#### **Semester wise Course Structure**

## M. Tech. Chemical Technology - Paint Technology (Applicable from Session 2020-2021 for new entrants)

#### Year I, Semester I

(A Stream Only for students having B.Tech in Paint Technology background)
(B Stream Only for students having B.Tech in other than Paint Technology background)
(C Stream Only for students of M.Sc (Chemistry/Applied Chemistry /Industrial Chemistry) background)

|       | Stream A |         |                         |         |         |   |    |     |         |          |       |     |       |
|-------|----------|---------|-------------------------|---------|---------|---|----|-----|---------|----------|-------|-----|-------|
| Sr.   | Course   | Subject | Course Title            | Credits | Periods |   | ls |     | Session | al Marks |       | ESE | Total |
| No.   | Type     | Code    |                         | Credits | L       | Т | Р  | MSE | TA      | Lab      | Total |     | Marks |
| 1.    | PCC      | TPT 551 | Advances in Chemistry   |         |         |   |    |     |         |          |       |     |       |
|       |          |         | and Technology of Film  | 5       | 3       | 1 | 2  | 15  | 20      | 15       | 50    | 50  | 100   |
|       |          |         | Formers                 |         |         |   |    |     |         |          |       |     |       |
| 2.    | PCC      | TPT 553 | Pigmentation of Surface | 4       | 3       | 1 | 0  | 30  | 20      | _        | 50    | 50  | 100   |
|       |          |         | Coatings                | 4       | 3       | 1 | U  | 30  | 20      | _        | 30    | 30  | 100   |
| 3.    | PCC      | TPT 555 | Advanced Modelling and  |         |         |   |    |     |         |          |       |     |       |
|       |          |         | Simulation of Chemical  | 4       | 3       | 1 | 0  | 30  | 20      | -        | 50    | 50  | 100   |
|       |          |         | Engineering Systems     |         |         |   |    |     |         |          |       |     |       |
| 4.    | PEC      | TPT 557 | Advanced Chemical       | 4       | 3       | 1 | 0  | 30  | 20      | _        | 50    | 50  | 100   |
|       |          |         | Reaction Engineering    | 4       | 3       | 1 | J  | 30  | 20      | -        | 30    | 30  | 100   |
| Total |          |         |                         | 17      | 12      | 4 | 2  |     |         |          | 200   | 200 | 400   |

#### OR

|       | Stream B/C             |         |                                      |         |         |   |    |                 |        |    |       |     |       |
|-------|------------------------|---------|--------------------------------------|---------|---------|---|----|-----------------|--------|----|-------|-----|-------|
| Sr.   | Course                 | Subject | Course Title                         | Credits | Periods |   | ls | Sessional Marks |        |    |       | ESE | Total |
| No.   | Туре                   | Code    |                                      |         | L       | Т | Р  | MSE             | TA Lab |    | Total | ESE | Marks |
| 1.    | PCC                    | TPT 559 | Technology of Resins and Polymers    | 4       | 3       | 1 | 0  | 30              | 20     | -  | 50    | 50  | 100   |
| 2.    | PCC                    | TPT 561 | Chemistry and Technology of Pigments | 5       | 3       | 1 | 2  | 15              | 20     | 15 | 50    | 50  | 100   |
| 3.    | PEC                    | TPT 563 | Technology of Surface Coatings       | 4       | 3       | 1 | 0  | 30              | 20     | 1  | 50    | 50  | 100   |
| 4.    | PCC                    | TPT 565 | Industrial Stichiometery             | 4       | 3       | 1 | 0  | 30              | 20     | -  | 50    | 50  | 100   |
| 5.    | *MC<br>(Non<br>Credit) | BMA 551 | Engineering Mathematics              | 2       | 2       | 0 | 0  | -               | 1      | 1  | 1     | -   | -     |
| Total | •                      | •       | •                                    | 17      | 12      | 4 | 2  |                 |        |    | 200   | 200 | 400   |

