**RAJIV GANDHI PROUDYOGIKI VISHVAVIDYALAYA (DIPLOMA WING)**

**BHOPAL T02 DIPLOMA IN TEXTILE TECHNOLOGY**

**PART A:- PROCESS OF CURRICULUM DEVELOPMENT**

**LIST OF IDENTIFIED PROFESSIONAL ROLES**

1. To apply knowledge of mathematics, science, and engineering.

2. To design and conduct experiments, as well as to analyze and interpret data.

3. To design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

4. To function on multidisciplinary teams.

5. To identify, formulate, and solve engineering problems.

6. To understand professional and ethical responsibility.

7. To communicate effectively.

8. To understand the impact of engineering solutions in a global, economic, environmental, and societal context.

9. To engage in lifelong learning.

10. To use the techniques, skills, and modern engineering tools necessary for engineering practice.

# LOs FORMATION

## COURSE NAME: - KNITTING TECHNOLOGY (603)
### (Total 100 Hrs., Total 100 Marks)

**List of COs and Los**

**CO1: To Understand about the basic of knitting technology. (20Hrs, 20 marks)**

LO1: To study about the concept of knitting process, its principal and general terms. (10 Hrs., 10 Marks)

LO2: To understand about the types of needles; such as latch, spring beard and compound. (10 Hrs., 10 Marks)

**CO2: To Understand about warp knitting. (20Hrs, 20 marks)**

LO1: To understand the principles and details of warp knitting machines i.e., tricot and raschel. (10 Hrs. 10 Marks)

LO2: To study about the different warp structures such as; pillar, atlas lap, full tricot, lock nit, reverse lock nit, satin, velvet, queen's cord, sharkskin, blind lap, inlay, full plate etc. (10 Hrs. 10 Marks)

**CO3: To understand about weft knitting. (20Hrs, 20 marks)**

LO1: To understand the principles and details of weft knitting machines. (10 Hrs. 10 Marks)

LO2: To study about the different weft structures such as; plain, rib, interlock, purl, float and tuck. (10 Hrs. 10 Marks)

**CO4: To understand the statistics of knitting and yarn requirement. (25Hrs, 35 marks)**

LO1: To understand the concept of production of warp and weft knitting machines. (10 Hrs 10 Marks)

LO2: To study about yarn quality requirement in terms of hairiness, coefficient of friction and fabric defects found in knitting. (10 Hrs. 10Marks)

LO3: Determination of stitch length, stitch density, tightness factor. (05Hrs, 15 Marks)

**CO5: To understand about the basics concepts principles of technical textiles. (25 Hrs, 35 marks)**

LO1: To understand about the principles and processes of technical textiles. (10 Hrs, 10 Marks)

LO2: To study about the fields of application of technical textiles. (10Hrs, 10 Marks)

LO3: To calculate the yarn requirement per square meter and costing of given knitted fabric (05Hrs, 15 Marks)

| RGPV (Diploma Wing ) Bhopal | | COURSE PLAN | | Format -2 | | Sheet No. 1/1 | |
|---|---|---|---|---|---|---|---|
| Course Name | | **KNITTING TECHNOLOGY** | | | Semester | | SIXTH |
| Branch | TEXTILE TECHNOLOGY | | Course Code | 603 | No. of Cos | 05 | No. of Los | 12 |

| Total Hrs. of Teaching Learning | 100 | Total Marks | 100 | Total no. of Assessments | 10 | Types of Assessments | | No. of External Assessments | | NIL |
|---|---|---|---|---|---|---|---|---|---|---|

| | | DESCRIPTION OF OUTCOMES | | | T-L Hrs. | Max. Marks |
|---|---|---|---|---|---|---|
| CO 01 | T026031 | **To Understand about the basic of knitting technology.** | | | 20 | 20 |
| Los | T0260311 | To study about the concept of knitting process, its principal and general terms. | | | 10 | 10 |
| | T0260312 | To understand about the types of needles; such as latch, spring beard and compound. | | | 10 | 10 |
| CO 02 | T026032 | **To Understand about warp knitting.** | | | 20 | 20 |
| Los | T0260321 | To understand the principles and details of warp knitting machines i.e., tricot and raschel. | | | 10 | 10 |
| | T0260322 | To study about the different warp structures such as; pillar, atlas lap, full tricot, lock nit, reverse lock nit, satin, velvet, queen's cord, sharkskin, blind lap, inlay, full plate etc . | | | 10 | 10 |
| CO 03 | T026033 | **To understand about weft knitting.** | | | 20 | 20 |
| Los | T0260331 | To understand the principles and details of weft knitting machines. | | | 10 | 10 |
| | T0260332 | To study about the different weft structures such as; plain, rib, interlock, purl, float and tuck. | | | 10 | 10 |
| CO 04 | T026034 | **To understand the statistics of knitting and yarn requirement.** | | | 25 | 35 |

