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**COURSE SYLLABUS**

**School:** MechanicalEngineering **Campus: Universitary CiTy**

**Professor:** Deborah Reis Alvarenga, Phd.

**Subjetct:** Materials Structure

**LLABUS**

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| **SUBJECT** | **AREA** | **WORKLOAD (HOURS)** |
| Materials Structure | Engeneering | 5 ECT’s |
| **COURSE TOPICS** |
| 1. Materials structure and deformation mechanisms.
2. Correlations between atomic bonds,
3. microstructure and macroscopic properties.
4. Phase diagrams.
5. Materials testing.
6. Properties and applications of technical materials in all materials categories: metals, polymers, ceramics and composites.
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| **REFERENCES (TENTATIVE)** |
| 1. Materials Science and Engineering: An Introduction,9th Ed., W.D. Callister Jr.
2. Foundations of Materials Science and Engineering -Smith, W. F. and Hashemi, J., 5th Edition, McGraw-Hill, 2010
3. The Science and Engenineering of Materials Donald R. Askeland
4. MecHanical Behavior of Materials William F. Hosford
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