



# ADITYA ENGINEERING COLLEGE

An Autonomous Institution  
Approved by AICTE - Permanently Affiliated to JNTUK - Accredited by NAAC with 'A' Grade  
Recognised by UGC under sections 2(f) and 12(B) of UGC Act, 1956  
Aditya Nagar, ADB Road, Surampalem - 533437, Near Kakinada, E.G.Dt., Ph:99498 76662

Program Name : B.Tech. in Mining Engineering

## Syllabus Revision for the Academic Year 2017-2018

S.No	Semester	Course Code	Course Name	% of content revised for the existing year
1	1	17IHS1T01	English - I	65
2	1	17IBS1T01	Mathematics - I	30
3	1	17IHS1T02	Environmental Studies	20
4	1	17IBS1T03	Engineering Chemistry	25
5	1	17IES1T02	Engineering Mechanics	0
6	1	17IES1T01	Computer Programming	10
7	1	17IHS1L01	English Communication Skills Lab - I	10
8	1	17IBS1L01	Engineering Chemistry Lab	15
9	1	17IES1L01	Computer Programming Lab	5
10	2	17IHS2T03	English - II	55
11	2	17IBS2T02	Mathematics - II	10
12	2	17IBS2T06	Mathematics - III	40
13	2	17IBS2T07	Engineering Physics	10
14	2	17IES2T03	Engineering Drawing	18
15	2	17IES2T05	Basic Electrical and Electronics Engineering	0
16	2	17IHS2L02	English Communication Skills Lab - II	40
17	2	17IBS2L02	Engineering Physics Lab	10
18	2	17IES2L02	Engineering Workshop and IT Workshop	0
19	3	R1621261	Development of Mineral Deposits	0
20	3	R1621262	Thermal Engineering for Mining	0
21	3	R1621034	Fluid Mechanics and Hydraulic Machines	0
22	3	R1621035	Computer Aided Engineering Drawing Practice	0
23	3	R1621263	Mining Geology - I	0
24	3	R1621026	Managerial Economics & Financial Analysis	0
25	3	R1621036	Electrical and Electronics Engineering Lab	0
26	3	R1621264	Fluid Mechanics and Hydraulic Machines Lab	0
27	4	R1622031	Kinematics of Machinery	0
28	4	R1622261	Materials Engineering	0
29	4	R1622262	Mining Geology - II	0
30	4	R1622263	Mine Surveying - I	0
31	4	R1622264	Surface Mining	0
32	4	R1622036	Industrial Engineering and Management	0
33	4	R1622265	Geology Lab	0
34	4	R1622266	Materials Lab	0
35	4	R1622267	Professional Ethics & Human Values	0
36	5	RT31261	Underground Coal Mining Technology	0
37	5	RT31263	Mine Environment Engineering - I	0
38	5	RT31264	Electrical Equipment in Mines	0
39	5	RT31265	Mine Surveying - II	0
40	5	RT31022	Managerial Economics & financial analysis	0
41	5	RT31266	Mine mechanization	0
42	5	RT31267	Advanced English Communication Skills Lab	0
43	5	RT31268	Mine Surveying Lab	0
44	5	RT31016	IPR & Patents	0

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45	5	RT31260	Mine Field visit(Mandatory)	0
46	6	1RT32261	Mine Systems Engineering	0
47	6	1RT32262	Mineral Engineering and Fuel Technology	0
48	6	1RT32263	Mine Environmental Engineering – II	0
49	6	1RT32264	Mining Machinery	0
50	6	1RT32265	Under Ground Metal Mining Technology	0
51	6	RT32266A	Rock Slope Engineering	0
52	6	RT32266B	Mine Subsidence Engineering	0
53	6	RT32266C	Rock Fragmentation Engineering	0
54	6	RT32267	Mineral Engineering Lab	0
55	6	RT32268	Environmental Engineering Lab	0
56	6	RT32269	Industrial Training (3-4weeks)	0
57	7	RT41261	Mine Economics	100
58	7	RT41262	Computer Applications in Mining	100
59	7	RT41263	Rock Mechanics & Ground Control	100
60	7	RT41264	Mine Legislation & General Safety	100
61	7	RT41265	Industrial Robotics	100
62	7	RT41266	Environmental Impact Assessment	100
63	7	RT41267	Numerical Methods	100
64	7	RT41268	Industrial Management	100
65	7	RT4126L	Computer Applications in Mining Lab	100
66	7	RT4126M	Rock Mechanics & Ground Control Lab	100
67	7	RT4126N	Short Survey Camp (One Week)	100
68	8	RT42031	Production Planning and Control	100
69	8	RT42262A	Deep Sea Mining	100
70	8	RT42262B	Mine Construction	100
71	8	RT42262C	Tunneling Engineering	100
72	8	RT42263A	Planning of Under Ground Metal Mining Project	100
73	8	RT42263B	Planning of Under Ground Coal Mining Project	100
74	8	RT42263C	Planning of Surface Mining Projects	100
75	8	RT42264A	Maintenance & Reliability Engineering	100
76	8	RT42264B	Rock Excavation Engineering	100
77	8	RT42264C	Mine Health and Safety Engineering	100
78	8	RT42265	Project	100
Total number of courses in the academic year 2017-2018				78
Number of courses having revision in syllabus content >= 20% in the academic year 2017-2018				30
Percentage of syllabus revision carried out in the academic year 2017-2018 = ( 30/78)*100				38.46

