**INTERNSHIP POSITION**

|  |  |
| --- | --- |
| **Topic** | PLLA bio-composites development (filler preparation, physical and chemical modification, processing) |
| **Specification/**  **Programme**  (min. 100 words) | The project is focused on the development of PLLA bio-composites with all components made from renewable materials. After modification of the individual components, samples will be produced on a laboratory extruder MC 15 HT (Xplore, Netherlands). Subsequently, the mechanical, thermal (Differential Scanning Calorimetry, Thermogravimetric Analysis), rheological properties, and chemical changes (Fourier Transform Infrared Spectroscopy) of PLLA bio-composites will be evaluated. Furthermore, the distribution of additives will be evaluated using Scanning Electron Microscopy (SEM). The project results will be summarized in the final report and presentation. |
| **Time period** | October 2023 to November 2023 |
| **Length of the traineeship - number of months** |  |
| **Supervisor´s name and contact** | Pavel Brdlík  Technical University of Liberec  Faculty of Mechanical Engineering  Department of Engineering Technology  Studentská 1402/2  46117 Liberec  pavel.brdlík@tul.cz |
| **Administrative Contact** | Marcela Valkova, [marcela.valkova@tul.cz](mailto:marcela.valkova@tul.cz) |
| **Documents required** | CV, Letter of motivation, Transcript of Records |