

## Course Offering State (FALL 2024)

| No                               | Course Code | Course Title                                         | Course CH | Semester     |
|----------------------------------|-------------|------------------------------------------------------|-----------|--------------|
| Chemical Engineering Department  |             |                                                      |           |              |
| 1                                | HU-127      | Ideology and Constitution of Pakistan                | 2-0       | 1st Semester |
| 2                                | PHY-102     | Applied Physics                                      | 2-1       |              |
| 3                                | CH-113      | Inorganic & Organic Chemistry                        | 2-1       |              |
| 4                                | CHE-103     | Chemical Engineering Principles-I                    | 2-0       |              |
| 5                                | CHE-103     | Chemical Engineering Principles-I                    | 2-0       |              |
| 6                                | CS-117      | Applications of ICT                                  | 2-1       |              |
| 7                                | ME-105      | Workshop Practice                                    | 0-1       |              |
| 8                                | MATH-101    | Calculus and Analytical Geometry                     | 3-0       |              |
| 9                                | HU-114      | Functional English                                   | 2-0       |              |
| 10                               | CH-202      | Organic & Biochemistry                               | 3-1       | 3rd Semester |
| 11                               | CHE-221     | Fluid Mechanics-I                                    | 3-0       |              |
| 12                               | CHE-221     | Fluid Mechanics-I                                    | 3-0       |              |
| 13                               | CHE-231     | Chemical Engineering Thermodynamics-I                | 3-0       |              |
| 14                               | CHE-202     | Chemical Process Principles (CPP-II)                 | 3-0       |              |
| 15                               | CHE-202     | Chemical Process Principles (CPP-II)                 | 3-0       |              |
| 16                               | HU-212      | Technical & Business Writing                         | 3-0       |              |
| 17                               | MSE-102     | Introduction to Engineering Materials                | 3-0       |              |
| 18                               | MSE-102     | Introduction to Engineering Materials                | 3-0       |              |
| 19                               | CHE-346     | Particulate Technology                               | 3-1       | 5th Semester |
| 20                               | CHE-343     | Separation Processes-I                               | 3-1       |              |
| 21                               | MATH-351    | Numerical Methods                                    | 3-0       |              |
| 22                               | CHE-332     | Chemical Engineering Thermodynamics-II               | 3-0       |              |
| 23                               | MGT-271     | Entrepreneurship                                     | 2-0       | 7th Semester |
| 24                               | ECO-130     | Engineering Economics                                | 2-0       |              |
| 25                               | CHE-422     | Fuel Engineering                                     | 3-1       |              |
| 26                               | CHE-422     | Fuel Engineering                                     | 3-1       |              |
| 27                               | CHE-451     | Chemical Engineering Plant Design                    | 3-0       |              |
| 28                               | CHE-499     | Final Year Project                                   | 0-2       |              |
| 29                               | CHE-442     | Membrane Technology                                  | 3-0       |              |
| 30                               | CHE-350     | Petroleum Refinery                                   | 3-0       |              |
| 31                               | OTM-454     | Project management                                   | 3-0       |              |
| 32                               | CHE-464     | Computational Fluid Dynamics in Chemical Engineering | 3-0       |              |
| 33                               | CHE-452     | Chemical Process Design & Simulation                 | 2-1       |              |
| 34                               | CHE-452     | Chemical Process Design & Simulation                 | 2-1       |              |
| 35                               | CSL-402     | Community Service Learning                           | 0-1       | PG           |
| 36                               | CHE-843     | Separation Processing in Chemical Engg (core)        | 3-0       |              |
| 37                               | CHE-847     | Chemical Kinetics and Reactor Design (core)          | 3-0       |              |
| 38                               | CHE-815     | Nanocatalysis (Elective)                             | 3-0       |              |
| 39                               | CSE-801     | Computational Fluid Dynamics                         | 3-0       |              |
| 40                               | EME-812     | Detection & Analysis of Explosives                   | 3-0       |              |
| 41                               | EME-981     | Advance Fuel Technology                              | 3-0       |              |
| 42                               | CHE-848     | Gasification Processes                               | 3-0       |              |
| 43                               | EME-800     | Science of Energetics Materials                      | 3-0       |              |
| Materials Engineering Department |             |                                                      |           |              |
| 1                                | HU-114      | Functional English                                   | 2-0       | 1st Semester |
| 2                                | CS-117      | Applications of ICT                                  | 2-1       |              |
| 3                                | HU-101      | Islamic Studies                                      | 2-0       |              |
| 4                                | MATH-101    | Calculus and Analytical Geometry                     | 3-0       |              |
| 5                                | ME-105      | Workshop Practice                                    | 0-1       | 3rd Semester |
| 6                                | EE-105      | Basic Electrical Engineering                         | 2-1       |              |
| 7                                | MSE-102     | Introduction to Engineering Materials                | 3-0       |              |
| 8                                | MATH-243    | Vector Calculus                                      | 3-0       |              |
| 9                                | CH-108      | Applied Chemistry                                    | 3-1       | 5th Semester |
| 10                               | MSE-221     | Materials Thermodynamic & Kinetics                   | 3-0       |              |
| 11                               | EE-105      | Basic Electrical Engineering                         | 2-1       |              |
| 12                               | MSE-231     | X-Ray Diffraction & Crystallography                  | 3-0       |              |
| 13                               | MSE-201     | Materials Engineering Lab-I                          | 0-1       | 7th Semester |
| 14                               | MSE-333     | Materials Testing Techniques                         | 3-0       |              |
| 15                               | MSE-342     | Polymer Engg                                         | 3-0       |              |
| 16                               | MSE-313     | Welding & Joining                                    | 2-0       |              |
| 17                               | MSE-316     | Foundry Engg                                         | 3-0       | PG           |
| 18                               | MSE-213     | Metals & Alloys-I                                    | 3-0       |              |
| 19                               | MGT-271     | Entrepreneurship                                     | 2-0       |              |
| 20                               | MSE-303L    | Materials Engg Lab-III                               | 0-2       |              |
| 21                               | MSE-474     | Surface Engg of Materials                            | 3-0       | PG           |
| 22                               | MSE-461     | Composite Materials                                  | 3-0       |              |
| 23                               | MSE-325     | Heat Treatment of Materials                          | 3-0       |              |
| 24                               | MSE-464     | Advanced Materials                                   | 3-0       |              |
| 25                               | MSE-405L    | Materials Engg Lab -V                                | 0-1       | PG           |
| 26                               | OTM-454     | Project Management                                   | 3-0       |              |
| 27                               | MSE-499     | Final Year Project                                   | 0-2       |              |
| 28                               | MSE-811     | Materials Thermodynamics                             | 3-0       |              |
| 30                               | MSE-821     | Mechanical Behaviour of Materials                    | 3-0       | PG           |
| 31                               | MSE-881     | Manufacturing Process                                | 3-0       |              |
| 32                               | MSE-882     | Corrosion & Control Engineering                      | 3-0       |              |
| 33                               | MSE-852     | Advanced Surface Coating                             | 3-0       |              |
| 34                               | NSE-843     | Nanotechnology & Photovoltaic                        | 3-0       | PG           |
| 35                               | NSE-842     | Nano Materials for Energy Applications               | 3-0       |              |
| 36                               | RM-898      | Research Methodology                                 | 0-2       |              |
| 37                               | MSE-854     | Characterization of Materials                        | 3-0       |              |
| 38                               | NSE-813     | Essentials of Nano Sci & Engg                        | 3-0       |              |