

**MIT Academy of Engineering, Alandi, Pune**  
An Autonomous Institute affiliated to Savitribai Phule Pune University

**CURRICULUM FRAMEWORK (2019 PATTERN)**  
**CIVIL ENGINEERING**

The Bachelor of Technology Program shall be based on the following type of courses.

<b>COURSE DISTRIBUTION : SEMESTER WISE</b>										
<b>S.N.</b>	<b>TYPE OF COURSE</b>	<b>NO. OF COURSES/SEMESTER</b>								<b>TOTAL</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	
1.	Natural Science (NSC)	2	2	1						<b>5</b>
2.	Engineering Science (ESC)	3	2	2						<b>7</b>
3.	Discipline Core (DC)			3	3	3	3	2		<b>14</b>
4.	Discipline Elective (DE)								2	<b>2</b>
5.	Open Elective (OE)					1	1	1		<b>3</b>
6.	Humanities and Social Science (HSS)	1	1		2	1	1	1	1	<b>8</b>
7.	Skill Development and Project (SDP)	1	1	3	2	2	2	3	1	<b>15</b>
<b>TOTAL</b>		<b>7</b>	<b>6</b>	<b>9</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>54</b>

<b>CREDIT DISTRIBUTION : SEMESTER WISE</b>											
<b>1 Lecture hour = 1 Credit</b>			<b>2 Lab Hours = 1 Credit</b>			<b>1 Tutorial Hour = 1 Credit</b>					
<b>S.N.</b>	<b>TYPE OF COURSE</b>	<b>NO. OF CREDITS/SEMESTER</b>								<b>TOTAL</b>	<b>%</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>		
1.	Natural Science (NSC)	8	8	4						<b>20</b>	<b>12.34</b>
2.	Engineering Science (ESC)	11	7		4					<b>22</b>	<b>13.58</b>
3.	Discipline Core (DC)			12	12	11	11	8		<b>54</b>	<b>33.33</b>
4.	Discipline Elective (DE)								6	<b>6</b>	<b>3.70</b>
5.	Open Elective (OE)					4	4	4		<b>12</b>	<b>7.40</b>
6.	Humanities and Social Science (HSS)	0	2		2	2	2	2	2	<b>12</b>	<b>7.40</b>
7.	Skill Development and Project (SDP)	2	2	6	4	4	4	8	6	<b>36</b>	<b>22.22</b>
<b>TOTAL</b>		<b>21</b>	<b>19</b>	<b>22</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>22</b>	<b>14</b>	<b>162</b>	<b>100</b>

<b>CREDITS</b>				
<b>1 Lecture Hour = 1 Credit, 2 Lab Hours = 1 Credit, 1 Tutorial Hour = 1 Credit</b>				
<b>SL. NO.</b>	<b>YEAR</b>	<b>SEMESTER</b>		<b>TOTAL</b>
		<b>1</b>	<b>2</b>	
1.	First Year	21	19	<b>40</b>
2.	Second Year	22	22	<b>44</b>
3.	Third Year	21	21	<b>42</b>
4.	Final Year	22	14	<b>36</b>
<b>TOTAL</b>				<b>162</b>


<b>CONTACT HOURS</b>				
<b>SL. NO.</b>	<b>YEAR</b>	<b>SEMESTER</b>		<b>TOTAL</b>
		<b>1</b>	<b>2</b>	
1.	First Year	29	27	<b>56</b>
2.	Second Year	33	32	<b>65</b>
3.	Third Year	27	30	<b>57</b>
4.	Final Year	24	20	<b>44</b>
<b>TOTAL</b>				<b>222</b>

<b>ABBREVIATIONS</b>		
1.	MSE	Mid Semester Exam
2.	ESE	End Semester Exam
3.	IA	Internal Assessment
4.	T/P	Term Work / Practical
5.	DM	Demonstration
6.	L	Lecture
7.	P	Practical
8.	T	Tutorial
9.	Lab	Laboratory

<b>MIT</b>   Academy of Engineering	<b>COURSE STRUCTURE (2019 - 2023)</b>		
An Autonomous Institute Affiliated to SPPU			
<b>SCHOOL OF ENGINEERING SCIENCES AND HUMANITIES</b>	<b>W.E.F</b>	<b>:</b>	<b>2019-2020</b>
<b>FIRST YEAR BACHLEOR OF TECHNOLOGY IN CIVIL ENGINEERING</b>	<b>RELEASE DATE</b>	<b>:</b>	<b>01/07/2019</b>
	<b>REVISION NO.</b>	<b>:</b>	<b>1.0</b>

