

## Tentative scheduling of undergraduate courses

(The courses in red colour are the Institute core and programme linked core courses. These slots are fixed by institute)

| Sem  | Lecture                     | lecture                                     | lecture                            | lecture                              | Other                              | Other                                 | Other                                       | Other                                   | L | T | P | TOTAL |
|------|-----------------------------|---------------------------------------------|------------------------------------|--------------------------------------|------------------------------------|---------------------------------------|---------------------------------------------|-----------------------------------------|---|---|---|-------|
| I    | Maths-1 / 2<br>(3-1-0)4     | EE / CS<br>(3-0-2)4                         | PH / CY<br>(3-0-4)5                | Mechanics<br>/ NONE<br>(3-0-2)4      | Intro. to<br>Engg/ Prog<br>(0-0-2) | Graphics /<br>Prod. Real.<br>(0-0-4)2 | Language /<br>None<br>(0-0-4)2              |                                         |   |   |   |       |
| II   | Maths-2 / 1<br>(3-1-0)4     | CS / EE<br>(3-0-2)4                         | CY / PH<br>(3-0-4)5                | NONE /<br>Mechanics<br>(3-0-2)4      | Intro to<br>Engg/ Prog<br>(0-0-2)  | Prod Real./<br>Graphics<br>(0-0-4)2   | Language /<br>None<br>(0-0-4)2              |                                         |   |   |   |       |
| III  | PL BS<br>AML120<br>(3-1-2)5 | PL EA/ES<br>AML130 / HUL<br>(3-1-2)5        | Poly chem<br>(3-0-0)3              | Biology<br>(3-0-2)4/ Env<br>(2-0-0)2 | Text. fibres<br>(2-0-2)3           |                                       |                                             |                                         |   |   |   |       |
| IV   | Yarn Manf.-I<br>(3-0-0)3    | Fabric Manf. I<br>(3-0-0)3                  | Tech TP &F<br>(3-0-0)3             | Env (2-0-0)2/<br>Biology<br>(3-0-2)4 | Structure<br>property<br>(3-0-0)3  | Yarn Manf.<br>Lab -I<br>(0-0-2)1      | Fabric<br>Manf. Lab I<br>(0-0-2)1           | Lab Prep and<br>finishing<br>(0-0-3)1.5 |   |   |   |       |
| V    | Yarn Manf.-II<br>(3-0-0)3   | Fabric Manf. II<br>(3-0-0)3                 | Tech. Tex Col<br>(3-0-0)3          | Mfd<br>Fibre Tech<br>(3-0-0)3        | DE/HUL<br>/PLEA/ES                 | Yarn Manf.<br>Lab -II<br>(0-0-2)1     | Fabric<br>Manf. Lab II<br>(0-0-2)1          | Tech. Tex.<br>Col. Lab<br>(0-0-3)1.5    |   |   |   |       |
| VI   | Eval. of Text<br>(3-0-0)3   | Theory of<br>textile structures<br>(3-1-0)4 | Spl. Yarns &<br>Fabric<br>(2-0-0)2 | DE/OC/HUL                            | DE/OC                              | Mfd<br>Fibre Tech<br>Lab<br>(0-0-2)1  | Evaluation<br>of textile<br>lab<br>(0-0-2)1 |                                         |   |   |   |       |
| VII  | DE/OC                       | DE/OC                                       | DE/OC/HUL                          |                                      |                                    | Project part 1<br>(0-0-8) 4           |                                             |                                         |   |   |   |       |
| VIII |                             |                                             |                                    |                                      |                                    | Project Part II<br>(0-0-12)6          |                                             |                                         |   |   |   |       |

| SN | Category                | Symbol | B.Tech requirement                   | Textile B.Tech    | Remarks                                          |
|----|-------------------------|--------|--------------------------------------|-------------------|--------------------------------------------------|
| 1  | Institute Core          | IC     | 55 credits                           | 55                | Common to all disciplines                        |
| 2  | Programme Linked EAS/BS | PL     | 0-15                                 | 62                | Discipline specific as decided by the Department |
| 3  | Departmental core       | DC     | 65-80 with minimum 10 as DE          |                   | 18                                               |
| 4  | Departmental Elective   | DE     |                                      |                   |                                                  |
| 5  | Open Category           | OC     | 10 credits                           | 10                | Open to student's choice                         |
| 6  | Nongraded Core          | NG     | 15 units                             | 15                |                                                  |
|    |                         |        | 145-155 Credits + 15 nongraded units | 145 +15 Nongraded |                                                  |
|    |                         |        |                                      |                   |                                                  |

