



**SHIVAJI UNIVERISTY, KOLHAPUR-416 004. MAHARASHTRA**  
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 शिवाजी विद्यापीठ, कोल्हापूर – 416004.  
 दुरध्वनी (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग— २६०९०९४)  
 फेक्स : ००९१-०२३१-२६९१५३३ व २६९२३३३.e-mail:bos@unishivaji.ac.in

**SU/BOS/Sci & Tech/ 6591**

**Date: 28/06/2019**

**To,**

**The Principal/ Director,**  
 All affiliated Architecture Colleges,  
 Shivaji University, Kolhapur..

**Subject:** Regarding syllabi of B.Arch. (CBCS) part-I (Sem I& II) under  
 the Faculty of Science & Technology

**Sir/Madam,**

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised B.Arch. (CBCS) part-I (Sem I& II) syllabi and structure under the Faculty of Science & Technology.

This syllabus and equivalence shall be implemented from the academic year 2019-2020 (i.e. from June 2019) onwards. A soft copy of containing syllabus is attached herewith and it is also available on university website [www.unishivaji.ac.in](http://www.unishivaji.ac.in).

The question papers on the pre-revised syllabi of above mentioned course will be set for the examinations to be held in October /November 2019 & March/April 2020. These chances are available for repeater students, if any.

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

**Yours faithfully,**

  
**Dy Registrar**

**Copy to:**

1	The I/c Dean and Associal Dean, Faculty of Science & Technology	6	Appointment Section
2	The Chairman, Respective Board of Studies	7	Affiliation Section (T.1)
3	Director, Examination and Evaluation	8	Affiliation Section (T.2)
4	Eligibility Section	9	P.G.Admission Section
5	O.E. – 4	10	P.G Seminar Section

# SHIVAJI UNIVERSITY, KOLHAPUR



Estd. 1962

NAAC 'A' Grade

**Faculty of Science and Technology**

**Syllabus For**

**B. Arch. Part – I (Sem I & II)**

**(To be implemented from June 2019 onwards)**

(Subject to the modifications that will be made from time to time)

**FIRST YEAR ARCHITECTURE ENGINEERING – CBCS PATTERN**

SEMESTER - I																						
Sr. No	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME											
		THEORY			TUTORIAL			PRACTICAL/STUDIO			THEORY					PRACTICAL			TERM WORK			
		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min	
1	PC – 101	1	1	1	-	-	-	1.5	3	3					As per BOS Guidelines				3	100	40	
2	PC – 102	1	1	1	-	-	-	1.5	3	3							50	20		3	50	20
3	PC – 103	1	1	1	-	-	-	3	6	6										6	100	40
4	PC – 104 **	2	2	2	-	-	-					CIE 20	50	20						50	20	
5	BS & AE – 105	1	1	1	-	-	-	1.5	3	3		ESE 30										3
6	BS & AE – 106 **	3	3	3	-	-	-					CIE 20	80	32						20	10	
7	PC – 107				-	-	-	1	2	2		ESE 60										2
8	SEC - 108	2	2	2	-	-	-					-	-	-							50	20
9	SEC – 109	1	1	1	-	-	-	0.5	1	1		-	-	-						1	50	20
	<b>TOTAL</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>18</b>	<b>18</b>			<b>180</b>			<b>50</b>	<b>20</b>		<b>520</b>	<b>200</b>		
SEMESTER - II																						
1	PC – 201	1	1	1	-	-	-	1.5	3	3					As per BOS Guidelines				3	100	40	
2	PC – 202	1	1	1	-	-	-	1.5	3	3		CIE 30	100	40						3	50	20
3	PC – 203	1	1	1	-	-	-	3	6	6		ESE 70							100	40		6
4	PC – 204 **	2	2	2	-	-	-					CIE 20	50	20						50	20	
5	BS & AE – 205 *	1	1	1	-	-	-	1.5	3	3		ESE 30							100	40		3
6	BS & AE – 206 **	3	3	3	-	-	-					CIE 20	80	32						20	10	
7	PC – 207				-	-	-	1	2	2		ESE 60										2

8	SEC - 208	2	2	2	-	-	-	0.5	1	1								50	20
9	SEC - 209	1	1	2	-	-	-										1	50	20
	<b>TOTAL</b>	<b>12</b>	<b>12</b>	<b>12</b>				<b>9</b>	<b>18</b>	<b>18</b>			<b>280</b>		<b>200</b>			<b>520</b>	<b>200</b>
	<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>24</b>				<b>18</b>	<b>36</b>	<b>36</b>			<b>460</b>		<b>250</b>			<b>1040</b>	

CIE- Continuous Internal Evaluation  
ESE – End Semester Examination

<ul style="list-style-type: none"> <li>• Candidate contact hours per week : 30 Hours (Minimum)</li> </ul>	<ul style="list-style-type: none"> <li>• Total Marks for B.Arch. Sem I &amp; II : 175</li> </ul>
<ul style="list-style-type: none"> <li>• Theory/Tutorial Duration : 60 Minutes and Practical Duration : 120 Minutes</li> </ul>	<ul style="list-style-type: none"> <li>• Total Credits for B.Arch.-I (Semester I &amp; II) : 42</li> </ul>
<ul style="list-style-type: none"> <li>• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.</li> </ul>	
<ul style="list-style-type: none"> <li>• There shall be separate passing for theory and practical (term work) courses.</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Sem I - SSC : Soft Skill Course</b> : There shall be an additional compulsory course of 2 Credits (Self Study) for a course of Democracy, Elections and Good Governance which will not included in total Credits</li> </ul>	
<ul style="list-style-type: none"> <li>• <b>Sem II - SSC : Soft Skill Course</b> : Any one from following (i) to (v) (2 Credits) (Self Study) <ul style="list-style-type: none"> <li>i) Business Communication &amp; Presentation ii) Event management iii) Personality Development, iv) Yoga &amp; Physical Management v) Resume, Report &amp; proposal writing</li> </ul> </li> </ul>	

