**Curriculum LMU**

P: Pflichtmodul mandatory course

WP: Wahlpflichtmodul elective course\*

V: Vorlesung lecture

Ü: Übung practice

\* Besides those listed in this plan as elective courses all science or engineering classes of LMU and TUM are eligible after consulting with the head of examination board (Mr. Gille). It will be sufficient to select courses in the first week of the semester.

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| 1. **Semester** | **ECTS** |

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| **P** | Materials Science I  (incl. structures of crystalline and non-crystalline solids ) | *3* V + 1 Ü | 5  1,5 |
| **P** | Thermodynamics and kinetics of phase transitions | 2V | 3 |
| **P** | Structure determination methods | 2 V + 1Ü | 3,5 |
| **P** | Exercises: Powder diffraction(block seminar) | 2 Ü | 2,5 |
| **WP** | Physics and chemistry of melts | 2 V + 1Ü | 3,5 |
| **WP** | Polarization Microscopy | V | 3 |
| **WP** | Crust and mantle petrology | V | 5 |
| **total** |  |  | 30 |

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| 1. **Semester** | **ECTS** |

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| **P** | Glass, ceramic and building materials | 2V + 2Ü | 3,5 |
| **P** | Materials science II | 3V + 1Ü | 5 |
| **P** | High Resolution Microscopic Methods/Electron Microscopic Methods | 2V + 1Ü | 3,5 |
| **P** | Analytical Methods in Geochemistry | 2V | 2,5 |
| **WP** | Biomineralisation | 2V | 2,5 |
| **WP** | Crystal Physics (structure – property relations)  Exercises in Crystal Physics (during term holidays) | 2V  1Ü | 2,5  1 |
| **WP** | Disordered Materials | 1V | 1,5 |
| **WP** | Mineral Surfaces and interfaces | 1V | 1,5 |
| **WP** | Nanostructures | 2V | 3 |
| **WP** | Petrophysics | 1V +1 Ü Blocked course | 3,5 |
| **total** |  |  | 30 |
| **TOTAL year 1** |  |  | 60 |

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| 1. **Semester** | **ECTS** |

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| **P** | Thermodynamic calculation of equilibria | 2V + 1Ü (blocked course during semester break) | 3,5 |
| **P** | Synthesis and Processing | 2V + 2Ü | 5 |
| **P** | Fundamentals of Spectroscopy | 2V | 2,5 |
| **P** | 2-weeks **laboratory internship or field course** during term holidays |  | 6 |
| **P** | summerschool |  | 7 |
| **WP** | Additional classes |  | 6 |
| **total** |  |  | 30 |

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| 1. **Semester** | **ECTS** |

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| **P** | **Presentation** | 1SWS | 2 |
| **P** | **Masterthesis** |  | 30 |
| **total** |  |  | 32 |
| **TOTAL year 2** |  |  | 62 |

This course overview applies for MaMaSELF students. It is adapted to the official course listing. Adaptions had been made after consulting Prof. Schmahl.