$$55+62+18(\text{DE}) +10=145$$

**INSTITUTE CORE COURSES REQUIREMENT: TOTAL- 55 CREDITS****a) Basic sciences: 22 credits**

| Maths | Physics | Chem. | Bio | Total |
|-------|---------|-------|-----|-------|
| 2X4=8 | 5       | 5     | 4   | 22    |

**b) EA and ES courses: 18 credits**

| Elect. Eng. | Comp. Sci | Eng. Mech | Eng drawg/<br>Communication | Manufacturing/<br>product realization | Env.Studies | Total |
|-------------|-----------|-----------|-----------------------------|---------------------------------------|-------------|-------|
| 4           | 4         | 4         | 2                           | 2                                     | 2           | 18    |

**c) Humanities and social Sciences: 15 credits****PROGRAMME LINKED BS/EA/ES COURSES: 10 CREDITS**

| AML130<br>Experimental Methods<br>& Analysis | AML150<br>Solid And Fluid<br>Mechanics | Total |
|----------------------------------------------|----------------------------------------|-------|
| 5( 3-0-2)                                    | 5(3-0-2)                               | 10    |

**NON GRADE CORE REQUIREMENT: 15 CREDITS**

| Introduction to<br>the Engg & Prog | Language<br>and<br>writing<br>skills | NCC/<br>NSO/<br>NSS | Prof. ethics<br>&<br>social<br>responsibilities | Communication<br>skill<br>/seminar | Design/<br>Practical<br>experience | Total |
|------------------------------------|--------------------------------------|---------------------|-------------------------------------------------|------------------------------------|------------------------------------|-------|
| 2                                  | 2                                    | 2                   | 2                                               | 2                                  | 2                                  | 15    |

## DEPARTMENT CORE: 62

| SN      | Courses                                             | LTP   | Total Credits |
|---------|-----------------------------------------------------|-------|---------------|
| TTL200  | Polymer Chemistry                                   | 3-0-0 | 3             |
| TTL210  | Textile Fibres                                      | 2-0-2 | 3             |
| TTL211  | Structure and Physical Properties of Fibres         | 3-0-0 | 3             |
| TTL212  | Manufactured Fibre Technology                       | 3-0-0 | 3             |
| TTL221  | Yarn Manufacture – I                                | 3-0-0 | 3             |
| TTL222  | Yarn Manufacture – II                               | 3-0-0 | 3             |
| TTL231  | Fabric Manufacture – I                              | 3-0-0 | 3             |
| TTL232  | Fabric Manufacture – II                             | 3-0-0 | 3             |
| TTL241  | Tech of Textile Preparation & Finishing             | 3-0-0 | 3             |
| TTL242  | Technology of Textile Coloration                    | 3-0-0 | 3             |
| TTL361  | Evaluation of Textile Materials                     | 3-0-0 | 3             |
| TTL362  | Theory of Textile Structures                        | 3-1-0 | 4             |
| TTL36-  | Speciality Yarns and Fabrics                        | 2-0-0 | 2             |
| TTP212  | Manufactured Fibre Technology Lab                   | 0-0-2 | 1             |
| TTP221  | Yarn Manufacture Laboratory – I                     | 0-0-2 | 1             |
| TTP222  | Yarn Manufacture Laboratory – II                    | 0-0-2 | 1             |
| TTP231  | Fabric Manufacture Laboratory – I                   | 0-0-2 | 1             |
| TTP232  | Fabric Manufacture Laboratory – II                  | 0-0-2 | 1             |
| TTP241  | Technology of Textile Preparation And Finishing Lab | 0-0-3 | 1.5           |
| TTP242  | Technology of Textile Coloration Lab                | 0-0-3 | 1.5           |
| TTP361  | Evaluation of Textiles lab                          | 0-0-2 | 1             |
|         | Major Project Part I                                |       | 4             |
| AML150  | Solid And Fluid Mechanics                           | 3-1-2 | 5             |
| AML 130 | Experimental Methods & Analysis                     | 3-1-2 | 5             |
|         | <b>TOTAL</b>                                        |       | <b>62</b>     |