• SECOND YEAR ARCHITECTURE ENGINEERING – CBCS PATTERN

SEMESTER – III																						
Sr. No	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME											
		THEORY			TUTORIAL			PRACTICAL/STUDIO			THEORY					PRACTICAL			TERM WORK			
		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min	
1	PC - 301	1	1	1				1.5	3	3		CIE			As per BOS Guidelines				3	50	20	
2	PE – 302	1	1	1				1	1	1		ESE							1	100	40	
3	PC – 303	1	1	1				3	6	6		CIE					100	40	6	100	40	
4	BS & AE – 304 *	1	1	1				1.5	3	3		CIE	20	80		32	100	40	3	70	28	
5	BS & AE – 305 **	3	3	3							ESE	60										
6	PC - 306 **	1	1	1				1	2	2		CIE	20	80		32			2	20	10	
7	BS & AE – 307	1	1	1				1	2	2		ESE	60									
8	BS & AE – 308	2	2	2								CIE	30	100		40			2	50	20	
9	BA & AE – 309	2	2	2							ESE	70										
	<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>13</b>				<b>9</b>	<b>17</b>	<b>17</b>				<b>310</b>				<b>200</b>			<b>460</b>	
SEMESTER – IV																						
1	PC – 401	1	1	1				1.5	3	3		CIE			As per BOS Guidelines				3	100	40	
2	PE – 402	1	1	1				1	1	1		ESE							1	100	40	
3	PC – 403	1	1	1				3	6	6		CIE	30	100		40	100	40	6	100	40	
4	BS & AE – 404 *	1	1	1				1.5	3	3		ESE	70									
5	BS & AE – 405 **	3	3	3								CIE	20	80		32	100	40	3	70	28	
6		1	1	1				1	2	2		ESE	60									
												CIE	20									
												ESE	60									
												CIE								50	20	20

	BS & AE – 406										ESE									
7	PC – 407 **	1	1	1				1	2	2	CIE ESE	20 60	80	32		-		2	20	20
8	BS & AE – 408	2	2	2							CIE ESE	20 30	50	20		-			50	20
9	BA & AE – 409	2	2	2							CIE ESE	20 50	70	28	-	-			30	12
	<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>13</b>				<b>9</b>	<b>17</b>	<b>17</b>			<b>360</b>			<b>200</b>			<b>520</b>	
	<b>TOTAL</b>	<b>26</b>	<b>26</b>	<b>26</b>				<b>18</b>	<b>34</b>	<b>34</b>			<b>670</b>			<b>400</b>			<b>980</b>	

CIE- Continuous Internal Evaluation  
ESE – End Semester Examination

#### OPEN ELECTIVE-I

Sr. No.	Name of the Subject	Name of the concern Branch
01	Art Appreciation - I	
02	Art in Architecture – I	
03	Graphic and Product Design - I	

#### OPEN ELECTIVE-II

Sr. No.	Name of the Subject	Name of the concern Branch
01	Art Appreciation – II	
02	Art in Architecture – II	
03	Graphic and Product Design - II	

<ul style="list-style-type: none"> <li>• Candidate contact hours per week : 30 Hours (Minimum)</li> </ul>	<ul style="list-style-type: none"> <li>• Total Marks for B.Arch. Sem III &amp; IV : 44</li> </ul>
<ul style="list-style-type: none"> <li>• Theory/Tutorial Duration : 60 Minutes and Practical Duration : 120 Minutes</li> </ul>	<ul style="list-style-type: none"> <li>• Total Credits for B.Arch.-I (Semester I &amp; II) : 2050</li> </ul>
<ul style="list-style-type: none"> <li>• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.</li> </ul>	
<ul style="list-style-type: none"> <li>• There shall be separate passing for theory and practical (term work) courses.</li> </ul>	

**THIRD YEAR ARCHITECTURE ENGINEERING – CBCS PATTERN**

<b>SEMESTER –V</b>																					
<b>Sr. No</b>	<b>Course (Subject Title)</b>	<b>TEACHING SCHEME</b>									<b>EXAMINATION SCHEME</b>										
		<b>THEORY</b>			<b>TUTORIAL</b>			<b>PRACTICAL/STUDIO</b>			<b>THEORY</b>					<b>PRACTICAL</b>			<b>TERM WORK</b>		
		<b>Credits</b>	<b>No. of Lecture</b>	<b>Hours</b>	<b>Credits</b>	<b>No. of Lecture</b>	<b>Hours</b>	<b>Credits</b>	<b>No. of Lecture</b>	<b>Hours</b>	<b>Hours</b>	<b>Mode</b>	<b>Marks</b>	<b>Total Marks</b>	<b>Min</b>	<b>Hours</b>	<b>Max</b>	<b>Min</b>	<b>Hours</b>	<b>Max</b>	<b>Min</b>
1	PC – 501 *	1	1	1				3	6	6		CIE			<b>As per BOS Guidelines</b>	100	40	6	100	40	
2	BS & AE – 502 *	1	1	1				1.5	3	3		ESE		80		32	100	40	3	70	28
3	BS & AE – 503 **	3	3	3								CIE	20	80		32				20	10
4	PC – 504 **	1	1	1				1	2	2		ESE	60	80		32			2	20	10
5	PC – 505 **	1	1	1				1	2	2		CIE	20	80		32			2	20	10
6	BS & AE – 506	1	1	1				1	2	2		ESE	30	50		20			2	50	20
7	PC – 507	1	1	1				1.5	3	3		-	-	-		-			3	50	20
8	PC – 508	1	1	1				1	2	2		CIE	20	50		20			2	50	20
	<b>TOTAL</b>	<b>10</b>	<b>10</b>	<b>10</b>				<b>10</b>	<b>20</b>	<b>20</b>				<b>420</b>		<b>200</b>			<b>430</b>		
<b>SEMESTER –VI</b>																					
1	PC – 601 *	1	1	1				3	6	6		CIE	30	100	40	<b>As per BOS Guidelines</b>	200	80	6	100	40
2	BS & AE - 602 *	1	1	1				1.5	3	3		ESE	70				80	32	100	40	3
3	BS & AE - 603 **	3	3	3								CIE	20	80	32					20	10
4	PC - 604 **	1	1	1				1	2	2		ESE	60	80	32				2	20	10
5	PC – 605 **	1	1	1				1	2	2		CIE	20	80	32				2	20	10
6	BS & AE – 606	1	1	1				1	2	2		ESE	60	50	20				2	50	20
7	PC – 607	1	1	1				1.5	3	3							100	40	3	50	20

8	PE – 608	1	1	1				1	2	2						50	20	2	50	20
9	BS & AE - 609	3	3	3								CIE	20	80	32				20	10
	<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>13</b>				<b>10</b>	<b>20</b>	<b>20</b>				<b>550</b>		<b>450</b>			<b>400</b>	
	<b>TOTAL</b>	<b>23</b>	<b>23</b>	<b>23</b>				<b>20</b>	<b>40</b>	<b>40</b>				<b>970</b>		<b>650</b>			<b>830</b>	

CIE- Continuous Internal Evaluation  
ESE – End Semester Examination

\* Means combine passing for external oral & theory paper

\*\* Means combine passing for internal term work & theory paper & external oral as applicable.

# One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)

- One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)
- Per Semester Periods per week – 30
- Total week – 15 weeks per semester

• Candidate contact hours per week : 30 Hours (Minimum)	• Total Marks for B.Arch. Sem V & VI : 43
• Theory/Tutorial Duration : 60 Minutes and Practical Duration : 120 Minutes	• Total Credits for B.Arch.-I (Semester I & II) :2450
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (term work) courses.	

