

First Year EngineeringNew Syllabus - R - 2019Semester I & IIFirst-Year  
Semester I & IINo. UG/65 of 2019-20CIRCULAR:-

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to this office Circular No. UG/131 of 2016-17 dated 9<sup>th</sup> November, 2016 relating to the revised syllabus as per (CBCS) for Bachelor of Engineering (First Year Engineering (Sem. I to II).

They are hereby informed that the recommendations made by the faculty members of Engineering at its meeting held on 8<sup>th</sup> May, 2019 have been accepted by the Academic Council at its meeting held on 26<sup>th</sup> July, 2019 vide item No. 4.40 and that in accordance therewith, the Revised Syllabus and Scheme for 2019 of First Year Engineering (Sem. I & II) as per AICTE model curriculum from the academic year 2019-20. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI - 400 032

14<sup>th</sup> August, 2019

To

(Dr. Ajay Deshmukh)  
REGISTRAR

The Principals of the affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)

A.C/4.40/26/07/2019

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No. UG/65 -A of 2019-20


MUMBAI-400 032

14<sup>th</sup> August, 2019

Copy forwarded with Compliments for information to:-

- 1) The I/c Dean, Faculty of Science & Technology,
- 2) The Director, Board of Examinations and Evaluation,
- 3) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. Ajay Deshmukh)  
REGISTRAR

  
**PRINCIPAL**  
St. Francis Institute  
Of Technology (Engg-College)  
Mount Poincur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

First Year Engineering (Semester I & II), Revised course

(REV- 2019'C' Scheme) from Academic Year 2019 – 20

(Common for All Branches of Engineering)

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year  
2019–2020)

  
PRINCIPAL

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Mount Poonam, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





**Program Structure for First Year Engineering**  
**Semester I & II**  
**UNIVERSITY OF MUMBAI**  
 (With Effect from 2019-2020)

**Semester I**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned				
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total	
FEC101	Engineering Mathematics-I	3	--	1*	3	--	1	4	
FEC102	Engineering Physics-I	2	--	--	2	--	--	2	
FEC103	Engineering Chemistry-I	2	--	--	2	--	--	2	
FEC104	Engineering Mechanics	3	--	--	3	--	--	3	
FEC105	Basic Electrical Engineering	3	--	--	3	--	--	3	
FEL101	Engineering Physics-I	--	1	--	--	0.5	--	0.5	
FEL102	Engineering Chemistry-I	--	1	--	--	0.5	--	0.5	
FEL103	Engineering Mechanics	--	2	--	--	1	--	1	
FEL104	Basic Electrical Engineering	--	2	--	--	1	--	1	
FEL105	Basic Workshop practice-I	--	2	--	--	1	--	1	
<b>Total</b>		<b>13</b>	<b>08</b>	<b>01</b>	<b>13</b>	<b>04</b>	<b>01</b>	<b>18</b>	
Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract. /oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test1	Test 2	Avg.					
FEC101	Engineering Mathematics-I	20	20	20	80	3	25	--	125
FEC102	Engineering Physics-I	15	15	15	60	2	--	--	75
FEC103	Engineering Chemistry-I	15	15	15	60	2	--	--	75
FEC104	Engineering Mechanics	20	20	20	80	3	--	--	100
FEC105	Basic Electrical Engineering	20	20	20	80	3	--	--	100
FEL101	Engineering Physics-I	--	--	--	--	--	25	--	25
FEL102	Engineering Chemistry-I	--	--	--	--	--	25	--	25
FEL103	Engineering Mechanics	--	--	--	--	--	25	25	50
FEL104	Basic Electrical Engineering	--	--	--	--	--	25	25	50
FEL105	Basic Workshop practice-I	--	--	--	--	--	50	--	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>90</b>	<b>360</b>	<b>--</b>	<b>175</b>	<b>50</b>	<b>675</b>

\* Shall be conducted batch-wise

  
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 Borivli (West), Mumbai - 400 103.



## Semester II

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
FEC201	Engineering Mathematics-II	3	--	1*	3	--	1	4
FEC202	Engineering Physics-II	2	--	--	2	--	--	2
FEC203	Engineering Chemistry-II	2	--	--	2	--	--	2
FEC204	Engineering Graphics	2	--	--	2	--	--	2
FEC205	C programming	2	--	--	2	--	--	2
FEC206	Professional Communication and Ethics- I	2	--	--	2	--	--	2
FEL201	Engineering Physics-II	--	1	--	--	0.5	--	0.5
FEL202	Engineering Chemistry-II	--	1	--	--	0.5	--	0.5
FEL203	Engineering Graphics	--	4	--	--	2	--	2
FEL204	C programming	--	2	--	--	1	--	1
FEL205	Professional Communication and Ethics- I	--	2	--	--	1	--	1
FEL206	Basic Workshop practice-II	--	2	--	--	1	--	1
<b>Total</b>		<b>13</b>	<b>12</b>	<b>01</b>	<b>13</b>	<b>06</b>	<b>01</b>	<b>20</b>

Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract. /oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test1	Test 2	Avg.					
FEC201	Engineering Mathematics-II	20	20	20	80	3	25	--	125
FEC202	Engineering Physics-II	15	15	15	60	2	--	--	75
FEC203	Engineering Chemistry-II	15	15	15	60	2	--	--	75
FEC204	Engineering Graphics	15	15	15	60	3	--	--	75
FEC205	C programming	15	15	15	60	2	--	--	75
FEC206	Professional Communication and Ethics- I	10	10	10	40	2	--	--	50
FEL201	Engineering Physics-II	--	--	--	--	--	25	--	25
FEL202	Engineering Chemistry-II	--	--	--	--	--	25	--	25
FEL203	Engineering Graphics	--	--	--	--	--	25	50	75
FEL204	C programming	--	--	--	--	--	25	25	50
FEL205	Professional Communication and Ethics- I	--	--	--	--	--	25	--	25
FEL206	Basic Workshop practice-II	--	--	--	--	--	50	--	50
<b>Total</b>		--	--	<b>90</b>	<b>360</b>	--	<b>200</b>	<b>75</b>	<b>725</b>

\* Shall be conducted batch-wise

**PRINCIPAL**

St. Francis Institute

Of Technology (Engg-College)

University of Mumbai, First Year Engineering, (Common for all Branches of Engineering) REV 2019 'C' Scheme

12/61

Borivli (West), Mumbai - 400 103.





Second Year Engg.  
Computer Engineering  
New Syllabus - R-2019  
Semester III & IV

University of Mumbai



CMFN  
Semester III & IV

No. UG/ 50 of 2021

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to the syllabus directly uploaded by the Academic Authority Unit which was accepted by the Academic Council at its meeting held on 11<sup>th</sup> May, 2017 vide item No.4.193 relating to the revised syllabus as per the (CBCGS) for Bachelor of Engineering (Computer Engineering) Second Year w.e.f. AY 2017-18, Third Year w.e.f. AY 2018-19 and Final Year w.e.f. AY 2019-20 (Rev - 2016) from Academic Year 2016-17.

They are hereby informed that the recommendations made by the Ad-hoc Board of Studies in Computer Engineering at its meeting held on 7<sup>th</sup> May, 2020 and subsequently made by the Board of Deans at its meeting held on 26<sup>th</sup> June, 2020 vide item No. 14(11) have been accepted by the Academic Council at its meeting held on 23<sup>rd</sup> July, 2020 vide item No. 4.127 and that in accordance therewith, the revised syllabus (Rev-2019 'C' Scheme) for the B.E. in Computer Engineering (Sem.III & IV) has been brought into force with effect from the academic year 2020-21. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI - 400 032  
21<sup>st</sup> January, 2021

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

To

The Principals of the Affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)

A.C/4.127/23/07/2020

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No. UG/ 50 -A of 2021 MUMBAI-400 032

21<sup>st</sup> January, 2021

Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Science & Technology,
- 2) The Chairman, Ad-hoc Board of Studies in Computer Engineering,
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

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Mount Poincur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

in

## Computer Engineering

Second Year with Effect from AY 2020-21

Third Year with Effect from AY 2021-22


Final Year with Effect from AY 2022-23

(REV- 2019 'C' Scheme) from Academic Year 2019 – 20

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year 2019–2020)

  
**PRINCIPAL**  
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Borivli (West), Mumbai - 400 103.





## Program Structure for Second Year Computer Engineering

UNIVERSITY OF MUMBAI (With Effect from 2020-2021)

### Semester III

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned				
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total	
CSC301	Engineering Mathematics-III	3	--	1*	3	--	1	4	
CSC302	Discrete Structures and Graph Theory	3	--	--	3	--	--	3	
CSC303	Data Structure	3	--	--	3	--	--	3	
CSC304	Digital Logic & Computer Architecture	3	--	--	3	--	--	3	
CSC305	Computer Graphics	3	--	--	3	--	--	3	
CSL301	Data Structure Lab	--	2	--	--	1	--	1	
CSL302	Digital Logic & Computer Architecture Lab	--	2	--	--	1	--	1	
CSL303	Computer Graphics Lab	--	2	--	--	1	--	1	
CSL304	Skill base Lab course: Object Oriented Programming with Java	--	2+2*	--	--	2	--	2	
CSM301	Mini Project – I A	--	4 <sup>§</sup>	--	--	2	--	2	
<b>Total</b>		<b>15</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>07</b>	<b>1</b>	<b>23</b>	
Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract & oral	Total
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test 1	Test2	Avg					
CSC301	Engineering Mathematics-III	20	20	20	80	3	25	--	125
CSC302	Discrete Structures and Graph Theory	20	20	20	80	3	--	--	100
CSC303	Data Structure	20	20	20	80	3	--	--	100
CSC304	Digital Logic & Computer Architecture	20	20	20	80	3	--	--	100
CSC305	Computer Graphics	20	20	20	80	3	--	--	100
CSL301	Data Structure Lab	--	--	--	--	--	25	25	50
CSL302	Digital Logic & Computer Architecture Lab	--	--	--	--	--	25	--	25
CSL303	Computer Graphics Lab	--	--	--	--	--	25	25	50
CSL304	Skill base Lab course: Object Oriented Programming with Java	--	--	--	--	--	50	25	75
CSM301	Mini Project – I A	--	--	--	--	--	25	25	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>175</b>	<b>100</b>	<b>775</b>