<sup>\*</sup>Only for students of Non-mathematics background at graduation level

#### **Semester wise Course Structure**

# M. Tech. Chemical Technology - Paint Technology (Applicable from Session 2020-2021 for new entrants)

### Year I, Semester II

| Sr.   | Course                | Subject | Course Title   | Credits | Pe | rioc | ls |     | Sessiona | ESE | Total |     |       |
|-------|-----------------------|---------|--|---------|----|------|----|-----|----------|-----|-------|-----|-------|
| No.   | Type                  | Code    |  |         | L  | Т    | Р  | MSE | TA       | Lab | Total |     | Marks |
| 1.    | PCC                   | TPT 552 | Modern Evaluation Techniques of Surface Coatings                           | 4       | 3  | 1    | 0  | 30  | 20       | ı   | 50    | 50  | 100   |
| 2.    | PCC                   | TPT 554 | Modern Manufacturing Techniques of Surface Coatings                        | 4       | 3  | 1    | 0  | 30  | 20       | 1   | 50    | 50  | 100   |
| 3.    | PCC                   | TPT 556 | High Performance Coatings  | 5       | 3  | 1    | 2  | 15  | 20       | 15  | 50    | 50  | 100   |
| 4.    | PEC                   | TPT 558 | Advances in Printing Inks  Advances in Packaging  Technology               | 4       | 3  | 1    | 0  | 30  | 20       | -   | 50    | 50  | 100   |
| 5.    | MC<br>(Non<br>Credit) | TPT 562 | Audit Course Critical review of research publication on one relevant Topic |         | 0  | 2    | 0  |     |          |     |       |     |       |
| 6.    | MC<br>(Non<br>Credit) | TPT 564 | Audit Course<br>Research Methodology<br>and IPR                            |         | 0  | 1    | 0  |     |          |     |       |     |       |
| Total |                       |         |  | 17      | 12 | 4    | 2  |     |          |     | 200   | 200 | 400   |

#### **Semester wise Course Structure**

## M. Tech. Chemical Technology - Paint Technology (Applicable from Session 2021-2022)

### Year II, Semester III

| SI.<br>No. | Course<br>Type                   | Subject<br>Code | Course Title   | Credits        | Periods       |               |                | Session | ESE | Total<br>Marks |                  |                  |                   |
|------------|----------------------------------|-----------------|--|----------------|---------------|---------------|----------------|---------|-----|----------------|------------------|------------------|-------------------|
|            | ,,                               |                 |  |                | L             | Т             | Р              | MSE     | TA  | Lab            | Total            |                  |                   |
| 1.         | PCC                              | TPT 651         | Technology of Surfactants & Coating Additives  | 4              | 3             | 1             | 0              | 30      | 20  | -              | 50               | 50               | 100               |
| 2.         | PEC                              | TPT 653         | Advances in Surface Treatment & Coating application OR Eco-friendly & Specialty        | 4              | 3             | 1             | 0              | 30      | 20  | -              | 50               | 50               | 100               |
| 3.         | MC<br>(Non<br>Credit)            | TPT 661         | Coatings  Audit Course  Critical Review of Research Publications on one Relevant Topic |                | 0             | 2             | 0              |         |     |                |                  |                  |                   |
| 4.         | MC<br>(Non<br>Credit)            | TPT 663         | Audit Course Research Methodology and IPR  |                | 2             | 1             | 0              |         |     |                |                  |                  |                   |
| 5.         | Disserta<br>tion/<br>Project     | TPT 695         | *Dissertation/Project  | 2              | 0             | 0             | 4              | -       | 50  | -              | 50               | 50               | 100               |
| 6.         | 6. Seminar TPT 697 Seminar Total |                 |  | 4<br><b>14</b> | 0<br><b>8</b> | 0<br><b>5</b> | 8<br><b>12</b> | -       | 50  | -              | 50<br><b>200</b> | 50<br><b>200</b> | 100<br><b>400</b> |

<sup>\*</sup>Dissertation to be continued in fourth semester.

#### **Semester wise Course Structure**

## M. Tech. Chemical Technology - Paint Technology (Applicable from Session 2021-2022)

## Year II, Semester IV

| SI. | Course Type               | Subject | Course Title         | Credits | Periods |   |    |     | Session | ESE | Total |    |     |
|-----|---------------------------|---------|----------------------|---------|---------|---|----|-----|---------|-----|-------|----|-----|
| No. |                           | Code    |                      |         |         |   |    |     |         |     | Marks |    |     |
|     |                           |         |                      |         | L       | Т | Р  | MSE | TA      | Lab | Total |    |     |
| 1.  | Dissertation<br>/ Project | TPT 698 | Dissertation/Project | 12      | 0       | 0 | 24 | -   | 50      | ı   | 50    | 50 | 100 |
|     |                           | Total   |                      | 12      | 0       | 0 | 24 |     | 50      |     | 50    | 50 | 100 |