**FOURTH YEAR ARCHITECTURE ENGINEERING – CBCS PATTERN**

<b>SEMESTER –VII</b>																					
Sr. No	Course (Subject Title)	<b>TEACHING SCHEME</b>									<b>EXAMINATION SCHEME</b>										
		<b>THEORY</b>			<b>TUTORIAL</b>			<b>PRACTICAL/STUDIO</b>			<b>THEORY</b>					<b>PRACTICAL</b>			<b>TERM WORK</b>		
		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min
1	PC – 701	1	1	1				3	6	6					As per BOS Guidelines	100	40	6	100	40	
2	PC - 702	1	1	1				2	3	3		CIE 30	100	40		50	20	3	50	20	
3	BS & AE – 704	3	3	3								ESE 70				100	40				50
4	PE – 705 **	1	1	1				1	2	2		CIE 30	100	40					2	50	20
5	PAECC – 706	1	1	1				1	2	2		ESE 70				50	20				2
6	PE – 707	1	1	1				1	2	2		-	-	-			50	20	2	50	20
7	PE – 708	1	1	1				1	2	2							50	20	2	50	20
	<b>TOTAL</b>	<b>09</b>	<b>09</b>	<b>09</b>				<b>9</b>	<b>17</b>	<b>17</b>			<b>350</b>			<b>250</b>			<b>400</b>		
<b>SEMESTER –VIII</b>																					
1	PAECC - 801							15	15	15						100	40	15	100	40	
	<b>TOTAL</b>							<b>15</b>	<b>15</b>	<b>15</b>						<b>100</b>			<b>100</b>		
	<b>TOTAL</b>	<b>09</b>	<b>09</b>	<b>09</b>				<b>24</b>	<b>35</b>	<b>35</b>			<b>350</b>			<b>400</b>			<b>550</b>		

CIE- Continuous Internal Evaluation  
ESE – End Semester Examination

\* Means combine passing for external oral & theory paper

\*\* Means combine passing for internal term work & theory paper & external oral as applicable.

# One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)

- One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)
- Per Semester Periods per week – 30
- Total week – 15 weeks per semester

<ul style="list-style-type: none"><li>• Candidate contact hours per week : 30 Hours (Minimum)</li></ul>	<ul style="list-style-type: none"><li>• Total Marks for B.Arch. Sem VII &amp; VIII : 33</li></ul>
<ul style="list-style-type: none"><li>• Theory/Tutorial Duration : 60 Minutes and Practical Duration : 120 Minutes</li></ul>	<ul style="list-style-type: none"><li>• Total Credits for B.Arch.-I (Semester VI I&amp; VIII) : 1300</li></ul>
<ul style="list-style-type: none"><li>• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.</li></ul>	
<ul style="list-style-type: none"><li>• There shall be separate passing for theory and practical (term work) courses.</li></ul>	

**FINAL YEAR ARCHITECTURE ENGINEERING – CBCS PATTERN**

SEMESTER – IX																						
Sr. No	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME											
		THEORY			TUTORIAL			PRACTICAL/STUDIO			THEORY					PRACTICAL			TERM WORK			
		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min	
1	PC – 901	1	1	1				3	6	6		CIE	30	100	40	As per BOS Guidelines	100	40	6	100	40	
											ESE	70										
2	PC - 902	2	2	2				3	6	6								100	40	6	50	20
3	PC-903	1	1	1				2	3	3								50	20	3	50	20
4	BS & AE – 904	3	3	3								CIE	30	100	40						50	20
											ESE	70										
5	PAECC – 903	3	3	3								CIE	30	100	40						50	20
											ESE	70										
6	PE – 904	1	1	1				1.5	3	3							50	20	3	50	20	
7	PE – 905	1	1	1				1.5	3	3							50	20	3	50	20	
	<b>TOTAL</b>	<b>12</b>	<b>12</b>	<b>12</b>				<b>11</b>	<b>21</b>	<b>21</b>				<b>300</b>			<b>350</b>			<b>400</b>		
SEMESTER – X																						
1	PC – 1001	02	02	02				4	8	8		CIE	30	100	40	As per BOS Guidelines	200	80	8	200	80	
											ESE	70										
2	BS & AE - 1002	01	01	01				2	3	3		CIE	30	100	40			100	40	3	100	40
											ESE	70										
3	PE- 1003	01	01	01				1.5	3	3		CIE	30	100	40			50	20	3	50	20
											ESE	70										
4	PE - 1004	01	01	01				1.5	3	3		CIE	30	100	40			50	20	3	50	20
											ESE	70										
5	SEC - 1006	02	02	02								CIE	30	100	40		50	20		50	20	
											ESE	70										
	<b>TOTAL</b>	<b>07</b>	<b>07</b>	<b>07</b>				<b>9</b>	<b>17</b>	<b>17</b>				<b>500</b>			<b>450</b>			<b>450</b>		
	<b>TOTAL</b>	<b>19</b>	<b>19</b>	<b>19</b>				<b>20</b>	<b>35</b>	<b>35</b>				<b>800</b>			<b>750</b>			<b>800</b>		

CIE- Continuous Internal Evaluation  
ESE – End Semester Examination

\* Means combine passing for external oral & theory paper

\*\* Means combine passing for internal term work & theory paper & external oral as applicable.

# One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)

- One lecture means period of One Hour (60 Minutes) and One Studio means studio period of One Hour (60 Minutes)
- Per Semester Periods per week – 30
- Total week – 15 weeks per semester

• Candidate contact hours per week : 30 Hours (Minimum)	• Total Marks for B.Arch. Sem IX & X : 2350
• Theory/Tutorial Duration : 60 Minutes and Practical Duration : 120 Minutes	• Total Credits for B.Arch.-I (Semester IX& X) : 39
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (term work) courses.	