<b>SEMESTER: I</b>												
<b>INDUCTION PROGRAM: 3 WEEKS</b>												
<b>COURSE</b>			<b>TEACHING SCHEME</b>			<b>EXAMINATION SCHEME AND MARKS</b>					<b>CREDIT</b>	
<b>TYPE</b>	<b>CODE</b>	<b>NAME</b>	<b>Hour/Week</b>			<b>THEORY</b>			<b>PRACT</b>			<b>TOTAL</b>
			<b>L</b>	<b>P</b>	<b>T</b>	<b>MSE</b>	<b>ESE</b>	<b>IA</b>	<b>T/P</b>	<b>DM</b>		
NSC1	AS105	Calculus and Differential Equations	3	-	1	20	40	40	50	-	150	4
NSC2	AS106	Engineering Physics	3	2	-	20	40	40	50	-	150	4
	CH101	Science of Nature										
ESC1	EX102	Electrical & Electronic Engineering	3	2	-	20	40	40	50	-	150	4
	CV102	Applied Mechanics										
ESC2	ME104	Engineering Graphics	2	4	-	-	60	40	100	-	200	4
HSS1	HP103/4/5	English for Engineers //(German/Japanese)	0		-	-	-	-		-	-	100
ESC3	CS101	Logic Development	1	4	-	-	40	-	100	-	140	3
SDP1	ME105	Experimental Tools and Techniques	-	4	-	-	-	-	40	60	100	2
	ME106	Design Thinking			-							
<b>TOTAL</b>			<b>12</b>	<b>16</b>	<b>1</b>	<b>60</b>	<b>220</b>	<b>160</b>	<b>390</b>	<b>60</b>	<b>890</b>	<b>21</b>
			<b>10</b>				<b>160</b>	<b>120</b>			<b>790</b>	<b>19</b>


SEMESTER: II												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
NSC3	AS107	Statistics and Integral Calculus	3	-	1	20	40	40	50	-	150	4
NSC4	CH101	Science of Nature	3	2	-	20	40	40	50	-	150	4
	AS106	Engineering Physics										
ESC4	CV102	Applied Mechanics	3	2	-	20	40	40	50	-	150	4
	EX102	Electrical and Electronics Engineering										
HSS1	HP103/4/5	English for Engineers //(German/Japanese)	0	4	-	-	-	-	100	-	100	2
ESC2	ME104	Engineering Graphics	2		-	-	60	40	100	-	200	4
ESC5	CS102	Application Programming	1	4	-	-	40	-	100	-	140	3
SDP2	ME106	Design Thinking	-	4	-	-	-	-	40	60	100	2
	ME105	Experimental Tools and Techniques			-	-	-	40	60			
HSS2	HP106	Indian Constitution	1		-	-	-	-	-	-	Audit	
TOTAL			10	16	1	60	220	160	390	60	790	19
			12					220			890	21

 <b>MIT</b>   Academy of Engineering Autonomous Institute Affiliated to SPPU	<b>COURSE STRUCTURE (2019 - 2023)</b>		
<b>SCHOOL OF MECHANICAL &amp; CIVIL ENGINEERING</b>	<b>W.E.F</b>	:	<b>2020-2021</b>
<b>SECOND YEAR BACHLEOR OF TECHNOLOGY IN CIVIL ENGINEERING</b>	<b>RELEASE DATE</b>	:	<b>01/01/2020</b>
	<b>REVISION NO.</b>	:	<b>1.0</b>

SEMESTER: III													
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		TOTAL		
			L	P	T	MSE	ESE	IA	T/P	DM			
ESC6/ ESC7	ME221 / IT221	Material Engineering/ Engineering Informatics	3	2	-	20	50	30	50	0	150	4	
DC01	CV202	Geotechnical Engineering	3	2	-	20	50	30	50	0	150	4	
DC02	CV203	Building Design & Construction	3	2	-	20	50	30	50	0	150	4	
DC03	CV204	Mechanics of Solids	3	2	-	20	50	30	50	0	150	4	
SDP3	ET224	Prototyping I	0	4	-	0	0	25	0	50	75	2	
SDP4	CV230	Minor Project I (Ethics)	1	2	-	0	0	25	0	50	75	2	
SDP5	CV21#	Skill Development Course 1 (MS Excel, 3DMax)	0	4	-	0	0	25	0	50	75	2	
ESC7	CV201	Environmental Sciences	0	2	-	-	-	-	-	-	Audit		
<b>TOTAL</b>			<b>13</b>	<b>20</b>	<b>0</b>	<b>80</b>	<b>200</b>	<b>195</b>	<b>200</b>	<b>150</b>	<b>825</b>	<b>22</b>	


