

TKM COLLEGE OF ENGINEERING

(Government Aided and Autonomous)

celebrating 60 years of excellence



B.Arch Curriculum 2022

THANGAL KUNJU MUSALIAR COLLEGE OF ENGINEERING
(Government Aided and Autonomous)
KOLLAM-691005, KERALA

Abstract

TKMCE-Academics- B.Arch Curriculum 2022 -orders issued

No: ACU3/1078/2022

Date: 01/10/2022

Order

Read:

1. UGC order Ref: F. 22-1/2022(AC) dated 26th May 2022
2. U.O. No. KTU/ASST11(ADMIN)/3212/2022 dated 2nd September 2022
3. ACU3/1010/2022 dated 16th September 2022

The TKM College of Engineering was conferred with autonomous status by the UGC on 26th May 2022 vide Ref: 1 and the same was notified by the APJ Abdul Kalam Technological University, on 2nd September 2022, vide ref.2

The first meeting of the Governing Body after the notification of autonomous status was held on 15th September 2022, authorized the Principal to constitute the Academic council as per the UGC (Conferment of Autonomous Status upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) Regulations, 2018. As per the resolution of the Governing Body, the Principal has constituted the Academic council on 16th September 2022 vide ref.3. The first Academic council meeting held on 24th September 2022, approved the B.Arch Curriculum for the academic year 2022-23. The academic curriculum for the B.Arch programme, 2022 approved by the Academic Council, is hereby notified as the **TKM College of Engineering (Aided and Autonomous) B.Arch Curriculum 2022.**




PRINCIPAL
THANGAL KUNJU MUSALIAR
COLLEGE OF ENGINEERING
KOLLAM-5

Copy to: All HODs, Deans, IQAC, COE, AA, AO, SS, JS(A)

TKM College of Engineering (Government Aided and Autonomous)
B.Arch Curriculum 2022.

This will be known as the **TKM College of Engineering B.Arch, Curriculum 2022**. These are subject to the provisions of the UGC (Conferment of Autonomous Status upon Colleges and Measures for Maintenance of Standards in Autonomous Colleges) Regulations, 2018 and APJ Abdul Kalam Technological University Act, 2015, the statutes and ordinances if any issued in the subject from time to time. All the rules specified herein, approved by the Academic council, will be in force and applicable to the students admitted from the Academic year 2022-23 onwards.




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CURRICULUM
BACHELOR OF ARCHITECTURE
2022

CURRICULUM I TO X- B. ARCH. 2022

Every course of B. Arch Program shall be placed in one of the five categories as listed in table below:

Sl. No	Knowledge Segment	Category description	Code	Credits
1.	Professional Courses (PC)			154
1.a		Architectural Design	ARD	100
1.b		Architectural Studies and Architectural Theory	ARS	15 +39
2.	Building Science and Applied Engineering (BS)			65
2.a		Building Construction	ARB	19
2.b		Basic and Building Sciences and Applied Engineering	ARC	46
3.	Elective Course (PE)		ARE	13
4.	Professional Ability Enhancement Courses (PAC)		ARP	26
5.	Skill Enhancement Courses (SEC)		ARK	02
Total Mandatory Credits				260

As outlined in the Regulation R 3.6 Category Code is based on the 5 knowledge segments prescribed by Council of Architecture (COA) and further subdivided for better clarity.

Semester wise credit distribution

Semester	1	2	3	4	5	6	7	8	9	10	Total
Credits	28	28	28	28	28	28	15	28	28	21	260

CATEGORY DESCRIPTION

Architectural Design Courses (ARD): Basic Design and Visual Arts, Architectural Design, Architectural Design Thesis.

Architectural Studies courses (ARS): Architectural Graphics and Drawing, Carpentry and Model Making Workshop, Site Planning and Interior Design.

Architectural Theory (ARS): Theory of Architecture, History of Architecture and Culture, Landscape Design, Specifications, Cost Estimation and Budgeting, Human Settlements Planning, Building Economics and Sociology, Urban Design, Housing.

Building Construction Courses (ARB): Building Materials and Construction Techniques, Building Materials Construction Techniques and Working Drawing.

Basic and Building Sciences Courses (ARC): Mathematics, Climate and Built Form, Building Services, Environmental Science for Architecture.

Applied Engineering Courses (ARC): Theory of Structures, Surveying and Levelling.

