNICAL UNIVERSITY

**2023-2024 SEMESTER**

**GRADUATION PROJECT PROPOSAL FORM FOR MECHANICAL ENGINEERING DEPARTMENT**

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| **Lecture Code: MEC 400** | **Lecture Name: Graduation Project** |
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| **Project Title / Number of Students:** | **Production of carbon fiber reinforced epoxy composite using hand-lay-up and investigating tensile/flexural strength** / 1 student |
| **WORKS AND PROCEDURE TO BE DONE IN THE PROJECT****(Put the item number on the left and write it in order)** |
| **Item**1. Literature review on the tensile/flexural behavior of carbon fiber reinforced epoxy composites (CFRPs) and its usage method of hand lay-up method will be searched.
2. Mechanical/physical properties like tensile/flexural strength/hardness and density of CFRP composites will be calculated.
3. Tensile/Flexural properties of the composites will be measured with according to ASTM D 3039, ASTM D 790 standard and determined at room temperature. The laminate composites with thin square samples are prepared.
4. Fracture surfaces of CFRP composites will be examined under optical/SEM images.
5. XRD analysis will be done to see the atomic structure and its defects.
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| PROJECT AIMS |
| **Item**1. To investigate the mechanical (tensile/flexural/hardness) and physical properties (density).
2. To find out the elastic modulus and strength property.
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| **THE STUDENT TO WORK ON THE PROJECT** |
| Number | Name Surname | Signature |
| 1.2. |  |  |

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| **SUPERVISOR** |
| TitleProf.Dr. | Name SurnameYusuf ŞAHIN | Signatureysahin |