| | | | | |
|---|---|---|---|---|
| Los | T0260341 | To understand the concept of production of warp and weft knitting machines. | 10 | 10 |
| | T0260342 | To study about yarn quality requirement in terms of hairiness, coefficient of friction and fabric defects found in knitting. | 10 | 10 |
| | T0260343 | Determination of stitch length, stitch density, tightness factor. | 05 | 15 |
| CO 05 | T026035 | **To understand about the basics concepts principles of technical textiles.** | 25 | 35 |
| Los | T0260351 | To understand about the principles and processes of technical textiles. | 10 | 10 |
| | TO260352 | To study about the fields of application of technical textiles. | 10 | 10 |
| | TO260353 | To calculate the yarn requirement per square meter and costing of given knitted fabric | 05 | 15 |

| RGPV (DIPLOMA WING) BHOPAL | OCB CURRICULUM FOR THE COURSE | FORMAT- 3 | Sheet No. 1/3 |
|---|---|---|---|
| Branch | TEXTILE TECHNOLOGY | Semester | SIXTH |
| Course Code | | Course Name | **KNIITING TECHNOLOGY** |

| CourseOutcome 1 | **To Understand about the basic of knitting technology.** | Teach Hrs | Marks |
|---|---|---|---|
| Learning Outcome 1 | To study about the concept of knitting process, its principal and general terms. | 10 | 10 |
| CONTENT | Introduction to knitting process, general terms of knitting technology such as loop, course, Wales, stitch density, stitch length. | | |
| Method of Assessment | Paper pen test | | |
| Learning Outcome 2 | To understand about the types of needles. | 10 | 10 |
| CONTENT | Details about knitting needle such as latch, spring beard and compound. | | |
| Method of Assessment | Paper pen test | | |
| CourseOutcome 2 | **To Understand about warp knitting.** | 20 | 20 |
| Learning Outcome 1 | To understand the principles and details of warp knitting machines. | 10 | 10 |
| CONTENT | Warp knitting machines i.e., tricot and raschel. | | |
| Method of Assessment | Paper pen test | | |
| Learning Outcome 2 | To study about the different warp structures. | 10 | 10 |
| CONTENT | Basic warp structure such as; pillar, atlas lap, full tricot, lock nit, reverse lock nit, satin, velvet, queen's cord, sharkskin, blind lap, inlay, full plate etc. | | |
| Method of Assessment | Paper pen test | | |
| CourseOutcome 3 | **To understand about weft knitting.** | 20 | 20 |
| Learning Outcome 1 | To understand the principles and details of weft knitting machines. | 10 | 10 |
| CONTENT | Principle and mechanism used in weft knitting machine. | | |

| | | | |
|---|---|---|---|
| Method of Assessment | Paper pen test | | |
| Learning Outcome 2 | To study about the different weft structures. | 10 | 10 |
| CONTENT | Weft structures such as; plain, rib, interlock, purl, float and tuck. | | |
| Method of Assessment | Paper pen test | | |
| CourseOutcome 4 | **To understand the statistics of knitting and yarn requirement.** | 25 | 35 |
| Learning Outcome 1 | To understand the concept of production of warp and weft knitting machines. | 10 | 10 |
| CONTENT | Production of warp knitting machine and production of weft knitting machine | | |
| Method of Assessment | Paper pen test | | |
| Learning Outcome 2 | To study about yarn quality requirement and fabric defects found in knitting. | 10 | 10 |
| CONTENT | Yarn quality requirement in terms of hairiness, coefficient of friction and different defects found in knitting. | | |
| Method of Assessment | Paper pen test | | |
| Learning Outcome 3 | Determination of stitch length, stitch density, tightness factor | 05 | 15 |
| CONTENT | Measurement of stitch length, stitch density and tightness factor of given fabric sample. | | |
| Method of Assessment | Paper Pen Test | | |
| CourseOutcome 5 | **To understand about the basics concepts principles of technical textiles.** | 25 | 35 |
| Learning Outcome 1 | To understand about the principles and processes of technical textiles. | 10 | 10 |
| CONTENT | General idea about types of technical textiles and processes of all its branches. | | |
| Method of Assessment | Paper pen test | | |

| Learning Outcome 2 | To study about the fields of application of technical textiles. | 10 | 10 |
|---|---|---|---|
| CONTENT | Detailed idea about the products, end uses and examples of technical textiles. | | |
| Method of Assessment | Paper pen test | | |
| Learning Outcome 3 | To calculate the yarn requirement per square meter and Costing of knitted fabric. | 05 | 15 |
| CONTENT | Determining the yarn requirement and costing of given fabric sample. | | |
| Method of Assessment | Paper Pen Test | | |