## COURSE CODE AND DEFINITION

### Semester I

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 101	Aesthetics & visual arts – I	
2.	PC – 102	Graphics – I	
3.	PC – 103	Architectural Design – I	
4.	PC – 104	** Human Settlement & History of Civilization	
5.	BS & AE – 105	Building Construction & Material – I	
6.	BS & AE – 106	** Theory of Structure – I	
7.	PC – 107	Workshop – I	
8.	SEC - 108	Communication Skills – I	
9.	SEC – 109	Computer Technology in Architecture - I	

### Semester II

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 201	Aesthetics & visual arts – II	
2.	PC – 202	Graphics – II	
3.	PC – 203	Architectural Design – II	
4.	PC – 204	** Human Settlement & History of Civilization	
5.	BS & AE – 205	* Building Construction & Material – II	
6.	BS & AE – 206	** Theory of Structure – II	
7.	PC – 207	Workshop – II	
8.	SEC - 208	Communication Skills – II	
9.	SEC - 209	Computer Technology in Architecture - II	

**'Semester III**

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC - 301	Graphics – III	
2.	PE – 302	Elective – I	
3.	PC – 303	Architectural Design – III	
4.	BS & AE – 304	* Building Construction & Material – III	
5.	BS & AE – 305	** Theory of Structure – III	
6.	PC - 306	History of Architecture	
7.	BS & AE – 307	Climatology & Architecture	
8.	BS & AE – 308	Building Services – I	
9.	BA & AE – 309	Environmental Studies	

**Semester IV**

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 401	Graphics – IV	
2.	PE – 402	Elective – II	
3.	PC – 403	Architectural Design – IV	
4.	BS & AE – 404	* Building Construction & Material – IV	
5.	BS & AE – 405	** Theory of Structure – IV	
6.	BS & AE – 406	Surveying & Leveling	
7.	PC – 407	History of Architecture	
8.	BS & AE – 408	Building Services – II	
9.	BA & AE – 409	Environmental Studies	

### Semester V

Sr. No	Code No.	Subject	Credits
1.	PC – 501	* Architectural Design – IV	
2.	BS & AE – 502	* Building Construction & Material – IV	
3.	BS & AE – 503	** Theory of Structure – IV	
4.	PC – 504	** History of Architecture – II	
5.	PC – 505	** Estimation Costing & Specification – II	
6.	BS & AE – 506	Building Services – IV	
7.	PC – 507	Working Drawing – II Arch, Graphics & Drawing	
8.	PC – 508	Landscape Architecture Landscape Design	

### Semester VI

Sr. No	Code No.	Subject	Credits
1.	PC – 601	* Architectural Design – VI	
2.	BS & AE -602	* Building Construction & Material – VI	
3.	BS & AE -603	** Theory of Structure –VI	
4.	PC - 604	** History of Architecture – IV	
5.	PC – 605	** Estimation Costing & Specification – II	
6.	BS & AE – 606	Building Services – IV	
7.	PC – 607	Working Drawing – II Arch, Graphics & Drawing	
8.	PE – 608	Interior Design	
9.	BS & AE - 609	Acoustics	

### Semester VII

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 701	* Advanced Architectural Design - I	
3.	PC - 703	Advanced Building Specification Valuation and Project Management System	
4.	BS & AE – 704	Advanced Structure – I	
5.	PE – 705	Urban and Regional Planning	
6.	PAECC – 706	Research Methodology	
7.	PE – 707	Elective – IV	
8.	PE – 708	Elective - V	

### Semester VIII

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PAECC – 801	Practical Training and Report	

### Semester IX

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 901	Advanced Architectural Design - 2	
2.	PC - 902	Architectural Project 1 + 2 (Synopsis, Literature Review, Data Collection)	
3.	PC-903	Urban Design	
4.	BS & AE – 904	Advanced Structure – 2	
5.	PAECC – 903	Professional Practice and Building Bye-Laws	
6.	PE – 904	Elective – VI	
7.	PE – 905	Elective - VII	

**emester X**

<b>Sr. No</b>	<b>Code No.</b>	<b>Subject</b>	<b>Credits</b>
1.	PC – 1001	Architectural Project III Case Study/Site/Final Design and Presentation Drawing / Report	
2.	BS & AE - 1002	Advanced Building Construction	
3.	PE- 1003	Elective – VIII	
4.	PE - 1004	Elective - IX	
5.	SEC - 1006	Entrepreneurship Skills for Architects	

# SHIVAJI UNIVERSITY, KOLHAPUR

## SYLLABUS FOR FIRST SEM I - ARCHITECTURE DEGREE COURSE

(PC-101)

### SUBJECT: AESTHETICS AND VISUAL ARTS – I

Lectures -	15	Paper-	-	Sessional Work (Int.)-	100
Studio-	60	Duration-	-	Oral (Ext.)	-
Total-	75			Theory	-
Total Credit points-	2.5			Total	100

#### COURSE OBJECTIVE:

To give an artistic orientation to the students to develop fundamental artistic skills.

#### COURSE CONTENTS:

- Aesthetics as part of LIFE, relation of all fine arts like painting, sculpture, music dance etc. to each other in everyday life ,beauty in human activities and movements, good ,mediocre and bad taste expression of Artists personality.
- Understand and relationship of surface from space masses, point, line, light, and shade, aesthetics in motion, sound, touch and smell. Aesthetics as part of mind.
- Colour theory, colour circle, various colour schemes and their combinations, general psychological effects of colours.
- Elements of design such as line, form & shape, colour & texture, patterns etc.

#### Reference Books -

- 1) Architecture form, space and order; FRANCIS D.K. CHING; John Miley And Sons.
- 2) Architectural rendering; ALBERT O HALSE; Mcgraw-Hill Book Company.
- 3) Design Fundamentals In Architecture; V.S.Parmar; Somaiya Publication Pvt. Ltd

(PC- 102)

**SUBJECT: GRAPHICS - I**

**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE COURSE**

Lectures - 15	Paper - -	Sessional Work (Int.) -50
Studio - 60	Duration- -	Oral (Ext.) - 50
Total - 75		Theory - -
Total Credit points-2.5		Total - 100

**COURSE OBJECTIVE:**

The purpose of this subject is to develop ability to present all the elements of design in graphic forms to enhance the potential of a student in presenting concepts and ideas in terms of drawing using different techniques.

**COURSE CONTENTS:**

- Introduction of drawing instruments such as drawing board set-squares tee-square french curve, stencils, different types of pencils and pens and their uses.
- Lettering, size and notation of drawing, symbolic representation of building elements and material, other features as per I.S.I and standard practice.
- Introduction of various media of drawing and presentation such as pencil, charcoal crayon, water colour, sketch pens, inks etc. and exercise using all these media.
- Freehand sketching using different media mentioned above.
- Scale drawing, construction of various metric scales, normally used scale, use of metric scale for various purposes.
- Introduction and understanding of plain elevation and section.
- Measured drawing of small objects, such as building elements, pieces of furniture and small built forms.
- Solid geometry to explain the need of solid geometry in architectural drawings such as techniques of presenting three dimensional drawing into two dimensional objects. Exercise involving geometrical forms, presented in different positions of individual object and then in group.
- Principles of orthographic projection, projection on points, lines, planes, solids.

