

BACHELOR PROGRAM IN MANUFACTURING ENGINEERING

Number of credits required: 130

| <i>Semester</i>                | <i>Subject code</i>   | <i>Subject</i>  | <i>Number of credits</i> |
|--------------------------------|-----------------------|---|--------------------------|
| <b>I</b><br><b>19 credits</b>  |                       | Basic principles of Marxism-Leninism 1                    | 2                        |
|                                |                       | Basic Informatics   | 3                        |
|                                |                       | Calculus  | 4                        |
|                                |                       | V General Physics A                                       | 4                        |
|                                |                       | General Chemistry   | 3                        |
|                                |                       | Foreign Language 1(English)                               | 3                        |
|                                |                       | Physical Education 1 - Athletics                          | 2                        |
|                                |                       | Party's military strategies and military – security tasks | 3                        |
| <b>II</b><br><b>19 credits</b> |                       | <b>Core subjects</b>                                      | <b>15</b>                |
|                                |                       | Foreign Language 2 (English)                              | 4                        |
|                                |                       | Introduction to Engineering                               | 2                        |
|                                |                       | Descriptive Geometry and Engineering Drawing              | 3                        |
|                                |                       | Linear Algebra  | 3                        |
|                                |                       | Theoretical Mechanics                                     | 3                        |
|                                |                       | Physical Education 2                                      | 2                        |
|                                |                       | Physical Education 3                                      | 2                        |
|                                |                       | Military tactics and techniques                           | 3                        |
|                                |                       | <b>Elective subjects</b>                                  | <b>4</b>                 |
|                                |                       | Fundamentals of Law                                       | 2                        |
|                                |                       | Communication Skills                                      | 2                        |
|                                |                       | Practice for Vietnamese Texts                             | 2                        |
|                                |                       | General Logics  | 2                        |
|                                | General of Psychology | 2   |                          |
|                                |                       | <b>Core subjects</b>                                      | <b>16</b>                |
|                                |                       | Basic principles of Marxism-Leninism 2                    | 3                        |
|                                |                       | Electrical Engineering                                    | 2                        |
|                                |                       | Strength of Materials                                     | 3                        |

|                                     |  |   |           |
|-------------------------------------|--|---|-----------|
| <b>III</b><br><br><b>19 credits</b> |  | Engineering Materials                                 | 3         |
|                                     |  | Mechanical Engineering Drawing                        | 2         |
|                                     |  | Theory of Mechanisms and Machines                     | 3         |
|                                     |  | <b>Elective subjects</b>                              | <b>3</b>  |
|                                     |  | Experimental Design and Analysis                      | 3         |
|                                     |  | Probability theory and mathematical statistics        | 3         |
| <b>IV</b><br><br><b>14 credits</b>  |  | <b>Core subjects</b>                                  | <b>12</b> |
|                                     |  | Theory of Metal Cutting                               | 2         |
|                                     |  | Tolerances, Fits, and Engineering Metrology           | 3         |
|                                     |  | Fundamentals of Machine Design and Project            | 4         |
|                                     |  | Mechanical Workshop Practice                          | 3         |
|                                     |  | <b>Elective subjects</b>                              | <b>2</b>  |
|                                     |  | Dynamics of Mechanical System                         | 2         |
|                                     |  | Numerical Methods in Mechanics                        | 2         |
| <b>V</b><br><br><b>19 credits</b>   |  | <b>Core subjects</b>                                  | <b>13</b> |
|                                     |  | Ho Chi Minh Ideology                                  | 2         |
|                                     |  | Research Methodology                                  | 2         |
|                                     |  | Machine Tools   | 3         |
|                                     |  | Jigs and Fixtures                                     | 2         |
|                                     |  | Machining Processes                                   | 4         |
|                                     |  | <b>Elective subjects</b>                              | <b>6</b>  |
|                                     |  | Fluid Engineering                                     | 3         |
|                                     |  | Industrial Machinery                                  | 3         |
|                                     |  | Thermal Engineering                                   | 3         |
|                                     |  | Mechatronic systems                                   | 3         |
| <b>VI</b><br><br><b>17 Credits</b>  |  | <b>Core subjects</b>                                  | <b>14</b> |
|                                     |  | Revolutionary strategies of Vietnam Communist Party   | 3         |
|                                     |  | Casting, Welding and Forming                          | 3         |
|                                     |  | Fundamentals of Manufacturing Engineering and Project | 4         |
|                                     |  | CAD/CAM Technology                                    | 4         |
|                                     |  | <b>Elective subjects</b>                              | <b>3</b>  |

|                                      |  |                                   |            |
|--------------------------------------|--|-----------------------------------|------------|
|                                      |  | Mold Design for Plastic products  | 3          |
|                                      |  | Advanced Machining Processes      | 3          |
|                                      |  | Machine Tools Maintenance         | 3          |
| <b>VII</b><br><br><b>13 credits</b>  |  | <b>Core subjects</b>              | <b>10</b>  |
|                                      |  | Safety Techniques and Environment | 3          |
|                                      |  | CNC Technology and Project        | 4          |
|                                      |  | Specialized Practicum             | 3          |
|                                      |  | <b>Elective subjects</b>          | <b>3</b>   |
|                                      |  | Cutting Tools Design              | 3          |
|                                      |  | Rapid Prototyping Technology      | 3          |
|                                      |  | Surface Engineering               | 3          |
| <b>VIII</b><br><br><b>10 credits</b> |  | <b>Core subjects</b>              | <b>5</b>   |
|                                      |  | Integrated Practicum              | 3          |
|                                      |  | Manufacturing System              | 2          |
|                                      |  | <b>Elective subjects</b>          | <b>5</b>   |
|                                      |  | Automation in Manufacturing       | 2          |
|                                      |  | Forming Technologies              | 2          |
|                                      |  | Business Management               | 3          |
|                                      |  | Quality Assurance                 | 3          |
| <b>Total</b>                         |  |                                   | <b>130</b> |