SEMESTER: IV													
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		TOTAL		
			L	P	T	MSE	ESE	IA	T/P	DM			
NSC5	AS201	Applied Mathematics	3	2	-	20	50	30	50	0	150	4	
DC04	CV205	Mechanics of fluids	3	2	-	20	50	30	50	0	150	4	
DC05	CV206	Geospatial Engineering	3	2	-	20	50	30	50	0	150	4	
DC06	CV207	Structural Analysis	3	2	-	20	50	30	50	0	150	4	
SDP6	ET235	Prototyping II	0	4	-	0	0	25	0	50	75	2	
SDP7	CV240	Minor Project II	1	2	-	0	0	25	0	50	75	2	
HSS3	HP202	Professional Skills I	0	4	-	0	0	25	0	50	75	2	
HSS4	HP203	Liberal Learning	1	0	-	-	-	-	-	-	Audit		

<b>TOTAL</b>	<b>14</b>	<b>18</b>	<b>0</b>	<b>80</b>	<b>200</b>	<b>195</b>	<b>200</b>	<b>150</b>	<b>825</b>	<b>22</b>
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 <b>Autonomous Institute Affiliated to SPPU</b>	<b>COURSE STRUCTURE (2019 - 2023)</b>			
	<b>SCHOOL OF MECHANICAL &amp; CIVIL ENGINEERING</b>	<b>W.E.F</b>	<b>:</b>	<b>2021-2022</b>
<b>THIRD YEAR BACHLEOR OF TECHNOLOGY IN CIVIL ENGINEERING</b>	<b>RELEASE DATE</b>	<b>:</b>	<b>01/01/2021</b>	
	<b>REVISION NO.</b>	<b>:</b>	<b>1.0</b>	

SEMESTER: V												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
DC07	CV301	Concrete Technology	3	2	-	20	50	30	50	0	150	4
DC08	CV302	Drinking Water & Sanitary Engineering	3	2	-	20	50	30	50	0	150	4
DC09	CV303	Structural Design- I	3	0	-	20	50	30	0	0	100	3
OE01	CV31#	Open Elective	3	2	-	20	50	30	50	0	150	4
HSS5	HP304	Project Management	2	0	-	0	50	25	0	0	75	2
SDP8	CV32#	Skill Development Course 2 (ETAB)	0	4	-	0	0	25	50	0	75	2
SDP9	ET324	Mini Project I (Technical Writing)	1	2	-	0	0	25	0	50	75	2
<b>TOTAL</b>			<b>15</b>	<b>12</b>	<b>0</b>	<b>80</b>	<b>250</b>	<b>195</b>	<b>200</b>	<b>50</b>	<b>775</b>	<b>21</b>

SEMESTER: VI												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
DC10	CV304	Structural Design-II	3	2	-	20	50	30	50	0	150	4
DC11	CV305	Transportation Engineering	3	2	-	20	50	30	50	0	150	4
DC12	CV306	Water Resources Engineering	3	0	-	20	50	30	0	0	100	3
OE02	CV33#	Open Elective	3	2	-	20	50	30	50	0	150	4
SDP10	CV34#	Skill Development Course 3 (VISSIM, STADDPRO)	0	4	-	0	0	25	50	0	75	2
SDP11	ET326	Mini Project II	0	4	-	0	0	25	0	50	75	2
HSS6	HP305	Professional Skills 2	0	4	-	0	0	25	0	50	75	2
<b>TOTAL</b>			<b>12</b>	<b>18</b>	<b>0</b>	<b>80</b>	<b>200</b>	<b>195</b>	<b>200</b>	<b>100</b>	<b>775</b>	<b>21</b>

 <b>MIT</b>   Academy of Engineering Autonomous Institute Affiliated to SPPU	<b>COURSE STRUCTURE (2019 - 2023)</b>		
<b>SCHOOL OF MECHANICAL &amp; CIVIL ENGINEERING</b>	<b>W.E.F</b>	:	<b>2022-2023</b>
<b>FINAL YEAR BACHLEOR OF TECHNOLOGY IN CIVIL ENGINEERING</b>	<b>RELEASE DATE</b>	:	<b>01/01/2022</b>
	<b>REVISION NO.</b>	:	<b>1.0</b>

SEMESTER: VII												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
DC13	CV401	Quantity Estimation	3	2	-	20	50	30	50	0	150	4
DC14	CV402	Design of Hydraulics Structures	3	2	-	20	50	30	50	0	150	4
OE03	CV41#	Open Elective	3	2	-	20	50	30	50	0	150	4
SDP12	CV42#	Skill Development Course 4 (WMS, QGIS)	0	4	-	0	0	25	50	0	75	2
HSS7	HP405/HP406	Engineering Economics/ Psychology	1	-	-	0	50	25	0	0	75	2
SDP13	CV454	Project I	0	4	-	0	0	25	0	50	75	2
SDP14	CV465	Summer Internship	-	-	-	-	-	-	-	150	150	4
<b>TOTAL</b>			<b>10</b>	<b>14</b>	<b>0</b>	<b>60</b>	<b>200</b>	<b>165</b>	<b>200</b>	<b>200</b>	<b>825</b>	<b>22</b>

