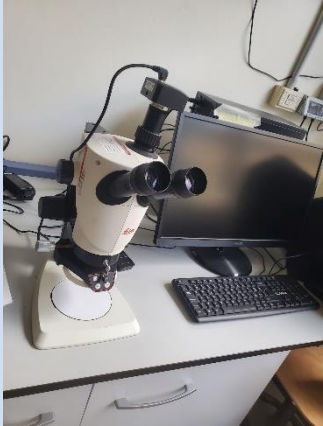



Materials for Advanced Manufacturing II Laboratory (7h)

| Activity | Instrument | Student action | |
|--|--|---|--|
| Microstructural characterization for Al, Cu e Ti materials | Optical Microscope Scanning Electron Microscope | Instrument use; data and results analysis and interpretation. |  A photograph of an optical microscope with a white base and black eyepieces, positioned on a desk next to a computer monitor and keyboard. |
| Hardness and microhardness and macro for Al, Cu e Ti materials. | Microhardness and macrohardness equipments | Instrument use; data and results analysis and interpretation. |  A photograph of a microhardness testing machine, which is a white, boxy device with a black stage and a digital display on the front. |