

| <i>University of Alberta</i> |                                                                          | <i>University of Calgary</i> |                                        |
|------------------------------|--------------------------------------------------------------------------|------------------------------|----------------------------------------|
| <b>10-MET-A1</b>             | <b>Metallurgical Thermodynamics</b>                                      |                              |                                        |
| MAT E 204                    | Materials Engineering Thermodynamics                                     |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-A2</b>             | <b>Metallurgical Rate Phenomena</b>                                      |                              |                                        |
| MAT E 470                    | Process Dynamics                                                         | ENME 341                     | Fundamentals of Fluid Mechanics        |
|                              |                                                                          | OR                           |                                        |
|                              |                                                                          | ENCH 331                     | Process Fluid Dynamics                 |
|                              |                                                                          | OR                           |                                        |
|                              |                                                                          | ENME 495                     | Fluid Mechanics                        |
|                              |                                                                          | OR                           |                                        |
|                              |                                                                          | ENME 471                     | Heat Transfer                          |
|                              |                                                                          | OR                           |                                        |
|                              |                                                                          | ENCH 403                     | Heat Transfer                          |
| <b>10-MET-A3</b>             | <b>Metal Extraction Processes</b>                                        |                              |                                        |
| CME 472                      | Extractive Metallurgy                                                    |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-A4</b>             | <b>Structure of Materials</b>                                            |                              |                                        |
| MAT E 211                    | Characterization of Materials                                            |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-A5</b>             | <b>Mechanical Behaviour and Fracture of Materials</b>                    |                              |                                        |
| MAT E 351                    | Mechanical Properties                                                    | ENME 521                     | Materials II                           |
| <b>10-MET-A6</b>             | <b>Phase Transformation &amp; Thermal Treatment of Metals and Alloys</b> |                              |                                        |
| MAT E 335                    | Phase Transformations I                                                  |                              | <i>No Equivalent Course offered</i>    |
| &                            |                                                                          |                              |                                        |
| MAT E 336                    | Phase Transformations II                                                 |                              |                                        |
| <b>10-MET-A7</b>             | <b>Corrosion and Oxidation</b>                                           |                              |                                        |
| MAT E 341                    | Applied Electrochemistry and Corrosion                                   |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B1</b>             | <b>Mineral Processing</b>                                                |                              |                                        |
| CME 421                      | Mineral Processing                                                       |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B2</b>             | <b>Hydrometallurgy and Electrometallurgy</b>                             |                              |                                        |
|                              | <i>No Equivalent Course offered</i>                                      |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B3</b>             | <b>Ironmaking and Steelmaking</b>                                        |                              |                                        |
|                              | <i>No Equivalent Course offered</i>                                      |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B4</b>             | <b>Non-Ferrous Extractive Metallurgy</b>                                 |                              |                                        |
|                              | <i>No Equivalent Course offered</i>                                      |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B5</b>             | <b>Metal Fabrication</b>                                                 |                              |                                        |
| MAT E 473                    | Processing of Materials                                                  | ENME 417                     | Manufacturing and Production Processes |
| <b>10-MET-B6</b>             | <b>Physical Metallurgy of Iron and Steel</b>                             |                              |                                        |
| MAT E 476                    | Microalloyed Steels provides about half of the material                  |                              | <i>No Equivalent Course offered</i>    |
| <b>10-MET-B7</b>             | <b>Physical Metallurgy of Non-Ferrous Metals and Alloys</b>              |                              |                                        |
|                              | <i>No Equivalent Course offered</i>                                      |                              | <i>No Equivalent Course offered</i>    |

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|------------------------------|-------------------------------------------------|------------------------------|-------------------------------------|
| <b>10-MET-B8</b>             | <b>Ceramic Materials</b>                        |                              |                                     |
| MAT E 471                    | Ceramics                                        |                              | <i>No Equivalent Course offered</i> |
| <b>10-MET-B9</b>             | <b>Structure and Properties of Polymers</b>     |                              |                                     |
| MAT E 482                    | Introduction of Polymer Science and Engineering | ENCH 539                     | Polymer Engineering                 |
| <b>10-MET-B10</b>            | <b>Advanced Electronic Materials</b>            |                              |                                     |
| MAT E 491                    | Properties and Physics of Functional Materials  |                              | <i>No Equivalent Course offered</i> |
|                              |                                                 |                              | <b>Updated October 2025</b>         |