SEMESTER: VIII (PART A)												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
DE01	CV44#	Discipline Elective	3	0	-	20	50	30	0	0	100	3
DE02	CV44#	Discipline Elective	3	0	-	20	50	30	0	0	100	3
HSS8	HP406/HP405	Psychology /Engineering Economics	2	0	-	0	50	25	0	0	75	2
SDP15	CV456	Project II	-	12	-	0	0	100	0	100	200	6
<b>TOTAL</b>			<b>8</b>	<b>12</b>	<b>0</b>	<b>40</b>	<b>150</b>	<b>185</b>	<b>0</b>	<b>100</b>	<b>475</b>	<b>14</b>

SEMESTER: VIII (PART B SEMESTER LONG INTERNSHIP)												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					CREDIT	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT			TOTAL
			L	P	T	MSE	ESE	IA	T/P	DM		
DE01	CV46#	Discipline Elective	3	0	-	20	50	30	0	0	100	3
DE02	CV46#	Discipline Elective	3	0	-	20	50	30	0	0	100	3
Semester Long Internship Design			-	-	-	-	-	-	-	150	150	4
Semester Long Internship Implementation			-	-	-	-	-	-	-	150	150	4
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>100</b>	<b>60</b>	<b>0</b>	<b>300</b>	<b>500</b>	<b>14</b>

Natural Science (NSC) : 5 Courses		
Sl. No.	Course Code	Course Name
1.	AS105	Calculus and Differential Equations
2.	AS106	Engineering Physics
3.	CH101	Science of Nature
4.	AS107	Statistics and Integral Calculus
5.	AS201	Applied Mathematics

Engineering Science (ESC) : 7 Courses		
Sl. No.	Course Code	Course Name
1.	EX102	Electrical and Electronics Engineering
2.	CV102	Applied Mechanics
3.	ME104	Engineering Graphics
4.	CS101	Logic Development
5.	CS102	Application Programming
6.	ME201	Material Engineering
7.	IT201	Engineering Informatics



<b>Humanities and Social Science (HSS) : 10 Courses</b>		
<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Name</b>
1.	HP103	English for Engineers
2.	HP104	German
3.	HP105	Japanese
4.	HP106	Indian Constitution
5.	HP202	Professional Skills I
6.	HP203	Liberal Learning
7.	HP304	Project Management
8.	HP305	Professional Skills 2
9.	HP405	Engineering Economics
10.	HP406	Psychology

<b>Discipline Core (DC) : 14 Courses</b>		
<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Name</b>
1.	CV202	Geotechnical Engineering
2.	CV203	Building Design & Construction
3.	CV204	Mechanics of Solid
4.	CV205	Mechanics of fluids
5.	CV206	Geospatial Engineering
6.	CV207	Structural Analysis
7.	CV301	Concrete Technology
8.	CV302	Drinking Water & Sanitary Engineering
9.	CV303	Structural Design-I
10.	CV304	Structural Design-II
11.	CV305	Transportation Engineering
12.	CV306	Water Resources Engineering
13.	CV401	Quantity Estimating
14.	CV402	Design of Hydraulics Structures

Discipline Elective (DE) : 8 Courses		
Sl. No.	Course Code	Course Name
1.	CV441	Building Services
	CV442	Advanced Structural Analysis
	CV443	Railway Engineering
	CV444	Numerical Methods in Civil Engineering
2.	CV445	Foundation Engineering
	CV446	Geospatial Tools and Techniques
	CV447	Air and Noise Pollution
	CV448	Finite Element Methods

Open Elective (OE) : 6 Courses		
Sl. No.	Course Code	Course Name
1.	CV311	Construction Project Management
	CV331	Operation Research
	CV411	Financial Management
2.	CV312	Solid waste management
	CV332	Unit operations for liquid waste/effluent treatment
	CV412	Environmental Impact assessment & Climate Change

Skill Development and Project (SDP): 17 Courses			
Sl. No.	Course Code	Course Name	
1.	ME105	Experimental Tools and Techniques	
2.	ME106	Design Thinking	
3.	ET206	Prototyping I	
4.	CV230	Minor Project I (Ethics)	
5.	CV211	Skill Development Course	MS Excel
	CV212		R
	CV213		3DMax
6.	ET216	Prototyping II	
7.	CV240	Minor Project II (IPR)	
8.	CV321	Skill Development Course 2 (ETAB)	
9.	ET324	Mini Project I (Technical Writing)	
10.	CV341	Skill Development Course 3	VISSIM
	CV342		STADDPRO
11	ET326	Mini Project II	

12	CV421	Skill Development Course 4	WMS
	CV422		QGIS
13	CV454	Project I	
14	CV465	Summer Internship	
	CV456	Project II	
15	ME105	Experimental Tools and Techniques	
16	ME106	Design Thinking	
17	ET206	Prototyping I	