**Reference Books**

1. Ching Francis D.K.: Architectural Graphics
2. Kelsey W. E.: Geometrical & Building Drawing
3. Leslie Martin: Architectural graphics
4. B. James: Essential of Drafting
5. H. Joseph and Morris: Practical plane and solid geometry
6. Gill Robert: Rendering with pen and ink
7. Burden Ernest: Architectural Delineation.
8. Burden Ernest: Architectural Delineation. Gill, Robert W.; Manual of Rendering with Pen and Ink, Thames and Hudson, London, 1997.
9. JaxThemier, B.W., "How to Paint and Draw", Thames and Hudson, 1985.

(PC-103)

**SUBJECT: ARCHITECTURE DESIGN - I**

**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE COURSE**

Lectures -	15	Paper-	-	Sessional Work (Int.) -100	
Studio-	90	Duration -	-	Oral (Ext.) -	-
Total-	105			Theory -	-
Total Credit points-4				Total -	100

**COURSE OBJECTIVES**

- To introduce the students to the fundamentals and principles of basic design and to enable them to undertake design by application of basic design principles.
- To comprehend Design as a creative process of choice making and statement of intent.

**COURSE CONTENTS**

- What is architecture and what does an architect do? Scope of this activity. Types of services rendered by an Architect.
- Application of elements of design to achieve design principles and in creative work.
- Approach to Design as a continuous process through Aesthetics, function and Technology (construction) Basic components of a building and their functions.
- Principal of Design with reference to function, various activities and related spaces. Data collection, Environments, climate, orientation, site conditions, Circulation.
- Study of basic human Needs, Various requirements, standard measurements of Human activities and allocation of Spaces.
- Study & comparison of single units like living spaces, sleeping and cooking spaces, stalls, bus-stops, telephone booths etc. detailed design of single room for simple function, showing relationship with adjoining areas for other activities not more than 25 sq. mtrs.
- Role of interior design in planning and Architecture
- 

**Reference Books -**

- 1) Time sever standards for building types – Latest Editions
- 2) Neuffer- architects data – latest editions
- 3) Rendering with pen and ink / rober w.gill
- 4) Ching- fdk architecture form, van nostand reinhold staff , new york – latest editions
- 5) Time saver standards for landscape architecture- latest edition

(PC-104\*\*)

**SUBJECT : HUMAN SETTLEMENT AND HISTORY OF  
CIVILISATION - I**

**SYLLABUS FOR FRIST SEM - ARCHITECTURE DEGREE COURSE**

Lectures -	30	Paper -	01	Sessional Work (Int.) -	50
Studio -	-	Duration-	2 hrs.	Oral (Ext.) -	-
Total -	30			Theory -	50
Total Credit points-	2			Total -	100**

**Note:** Internal marks should be based on assignments, sketches, question bank & seminar.

**COURSE OBJECTIVE:**

To study the settlement and the History of Civilization from Prehistoric period and ancient civilization. Settlement pattern and architectural built from have the influence of geography, geology, climate, socio-climate and religious aspect of that particular place, which emphasis the context of specific planning and design approach is required. Comparative study of various civilizations will give the appropriate guideline for the study of settlement and architecture.

**COURSE CONTENTS :**

- Prehistoric period:  
Evolution of man, relation in between Man and environment, rise of culture and religion, Stone Age, Bronze Age, Iron Age, Culture and civilization.
- General features/influences of human settlement factor responsible for the development of human settlement.
- Nile valley civilization:  
Influences/aspects, architectural characters, Burial system, Egyptian temple, Egyptian city [city kahun] planning.
- Greek civilization: Influence/ aspects, architectural characters, Study of Greek cities in detail, city Athens
- Roman civilization: influence /aspect, architectural characters, study of roman cities, Roman Military town
- Mesopotamian civilization: Influence/aspects, architectural characters, city Babylon, city Ur ,ziggurat , Hanging Garden [Sumerian , Assyrian and Babylonian ]
- A: Indus valley civilization- Influence/aspects, architectural characters, Mohenjo-Daro city planning
- B: Vedic civilization – Vedic village

## Reference books:

1. A History of World Civilization -By James Edger Swain,Ph.D
2. Davies: An Outline history of the world-H. A. Davies, MA
3. Town Planning – AbirBandopadhyay
4. Town Planning – G. K. Hiraskar
5. The urban pattern – city planning and Design-Arthur B. Gallion FAIA  
Simon Eisner, AICP
6. Sir Banister Fletcher's- A history of architecture - Revised by J. C. Palmes
7. The Great Ages Of World Architecture – G. K. Hiraskar
8. Human settlement- A planning guide to beginners-K. R. Thooyavan
9. Indian architecture -Vedula V L N Murthy.

\* Means combine passing for external oral & theory paper.

\*\* Means combine passing for internal term work & theory paper & external oral as applicable

**( BS&AE- 105)**  
**SUBJECT:- BUILDING CONSTRUCTION AND MATERIAL – I**  
**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE**  
**COURSE**

Lectures -	15	Paper -	01	Sessional Work (Int.) -	50
Studio -	45	Duration-	3 hrs.	Oral (Ext.) -	50
Total -	60			Theory -	50
Total Credit points-	2.5			Total -	150

Marks weightage: Materials 25%, construction 75%

Note : For theory exams, Separate sections for materials and construction should be allotted ( Materials 25%, construction 75% )

External examination (oral) will be conducted by the university.

**COURSE OBJECTIVES**

- To help students understand the basic building elements, their function and behavior Under various conditions with specific reference to load bearing construction.
- To help students to develop a clear understanding of the basic principles of construction And materials suitable for load bearing construction.
- To help students develop an analytical and logical sequence in thinking about structural aspects of architecture.
- To encourage a mix of classroom and field learning.

**COURSE CONTENTS**

**MATERIALS :**

- Soil : Different types and their origin, Physical properties and effect of weather, water, temperature etc. on different soil types, bearing capacity of commonly met soil and their role in building foundations, angle of repose ( introductory only)
- Brick : Composition of earths, standard market and I.S.I. size properties as per I.S.I. Brick manufacturing Processes, sun dried brick, special types of bricks, Different uses of brick in construction.
- Sand : Pit, river sea sand, gravel, I.S.I. standards use in mortar and concrete, bulk age of sand, impurities in sand their removal, different grades of sand with respective size and their application  
I.S.I. standard uses in construction

## **CONSTRUCTION :**

General introduction: structure load bearing structure

Foundation: simple foundation for masonry load bearing walls, piers pillars; in brick and stones load bearing foundation; foundation in black cotton soil; masonry retaining wall.

### Superstructure

Brick masonry: tools and equipments bonding and its principles; types of brick like headers stretchers king and queen closer etc and their use, English and Flemish bond in straight line for stopped end, corner tee and cross junctions up to thickness on two brick thick wall and its combinations; attached and detached piers, buttresses, pilasters, brick on edge wall, sundried brick construction in mud mortar, soil-cement block, expansion joint in masonry compound wall.

