

MEM 3921 METROLOGY AND CALIBRATION HOMEWORK

Program Outputs:

PO. 1.2: Adequate knowledge in the field of Metallurgical and Materials Engineering

PO. 1.3: Ability to use theoretical and applied information in the fields of Mathematics and Science to solve Metallurgical and Materials Engineering problems

It is necessary to conduct research on the topics determined below for **each group** and deliver the study to the teacher in the form of both report (Word) and presentation (PowerPoint) prints. **Each group will deliver only 1 copy.**

Subject:

Explain the working principle, device features, and measurement methods of instruments used for chemical and structural analyses.

Subject distributions were made according to groups.

The presentation dates are given below. Presentation time **should not exceed 15 minutes.**

ASSESSMENT OF THE HOMEWORKS

1. Understanding and definition of the subject: %30
2. Effectiveness of Team work: %30
3. Personal technical and scientific level of the presentation/homework and its relations with the Metallurgical and Materials Engineering, respect to honesty, responsibility and ethical values %20
4. Content and structure as well as scientific level of the presentation/homework: %20

PS. You can not read from presentation, you will have to prepare a speech!

Group Number	Presentation Date	Subject
Gr_1	06.12.2023	Temperature measurement in industry (thermocouples, pyrometer, laser thermometer etc.)
Gr_2	06.12.2023	Pressure measurement in industry (U Tube Manometer, Bourdon Gauge, Diaphragm Gauge, Bellow Gauge etc.)
Gr_3	06.12.2023	Humidity measurement in industry (Relative humidity sensors, Condensation principal hygrometer, Psychrometer etc.)
Gr_4	13.12.2023	Dynamic and static weight measurement (weighing) in industry (Gravimetric measurement, Continuous Weighing, Force/Torque measurement etc.)
Gr_5	13.12.2023	Length measurement in industry (vernier, Laser Surface Velocimeter, etc.)
Gr_6	13.12.2023	Scanning electron microscopy (SEM) and Transmission electron microscopy (TEM)
Gr_7	20.12.2023	X-ray diffraction
Gr_8	20.12.2023	Thermogravimetric Analysis (TGA) and Differential Scanning Calorimetry (DCS)
Gr_9	27.12.2023	Atomic Force Microscopy (AFM)
Gr_10	27.12.2023	Fourier Transform Infrared Spectroscopy (FTIR Analysis or FTIR Spectroscopy)

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Group 1 17054701 NECAT GENERAL 18054081 HÜSEYİN CANTİMUR 19054902 ISRAFIL SALIMOV 20054034 HASAN MERT KAYMAK 20054073 AHMET HAKAN ENDEN 20054088 ECENAZ TOHUMCU	Group 2 20054090 FATMANUR CİN 20054091 MEHMET SAİD DEĞİRMENÇİ 20054092 FURKAN ŞAHİN 20054094 EREN UZUNOĞLU 20054097 RAKİB KAĞAN ÖZYÜREK 20054098 RUKİYE SERİM
Group 3 20054099 ÖMER FARUK DAVARCIOĞLU 20054100 MERT DALTABAN 20054102 BEYZA AKPINAR 20054103 AHMET TALHA DARAMA 20054702 ÇAĞATAY YILDIRIM 20054706 MERT KALAFAT	Group 4 20 20054707 ENİS ERGÜN 20054708 KENAN TAŞDEMİR 20054905 NİMA PEYKARİMEH 20054906 KAN ÖNDER 20054908 RAMAZAN JUMABAYEV 20054909 MUHAMMED MULHAM SABBAĞ
Group 5 20054912 SEDAT ARIK 20054913 SEMİH ÇELİK 20054914 AYLİN AYDIN 21054012 AYBİKE LARA PEKER 21054019 ŞÜKRAN CEMRE BOZKURT 21054024 EMİR ATABEY	Group 6 21054025 YAĞMUR SEVİNÇ 21054039 BATUHAN MALAZGİRT 21054041 MUHAMMED ERCAN 21054046 SİDDİKA EDA AZER 21054052 SAFA SERCAN GÜVEN 21054055 MELİKE GÜRKAN
Group 7 21054060 ZEYNEP BATUR 21054062 DOĞA TÜRKDOĞAN 21054079 TOPRAK IŞIK ÇAKIN 21054080 AHMET TAHA KILIÇ 21054090 FİRDEVŞ ÖZDEMİR	Group 8 21054096 TAN GÜNGÖR 21054605 NİYAZİ ATIŞ 21054606 RESUL SAĞLAR 21054705 OĞUZHAN AYDIN 22054025 DUYGU ALTINBAŞ 22054053 BETÜL ÖNCÜ
Group 9 22054602 MERT GÜLER 22054603 NİLSUN KARADAĞ 22054604 NAZLİCAN BARAN 22054608 YASİN YAMAN 22054609 MEHMET OZAN TOFTA	Group 10 22054610 SERHUN DEMİR 22054614 TUĞÇE NUR KARAPINAR 22054803 MUHAMMED BEKTAŞ GÜNEŞ 23054612 BARIŞ SEVAT 20054089 MEHMET MERT MUTLU