\*Should be conducted batch wise and

§ indicates workload of Learner (Not Faculty). Students can form groups with minimum 2 (Two) and not more than 4 (Four), Faculty Load: 1 hour per week per four groups

**PRINCIPAL**

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Mount Painsur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





**Program Structure for Second Year Computer Engineering**  
**UNIVERSITY OF MUMBAI (With Effect from 2020-2021)**

**Semester IV**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned				
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total	
CSC401	Engineering Mathematics-IV	3	--	1*	3	--	1	4	
CSC402	Analysis of Algorithm	3	--	--	3	--	--	3	
CSC403	Database Management System	3	--	--	3	--	--	3	
CSC404	Operating System	3	--	--	3	--	--	3	
CSC405	Microprocessor	3	--	--	3	--	--	3	
CSL401	Analysis of Algorithm Lab	--	2	--	--	1	--	1	
CSL402	Database Management System Lab	--	2	--	--	1	--	1	
CSL403	Operating System Lab	--	2	--	--	1	--	1	
CSL404	Microprocessor Lab	--	2	--	--	1	--	1	
CSL405	Skill Base Lab Course: Python Programming	--	2*+2	--	--	2	--	2	
CSM401	Mini Project 1-B	--	4 <sup>§</sup>	--	--	2	--	2	
<b>Total</b>		<b>15</b>	<b>16</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>1</b>	<b>24</b>	
Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract & oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test 1	Test 2	Avg.					
CSC401	Engineering Mathematics-IV	20	20	20	80	3	25	--	125
CSC402	Analysis of Algorithm	20	20	20	80	3	--	--	100
CSC403	Database Management System	20	20	20	80	3	--	--	100
CSC404	Operating System	20	20	20	80	3	--	--	100
CSC405	Microprocessor	20	20	20	80	3	--	--	100
CSL401	Analysis of Algorithm Lab	--	--	--	--	--	25	25	50
CSL402	Database Management System Lab	--	--	--	--	--	25	25	50
CSL403	Operating System Lab	--	--	--	--	--	25	25	50
CSL404	Microprocessor Lab	--	--	--	--	--	25	--	25
CSL405	Skill Base Lab Course: Python Programming	--	--	--	--	--	25	--	25
CSM401	Mini Project 1-B	--	--	--	--	--	25	25	50
<b>Total</b>		--	--	<b>100</b>	<b>400</b>	--	<b>175</b>	<b>100</b>	<b>775</b>

\*Should be conducted batchwise and

§ indicates workload of Learner (Not Faculty). Students can form groups with minimum 2 (Two) and not more than 4 (Four), Faculty Load: 1 hour per week per four groups.





③ SE-EXTC-R2019

# University of Mumbai

EXTC

Second Year  
Electronics & Telecommunication  
Engineering  
New Syllabus - R-2019



Semester III & IV

No. UG/56 of 2021

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to the syllabus directly uploaded by the Academic Authority Unit which was accepted by the Academic Council at its meeting held on 11<sup>th</sup> May, 2017 vide item No.4.307 relating to the revised syllabus as per the (CBCGS) for Bachelor of Engineering (Electronics and Telecommunication Engineering) Second Year w.e.f. AY 2017-18, Third Year w.e.f. AY 2018-19 and Final Year w.e.f. AY 2019-20 (Rev - 2016) from Academic Year 2016-17.

They are hereby informed that the recommendations made by the Board of Studies in Electronics and Telecommunication Engineering at its meeting held on 5<sup>th</sup> May, 2020 and subsequently made by the Board of Deans at its meeting held on 20<sup>th</sup> July, 2020 vide item No. 6 have been accepted by the Academic Council at its meeting held on 23<sup>rd</sup> July, 2020 vide item No. 4.145 and that in accordance therewith, the revised syllabus (Rev-2019 'C' Scheme) for the B.E. in Electronics and Telecommunication Engineering (Sem.III & IV) has been brought into force with effect from the academic year 2020-21. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI - 400 032  
21<sup>st</sup> January, 2021  
To

(Dr. B.N. Gaikwad)  
I/c REGISTRAR

The Principals of the Affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)

A.C/4.145/23/07/2020

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No. UG/56 -A of 2021                      MUMBAI-400 032                      21<sup>st</sup> January, 2021  
Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Science & Technology,
- 2) The Chairman, Board of Studies in Electronics and Telecommunication Engineering,
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. B.N. Gaikwad)  
I/c REGISTRAR

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Borivli (West), Mumbai - 400 103.





# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

in

## Electronics and Telecommunication Engineering

Second Year with Effect from AY 2020-21

Third Year with Effect from AY 2021-22

Final Year with Effect from AY 2022-23

(REV- 2019 'C' Scheme) from Academic Year 2019 – 20

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year

**PRINCIPAL**

2019–2020)

St. Francis Institute

St. Francis Institute (Engg. College)  
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Borivli (West), Mumbai - 400 103





**Program Structure for Second Year Engineering**

**Semester III & IV**

**UNIVERSITY OF MUMBAI**

(With Effect from 2020-2021)

**Semester III**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
ECC301	Engineering Mathematics-III	3	--	1*	3	--	1	4
ECC302	Electronic Devices & Circuits	3	--	--	3	--	--	3
ECC303	Digital System Design	3	--	--	3	--	--	3
ECC304	Network Theory	3	--	1	3	--	1	4
ECC305	Electronic Instrumentation & Control Systems	3	--	--	3	--	--	3
ECL301	Electronic Devices & Circuits Lab	--	2	--	--	1	--	1
ECL302	Digital System Design Lab	--	2	--	--	1	--	1
ECL303	Electronic Instrumentation & Control Systems Lab	--	2	--	--	1	--	1
ECL304	Skill Lab: C++ and Java Programming	--	4	--	--	2	--	2
ECM301	Mini Project 1A	--	4 <sup>§</sup>	--	--	2	--	2
<b>Total</b>		<b>15</b>	<b>14</b>	<b>2</b>	<b>15</b>	<b>07</b>	<b>2</b>	<b>24</b>

\* Should be conducted batch wise.

§ Indicates work load of a learner (Not Faculty) for Mini Project 1A. Faculty Load: 1 hour per week per four groups.

Course Code	Course Name	Examination Scheme							Total
		Theory					Term Work	Pract. & oral	
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test 1	Test 2	Avg.					
ECC301	Engineering Mathematics-III	20	20	20	80	3	25	--	125
ECC302	Electronic Devices & Circuits	20	20	20	80	3	--	--	100
ECC303	Digital System Design	20	20	20	80	3	--	--	100
ECC304	Network Theory	20	20	20	80	3	25	--	125
ECC305	Electronic Instrumentation & Control Systems	20	20	20	80	3	--	--	100
ECL301	Electronic Devices & Circuits Lab	--	--	--	--	--	25	25	50
ECL302	Digital System Design Lab	--	--	--	--	--	25	--	25
ECL303	Electronic Instrumentation & Control Systems Lab	--	--	--	--	--	25	--	25
ECL304	Skill Lab: C++ and Java Programming	--	--	--	--	--	25	25	50
ECM301	Mini Project 1A	--	--	--	--	--	25	25	50
<b>Total</b>		--	--	<b>100</b>	<b>400</b>	--	<b>175</b>	<b>75</b>	<b>750</b>

**PRINCIPAL**

St. Francis Institute

Of Technology (Engg-College)

Mount Poonam, S.V.P. Road,

Borivli (West), Mumbai - 400 103.





### Semester IV

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
ECC401	Engineering Mathematics-IV	3	--	1*	3	--	1	4
ECC402	Microcontrollers	3	--	--	3	--	--	3
ECC403	Linear Integrated Circuits	3	--	--	3	--	--	3
ECC404	Signals & Systems	3	--	1	3	--	1	4
ECC405	Principles of Communication Engineering	3	--	--	3	--	--	3
ECL401	Microcontrollers Lab	--	2	--	--	1	--	1
ECL402	Linear Integrated Circuits Lab	--	2	--	--	1	--	1
ECL403	Principles of Communication Engineering Lab	--	2	--	--	1	--	1
ECL404	Skill Lab: Python Programming	--	4	--	--	2	--	2
ECM401	Mini Project 1B	--	4 <sup>§</sup>	--	--	2	--	2
<b>Total</b>		<b>15</b>	<b>14</b>	<b>2</b>	<b>15</b>	<b>7</b>	<b>2</b>	<b>24</b>

\* Should be conducted batch wise.

§ Indicates work load of a learner (Not Faculty) for Mini Project 1B. Faculty Load: 1 hour per week per four groups.

Course Code	Course Name	Examination Scheme							Total
		Theory					Term Work	Pract. & oral	
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test 1	Test 2	Avg.					
ECC401	Engineering Mathematics-IV	20	20	20	80	3	25	--	125
ECC402	Microcontrollers	20	20	20	80	3	--	--	100
ECC403	Linear Integrated Circuits	20	20	20	80	3	--	--	100
ECC404	Signals & Systems	20	20	20	80	3	25	--	125
ECC405	Principles of Communication Engineering	20	20	20	80	3	--	--	100
ECL401	Microcontrollers Lab	--	--	--	--	--	25	--	25
ECL402	Linear Integrated Circuits Lab	--	--	--	--	--	25	25	50
ECL403	Principles of Communication Engineering Lab	--	--	--	--	--	25	25	50
ECL404	Skill Lab: Python Programming	--	--	--	--	--	25	25	50
ECM401	Mini Project 1B	--	--	--	--	--	25	25	50
<b>Total</b>		--	--	<b>100</b>	<b>400</b>	--	<b>175</b>	<b>100</b>	<b>775</b>

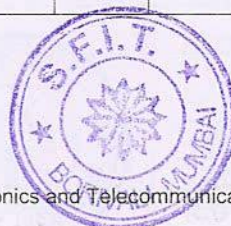
**PRINCIPAL**

St. Francis Institute

Of Technology (Engg-College)

Mount Poincur, S. V. P. Road,

Borivli (West), Mumbai - 400 103





University of Mumbai

Second Year  
Information Technology  
New Syllabus - R2019



INFTR  
Semester III & IV


No. UG/49 of 2021

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to the syllabus directly uploaded by the Academic Authority Unit which was accepted by the Academic Council at its meeting held on 11<sup>th</sup> May, 2017 vide item No.4.180 relating to the revised syllabus as per the (CBCGS) for Bachelor of Engineering (Information Technology) Second Year w.e.f. AY 2017-18, Third Year w.e.f. AY 2018-19 and Final Year w.e.f. AY 2019-20 (Rev - 2016) from Academic Year 2016-17.

