TKM COLLEGE OF ENGINEERING

(Government Aided and Autonomous)

Celebrating 60 years of excellence

ARCHITECTURE
B. Arch Curriculum 2023

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

Abstract

TKMCE-Academics- B.Arch Curriculum 2023 -orders issued

No: ACU3/651/2023 Date: 12/06/2023

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 second academic council meeting held on 27th May 2023, approved the B.Arch Curriculum for the academic year 2023-24 onwards. The academic curriculum for the B.Arch program, 2023, approved by the Academic Council, is hereby notified as the **TKM College of Engineering (Aided and Autonomous) B.Arch Curriculum 2023**.

PRINCIPAL
THANGAL KUNJU MUSALIAR
COLLEGE OF ENGINEERING
KOLLAM-5

PRINCIPAL

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

TKM College of Engineering (Government Aided and Autonomous)

B.Arch. Curriculum 2023.

This will be known as the **TKM College of Engineering B.Arch, Curriculum 2023**. 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 2023-24 onwards.

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CURRICULUM

DEPARTMENT OF ARCHITECTURE

INTRODUCTION

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

Sl. No	Knowledge Segment	Category description	Code	Credits
1.	**Professional Core Courses (PC)**			**140**
1.a		Architectural Design	ARD	91
1.b		Architectural Studies Architectural Theory	ARS	49
2.	**Building Science and Applied Engineering (BS)**			**62**
2.a		Building Construction	ARB	30
2.b		Basic and Building Sciences Applied Engineering	ARC	32
3.	**Elective Courses (EC)**		ARE	**24**
4.	**Professional Ability Enhancement Courses (PAC)**		ARP	**26**
5.	**Skill Enhancement Courses (SEC)**		ARK	**08**
Total Mandatory Credits				**260**

PROFESSIONAL CORE COURSES (PC):

Architectural Design Courses: Basic Design, Architectural Design, Architectural Design Thesis.

Architectural Studies courses: Architectural Graphics and Visual Arts, Geometrical drawing, Carpentry and Model Making Workshop, Landscape design and Site Planning and Interior Design.

Architectural Theory Courses: Theory of Architecture, History of Architecture and Culture, Estimation and Valuation, Urban Design, Housing.

BUILDING SCIENCE AND APPLIED ENGINEERING (BS)

Building Construction Courses: Building Materials and Construction Techniques, and Working Drawing.

Basic and Building Sciences Courses: Mathematics for Architectural Applications, Climate and Built Form, Building Services

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

ELECTIVE COURSES (EC):

Professional Electives and Open Electives

PROFESSIONAL ABILITY ENHANCEMENT COURSES (PAC):

Internship or Practical Training, Material Study/ Critical Analysis/ Market survey,

Research Methodology, Professional Practice, Project Management, Seminar

SKILL ENHANCEMENT COURSES (SEC):

Communication Skills & Techniques for Architecture, Computer studio and digital art, Computer Applications I and II

STRUCTURE OF COURSE CODE:

Each course will be identified by a unique Course Code consisting of eight alpha numeric characters.

Table 1: Structure of Course Code

YYYARXSNN (for courses offered by Architecture Department)				
YY	**AR**	**X**	**S**	**NN**
Regulation Year	Department offering the course	Course category code C	Semester Number	Serial No. of course in a semester
23 for year 2023	Architecture	D – Architectural Design S – Architectural Studies B – Building Construction C – Basic Sciences and Applied Engineering E - Elective P – Professional Ability Enhancement course K– Skill Enhancement courses	1-10 etc.	01 02 03 etc.

YYAXCSNN (for courses offered by other departments)					
YY	**A**	**X**	**C**	**S**	**NN**
23 for year 2023	Architecture Department	X is department offering the course C- Civil E- Electrical M-Mechanical B- Humanities and Basic Sciences	C-Basic sciences and Applied Engineering K- Skill Enhancement Courses	1-10 etc.	01 02 03 etc.

E.g., 23ARS303; 23 is regulation year, AR is Architecture Department offering the course, S is category code for Architectural studies, 3 is third semester and 03 is the sequence of the subject in the semester.

e.g., 23ACC405 - 23 is regulation year, A is for Architecture department, C is for Civil Department offering the course, C is category code for Applied Engineering, 4 is fourth semester and 05 is the sequence of the subject in the semester.

The L-T-P-S-C for each course indicates the number of hours delivered as Lecture (L), Tutorial (T), Practical/ Studio/ Drawing (P), Self-study hours (S) and the total instructional delivery indicated as Credits (C).

