**VISHVAKARMA SKILLS UNIVERSITY (VSU)**

**(A State Government University)**

2nd and 3rd Floor, Rajiv Gandhi Vidya Bhavan

Shiksha Sankul, JLN Marg, Jaipur - 302 017

Website: [www.vsuraj.ac.in](http://www.vsuraj.ac.in)

E-mail: [risu.jaipur@](mailto:risu.jaipur@)rajasthan.gov.in

**SYLLABUS FOR TWO YEAR ADVANCE DIPLOMA IN MINING ENGINEERING**

**MAIN FEATURES OF THE CURRICULUM**

1. Title of the Course : ADVANCE Diploma In Mining Engineering

2. Duration of the Course : TWO Years (FOUR SEMESTERS)

3. Type of the Course : Full Time Institutional

4. Pattern of the Course : Semester System

5. Intake : 30

6. Entry Qualification : Passed 12TH (10+2) SENIOR SECONDARY SCHOOL CERTIFICATE (MATHS AS ONE OF THE

: SUBJECT)

7. Admission Criteria :

**UNIVERSITY GUIDELINES**

1. Entry Qualification : Passed 12TH (10+2) SENIOR SECONDARY SCHOOL CERTIFICATE (MATHS AS ONE OF THE

: SUBJECTS)

2. AGE : NO UPPER LIMIT

3. MEDIUM : ENGLISH/HINDI

4. COMMUNICATION SKILL PAPER : ENGLISH FOUNDATION COURSE – ELECTIVE – SYLLABUS BY separate BOS OF RISU

5. COMPUTER FUNDAMENTAL PAPER : IT SKILL – ELECTIVE- SYLLABUS BY separate BOS OF RISU

6. MARKING IN EXAMINATION : GRADING (100 MARKS FOR THEORY AND PRACTICAL EACH AND GRADING BY

: COMPUTER)

7. PASS MARKS : FORTY (40) IN THEORY AND PRACTICAL SEPERATELY (THEREAFTER GRADING)

7. NO OF STUDENTS TO BE : ATLEAST 15 AND IN BATCHES OF 30

ADMITTED IN A COLLEGE :

8. ADMISISION : BY MERIT

9. FACULTY : LECTURER, READER AND PROFESSOR FOR PG COURSE

: FIFTY PERCENT FACULTIES CAN BE HIRED INITIALLY

10. EAXAMINATION TIME : MAY AND DECEMBER OR AS MAY BE DIRECTED BY THE RISU.

**Proposed time line for each semester**

|  |  |  |  |
| --- | --- | --- | --- |
| **SL NO.** | **ACTIVITY** | **DURATION IN WEEKS** | **REMARK** |
| 1. | COLLEGE STUDY (EFFECTIVE COLLEGE STUDY) | 14 (12) | MAX |
| 2. | EXAMINATION | 02 | MAX |
| 3. | TRAINING/CAMP/TOUR/VISIT | 08 | MAX |
| 4. | BREAK/HOLIDAY | 02 | MAX |

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**SYLLABUS FOR TWO YEAR ADVANCE DIPLOMA IN MINING ENGINEERING**

**FIRST YEAR** FIRST SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S No.** | **Subject Code** | **Subject** | **Periods per week** | | **scheme of examination** | | | | | **total marks** | **CREDIT**  **L + (T+P)/2** |
| **THEORY** | **P** | **HRS OF EXAM** | **THEORY** | | | **PRACTICAL** |
| **L** | **ESE** | **CT** | **TOTAL** | **ESE** |
| 1 |  | Communication Skill | 3 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 2 |  | Engineering Drawing | 2 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 3 |  | Electrical Technology & Electronics | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 4 |  | Mechanical Engineering | 3 | 1 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 5 |  | Civil Engineering | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 6 |  | Elements of Mine Surveying | 3 | 3 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 7 |  | Workshop Technology | - | 3 | 3 | - | - | - | 100 | 100 |  |
| 8 |  | Industrial Training | - | 1 | 3 | - | - | - | 100 | 100 |  |
| TOTAL | | | 17 | 14 |  | 480 | 120 | 600 | 700 | 1300 |  |

\*Industrial Training: Students will undergo on Industrial Practical Training for eight weeks including tours and visits to prominent mining/industrial units during 1st Semester. All students proceeding for training/tour/visit shall be given a detailed instruction by a faculty. Students shall submit a report on the industrial training/tour/visits at the end of semester.