They are hereby informed that the recommendations made by the Ad-hoc Board of Studies in Information Technology at its meeting held on 24<sup>th</sup> April, 2020 and subsequently made by the Board of Deans at its meeting held on 26<sup>th</sup> June, 2020 vide item No. 14(10) have been accepted by the Academic Council at its meeting held on 23<sup>rd</sup> July, 2020 vide item No. 4.126 and that in accordance therewith, the Scheme (Sem. III to VIII) and revised syllabus (Rev-2019 'C' Scheme) for the B.E. in Information Technology (Sem.III & IV) has been brought into force with effect from the academic year 2020-21. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI - 400 032  
21<sup>st</sup> January, 2021  
To

  
(Dr. B.N. Gaikwad)  
I/c REGISTRAR

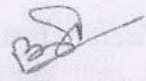
The Principals of the affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)  
A.C/4.126/23/07/2020

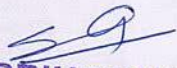
\*\*\*\*\*

No. UG/49 -A of 2021 MUMBAI-400 032 21<sup>st</sup> January, 2021

Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Science & Technology,
- 2) The Chairman, Ad-hoc Board of Studies in Information Technology,
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

  
(Dr. B.N. Gaikwad)  
I/c REGISTRAR

  
**PRINCIPAL**  
St. Francis Institute  
Of Technology (Engg-College)  
Mount Poincur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





AC: 23/7/2020

Item No. : 126

# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

in

## Information Technology Engineering

Second Year with Effect from AY 2020-21

Third Year with Effect from AY 2021-22

Final Year with Effect from AY 2022-23

(REV- 2019 'C' Scheme) from Academic Year 2019 – 20

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year  
2019–2020)

**PRINCIPAL**

St. Francis Institute  
Of Technology (Engg-College)  
Mount Painsur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





**Program Structure for Second Year  
Engineering Semester III & IV  
UNIVERSITY OF MUMBAI  
(With Effect from 2020-2021)**

**Semester III**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
ITC301	Engineering Mathematics-III	3	--	1	3	--	1	4
ITC302	Data Structure and Analysis	3		--	3		--	3
ITC303	Database Management System	3	--	--	3	--	--	3
ITC304	Principle of Communication	3	--	--	3	--	--	3
ITC305	Paradigms and Computer Programming Fundamentals	3	--	--	3	--	--	3
ITL301	Data Structure Lab	--	2	--	--	1	--	1
ITL302	SQL Lab	--	2	--	--	1	--	1
ITL303	Computer programming Paradigms Lab	--	2	--	--	1	--	1
ITL304	Java Lab (SBL)	--	4	--	--	2	--	2
ITM301	Mini Project – 1 A Front end /backend Application using JAVA	--	4 <sup>s</sup>	--	--	2	--	2
<b>Total</b>		<b>15</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>07</b>	<b>1</b>	<b>23</b>

Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract/oral	Total
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test 1	Test2	Avg.					
ITC301	Engineering Mathematics-III	20	20	20	80	3	25	--	125
ITC302	Data Structure and Analysis	20	20	20	80	3	--	--	100
ITC303	Database Management System	20	20	20	80	3	--	--	100
ITC304	Principle of Communication	20	20	20	80	3	--	--	100
ITC305	Paradigms and Computer Programming Fundamentals	20	20	20	80	3	--	--	100
ITL301	Data Structure Lab	--	--	--	--	--	25	25	50
ITL302	SQL Lab	--	--	--	--	--	25	25	50
ITL303	Computer programming Paradigms Lab	--	--	--	--	--	25	25	50
ITL304	Java Lab (SBL)	--	--	--	--	--	25	25	50
ITM301	Mini Project – 1 A Front end /backend Application using JAVA	--	--	--	--	--	25	25	50
<b>Total</b>		--	--	<b>100</b>	<b>400</b>	--	<b>150</b>	<b>125</b>	<b>775</b>

\$ indicates work load of Learner (Not Faculty), for Mini Project.





