

Department of Materials Engineering  
<MM-410> Final Year Design Project  
**Project List**



F/SOP/FYDP 02/03/00

Batch **2020**

Semester **Fall and Spring**

| S.No. | Project Title   | Student Name         |          | Supervisor/Co-Supervisor   | Industry          |
|-------|---|----------------------|----------|--|-------------------|
| 01    | Design and Development of piezoelectric composite material for flexible sensor application                        | Umm-e-Aiman          | MM-20006 | Prof. Dr. Fayaz Hussain<br>Dr. M. Sajid Ali<br>Dr. Sajida Shaikh | Nano Technology   |
|       |   | Fouzia Haider        | MM-20021 |  |                   |
|       |   | Uroosa Siddiqui      | MM-20032 |  |                   |
| 02    | Green Synthesis and Characterization of ZnO nanostructures for sensor application.                                | Kashaf Batool        | MM-20002 | Dr. M. Sajid Ali<br>Engr. Danish Majeed                          | Kompas Engg.      |
|       |   | Jaweria Asif         | MM-20003 |  |                   |
|       |   | Fizza Shakil         | MM-20005 |  |                   |
| 03    | Development of Nickel Sulfide Nanostructures for Energy Application.  | Sarah Ashraf         | MM-20001 | Dr. Faaz Ahmed butt<br>Engr. Danish Majeed                       | Wavetec           |
|       |   | M. Asad Khan         | MM-20016 |  |                   |
| 04    | Synthesis of Sodium iron phosphate as a cathode material  | Hamza Bilal          | MM-20012 | Dr. Faaz Ahmed butt<br>Dr. M. Sajid Ali                          | Wavetec           |
|       |   | S. Abdullah Ahmed    | MM-20039 |  |                   |
|       |   | M. Jawwad            | MM-20042 |  |                   |
| 05    | Copper-Ore Extraction and Development of Prototype set-up   | S. Asad Ullah Qadri  | MM-20047 | Prof. Dr. Fayaz Hussain<br>Dr. M. Sajid Ali<br>Dr. M. Sajid Ali  | Keystone Minerals |
|       |   | Muneeb Ali Khan      | MM-20035 |  |                   |
| 06    | Application of computer vision and machine learning for microstructural characterization and analysis of material | Mehdi kazmi          | MM-20046 | Prof. Dr. M. Sohail<br>Dr. Maria Waqas                           |                   |
|       |   | Sohaib anwer         | MM-20049 |  |                   |
|       |   | Bilal Raza           | MM-20018 |  |                   |
| 07    | Development of tools for friction stir welding of space grade aluminum alloy                                      | S. Ahsan Abbas Zaidi | MM-20038 | Prof. Dr. M. Sohail<br>Engr. Bilal Ahmed<br>Engr. Wasiq          | Suparco           |
|       |   | M. Taha Siddiqui     | MM-20045 |  |                   |

FYDP Coordinator \_\_\_\_\_

**(Dr. M. Sajid Ali)**

Chairperson \_\_\_\_\_

**(Prof. Dr. Fayaz Hussain)**

Department of Materials Engineering  
MM-410: Final Year Design Project  
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F/SOP FYDP/02/00

