

## *Chhattisgarh Swami Vivekanand Technical University, Bhilai*

### SCHEME OF TEACHING AND EXAMINATION

#### M.E. (First Semester) Chemical Engineering (Environmental Engineering)

| S.No.        | Board of Studies | Code        | Subject                           | Periods per week |          |          | Scheme of Exam     |            |            | Grand Total | Credits<br>L+(T+P)/2 |
|--------------|------------------|-------------|-----------------------------------|------------------|----------|----------|--------------------|------------|------------|-------------|----------------------|
|              |                  |             |                                   | L                | T        | P        | Theory / Practical |            |            |             |                      |
|              |                  |             |                                   |                  |          |          | ESE                | CT         |            |             |                      |
| 1            | Chem. Engg       | 530111 (19) | Principals of Environmental Engg. | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                    |
| 2            | Chem. Engg       | 530112 (19) | Air Pollution Control             | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                    |
| 3            | Chem. Engg       | 530113 (19) | Environment System Optimization   | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                    |
| 4            | Chem. Engg       | 530114 (19) | Water Pollution Control           | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                    |
| 5            | Refer Table - I  | Elective-I  |                                   | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                    |
| 6            | Chem. Engg.      | 530121 (19) | Air Pollution Control -Lab        | -                | -        | 3        | 75                 | -          | 75         | 150         | 2                    |
| 7            | Chem. Engg.      | 530122 (19) | Water Pollution Control - Lab     | -                | -        | 3        | 75                 | -          | 75         | 150         | 2                    |
| <b>Total</b> |                  |             |                                   | <b>15</b>        | <b>5</b> | <b>6</b> | <b>650</b>         | <b>100</b> | <b>250</b> | <b>1000</b> | <b>24</b>            |

ESE: End Semester Examination

CT: Class Test

TA: Teacher's Assessment

L: Lecture

T: Tutorial P: Practical

**Table - I**

| Elective – I |                  |             |                               |
|--------------|------------------|-------------|-------------------------------|
| S.No.        | Board of Studies | Code        | Subject                       |
| 1            | Chemical Engg.   | 530131 (19) | Energy & Environment          |
| 2            | Chemical Engg.   | 530132 (19) | Natural Resource Management   |
| 3            | Chemical Engg.   | 530133 (19) | Introduction to ANN & Ex. Sy. |

**Note (1) –** 1/4<sup>th</sup> of total strength of students subject to minimum of twenty students is required to offer an elective in the college in a Particular academic session.

**Note (2) –** Choice of elective course once made for an examination cannot be changed in future examinations.

*Chhattisgarh Swami Vivekanand Technical University, Bhilai*

**SCHEME OF TEACHING AND EXAMINATION**

**M.E. (Second Semester) Chemical Engineering (Environmental Engineering)**

| S.No.        | Board of Studies | Code        | Subject  | Periods per week |          |          | Scheme of Exam     |            |            | Grand Total | Credits L+(T+P)/2 |
|--------------|------------------|-------------|--|------------------|----------|----------|--------------------|------------|------------|-------------|-------------------|
|              |                  |             |  | L                | T        | P        | Theory / Practical |            |            |             |                   |
|              |                  |             |  |                  |          |          | ESE                | CT         |            |             |                   |
| 1            | Chem. Engg       | 530211 (19) | Environment System Modeling                        | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                 |
| 2            | Chem. Engg       | 530212 (19) | Natural & Industrial Disaster Management           | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                 |
| 3            | Chem. Engg       | 530213 (19) | Environmental Policy & Legislation                 | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                 |
| 4            | Chem. Engg       | 530214 (19) | Environmental Measurement & Impact Assessment      | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                 |
| 5            | Refer Table - II | Elective-II |  | 3                | 1        | -        | 100                | 20         | 20         | 140         | 4                 |
| 6            | Chem. Engg.      | 530221 (19) | Natural & Industrial Disaster Management - Lab     | -                | -        | 3        | 75                 | -          | 75         | 150         | 2                 |
| 7            | Chem. Engg.      | 530222 (19) | Environmental Measurement & Impact Assessment -Lab | -                | -        | 3        | 75                 | -          | 75         | 150         | 2                 |
| <b>Total</b> |                  |             |  | <b>15</b>        | <b>5</b> | <b>6</b> | <b>650</b>         | <b>100</b> | <b>250</b> | <b>1000</b> | <b>24</b>         |