Program Coordinator

Head of the Department

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- a) Deep Sea Mining to be replaced by Mining & Construction Management.
- b) Industrial management to be renamed as Industrial Management & Labour Relations.
- 8. Suggested to make two changes in Elective subjects of III year II Semester
  - a) Tunnelling Engineering to be replaced by Geo Mechanics-II.
  - b) Electrical Equipment in Mines to be replaced by Advanced Surveying.
- 9. Suggested to rename Mineral Engineering and Fuel Technology as Mineral Processing Technology along with Mineral Engineering Lab as Mineral Processing Technology Lab.
- 10. Suggested to replace mine construction with Advance Surface Technology which is an elective in IV Year II Semester.
- The BoS members have discussed and approved the new courses introduced in B. Tech. (Min.E), programmes. The Percentage of new courses introduced in the academic year 2017-2018 for B.Tech (Min.E) is 16.67%. The list of new courses is enclosed as Annexure-I.
- BOS members discussed and ratified the percentage revision in the courses. The percentage of courses revised in the academic year 2017-2018 for B.Tech (Min. E) is 38.46%. The list of courses revised is enclosed as Annexure-II.

**Agenda 1.4: Ratification of the proposed model question papers for sessional and external examinations of AR17 B.Tech. (Min.E), programme.**

BoS members have approved the pattern of the model papers for the internal and external examinations.

**Agenda 1.5: Finalization of names of reputed institution for setting question paper and valuation of answer scripts.**

BoS members accepted the list consisting of the names of reputed autonomous institution for setting question paper and valuation of answer scripts.

**Agenda 1.6: Analysis of Results**

The BoS Chairperson presented the odd and even semesters pass percentage for the A.Y.2016-2017. The BoS members noted the same and appreciated the faculty.

**Agenda 1.7: Analysis of student feedback and action taken report**

BoS Chairperson expressed that the student feedback & action taken report process initiated at the end of each semester. In academic year 2016-2017 the

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- average student feedback of the faculty for even and odd semester was taken and BoS members were noted the same.

**Agenda 1.8: Analysis of Stakeholder's Feedback on Curriculum**

The stakeholder's feedback on curriculum was discussed and applicable considerations were incorporated. The BOS members noted the same and advised to incorporate the suggestions as per the feasibility. The Action Taken Report is enclosed as Annexure-III.

**Agenda 1.9: Any other item/s**

- Suggested to reduce Employability skills credits from 4 to 2.
- Suggested to increase credits for Main project.
- Suggested to increase the courses which improves the skills of the students.

**Agenda 1.10: Scheduling of next BoS meeting**

- The next BoS meeting is tentatively scheduled in the month of November 2017.

**Agenda 1.11: Vote of Thanks**

- Mr Satyajeet Parida, BoS Chairperson presented the Vote of thanks.

  
BoS Chairperson

**Head of the Department**  
**DEPARTMENT OF MINING ENGINEERING**  
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## Department of Mining Engineering