Stone masonry : various types of stone dressing, various types stone joint such as plain, beveled, rebated dowel, clamp joint monolithic construction of columns, quoins, header bond of through stones, various types of stone masonry

such as ashlar and rubble with their different types, composites wall in brick and stone, compound walls.

## **Introduction of Bamboo as a Building Element and its Construction details**

Lintels and Chajjas.

Hollow, solid concrete

block wall. Brick and

stone paving

Finishes: plastering, sand faced, neeru finish and other finishing types, various types of pointing. Use of scaffolding, single and double scaffolding for masonry work, bamboo, timber and tubular scaffolding.

## **REFERENCE BOOKS:**

- 1) Engg. Materials – K.S.Rangwala
- 2) Engg. Materials – B.K.Agarwal
- 3) Building Materials – S.K.Duggal
- 4) Building Construction Technology –R.Chudley Building
- 5) Construction –Sushil Kumar
- 6) Building Construction –W.B.Mackay
- 7) Building Construction –Bindra Arora

**(BS&AE—106\*\*)**

**SUBJECT: THEORY OF STRUCTURE –I**

**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE COURSE**

Lectures -	45	Paper -	01	Sessional Work (Int.) -	25
Studio -	-	Duration-	03 hrs.	Oral (Ext.) -	-
Total -	45			Theory -	75
Total Credit points-	03			Total -	100**

**Note:** The passing in this subject requires min. 40% marks for theory paper , 50% for internal assessment and combined 50% of Total internal and theory paper.

**COURSE OBJECTIVES:**

- To Introduce Applied Mechanics as an important Subject for Architecture.
- To Understand Different Systems of Forces and their Equilibrium and that a Building is a System of Forces in Equilibrium.
- To Introduce and Understand Concepts of Support, Support Reactions, Beams, Loads, Bending and Shear.

**COURSE OUTLINE:**

- Introduction: aim and object, scope of study.
- Concept of simple load bearing, framed structure & composite structure.
- Loads : Dead load, live load, wind load, snow load, seismic load , conceptual idea and their impact on building as a whole, relevant ISCode.
- Force: definition, characteristics and classification of forces. System of forces, composition and resolution of forces. Resultant and equilibrant of coplanar concurrent and non concurrent force systems by analytical & graphical method.
- Moments: moment of force, moment of couple, effect of couple, concept of static equilibrium. Lami's theorem, Equations of static equilibrium, free body diagram.
- Support reactions: Types of beams, Loading and support conditions and their significance.
- Friction: Types of friction, laws of dry friction, problems on block, wedge and ladder.

**Sessional work:** Minimum Six assignments based on above topics.

**REFERENCEBOOKS:**

1. Engineering Mechanics – RK Bansal and Sanjay Bansal ,Laxmi publications, NewDelhi.
2. Engineering Mechanics - F.L. Singer, Harper Collinspublications.

\* Means combine passing for external oral & theory paper.

\*\* Means combine passing for internal term work & theory paper & external oral as applicable

(PC- 107)

**SUBJECT:- WORKSHOP – I**

**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE COURSE**

Lectures -	-	Paper -	-	Sessional Work (Int.) -	50
Studio -	30	Duration-	-	Oral (Ext.) -	-
Total -	30			Theory -	-
Total Credit points-01				Total -	50

**COURSE OBJECTIVES:**

- Introducing students to various materials and techniques used in making Architectural models.
- Enabling Students to make Architectural models for study and presentation.

**COURSE CONTENTS**

- Introduction of masonry tools.
- Demonstration of brickwork, stonework, demonstration of plaster and textured finishes. i) Mud ii) Cement iii) Lime.
- Study tours to sources of local building materials and to local building under construction to study their actual use.
- Models for basic design and Architecture design studio work.
- Introduction to modeling with paper, paper board, plastics, plaster of Paris, wood and clay.
- Basic model making technique, different types of material and their techniques.
- Introduction to modeling with paper, paper board, plastics, plaster of Paris, wood and clay.

**RECOMMENDED BOOKS**

- John Taylor, Model Building for Architects and Engineers
- Rolf Janke, Architectural Models

(SEC- 108)

**COMMUNICATION SKILLS - I**  
**SYLLABUS FOR FIRST SEM - ARCHITECTURE DEGREE COURSE**

Lectures - 30	Paper - -	Sessional Work (Int.) - 50
Studio - -	Duration- -	Oral (Ext.) - -
Total - 30		Theory - -
Total Credit points-02		Total - 50

**COURSE OBJECTIVES:**

- Introducing various communication skills in the society.
- Enabling Students to make presentation in front of mass communication.

**COURSE CONTENTS**

**1) Communication**

- Introduction to Communication Definition, need & importance Process of Communication
- Types of Communication Forms of Communication Barriers to Communication

**2) Techniques of Communication**

- A) Verbal Communication: Techniques of GD & Interview
- B) Non-Verbal Communication: Body Language

**3) Essay Writing**

- Descriptive (Current Topics)

**4) Rapid Review of Grammar**

- Tenses
- Active/Passive voice
- Direct –Indirect
- Affirmative, Negative , Assertive , Exclamatory ,Interrogative.
- Q-Tag, Remove “too”

**5) Correction of Common Errors**

**Note:** The internal marks will be based on tutorials and individual performance.

(SEC- 109)

**SUBJECT: COMPUTER TECHNOLOGY IN  
ARCHITECTURE -1**

Lectures – 15	Paper - -	Internal - 50
Studio - 15	Duration Hours - -	External - --
Total - 30		Theory - -
Total Credit Points-1.5		Total - 50

**CAD AND ADVANCED APPLIATION**

Creating and organizing 2-d drawing All 2 Dimensional drawing commands. All 2 Dimensional edit commands.

Inquiry commands.

Setting for drawing

Concept of layer, line types, Dimensions

Introduction to block and application Texts and fonts

Output of the drawing through printer or plotters Different setting of drawing snap mode etc.

Hatch its patterns.

Isometric drawing

Different types of styles e.g. dimension style, text, style, symbol library, drawing at different scales, composition of drawing at different scales e.g. municipal drawing (concept of paper space & model space).

Minimum one drawing showing plan, elevation., section of a project be submitted as sessional work.

# SHIVAJI UNIVERSITY, KOLHAPUR

## SYLLABUS FOR FIRST YEAR SEM II- ARCHITECTURE DEGREE COURSE

(PC 201)

### SUBJECT: AESTHETICS AND VISUAL ARTS-II

Lectures -	15	Paper -	-	Sessional Work (Int.) -	100
Studio -	45	Duration-	-	Oral (Ext.) -	-
Total -	60			Theory -	-
Total Credit points-	2.5			Total -	100

#### COURSE OBJECTIVE :

The purpose of this subject is to create awareness about principle of good design to develop good aesthetic taste understand of Architecture and different fine arts and their application to study the principle of architecture, interior design, house design, advertising, city planning etc. In each of these fields, one works with sizes, shapes, colours and texture etc. which are created and arranged in accordance with the principles of aesthesis.

