**MME 2408 MATERIALS CHARACTERIZATION**

**2015-2016 SPRING SEMESTER**

**LAB PROGRAM (2nd Section)**

**REVISED**

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| **DATE** | **LAB TOPICS & LEARNING OUTCOMES (LO)** | **LAB PERSONNEL** |
|  | **Introduction to Lab work**  **(report writing, homework, dress code, attendance)** |  |
| ***11 - 15 April 2016***  ***COMPLETED*** | Lab 1: Scanning Electron Microscope (SEM)  LO :  - Basic structure and parts of the SEM  - Sample preparation for SEM analyses  -“Charging” phenomenon  - Coating equipments in the Lab. | RAMAZAN DALMIŞ |
| ***18 - 22 April 2016***  ***COMPLETED*** | Lab 2: Scanning Electron Microscope (SEM)  LO:  - Secondary electron image (SEI) and interpretation  - Backscattered electron image (BEI) interpretation  - Energy Dispersive Spectrometer (EDS) technique with SEM | Onur ERTUĞRUL    Kadir TEKİN |
| ***25 - 29 April 2016*** | 1st MID-TERM WEEK |  |
| ***2 - 6 May 2016***  ***COMPLETED*** | Lab 3: X Ray Diffraction  LO:  - Basic structure and parts of the XRD analyzer  - Sample preparation for XRD  - Material analysis by XRD | Serhan KÖKTAŞ  Çağrı KILINÇ |
| **11 May 2016**  **WILL BE CONDUCTED**  **DURING LECTURE HOURS**  **AT**  ***MMZ 2 & LAB*** | Lab 4: X Ray Fluorescence (XRF)  LO:  Basic structure and parts of the XRF analyzer  Sample preparation for XRF analysis  Material analysis by XRF | **Şükrü KAYA**  **(Hatice YILMAZ)**  **(MDN)** |
| **18 May 2016**  **WILL BE CONDUCTED**  **DURING LECTURE HOURS**  **AT**  ***MMZ 2***  **--------------------------------**  ***16 - 20 May 2016*** | Lab 5: Thermal Gravimetric Analysis (TGA)  Differential Thermal Analysis (DTA)  LO:  - Basic structure and parts of the TGA/DTA equipment  - Characterization by TGA/DTA  -------------------------------------------------------------------------------  Lab 6: Fourier Transformed Infrared (FTIR)  LO:  Basic structure and parts of the FTIR equipment  Sample preparation for FTIR  Material analysis by FTIR | **Haydar KAHRAMAN**  **------------------------------------**  **Oylum ÇOLPANKAN** |