**Program Structure for Second Year Engineering  
Semester III & IV  
UNIVERSITY OF MUMBAI  
(With Effect from 2020-2021)**

**Semester IV**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned				
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total	
ITC401	Engineering Mathematics-IV	3	--	1	3	--	1	4	
ITC402	Computer Network and Network Design	3	--	--	3	--	--	3	
ITC403	Operating System	3	--	--	3	--	--	3	
ITC404	Automata Theory	3	--	--	3	--	--	3	
ITC405	Computer Organization and Architecture	3	--	--	3	--	--	3	
ITL401	Network Lab	--	2	--	--	1	--	1	
ITL402	Unix Lab	--	2	--	--	1	--	1	
ITL403	Microprocessor Lab	--	2	--	--	1	--	1	
ITL404	Python Lab (SBL)	--	4	--	--	2	--	2	
ITM401	Mini Project – 1 B Python based automation projects	--	4 <sup>s</sup>	--	--	2	--	2	
<b>Total</b>		<b>15</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>1</b>	<b>23</b>	
Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract/oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test 1	Test 2	Avg.					
ITC401	Engineering Mathematics-IV	20	20	20	80	3	25	--	125
ITC402	Computer Network and Network Design	20	20	20	80	3	--	--	100
ITC403	Operating System	20	20	20	80	3	--	--	100
ITC404	Automata Theory	20	20	20	80	3	--	--	100
ITC405	Computer Organization and Architecture	20	20	20	80	3	--	--	100
ITL401	Network Lab	--	--	--	--	--	25	25	50
ITL402	Unix Lab	--	--	--	--	--	25	25	50
ITL403	Microprocessor Lab	--	--	--	--	--	25	25	50
ITL404	Python Lab (SBL)	--	--	--	--	--	25	25	50
ITM401	Mini Project – 1 B Python based automation projects	--	--	--	--	--	25	25	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>150</b>	<b>75</b>	<b>775</b>

§ indicates work load of Learner (Not Faculty), for Mini Project.





## University of Mumbai

Second Year

Electrical Engineering

New Syllabus R2019



ELEC

Semester III &amp; IV

No. UG/ 47 of 2021

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to the syllabus directly uploaded by the Academic Authority Unit which was accepted by the Academic Council at its meeting held on 11<sup>th</sup> May, 2017 vide item No.4.183 relating to the revised syllabus as per the (CBCGS) for Bachelor of Engineering (Electrical Engineering) Second Year w.e.f. AY 2017-18, Third Year w.e.f. AY 2018-19 and Final Year w.e.f. AY 2019-20 (Rev – 2016) from Academic Year 2016-17.

They are hereby informed that the recommendations made by the Board of Studies in Electrical Engineering at its meeting held on 23<sup>rd</sup> April, 2020 and subsequently by the Board of Deans at its meeting held on 26<sup>th</sup> June, 2020 vide item No. 14(8) have been accepted by the Academic Council at its meeting held on 23<sup>rd</sup> July, 2020 vide item No. 4.124 and that in accordance therewith, the scheme (Sem. III to VIII) and revised syllabus (Rec-2019 'C' Scheme) for the B.E. in Electrical Engineering (Sem. III & IV) has been brought into force with effect from the academic year 2020-21. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI – 400 032  
21<sup>st</sup> January, 2021

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

To

The Principals of the Affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)

A.C/4.124/23/07/2020

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No. UG/ 47 -A of 2021 MUMBAI-400 032

21<sup>st</sup> January, 2021

Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Science & Technology,
- 2) The Chairman, Board of Studies in Electrical Engineering,
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

39  
**PRINCIPAL**  
St. Francis Institute  
Of Technology (Engg-College)  
Mount Poincur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





Item No. - 124  
AC- 23/7/2020

# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

in

## Electrical Engineering

Second Year with Effect from AY 2020-21

Third Year with Effect from AY 2021-22

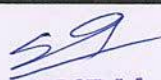
Final Year with Effect from AY 2022-23

(REV- 2019 'C' Scheme) from Academic Year 2019 – 20

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year  
2019–2020)

  
**PRINCIPAL**  
St. Francis Institute  
Of Technology (Engg-College)  
Mount Pooner, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





**Program Structure for Second Year Electrical Engineering  
(Semester III & IV)**

**UNIVERSITY OF MUMBAI  
(With Effect from 2020-2021)**

**Semester III**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
EEC301	Engineering Mathematics-III	3	--	1	3	--	1	4
EEC302	Electrical Circuit Analysis	3		--	3		--	3
EEC303	Fundamentals of Electrical Machines & Measurements	4	--	--	4	--	--	4
EEC304	Electrical Power System I	3	--	--	3	--	--	3
EEC305	Analog Electronics	3	--	--	3	--	--	3
EEL301	Electrical Machines & Measurements Lab	--	2	--	--	1	--	1
EEL302	Electronics Lab-I	--	2	--	--	1	--	1
EEL303	Simulation Lab-I	--	2	--	--	1	--	1
EEL304	SBL-I: Applied Electrical Engineering Lab	--	4	--	--	2	--	2
EEM301	Mini Project – 1A	--	4 <sup>S</sup>	--	--	2	--	2
<b>Total</b>		<b>16</b>	<b>14</b>	<b>1</b>	<b>16</b>	<b>07</b>	<b>1</b>	<b>24</b>