Elective Courses (ARE): Electives

Professional Ability Enhancement Courses (ARP): Internship or Practical Training, Material Study/ Critical Analysis, Research Methodology, Professional Practice, Project Management, Dissertation.

Skill Enhancement Courses (ARK): Communication Skills & Techniques

COURSE CODE AND COURSE NUMBER

Each course is denoted by a unique code consisting of two numerals denoting year of scheme, three alphabets followed by three numerals. For example, 22A R D 1 0 1. The two alphabets AR in the code refer to the Architecture department offering the course.

AR stands for a course in Architecture, third letter stands for the category; e.g. D stands for a design course, B stands for Building Construction, C stands for a course in Basic Sciences and Applied Engineering for Construction, E stands for Elective courses, P for Professional Ability Enhancement courses and K stands for skill enhancement.

Course Number is a three-digit number and the first numeral refers to the semester of an academic year in which the course is normally offered, i.e. 1, 2, 3, 4 or 5 and so on till 10, for the ten semesters of five-year duration. Of the other two numerals, the last digit identifies the course in sequence in a particular category in a semester. The middle numeral could be any digit.

Table 1: Code for the Exam Slot of courses

Code	Description
A,B,C,D,E	End sem exams for theory subjects
S,T,U,V	Studio courses with Jury _Basic Design, Architectural Design and Thesis, Training or subjects evaluated by internal assessment (viva for workshop)

SEMESTER I								
EXAM SLOT	COURSE NO.	COURSE TITLE	HOURS/WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L -T-S- P			CIA	ESE	TOTAL
A	22ARS101	Theory of Architecture - I	3-0-0-0	3	3	40	60	100
B	22ARC101	Theory of Structures – I	2-1-0-0	3	3	40	60	100
C	22ARC102	Mathematics for Architectural Applications	3-0-0-0	3	3	40	60	100
S	22ARD101	Basic Design and Visual Arts	0-0-8-2	10	10	50	50	100
T	22ARB101	Building Materials and Construction Techniques –I	1-0-0-2	3	3	50	50	100
U	22ARS102	Architectural Graphics and Drawing I	1-0-0-3	4	4	50	50	100
V	22ARK101	Communication Skills and Techniques for Architecture	1-0-0-1	2	2	100	-	100
TOTAL				28	28			

PC-17; BS-9; PE-0; OE-0; PAC- 0; SEC- 2

22ARD 101- Basic Design and Visual Arts course is assigned 8 hours of studio and 2 hours of tutorial which is earmarked for contents from visual arts to be handled by fine arts faculty

22ARB 101- Building Materials and Construction Techniques - I is assigned 1 hour of lecture and 2 hours for drawing and practical sessions in the construction yard

SEMESTER II								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS201	Theory of Architecture – II	3-0-0-0	3	3	40	60	100
B	22ARS202	History of Architecture and Culture-I	3-0-0-0	3	3	40	60	100
C	22ARC201	Theory of Structures – II	2-1-0-0	3	3	40	60	100
S	22ARD201	Architectural Design – I	0-0-8-2	10	10	50	50	100
T	22ARB201	Building Materials and Construction Techniques – II	1-0-0-2	3	3	50	50	100
U	22ARS203	Architectural Graphics and Visual Arts II	1-0-0-3	4	4	50	50	100
V	22ARS204	Carpentry and Model Making Workshop	0-0-0-2	2	2	100	-	100
TOTAL				28	28			

PC- 22; BS -6; PE- 0; OE- 0; PAC- 0; SEC-0

SEMESTER III

SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS301	History of Architecture and Culture- II	3-0-0-0	3	3	40	60	100
B	22ARB301	Climate and Built form – I	2-0-0-2	4	4	40	60	100
C	22ARC301	Theory of Structures — III	2-1-0-0	3	3	40	60	100
D	22ARC302	Building Services - I	2-0-1-0	3	3	40	60	100
S	22ARD301	Architectural Design- II	0-0-8-2	10	10	50	50	100
T	22ARB302	Building Materials and Construction Techniques- III	1-0-0-2	3	3	50	50	100
U	22ARC303	Surveying and leveling	1-0-0-1	2	2	100	-	100
TOTAL				28	28			

PC- 13; BS -15; PE- 0; OE- 0; PAC- 0; SEC-0

22ARB 301- Climate and Built Form – I is assigned 2 hours of lecture and 2 hour of practical which is earmarked for conducting experiments in building science laboratory.