Batch: 2019

Semester Fall-2022 & Spring 2023

| S. No. | Project Title  | Student Name          |          | Supervisor/Co-Supervisor                 | Industry       |
|--------|--|-----------------------|----------|--|----------------|
| 01     | Surface Modification of Magnesium Alloys Through Advanced Coating Processing for Biomedical Applications.                      | Hareem Fatima         | MM-19008 | Prof. Dr. Fayaz Hussain<br>Engr. Uzair   |                |
|        |  | Shanza Idrees         | MM-19006 |  |                |
|        |  | K. M. Taha Rab        | MM-19048 |  |                |
|        |  | Kainat Ikram          | MM-19010 |  |                |
| 02     | Design and Development of Green Nanoparticle incorporated Nano Composite Coatings for improving corrosion resistance of metal. | Rahemeen Imran        | Mm-19004 | Dr. M. Sajid Ali<br>Engr. Mudasir farooq |                |
|        |  | Masooma Fatima        | MM-19018 |  |                |
|        |  | Alvia Fatima          | MM-19021 |  |                |
|        |  | Syeda Ayman Arif      | MM-19025 |  |                |
| 03     | Synthesis and Characterisation of Microporous Bioactive Glass for soft Tissue Re-generation.                                   | M. Zaid Hashim        | MM-19032 | Dr. M. Sajid Ali<br>Dr. Rizwan           |                |
|        |  | Areefa Khan           | MM-19023 |  |                |
|        |  | Syeda Amna Fatima     | MM-19007 |  |                |
|        |  | Zeeshan Shaukat       | MM-19050 |  |                |
| 04     | Development of MAX phases as precursors for catalysis in Battery applications.   | Aina Atif Khan        | MM-19026 | Dr. Faaz Ahmed Butt                      |                |
|        |  | Tayyab Abrar          | MM-19042 |  |                |
|        |  | Abrar Hussain         | MM-19044 |  |                |
|        |  | Taqweem Arshad        | MM-19027 |  |                |
| 05     | Estimation of lifetime of thermally degraded instrument cable used in Power plant.   | H. M. Abu Bakar       | MM-19029 | Prof. Dr. Fayaz Hussain<br>Engr. Mudasir | KINPOE, (PAEC) |
|        |  | M. Yousuf             | MM-19011 |  |                |
|        |  | H. S. Khadija Fareeha | MM-19019 |  |                |
|        |  | Rawaha Imran Elahi    | MM-19054 |  |                |

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|----|---|--------------------|----------|--|-----|
| 06 | Characterisation and development of low and ultra-low cement high alumina castable by using a portion of recycled materials | Faaiz Ali khan     | MM-19003 | Dr. Fayaz Hussain<br>Enrg. Waqar (PSM) | PSM |
|    |   | Hassan Mushataq    | MM-19012 |  |     |
|    |   | Ameer Hamza        | MM-19016 |  |     |
|    |   | Muhammad Hasan     | MM-19043 |  |     |
| 07 | Study on root cause analysis of crack observed during press forging in low alloyed steel ingots.                            | M. Ovais           | MM-19045 | Dr. Sajid and<br>Danish Majeed         | PSM |
|    |   | Abdul Jabbar Azam  | MM-19034 |  |     |
|    |   | M. Hamza Rizwan    | MM-19017 |  |     |
|    |   | Hammad Haider      | MM-19015 |  |     |
| 08 | Utilization of Polyster Powder in Fly-Ash bricks.   | Maaz Mirza         | MM-19052 | Engr. Mudasir                          |     |
|    |   | Aarfa Zarrin       | MM-19051 |  |     |
|    |   | Eman e Taba        | MM-19020 |  |     |
|    |   | S. M. Yashab Naqvi | MM-19039 |  |     |
| 09 | Development of Functional Ceramics for energy Harvesting Devices  | Saeed Ahmed        | MM-19040 | Dr. Fayaz Hussain,<br>Engr. Fahad Riaz |     |
|    |   | Neha Nadeem        | MM-19022 |  |     |
|    |   | Danish Ahmed       | MM-19002 |  |     |