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Gr_1	05.12.2023	Temperature measurement in industry (thermocouples, pyrometer, laser thermometer etc.)
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Gr_9	26.12.2023	Atomic Force Microscopy (AFM)
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Group 1 1805C044 BETÜL YILDIRIM 1805C701 SİNAN BULSUN 1805C902 AHMET KARADENİZ 1905C002 AZİZE BİLGE ÖZCAN 1905C021 KADİR ARDA UĞURLU 2005C914 YUSUF CAN ŞENTÜRK	Group 2 1905C902 MEHRAN AKBARI 2005C004 AYÇA ÖZKAN 2005C005 DİLANUR KOCAMAN 2005C008 SEZGİN BAŞ 2005C009 İREM MELTEM YAVUZ 2005C011 HAZAR YAŞAR
Group 3 2005C012 MİHRAÇ AKPINAR 2005C013 EGE UZ 2005C014 SUDE ŞENGÜL 2005C016 AYSU ÇATAK 2005C017 ZEYNEP NAMAL 2005C022 ÇAĞLA GEYLANİ	Group 4 2005C023 ALİ CAM 2005C024 ALİEKBER İSET 2005C025 EMİRHAN KILIÇASLAN 2005C030 DENİZ TEMUR 2005C031 UMUT EFE USTAOĞLU 2005C049 ALİ TEOMAN BOZDOĞAN
Group 5 2005C033 HÜSEYİN EGE COŞGUNOĞLU 2005C034 EREN ERTAŞ 2005C035 EMİR USTA 2005C036 MUHAMMET ALİ ÇAM 2005C037 BERKAY BOSTANCI	Group 6 2005C040 HATİCE SENA AYDIN 2005C043 AHMET MELİH YILDIRIM 2005C044 UMUT SEVİM 2005C046 BEYZA NUR EKİNCİ 2005C048 KEREM GÜNÖZ
Group 7 2005C051 AYŞULA İREM AYDIN 2005C905 KÜBRA NUR KOÇAK 2005C911 NİLSU ŞEYMA GÜLER 2005C925 ÖZGE ERSOY 2005C927 ELİF YILMAZ	Group 8 2005C934 BATUHAN YILMAZ 2005C935 GİZEM NUR ÖZTÜRK 2105C008 BEGÜM MEMİ 2105C020 MELİKE İŞILDAR 2105C022 HİLAL YILMAZ
Group 9 2105C026 HARUN BALKAN 2105C039 ÖMER TAYYİP EROĞLU 2105C042 ŞÜKRİYE GÖRAL 2105C704 ENES TALHA ŞENTÜRK 2005C032 BERAT YILMAZ	Group 10 2105C901 İBRAHİM EID 2105C903 SARA İYAD FAYEZ ALBELBEİSİ 2205C033 KAAN ALP ŞİMŞEK 1905C042 TOLGA YILMAZ 2005C038 BERHAN CAN