22ARC 302 - Building Services – I, deals with Water Supply, Plumbing and Sanitation. This course is assigned 2 hours of lecture and 1 hour of studio so that contents learnt can be applied to a design problem.

22ARD 301 - Architectural Design - II course is assigned 8 hours of studio and 2 hours of practical which is earmarked for training of fundamental application of computer in design and drafting.

22ARB 302- Building Materials and Construction Techniques - III is assigned 1 hour of lecture and 2 hours for drawing and practical sessions

SEMESTER IV

SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS401	History of Architecture and Culture-- III	3-0-0-0	3	3	40	60	100
B	22ARB401	Climate and Built form – II	2-0-0- 2	4	4	40	60	100
C	22ARC401	Theory of Structures – IV	2-1-0-0	3	3	40	60	100
D	22ARC402	Building Services –II	2-0-0-1	3	3	40	60	100
S	22ARD401	Architectural Design – III	0-0-8-2	10	10	50	50	100
T	22ARB402	Building Materials and Construction Techniques- IV	1-0-0-2	3	3	50	50	100
U	22ARS402	Site Planning	1-0-1-0	2	2	50	50	100
TOTAL				28	28			

PC- 15; BS -12; PE- 0; OE- 0; PAC- 0; SEC- 0

22ARB 401- Climate and Built Form – II is assigned 2 hours of lecture and 2 hour of practical which is earmarked for conducting experiments in building science laboratory.

22ARC 402 - Building Services – II, deals with Electrical, Lighting and Illumination. This course is assigned 2 hours of lecture and 1 hour of practical which is earmarked for conducting experiments in building science laboratory

22ARD 401 - Architectural Design - III course is assigned 8 hours of studio and 2 hours of practical which is earmarked for training of advanced application of computer in design and drafting. Municipal drawings are a part of ARD

22ARS 402 – Site Planning is assigned 1 hour of lecture and 1 hour of studio so that contents learnt can be applied to a design problem.

SEMESTER V								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS501	History of Architecture and Culture - IV	3-0-0-0	3	3	40	60	100
B	22ARC501	Theory of Structures – V	2-1-0-0	3	3	40	60	100
C	22ARC502	Building Services - III	2-0-1-0	3	3	40	60	100
D	22ARS502	Landscape Design	2-0-1-0	3	3	40	60	100
E	22ARE501	Elective	3-0-0-0	3	3	40	60	100
S	22ARD501	Architectural Design- IV	0-0-10-0	10	10	50	50	100
T	22ARB501	Building Materials and Construction Techniques- V	1-0-0-2	3	3	50	50	100
TOTAL				28	28			

PC- 16; BS -9; PE- 3; OE- 0; PAC- 0; SEC- 0

22ARS 502- Landscape Design is assigned 2 hours of lecture and 1 hour of studio so that contents learnt can be applied to a design problem.

22ARC 502 - Building Services – III, deals with HVAC, Fire Fighting and Safety. This course is assigned 2 hours of lecture and 1 hour of studio so that contents learnt can be applied to a design problem.

22ARB 501- Building Materials and Construction Techniques - V is assigned 1 hour of lecture and 2 hours for drawing and practical sessions in the construction yard

SEMESTER VI								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS601	History of Architecture and Culture - V	3-0-0-0	3	3	40	60	100
B	22ARS602	Specifications, Cost Estimation and Budgeting	2-1-0-0	3	3	40	60	100
C	22ARC601	Theory of Structures – VI	2-1-0-0	3	3	40	60	100
D	22ARC602	Building Services – IV (Acoustics)	2-0-0-1	3	3	40	60	100
E	22ARE601	Elective – II	2-0-0-0	2	2	40	60	100
S	22ARD601	Architectural Design – V	0-0-10-0	10	10	50	50	100
T	22ARB601	Building Materials, Construction Techniques VI	1-0-0-3	4	4	50	50	100
TOTAL				28	28			

PC- 16; BS -9; PE-3; OE- 0; PAC- 0; SEC- 0

22ARC 602 - Building Services – IV, deals with Architectural Acoustics. This course is assigned 2 hours of lecture and 1 hour of practical which is earmarked for conducting experiments in building science laboratory.

22ARB 601- Building Materials, Construction Techniques and Working Drawing is assigned 1 hour of lecture and 3 hours of practical sessions learning to prepare working drawings.