#### COURSE CONTENTS:

- Study of texture.
- Definition of design, functional and decorative design requirements of good design, principle of design such as harmony & unity, proportions, constast, scale, balance, rhythm, emphasis expression and character.
- Composition of group of objects, forms positive and negative spaces.
- Approach to architecture and design and space.
- Planning for different activities building for them.
- Function- planning form in side out.
- Forms development from the above.

The sessional work shall consist of study of models photographs.

Project report writing and seminar on any one selected projected based on this subject.

#### Reference Books -

- 1) Architecture form, space and order; FRANCIS D.K. CHING; John Miley And Sons.
- 2) Architectural rendering; ALBERT O HALSE; Mcgraw-Hill Book Company.
- 3) Design Fundamentals In Architecture; V.S.Parmar; Somaiya Publication Pvt. Ltd

(PC 202)

**SUBJECT: GRAPHICS II**

Lectures -	15	Paper -	1	Sessional Work (Int.) -	50
Studio -	45	Duration-	3 hrs.	Oral (Ext.) -	-
Total -	0			Theory -	100
Total Credit points-	2.5			Total -	150

**COURSE OBJECTIVE :**

To introduce the students to the fundamental techniques of Architectural drawings and to enhance their visualization skills.

**COURSE CONTENTS:**

**PART –I**

- Isometric and Axonometric projections.
- Interpenetration of geometric solids, forms and section of solids.
- Surface development of simple and complex objects.

**PART –II**

- Application of subject Computer – I in Graphics – I  
Drafting of measured building elements / small building units using computer.  
Isometric and axonometric views using computer.

**Reference Books**

1. Ching Francis D.K.: Architectural Graphics
2. Kelsey W. E.: Geometrical & Building Drawing
3. Leslie Martin: Architectural graphics
4. B. James: Essential of Drafting
5. H. Joseph and Morris: Practical plane and solid geometry
6. Gill Robert: Rendering with pen and ink
7. Burden Ernest: Architectural Delineation.
8. Burden Ernest: Architectural Delineation. Gill, Robert W.; Manual of Rendering with Pen and Ink, Thames and Hudson, London,1997.
9. JaxThemier, B.W., “How to Paint and Draw”, Thames and Hudson, 1985.

(PC-203)

**SUBJECT: ARCHITECTURE DESIGN II**

Lectures - 15	Paper - -	Sessional Work (Int.) -100
Studio - 90	Duration- -	Oral (Ext.) - 100
Total - 105		Theory - -
Total Credit points-4		Total - 200

**COURSE OBJECTIVE**

- To introduce the students to the fundamentals and principles of basic design and to enable them to undertake design by application of basic design principles.
- To comprehend Design as a creative process of choice making and statement of intent.

**COURSE CONTENTS**

- Structure, types of structures and structures techniques
- Elementary, climatology and orientation
- Architecture as one of the visual arts and its inter-relationship with other arts.
- Conceptual sketches developments of above principles and disciplines.
- At the end of year the students should take review of his study of the subject and prepare summary sheet to explain the knowledge gained.
- Design problems dealing with planning for activities such as individual living, units shops, stalls, snacks bars, unilevel activities with three to four functions of total area up to 80 sq. mtrs .
- The students should be encouraged to collect their own data experiments and try various alternative before reaching final solution and should also be encouraged to express their ideas with the help of different media and materials.

**Reference Book**

- 1)Time Sever Standards For Building Types – Latest Editions
- 2)Neufer- Architects Data – Latest Editions
- 3)Rendering With Pen And Ink / Rober W.Gill
- 4)Ching- Fdk Architecture Form, Van Nostand Reinhold Staff , New York – Latest Editions
- 5)Time Saver Standards For Landscape Architecture- Latest Edition

(PC- 204\*\*)

**SUBJECT : HUMAN SETTLEMENT AND  
HISTORY OF CIVILISATION - II**

Lectures -	30	Paper -	01	Sessional Work (Int.) -	50
Studio -	-	Duration-	02 hrs.	Oral (Ext.) -	-
Total -	30			Theory -	50
Total Credit points-2				Total -	100**

**Note:** Internal marks should be based on assignments, sketches, question bank & seminar.

**COURSE OBJECTIVE:** To study of settlement of development of civilization from medieval period to modern period. Study should emphasise a development phases of civilization with reference to socio-cultural, religion, climate geography and geological aspect. Comparative study of various civilization

**COURSE CONTENTS :**

Medieval Period – Study of settlement in Europe and India, Medieval Cities [Indian and western]

- Renaissance Period – study of settlement in Europe and in India  
Renaissance city – Jaipur, Baroque city planning – city of Versailles
- Industrial Revolution: Impact of industrial revolution in development of transportation and communication, concept of factory town, City beautiful movement
- Plan for community – Robert Owen, satellite town And Garden city, Gedian Triad and urban renewal, Theory of Dynapolis C.A. Doxiadis.
- Evolution of cities
- Neighbourhood Planning – Stein and Perry -Example- Radburn layout
- Modern town planning in India
- Example – Chandigarh and Gandhinagar.

**Reference books:**

1. A History of World Civilization -By James Edger Swain,Ph.D
2. Davies: An Outline history of the world-H. A. Davies, MA
3. Town Planning – AbirBandopadhyay
4. Town Planning – G. K. Hiraskar

5. The urban pattern – city planning and Design-Arthur B. Gallion FAIA  
Simon Eisner, AICP
6. Sir Banister Fletcher's- A history of architecture - Revised by J. C. Palmes
7. The Great Ages Of World Architecture – G. K. Hiraskar
8. Human settlement- A planning guide to beginners-K. R. Thooyavan
9. Indian architecture -Vedula V L N Murthy

\* Means combine passing for external oral & theory paper.

\*\* Means combine passing for internal term work & theory paper & external oral as applicable

**(BS & AE-205)**

**SUBJECT:- BUILDING CONSTRUCTION AND MATERIAL - II**

Lectures -	15	Paper -	01	Sessional Work (Int.) -	50
Studio -	45	Duration-	03 hrs.	Oral (Ext.) -	100
Total -	60			Theory -	50
Total Credit points-	2.5			Total -	200

External examination (oral) will be conducted by the university.

**COURSE OBJECTIVES**

- To help students understand the basic building elements, their function and behavior Under various conditions with specific reference to load bearing construction.
- To help students to develop a clear understanding of the basic principles of construction And materials suitable for load bearing construction.
- To help students develop and analytical and logical sequence in thinking about structural aspects of architecture.
- To encourage a mix of classroom and field learning.