ESE: End Semester Examination

CT: Class Test

TA: Teacher's Assessment

L: Lecture

T: Tutorial

P: Practical

**Table - II**

**Elective – II**

| S.No. | Board of Studies | Code        | Subject  |
|-------|------------------|-------------|--|
| 1     | Chemical Engg.   | 530231 (19) | Advanced Water Supply Engg.                          |
| 2     | Chemical Engg.   | 530232 (19) | Membrane Separation Technology                       |
| 3     | Chemical Engg.   | 530233 (19) | Environment Statistics & Data Base Management System |

**Note (1) –** 1/4<sup>th</sup> of total strength of students subject to minimum of twenty students is required to offer an elective in the college in a Particular academic session.

**Note (2) –** Choice of elective course once made for an examination cannot be changed in future examinations.

## *Chhattisgarh Swami Vivekanand Technical University, Bhilai*

### SCHEME OF TEACHING AND EXAMINATION

#### M.E. (Third Semester) Chemical Engineering (Environmental Engineering)

| .No.         | Board of Studies | Code           | Subject                          | Periods per week |          |           | Scheme of Exam     |           |            | Grand Total | Credits<br>L+(T+P)/2 |
|--------------|------------------|----------------|----------------------------------|------------------|----------|-----------|--------------------|-----------|------------|-------------|----------------------|
|              |                  |                |                                  | L                | T        | P         | Theory / Practical |           |            |             |                      |
|              |                  |                |                                  |                  |          |           | ESE                | CT        |            |             |                      |
| 1            | Chemical Engg.   | 530311(19)     | Nanotechnology                   | 3                | 1        | -         | 100                | 20        | 20         | 140         | 4                    |
| 2            | Refer Table -III | Elective - III |                                  | 3                | 1        | -         | 100                | 20        | 20         | 140         | 4                    |
| 3            | Chemical Engg.   | 530321(19)     | Preliminary Work On Dissertation | -                | -        | 30        | 100                | -         | 100        | 200         | 15                   |
| 4            | Chemical Engg.   | 530322(19)     | Seminar based on Dissertation    | -                | -        | 2         | -                  | -         | 20         | 20          | 1                    |
| <b>Total</b> |                  |                |                                  | <b>6</b>         | <b>2</b> | <b>32</b> | <b>320</b>         | <b>40</b> | <b>140</b> | <b>500</b>  | <b>24</b>            |

ESE: End Semester Examination CT: Class Test TA: Teacher's Assessment L: Lecture  
T: Tutorial P: Practical

**Table - III**

| Elective – III |                  |             |                                 |
|----------------|------------------|-------------|---------------------------------|
| S.No.          | Board of Studies | Code        | Subject                         |
| 1              | Chemical Engg.   | 530331 (19) | Non Conventional Energy Sources |
| 2              | Chemical Engg.   | 530332 (19) | Down Stream Processing          |
| 3              | Chemical Engg.   | 530333 (19) | Environmental Biotechnology     |

**Note (1) –** 1/4<sup>th</sup> of total strength of students subject to minimum of twenty students is required to offer an elective in the college in a Particular academic session.

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## SCHEME OF TEACHING AND EXAMINATION

**M.E. (Fourth Semester) Chemical Engineering (Environmental Engineering)**

| S.No. | Board of Studies | CODE       | SUBJECT                | Periods per week |   |    | Scheme of Exam |    |     | GRAND TOTAL | Credits<br>L+ (T+P)/2 |
|-------|------------------|------------|------------------------|------------------|---|----|----------------|----|-----|-------------|-----------------------|
|       |                  |            |                        | L                | T | P  | ESE            | CT |     |             |                       |
| 1     | Chemical Engg.   | 530421(19) | Dissertation + seminar | 6                | - | 34 | 300            | -  | 200 | 500         | 23                    |
| Total |                  |            |                        | 6                | - | 34 | 300            | -  | 200 | 500         | 23                    |

ESE: End Semester Examination CT: Class Test TA: Teacher's Assessment L: Lecture  
T: Tutorial P: Practical