FYDP Coordinator **Dr. M. Sajid Ali Asghar**

FYDP Steering Committee Head: **Dr. M. Sajid**

Chairperson: **Prof. Dr. Fayaz Hussain**

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F/SOP FYDP/02/00

Batch: 2018

Semester Fall-2021 & Spring 2022

| S. No. | Project Title  | Student Name            |          | Supervisor/Co-Supervisor   | Industry                   |
|--------|--|-------------------------|----------|--|----------------------------|
| 01     | Design and development of Friction Stir Welding tools for non-ferrous alloys / materials.  | 1. Mahjabeen Zafar      | MM-18008 | Dr. Sohail Hanif   |                            |
|        |  | 2. Kashaf Mansoor       | MM-18025 |  |                            |
|        |  | 3. Nimra Iqbal          | MM-18027 |  |                            |
|        |  | 4. Zainab Khurshid      | MM-18028 |  |                            |
| 02     | Synthesis and Characterization of Nano Structure Coating Materials for The Improvement of Wear and Tear Resistance of Piercing Plug for Manufacturing of Seamless Pipes. | 1. Rana M. Uzair Anwer  | MM-18001 | Dr. M. Sajid Ali<br>Engr. Asif Ali (E)   | Peoples Steel Mills        |
|        |  | 2. Umer farooq Bin Aziz | MM-18009 |  |                            |
|        |  | 3. M. Ali sarfaraz      | MM-18024 |  |                            |
| 03     | Design and development of shear thickening fluid based fiber reinforced composite for impact resistance applications.  | 1. Aliza Irfan          | MM-003   | Dr. M. Sohail  |                            |
|        |  | 2. Afia Shamim          | MM-013   |  |                            |
|        |  | 3. Bushra               | MM-022   |  |                            |
|        |  | 4. Laiba Shaikh         | MM-035   |  |                            |
| 04     | Design and development of efficient cathode for energy applications  | 1. S. Mahnoor Fatima    | MM-18002 | Dr. Faaz Ahmad Butt  |                            |
|        |  | 2. M. Umer Khan         | MM-18037 |  |                            |
|        |  | 3. Taha Akhlas          | MM-18040 |  |                            |
|        |  | 4. M. Bilal Ahmed       | MM-18044 |  |                            |
| 05     | Design and Development of Polymer Dispersed Liquid Crystal (PDLC) Smart Films  | 1. Junaid Jhangir       | MM-18010 | Dr. Fayaz Hussain<br>Dr. M. Sajid Ali<br>Engr. Danish<br>Engr. Wajhee Abubakar (E) | Optimist Solution Pvt, LTD |
|        |  | 2. Taimoor Sarfaraz     | MM-18016 |  |                            |
|        |  | 3. Furjade Agakan       | MM-18023 |  |                            |
|        |  | 4. Muneeb Raza          | MM-18015 |  |                            |
| 06     | Development and Characterisation of Super-hydrophobic and Self-Healing coatings for engineering applications   | 1. Munsif Jaweed        | MM-18045 | Dr. Fayaz Hussain/<br>Dr. Iftikhar Ahmed Channa                                    |                            |
|        |  | 2. M. Safwan            | MM-18036 |  |                            |
|        |  | 3. M. Wajih Waseem      | MM-18031 |  |                            |

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|----|---|---------------------------|----------|---|--------------------------------|
|    |   | 4. S. Tayyab Bin Tahir    | MM-18014 |   |                                |
| 07 | Design And Development Of Automotive Body Using Recyclable Material And Fiber (Synthetic And Natural) Along With Nano Structures. | 1. UMAMA SHAHID           | MM-18034 | Dr. M. Sajid Ali<br>Engr. Umair<br>Engr. Sarfaraz Karim<br>(E)    | System Dies and Moulds         |
|    |   | 2. ABDUL RAFY QASMI       | MM-18019 |   |                                |
|    |   | 3. ASMA REHAN             | MM-18012 |   |                                |
|    |   | 4. WARISHA SHAHID         | MM-18042 |   |                                |
| 08 | Design and Development of See-beck coefficient measurement setup.   | 1. Hammad Siddiqui        | MM-18018 | Dr. Fayaz Hussain<br>Dr. Iftikhar                                 |                                |
|    |   | 2. Ghulam Fareed          | MM-18043 |   |                                |
|    |   | 3. Ghulam Ali Raza Jaffri | MM-18020 |   |                                |
|    |   | 4. Shaheer Masroor        | MM-18039 |   |                                |
| 09 | Investigation of Transition metal derivative as an efficient Hydrogen Evaluation Catalyst   | 1. M. Arshan              | MM-18021 | Dr. Faaz Ahmad Butt   |                                |
|    |   | 2. Hammad Liaquat         | MM-18005 |   |                                |
|    |   | 3. Hamza Naeem            | MM-18032 |   |                                |
| 10 | Design And Development Of corrosion resistant hydrophobic Zn/ZnO Composite Coatings on Steel Substrates.                          | 1. Abdul Hanan            | MM-18041 | Engr. Danish Majeed<br>Dr. M. Sajid Ali<br>Engr. Umer Hussain (E) | SSGC, Sui Southern Gas Company |
|    |   | 2. Sheharyar Ahmad        | MM-301   |   |                                |
|    |   | 3. Tabish Ali             | MM-302   |   |                                |
|    |   | 4. M. Huzaifa Saleem      | MM-18004 |   |                                |

FYDP Coordinator **Dr. M. Sajid Ali Asghar**

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