**COURSE CONTENTS**

**MATERIALS :**

- Stones : Building stones, types of rocks, method of quarrying origin and composition of stones, properties of good stones natural bed, various types of stone dressings defects in stone, stones used in construction, uses in construction, aggregates.
- Lime : Lime ore stone, quarrying and collection composition and physical properties method of burning of lime ore, quick lime, fat lime , hydraulic lime mortar mix, method of preparation, neeru, plaster, efflorescence, peeling, flaking, blistering, use of surkhi, I.S.I. standards, lime wash, uses in construction.

**CONSTRUCTION :**

Types of Arches in bricks, stones construction method & centring for Arch.

Cornices, canopy and porch in brick and stones.

Doors and windows such as ledged, braced, battened, false paneled door, simple glazed and wooden panalled.

Roof : roof layout ridge, hip valley, gable eaves etc. types of simple pitched roof such as lean to couple, close couple and ,collar and, material and details of roof covering such as thatch Mangalore and other patent tiles country tiles and shingles.

**REFERENCE BOOKS:**

1) Engg. Materials – K.S.Rangwala

- 2) Engg. Materials – B.K. Agarwal
- 3) Building Materials – S.K. Duggal
- 4) Building Construction Technology – R. Chudley Building
- 5) Construction – Sushil Kumar
- 6) Building Construction – W.B. Mackay
- 7) Building Construction – Bindra Arora

**(BS&AE-206\*\*)**  
**SUBJECT : THEORY OF STRUCTURE –II**

Lectures -	45	Paper -	01	Sessional Work (Int.) -	25
Studio -	-	Duration-	03 hrs.	Oral (Ext.) -	-
Total -	45			Theory -	75
Total Credit points-	3			Total -	100**

**Note:** The passing in this subject requires min. 40% marks for theory paper, 50% for internal assessment and combined 50% of Total internal and theory paper.

**COURSE OBJECTIVES:**

- To Introduce Applied Mechanics as an important Subject for Architecture.
- To Understand Different Systems of Forces and their Equilibrium and that a Building is a System of Forces in Equilibrium.
- To Introduce and Understand Concepts of Support, Support Reactions, Beams, Loads, Bending and Shear.

**COURSE OUTLINE:**

- Analysis of trusses: Definition of perfect, deficient & redundant trusses. Analysis of determinate trusses by method of joints, sections and graphical method.
- Simple Stresses and strains: concept, definitions, units, types of stresses and strains. Stress strain curve, safe stresses, factor of safety, different types of safe stress as per ISI code for different materials like timber, steel. Hook's law, typical stress strain behavior for steel and concrete.
- Elastic constants: modulus of elasticity, Poisson's ratio, modulus of rigidity, bulk modulus, shears modulus and their relations.
- Properties of sections: centre of gravity, moment of inertia, modulus of section, radius of gyration of simple symmetrical and unsymmetrical sections including built up sections.
- Bending Moment & Shear force: concept of shear force and bending moment. BMD & SFD for statically determinate simply supported and cantilever beams subjected to combinations of concentrated, uniformly distributed, uniformly varying loads. Point of contra flexure in simply supported beams with overhang.

**Sessional work:** Minimum Six assignments based on above topics.

**REFERANCE BOOKS:**

- 1 Strength of Materials – R.K. Bansal, Laxmi publications, NewDelhi.
- 2 Strength of Materials - R.S. Khurmi, S. Chand &company , NewDelhi.

(PC-207)

**SUBJECT:- WORKSHOP – II**

Lectures -	-	Paper -	-	Sessional Work (Int.) -50	
Studio -	30	Duration-	-.	Oral (Ext.) -	-
Total -	30			Theory -	-
Total Credit points-1				Total -	50

**COURSE OBJECTIVE :**

To develop the ability to appreciate the three dimensional implications of design and to introduce the students to the techniques of model making.

**COURSE CONTENTS**

- Introduction of carpentry tools and machines.
- Different types of joints and their function.
- Clay work, brick, cob, wattle and daub, rammed earth  
Masonry construction- walls, arches and corbel.
- Marking of geometrical forms on the ground.
- Study tours to sources of local building materials and to local building under construction to study their actual use.
- Introduction to modeling with paper, paper board, plastics, plaster of Paris, wood and clay.

(SEC- 208)

**SUBJECT :- COMMUNICATION SKILL- II**

Lectures -	30	Paper -	-	Sessional Work (Int.) -	50
Studio -	-	Duration-	-	Oral (Ext.) -	-
Total -	30			Theory -	-
Total Credit points-	2			Total -	50

**COURSE OBJECTIVES:**

- Introducing various communication skills in the society.
- Enabling Students to make presentation in front of mass communication.

**COURSE CONTENTS**

**1) Paragraph Writing**

- Techniques of Paragraph Writing

**2) Soft Skills**

- Definition, need & significance
- Types of Soft Skill

**3) Techniques of Professional Correspondence**

- Importance
- Techniques
- Types-Enquiry , Order, Complaint, & Invitation letters with replies
- Application Letters with Resume .

**4) Precis Writing**

- Importance
- Techniques

**5) Presentation Skills**

(SEC- 209)

**SUBJECT: COMPUTER TECHNOLOGY IN ARCHITECTURE - IV**

Lectures - 15	Paper - -	Internal - 50
Studio - 15	Duration - -	External - -
Total - 30		Theory - -
Total Credit Points- 1		Total - 50

**COURSE OBJECTIVE**

Different types of styles e.g. dimension style, text, style, symbol library, drawing at different scales, composition of drawing at different scales e.g. municipal drawing (concept of paper space & model space).

This course is an introduction to computational design using a range of techniques from NURBS modeling, simple programming and parametric modeling to basic digital fabrication using different types of software's.

**COURSE CONTENTS**

Concept of 3D modeling, Introduction to 3D Digital modeling.  
Study climatic aspect like shades and shadows of 3D Digital models.

Digital 3D model of small scale Historical Building/climate responsive building.  
Concept of UCS 3 Dimensional drawings primitive mesh and surfaces. Viewing commands & view points.

**INTRODUCTION TO SHADING & RENDERING.**

Rendering of the plans, sections, elevations, perspectives using different presentation Software's. Introduction to interactive multimedia technology for design presentation.  
Introduction to other drafting & presentation software's.

Developing skills in non-graphic applications on computer as required for architectural profession and office management such as Word processing, Spreadsheets, Power Point presentation, Databases etc.

**Assessment:**

- Drawing municipal drawing of bungalow
- One 3d project of bungalow ( min-2bhk) with rendered
- Symbol library

