Course:	**Material Computing**
Module Level:	Undergraduate
Code:	FIT405
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/Term:	7th / Fourth Year
Module Coordinator:	Febdian Rusydi, Ph.D
Lecturer(s):	Febdian Rusydi, Ph.D and Andi Hamim Zaidan,Ph.D
Language:	English
Classification within the Curriculum	~~Compulsory Course~~ / Elective Course
Teaching format / class hours per week during semester:	3 hours of lectures (50 minutes/hour)
Workload:	3 hours of lectures, 3 hours of structural activities, 3 hours of individual study, 14 weeks per semester, and total of 126 hours per semester 4.2 ECTS*
Credit Points:	3
Requirement(s):	FIM301 Solid State Physics
Learning Goals/Competencies:	**General Competence (Knowledge) :** Students learn to perform first principles calculations for bulks and surface system in the ground state. **Specific Competence:** 1. Ability to determine the electronic structure of simple solid. 2. Ability to determine the electronic structure of surfaces.

Contents:	This course is designed to train students using computation method to study electronic structure of bulks and surfaces. ——————————————————— Competence Literature Chapter ——————————————————— 1 1 1, 2 ——————————————————— 2 1 3, 4 ———————————————————
Soft Skill Attribute	Effort and ethic.
Study/Exam Achievements:	Passing grade is D (equivalent of score 40.0 of 100.0). The score is determined by one assignment (40%) and one final task (60%). Score to grade conversion: A : 75.00 — 100.00 AB : 70.00 — 74.99 B : 65.00 — 69.99 BC : 60.00 — 64.99 C : 55.00 — 59.99 D : 40.00 — 54.99 E : 00.00 — 39.99
Learning Methods:	Lecturing, homework, tutorial
Form of Media:	Whiteboard, projector.
Literature(s):	1. David Sholl and Janice Steckel, Density Functional Theory: A Practical Introduction, John Wiley & Sons, 2009
Notes:	*Total ECTS={(total hours workloadx50 min)/60 min}/25 hours Each ECTS is equals with 25 hours