L – Lecture P – Practical

ESE – End Semester Exam CT – Class Test

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**SYLLABUS FOR TWO YEAR ADVANCE DIPLOMA IN MINING ENGINEERING**

**FIRST YEAR** SECOND SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S No.** | **Subject Code** | **Subject** | **Periods per week** | | **HRS OF EXAM** | **scheme of examination** | | | | **total marks** | **CREDIT**  **L + (T+P)/2** |
| **THEORY** | **P** | **THEORY** | | | **PRACTICAL** |
| **L** | **ESE** | **CT** | **TOTAL** | **ESE** |
| 1 |  | Applied Mechanics | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 2 |  | Applied Geology | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 3 |  | Elements of Mining Technology | 3 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 4 |  | Drilling and Blasting Practices in Mines | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 5 |  | Surface Mining | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 6 |  | Mine Surveying | 3 | 3 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 7 |  | CAD Practical | - | 2 | 3 | - | - | - | 100 | 100 |  |
| 8 |  | Industrial Training | - | 1 | 3 | - | - | - | 100 | 100 |  |
| TOTAL | | | 18 | 14 |  | 480 | 120 | 600 | 700 | 1300 |  |

\*Industrial Training: Students will undergo on Industrial Practical Training for eight weeks including tours and visits to prominent mining/industrial units during 2nd Semester. All students proceeding for training/tour/visit shall be given a detailed instruction by a faculty. Students shall submit a report on the industrial training/tour/visits at the end of semester.

L – Lecture P – Practical

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**SYLLABUS FOR TWO YEAR ADVANCE DIPLOMA IN MINING ENGINEERING**

**SECOND YEAR** THIRD SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S No.** | **Subject Code** | **Subject** | **Periods per week** | | **HRS OF EXAM** | **scheme of examination** | | | | **total marks** | **CREDIT**  **L + (T+P)/2** |
| **THEORY** | **P** | **THEORY** | | | **PRACTICAL** |
| **L** | **ESE** | **CT** | **TOTAL** | **ESE** |
| 1 |  | Underground Coal Mining | 4 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 2 |  | Underground Metal Mining | 3 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 3 |  | Mine Ventilation | 4 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 4 |  | Mining Machinery | 4 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 5 |  | Rock Mechanics and Strata Control | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 6 |  | Advance Mine Surveying | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 7 |  | Mining Lab (Coal & Metal) | - | 2 | 3 | - | - | - | 100 | 100 |  |
| 8 |  | Industrial Training | - | 1 | 3 | - | - | - | 100 | 100 |  |
| TOTAL | | | 21 | 09 |  | 480 | 120 | 600 | 500 | 1100 |  |

\*Industrial Training: Students will undergo on Industrial Practical Training for eight weeks including tours and visits to prominent mining/industrial units during 3rd Semester. All students proceeding for training/tour/visit shall be given a detailed instruction by a faculty. Students shall submit a report on the industrial training/tour/visits at the end of semester.

L – Lecture P – Practical

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**SYLLABUS FOR TWO YEAR ADVANCE DIPLOMA IN MINING ENGINEERING**

**SECOND YEAR** FOURTH SEMESTER

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S No.** | **Subject Code** | **and Subject** | **Periods per week** | | **HRS OF EXAM** | **scheme of examination** | | | | **total marks** | **CREDIT**  **L + (T+P)/2** |
| **THEORY** | **P** | **THEORY** | | | **PRACTICAL** |
| **L** | **ESE** | **CT** | **TOTAL** | **ESE** |
| 1 |  | Mine Economics | 4 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 2 |  | Mine Fires Explosion Inundation Rescue & Recovery | 4 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 3 |  | Advance Underground Mining Methods | 4 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 4 |  | Dimensional Stone Mining | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 5 |  | Mine Management Legislation and General Safety | 4 | - | 3 | 80 | 20 | 100 | - | 100 |  |
| 6 |  | Elective | 3 | 2 | 3 | 80 | 20 | 100 | 100 | 200 |  |
| 7 |  | Project & Presentation | - | 4 | 3 | - | - | - | 100 | 100 |  |
| 8 |  | Industrial Training\* | - | 1 | 3 | - | - | - | 100 | 100 |  |
| TOTAL | | | 22 | 11 |  |  |  | 600 | 500 | 1100 |  |

\*Industrial Training: Students will undergo on Industrial Practical Training for eight weeks including tours and visits to prominent mining/industrial units during 4th Semester. All students proceeding for training/tour/visit shall be given a detailed instruction by a faculty. Students shall submit a report on the industrial training/tour/visits at the end of semester.

L – Lecture P – Practical

ESE – End Semester Exam CT – Class Test

**LIST OF ELECTIVES**

**NOTE: ELECTIVE SUBJECT WILL BE OFFEERED DEPENDING UOPN THE FACILITY AND FACULTY AVAILABLE AT THE COLLEGE**

|  |  |
| --- | --- |
| 1 | Advance Mining Geology |
| 2 | Mine Environmental Engineering |
| 3 | Rock Slope Engineering |
| 4 | Tunneling |
| 5 | Entrepreneurship Development |

(D. K. Saxena)

Former Director of Mines Safety, DGMS, Govt. of India

Dean of Mining Engineering and

Chairman Board of Studies

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