SEMESTER VII								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
S	22ARP701	Internship or Practical Training	0-0-0-0	12	12	-	100	100
T	22ARP702	Critical Analysis, Material Study/ Market Survey	0-0-0-0	3	3	-	50	50
TOTAL				15	15			

PC- 0; BS -0; PE- 0; OE- 0; PAC- 15; SEC- 0

SEMESTER VIII								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS801	Human Settlements Planning	3-0-0-0	3	3	40	60	100
B	22ARS802	Building Economics and Sociology	3-0-0-0	3	3	40	60	100
C	22ARS803	Environmental Science for Architecture	3-0-0-0	3	3	40	60	100
D	22ARP801	Research Methodology	2-1-0-0	3	3	40	60	100
E	22ARE802	Elective – IV	3-0-0-0	3	3	40	60	100
S	22ARD801	Architectural Design - VI	0-0-10-0	10	10	50	50	100
T	22ARS804	Interior Design	1-0-2-0	3	3	50	50	100
TOTAL				28	28			

PC- 22; BS -0; PE-3; OE- 0; PAC- 3; SEC- 0

22ARP 801 - Research Methodology is assigned 2 hours of lecture and 1 hour of tutorial in order to enable students to learn designing of research.

22ARS 804 – Interior Design is assigned 1 hour of lecture and 2 hours of studio so that contents learnt can be applied to a design problem.

SEMESTER IX								
SLOT	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
A	22ARS901	Urban Design	2-0-1-0	3	3	40	60	100
B	22ARS902	Housing	3-0-0-0	3	3	40	60	100
C	22ARP901	Professional Practice	2-1-0-0	3	3	40	60	100
D	22ARP902	Project Management	2-0-0-1	3	3	40	60	100
E	22ARE901	Elective IV	2-0-0-0	2	2	40	60	100
S	22ARD901	Architectural Design- VII	0-0-12-0	12	12	50	50	100
T	22ARP903	Dissertation	0-0-2-0	2	2	40	60	100
TOTAL				28	28			

PC- 18; BS -0; PE- 2; OE- 0; PAC- 8; SEC- 0

22ARS 901 - Urban Design is assigned 2 hours of lecture and 1 hour of studio so that contents learnt can be applied to the design problem.

22ARP 901 - Professional Practice is assigned 2 hours of lecture and 1 hour of tutorial so that contents learnt can be applied

22ARP 902 - Project Management is assigned 2 hours of lecture and 1 hour of practical so that computer applications can be introduced.

SEMESTER X								
Slot	COURSE NO	COURSE TITLE	HOURS / WEEK	NO. OF HOURS	CREDITS	MAXIMUM MARKS		
			L-T-S-P/D			CIA	ESE	TOTAL
S	22ARD1001	Architectural Thesis	0-0-0-0	18	18	300	200	500
T	22ARE1001	Elective V– MOOC*	To be completed successfully		3	100	100
TOTAL				18	21			

PC- 18; BS -6; PE- 3; OE- 0; PAC- 0; SEC- 0

SEMESTER-WISE CREDIT DISTRIBUTION

Semester	1	2	3	4	5	6	7	8	9	10	Total
2022 Autonomy batch	28	28	28	28	28	28	15	28	28	21	260

ELECTIVE I*

1. ARE 5011 Vernacular Architecture
2. ARE 5012 Appreciation of Art in Architecture
3. ARE 5013 Services in High-rise Buildings

ELECTIVE -II*

1. ARE 6011 Cost Effective Technology
2. ARE 6012 Contemporary Architecture and Design
3. ARE 6013 Architecture of South-East Asia

ELECTIVE -III*

1. ARE 8011 Architectural Conservation
2. ARE 8012 Architectural Journalism
3. ARE 8013 Disaster Mitigation, Management and Recovery.

ELECTIVE -IV*

1. ARE 9021 Earthquake Resistant Architecture
2. ARE 9022 Traffic and Transportation Planning
3. ARE 9023 Advance Construction Technology

ELECTIVE V – MOOC*

1. ARE 10011 Urban Governance and Development Management (NPTEL)
2. ARE 10012 Entrepreneurship Skills for Architects
3. ARE 10013 Building Performance and Compliance
4. ARE 10014 Role of Craft and Technology in Interior (NPTEL)
5. ARE 10015 Urban Land Use and transportation planning (NPTEL)
6. ARE 10016 Structural System in Architecture (NPTEL)
7. ARE 10017 Culturally Responsive Built Environments (NPTEL)
8. ARE 10018 Building Materials and Composites (NPTEL)