### Annexure-I

#### List of New Courses in the Academic Year 2017-2018

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (Min.E)	VII	RT41262	Mine Economics
2	B. Tech (Min.E)	VII	RT41263	Computer Applications in Mining
3	B. Tech (Min.E)	VII	RT41264	Rock Mechanics & Ground Control
4	B. Tech (Min.E)	VII	RT41266	Mine Legislation & General Safety
5	B. Tech (Min.E)	VII	RT41268	Environmental Impact Assessment
6	B. Tech (Min.E)	VII	RT4126L	Industrial Management
7	B. Tech (Min.E)	VII	RT4126M	Computer Applications in Mining Lab
8	B. Tech (Min.E)	VII	RT4126N	Rock Mechanics & Ground Control Lab
9	B. Tech (Min.E)	VII	RT42031	Short Survey Camp (One Week)
10	B. Tech (Min.E)	VIII	RT42262B	Production Planning and Control
11	B. Tech (Min.E)	VIII	RT42263C	Mine Construction
12	B. Tech (Min.E)	VIII	RT42264C	Planning of Surface Mining Projects
13	B. Tech (Min.E)	VIII	RT42265	Mine Health and Safety Engineering

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BoS Chairperson

Head of the Department

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## Department of Mining Engineering

### Annexure-II

#### List of Courses Revised in the Academic Year 2018-2019

S. No	Program	Semester	Course Code	Course Name
1	B. Tech (Min.E)	III	171MI3T01	Introduction To Mining Technology
2	B. Tech (Min.E)	III	171MI3T02	Basic Mechanical Engineering For Mines
3	B. Tech (Min.E)	III	171ES3L12	Electrical and Electronics Lab
4	B. Tech (Min.E)	IV	171MI4T08	Fundamentals of Rock Mechanics
5	B. Tech (Min.E)	V	R1631268	Mechanical Engineering Lab
6	B. Tech (Min.E)	VI	R163226C	Mine Safety Engineering

BoS Chairperson

Head of the Department  
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## Department of Mining Engineering

### Annexure III


#### Action Taken Report on Stakeholders Feedback in the Academic Year 2017-2018

S. No	Agenda Item No.	Stakeholders Recommended	Action Taken
1	1.8	Student should be thorough in the core subject of mining as lot of company give opportunity in the mines for the purpose of production and design of the mines area.	The subject which makes the student good in the basic knowledge of mines which helps them in the production and design of mine area has already incorporated in the syllabus they are :  ✓ Surface Mining  ✓ Underground Coal Mining Technology  ✓ Under Ground Metal Mining Technology  ✓ Rock Mechanics & Ground Control
2		Students should be aware of latest software used in mining that helps in mining industry.	The subject which are related to mining and are application of software, in it has been included in the curriculum, like Computer Applications in Mining
3		Students should be proficient in managerial role and different financial aspect of the mines. So that they will be able to evaluate the feasibility of a mine	The subject that will make student a good manager as well as make them understand the financial aspect of mines are:  Managerial Economics & Financial Analysis

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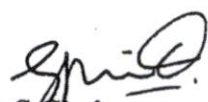
4	1.8	Department should include more Planning of mines related subjects.	The subject which are related to different types of planning are :  ✓ Planning of Surface Mining Projects ✓ Planning of Under Ground Coal Mining Project ✓ Planning of Under Ground Metal Mining Project
5	1.8	Department should include the Mine environment related subject so that student should be aware of the mine Environment	The subject related to mine environment has been included in the syllabus they are:  1. Mine Environment Engineering – I 2. Mine Environmental Engineering – II 3. Environmental Impact Assessment
6		Student should be Visit different mining industry so that they will be aware of real mining processes.	The mining field visit has made mandate for the student so that they can experience mine in real time.  Mine Field visit
7		Include Programming related subject in the course so that student students will be aware of programming	Programming related subject are included in the syllabus they are:-  1. Computer Programming 2. Computer Programming Lab
8		Student should be aware of different mining hazards that happening while working in the mining field	The subject which makes students aware of different hazards happening in the mining field are:  1. Mine Health and Safety Engineering



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9		Students should be aware of different industrial and managerial skills required in the mining field.	To aware students of managerial skills in the mining field. The following course has been included:  ✓ Industrial Management
10	1.7	Lab facility needs to improve and more lab equipment should be added to the lab	The department is in its early stage but in the next batch already few equipment's has been ordered and it will be installed soon.
11	1.7	Students should be allowed for more vocational training and more mines visits.	About vocational training students are allowed in the summer and winter vacation for minimum 15 days training in different mines for 3 <sup>rd</sup> and 4 <sup>th</sup> year students. For mine visit department HOD has already spoken to the mines manager so that in the upcoming year more mine visit will be made possible.
12	1.7	Students should be allowed for survey camps as it is happening in other universities which benefit the students as they will experience real surveying field practice.	To make students aware of the surveying practice it is included in the curriculum as follows:  Short Survey Camp

  
BoS Chairperson

**Head of the Department**  
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