**Examination Scheme**

Course Code	Course Name	Theory					Term Work	Pract/ Oral	Total
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test I	Test II	Avg					
EEC301	Engineering Mathematics-III	20	20	20	80	3	25	--	125
EEC302	Electrical Circuit Analysis	20	20	20	80	3	--	--	100
EEC303	Fundamentals of Electrical Machines & Measurements	20	20	20	80	3	--	--	100
EEC304	Electrical Power System-I	20	20	20	80	3	--	--	100
EEC305	Analog Electronics	20	20	20	80	3	--	--	100
EEL301	Electrical Machines & Measurements Lab	--	--	--	--	--	25	25	50
EEL302	Electronics Lab-I	--	--	--	--	--	25	25	50
EEL303	Simulation Lab-I	--	--	--	--	--	25	25	50
EEL304	SBL-I: Applied Electrical Engineering Lab	--	--	--	--	--	50	--	50
EEM301	Mini Project – 1A	--	--	--	--	--	25	25	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>175</b>	<b>100</b>	<b>775</b>

S indicates work load of Learner (Not Faculty), for Mini Project





### Semester IV

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
EEC401	Engineering Mathematics-IV	3	--	1	3	--	1	4
EEC402	Electrical AC Machines-I	3	--	--	3	--	--	3
EEC403	Digital Electronics	3	--	--	3	--	--	3
EEC404	Power Electronic Devices and Circuits	3	--	--	3	--	--	3
EEC405	Electric and Hybrid Electric Vehicles	3	--	--	3	--	--	3
EEL401	Electrical AC Machines Lab I	--	2	--	--	1	--	1
EEL402	Python Programming Lab	--	2	--	--	1	--	1
EEL403	Electronics Lab II	--	2	--	--	1	--	1
EEL404	SBL-II : PCB Design and Fabrication Lab	--	4	--	--	2	--	2
EEM401	Mini Project – 1B	--	4 <sup>s</sup>	--	--	2	--	2
<b>Total</b>		<b>15</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>1</b>	<b>23</b>

#### Examination Scheme

Course Code	Course Name	Theory					Term Work	Pract/oral	Total
		Internal Assessment			End Sem. Exam.	Exam. Duration (in Hrs)			
		Test I	Test II	Avg.					
EEC401	Engineering Mathematics-IV	20	20	20	80	3	25	--	125
EEC402	Electrical AC Machines-I	20	20	20	80	3	--	--	100
EEC403	Digital Electronics	20	20	20	80	3	--	--	100
EEC404	Power Electronic Devices and Circuits	20	20	20	80	3	--	--	100
EEC405	Electric and Hybrid Electric Vehicles	20	20	20	80	3	--	--	100
EEL401	Electrical AC Machines Lab-I	--	--	--	--	--	25	25	50
EEL402	Python Programming Lab	--	--	--	--	--	25	25	50
EEL403	Electronics Lab-II	--	--	--	--	--	25	25	50
EEL404	SBL-II: PCB Design and Fabrication Lab	--	--	--	--	--	50	--	50
EEM401	Mini Project -1B	--	--	--	--	--	25	25	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>175</b>	<b>100</b>	<b>775</b>

\$ indicates work load of Learner (Not Faculty), for Mini Project

SBL: Skill Based Lab

#### Students group and load of faculty per week.

Mini Project 1A / 1B: Students can form groups with minimum 3 (Three) and not more than 4 (Four)

Faculty Load: 1 hour per week per four groups





# University of Mumbai

Second Year  
Mechanical Engineering  
New Syllabus R2019



MECH  
Semester III & IV

No. UG/ 43 of 2020-21

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges, Directors of the recognized Institutions in Science & Technology Faculty is invited to this office circular No. UG/167 of 2017-18 dated 8<sup>th</sup> August, 2017 relating to the revised syllabus as per the (CBCS) for Bachelor of Engineering (Mechanical Engineering) (Sem.III to VIII) be revised for S.E. (Sem.III & IV) from Academic Year 2017-18, Third Year (Sem.V & VI) from academic Year 2018-19 and Bachelor of Engineering (Sem.VII & VIII) from Academic Year 2019-20.

They are hereby informed that the recommendations made by Board of Studies in Mechanical Engineering at its meeting held on 28<sup>th</sup> May, 2020 and subsequently by the Board of Deans at its meeting held on 26<sup>th</sup> June, 2020 vide item No. 14(3) have been accepted by the Academic Council at its meeting held on 23<sup>rd</sup> July, 2020 vide item No. 4.119 and that in accordance therewith, the scheme (Sem. III to VIII) and revised syllabus (Rev-2019 'C' Scheme) for the B.E. in Mechanical Engineering (Sem.III & IV) has been brought into force with effect from the academic year 2020-21. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI - 400 032  
21<sup>st</sup> January, 2021  
To

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

The Principals of the Affiliated Colleges, and Directors of the recognized Institutions in Science & Technology Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)  
A.C/4.119/23/07/2020

\*\*\*\*\*

No. UG/43 -A of 2020-21      MUMBAI-400 032      21<sup>st</sup> January, 2021

Copy forwarded with Compliments for information to:-

- 1) The Dean, Faculty of Science & Technology.
- 2) The Chairman, Board of Studies in Mechanical Engineering.
- 3) The Director, Board of Examinations and Evaluation,
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. B.N.Gaikwad)  
I/c REGISTRAR

  
**PRINCIPAL**  
St. Francis Institute  
Of Technology (Engg-College)  
Mount Painsur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





AC 23/07/2020

Item No. 119

# UNIVERSITY OF MUMBAI



## Bachelor of Engineering

in

## Mechanical Engineering

Second Year with effect from AY 2020-21

Third Year with effect from AY 2021-22

Final Year with effect from AY 2022-23

(REV- 2019 'C' Scheme) from Academic Year 2019 – 20

Under

## FACULTY OF SCIENCE & TECHNOLOGY

(As per AICTE guidelines with effect from the academic year 2019–2020)

  
PRINCIPAL

St. Francis Institute  
Of Technology (Engg-College)  
Mount Poincur, S. V. P. Road,  
Borivli (West), Mumbai - 400 103.