## DEPARTMENT ELECTIVES: MINIMUM 18

| SN      | Courses                                          | LTP   | Total credits | Spl. Cat |
|---------|--------------------------------------------------|-------|---------------|----------|
| TTL324  | Multi and long Fibre Spinning                    | 3-0-0 | 3             |          |
| TTL331  | Woven textile design                             | 3-0-0 | 3             |          |
| TTL332  | Computer Aided fabric manufacturing              | 2-0-2 | 3             |          |
| TTL342  | Colour Science                                   | 2-0-0 | 2             |          |
| TTL351  | Apparel Technology                               | 2-0-2 | 3             |          |
| TTL365  | Costing and its Application in Textiles          | 3-1-0 | 4             | 2        |
| TTL710  | High Performance and Specialty Fibres            | 3-0-0 | 3             | 1        |
| TTL719  | Functional and Smart Textiles                    | 3-0-0 | 3             | 1        |
| TTL722  | Mechanics of Spinning Processes                  | 3-0-0 | 3             |          |
| TTL724  | Textured Yarn Technology                         | 3-0-0 | 3             |          |
| TTL725  | Mechanics of Spinning Machines                   | 3-0-0 | 3             |          |
| TTL740  | Science & App. of Nanotechnology in Textiles     | 3-0-0 | 3             | 1        |
| TTL744  | Env. Manag. in Textile and Allied Industries     | 3-0-0 | 3             |          |
| TTL746  | Medical Textiles                                 | 3-0-0 | 3             | 1        |
| TTL750  | Science of Clothing Comfort                      | 3-0-0 | 3             |          |
| TTL752  | Design of Functional Clothing                    | 3-0-0 | 3             | 1        |
| TTL 761 | Costing, Project Formulation and Appraisal       | 2-1-0 |               | 2        |
| TTL762  | Prod & operations management in Textile industry | 3-0-0 | 3             | 2        |
| TTL773  | Design of experiments and statistical techniques | 3-0-0 | 3             |          |
| TTL763  | Technical Textiles                               | 3-0-0 | 3             | 1        |
| TTL764  | Process Control in Yarn & Fabric Manufacturing   | 3-0-0 | 3             |          |
| TTL766  | Design & Manuf. of Text. Reinforced Composites   | 3-0-0 | 3             | 1        |
| TTL782  | Nonwoven Science and Engineering                 | 3-0-0 | 3             | 1        |
| TTL7- - | Modelling and Simulation                         | 2-0-2 | 3             |          |
| TTV701  | Special Module in Yarn Manufacture               | 1-0-0 | 1             |          |
| TTV706  | Special Module in Fabric Manufacture             | 1-0-0 | 1             |          |
| TTV703  | Special Module in Textile Chemical Processing    | 1-0-0 | 1             |          |
| TTV704  | Special Module in Fibre Science                  | 1-0-0 | 1             |          |
| TTV705  | Special Module in Textile Technology             | 1-0-0 | 1             |          |
| TTV702  | Management of Textile Business                   | 1-0-0 | 1             | 2        |
| SML304  | Introduction to Marketing Management             | 3-1-0 | 4             | 2        |
| MEL754  | Operations Planning & Control                    | 3-0-2 | 4             | 2        |

|        |                         |        |          |                   |
|--------|-------------------------|--------|----------|-------------------|
| MEL756 | Supply Chain Management | 3-0-2  | <b>4</b> | <b>2</b>          |
| SML780 | Managerial Economics    | 2-0-2  | <b>3</b> | <b>2</b>          |
| SML760 | Marketing Management    | 2-0-2  | <b>3</b> | <b>2</b>          |
|        | Major Project Part II   | 0-0-16 | 8        | <b>1 or<br/>2</b> |

## **TENTATIVE DEPARTMENT SPECIALIZATION BASKETS OF 20 CREDITS**

**Spl. 1.     Technical and Innovative Textiles**

**Spl. 2     Textile Business & Management**