**Undergraduate Program Structure for Mechanical Engineering  
Semester III**

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract	Tut.	Theory	Pract.	Tut.	Total
MEC301	Engineering Mathematics-III	3	--	1	3	--	1	4
MEC302	Strength of Materials	3		--	3		--	3
MEC303	Production Processes	4	--	--	4	--	--	4
MEC304	Materials and Metallurgy	3	--	--	3	--	--	3
MEC305	Thermodynamics	3	--	--	3	--	--	3
MEL301	Materials Testing	--	2	--	--	1	--	1
MEL302	Machine Shop Practice	--	4	--	--	2	--	2
MESBL301	CAD –Modeling	--	4	--	--	2	--	2
MEPBL301	Mini Project – 1 A	--	4 <sup>S</sup>	--	--	2	--	2
<b>Total</b>		<b>16</b>	<b>14</b>	<b>1</b>	<b>16</b>	<b>07</b>	<b>1</b>	<b>24</b>

Course Code	Course Name	Examination Scheme							Total
		Theory					Term Work	Pract/ Oral	
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test1	Test2	Avg					
MEC301	Engineering Mathematics-III	20	20	20	80	3	25	--	125
MEC302	Strength of Materials	20	20	20	80	3	--	--	100
MEC303	Production Processes	20	20	20	80	3	--	--	100
MEC304	Materials and Metallurgy	20	20	20	80	3	--	--	100
MEC305	Thermodynamics	20	20	20	80	3	--	--	100
MEL301	Materials Testing	--	--	--	--	--	25	25	50
MEL302	Machine Shop Practice	--	--	--	--	--	50	--	50
MESBL301	CAD – Modelling	--	--	--	--	--	25	25	50
MEPBL301	Mini Project – 1 A	--	--	--	--	--	25	25	50
<b>Total</b>		<b>--</b>	<b>--</b>	<b>100</b>	<b>400</b>	<b>--</b>	<b>150</b>	<b>75</b>	<b>725</b>

S indicates work load of Learner (Not Faculty), for Mini Project

SBL – Skill Based Laboratory

PBL – Project Based Learning



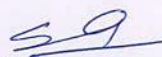
## Semester IV

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Pract.	Tut.	Theory	Pract.	Tut.	Total
MEC401	Engineering Mathematics-IV	3	--	1	3	--	1	4
MEC402	Fluid Mechanics	3	--	--	3	--	--	3
MEC403	Kinematics of Machinery	3	--	--	3	--	--	3
MEC404	CAD/CAM	3	--	--	3	--	--	3
MEC405	Industrial Electronics	3	--	--	3	--	--	3
MEL401	Industrial Electronics	--	2	--	--	1	--	1
MEL402	Kinematics of Machinery	--	2	--	--	1	--	1
MEL403	Python Programming	--	2	--	--	1	--	1
MESBL401	CNC and 3-D Printing	--	4	--	--	2	--	2
MEPBL401	Mini Project – 1 B	--	4 <sup>\$</sup>	--	--	2	--	2
<b>Total</b>		<b>15</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>1</b>	<b>23</b>

Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract/ Oral	Total
		Internal Assessment			End Sem. Exam	Exam. Duration (in Hrs)			
		Test1	Test 2	Avg.					
MEC401	Engineering Mathematics-IV	20	20	20	80	3	25	--	125
MEC402	Fluid Mechanics	20	20	20	80	3	--	--	100
MEC403	Kinematics of Machinery	20	20	20	80	3	--	--	100
MEC404	CAD/CAM	20	20	20	80	3	--	--	100
MEC405	Industrial Electronics	20	20	20	80	3	--	--	100
MEL401	Industrial Electronics	--	--	--	--	--	25	25	50
MEL402	Kinematics of Machinery	--	--	--	--	--	25	--	25
MEL403	Python Programming	--	--	--	--	--	25	25	50
MESBL401	CNC and 3-D Printing	--	--	--	--	--	25	25	50
MEPBL401	Mini Project – 1 B	--	--	--	--	--	25	25	50
<b>Total</b>		--	--	<b>100</b>	<b>400</b>	--	<b>150</b>	<b>100</b>	<b>750</b>

\$ indicates work load of Learner (Not Faculty), for Mini Project

SBL – Skill Based Laboratory  
PBL – Project Based Learning

  
**PRINCIPAL**  
 St. Francis Institute  
 Of Technology (Engg-College)  
 Mount Poinsur, S. V. P. Road,  
 Borivli (West), Mumbai - 400 103.