S= (L*1+T*0+P*1)

C = L+ T + P

Table 2: Semester Wise Credit Distribution

Semester	1	2	3	4	5	6	7	8	9	10	**Total**
Credits	29	28	28	29	28	28	15	28	26	21	**260**

Table 3: Code for the Exam Slot of courses

Code	**Description**
A,B,C,D,E,F	End semester exams for theory subjects
S,T,U,V	Studio courses with Jury exam for Basic Design, Architectural Design and Thesis, Training or subjects evaluated by internal assessment (e.g.,viva for workshop)

FIRST SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD101	PC	Basic Design – I	0	0	8	8	8	8	100	100
2	A	23ARS102	PC	Theory of Architecture - I	3	0	0	3	3	3	40	60
3	B	23ARS103	PC	Geometrical Drawing	0	0	3	3	3	3	50	50
4	C	23ARS104	PC	Architectural Graphics and Visual Arts - I	1	0	3	4	4	4	50	50
5	D	23ARB105	BS	Building Materials and Construction Techniques – I	1	0	2	3	3	3	50	50
6	E	23ACC106	BS	Theory of Structures – I	2	1	0	2	3	3	40	60
7	F	23ABC107	BS	Mathematics for Architectural Applications	2	1	0	2	3	3	40	60
8	T	23ABK108	SEC	Communication Skills and Techniques for Architecture	1	0	1	2	2	2	100	-
TOTAL								**27**	**29**	**29**		

PC-18; BS-9; EC-0; PAC- 0; SEC- 2

SECOND SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD201	PC	Architectural Design – I	0	0	8	8	8	8	100	100
2	A	23ARS202	PC	History of Architecture and Culture-I	3	0	0	3	3	3	40	60
3	B	23ARS203	PC	Theory of Architecture – II	3	0	0	3	3	3	40	60
4	C	23ARS204	PC	Architectural Graphics and Visual Arts II	1	0	3	4	4	4	50	50
5	D	23ARB205	BS	Building Materials and Construction Techniques – II	1	0	2	3	3	3	50	50
6	E	23ACC206	BS	Theory of Structures – II	2	1	0	2	3	3	40	60
7	T	23ARK207	SEC	Computer studio and digital art	0	0	2	2	2	2	100	-
8	U	23ARS208	PC	Carpentry and Model Making Workshop	0	0	2	2	2	2	100	-
TOTAL								**27**	**28**	**28**		

PC- 20; BS -6; EC- 0; PAC- 0; SEC-2

THIRD SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD301	PC	Architectural Design- II	0	0	8	8	8	8	100	100
2	A	23ARS302	PC	History of Architecture and Culture- II	3	0	0	3	3	3	40	60
3	B	23ARB303	BS	Building Materials and Construction Techniques- III	1	0	2	3	3	3	50	50
4	C	23ARB304	BS	Climate and Built form – I	2	0	2	4	4	4	40	60
5	D	23ACC305	BS	Theory of Structures - III	2	1	0	2	3	3	40	60
6	E	23ACC306	BS	Building Services - I	2	0	1	3	3	3	40	60
7	T	23ACC307	BS	Surveying and leveling	1	0	1	2	2	2	100	-
8	U	23ARK308	SEC	Computer Applications I	0	0	2	2	2	2	100	-
TOTAL								**27**	**28**	**28**		

PC- 11; BS -15; EC-0; PAC- 0; SEC-2

FOURTH SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD401	PC	Architectural Design – III	0	0	8	8	8	8	100	100
2	A	23ARS402	PC	History of Architecture and Culture-- III	3	0	0	3	3	3	40	60
3	B	23ARS403	PC	Landscape Design and Site Planning	2	0	2	4	4	4	50	50
4	C	23ARB404	BS	Building Materials and Construction Techniques- IV	1	0	2	3	3	3	50	50
5	D	23ARB405	BS	Climate and Built form – II	2	0	1	3	3	3	40	60
6	E	23ACC406	BS	Theory of Structures – IV	2	1	0	2	3	3	40	60
7	F	23AEC407	BS	Building Services –II	2	0	1	3	3	3	40	60
8	T	23ARK408	SEC	Computer Applications II	0	0	2	2	2	2	100	-
TOTAL								**28**	**29**	**29**		

PC- 15; BS -12; EC- 0; PAC- 0; SEC- 2

FIFTH SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD501	PC	Architectural Design- IV	0	0	9	9	9	9	100	100
2	A	23ARS502	PC	History of Architecture and Culture - IV	3	0	0	3	3	3	40	60
3	B	23ARS503	PC	Interior Design	1	0	1	2	2	2	50	50
4	C	23ARB504	BS	Building Materials and Construction Techniques- V	1	0	2	3	3	3	50	50
5	D	23ACC505	BS	Theory of Structures – V	2	1	0	2	3	3	40	60
6	E	23AMC506	BS	Building Services - III	2	0	1	3	3	3	40	60
7	F	23ARE507	EC	Elective I	3	0	0	3	3	3	40	60
8	T	23ARB508	BS	Working drawings	0	0	2	2	2	2	100	-
TOTAL								**27**	**28**	**28**		

PC- 14; BS -11; EC-3(PE- 3); PAC- 0; SEC- 0

SIXTH SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD601	PC	Architectural Design – V	0	0	10	10	10	10	100	100
2	A	23ARS602	PC	History of Architecture and Culture - V	3	0	0	3	3	3	40	60
3	B	23ARS603	PC	Estimation and Valuation	2	1	0	2	3	3	40	60
4	C	23ARB604	BS	Building Materials, Construction Techniques VI	1	0	2	3	3	3	50	50
5	D	23ARC605	BS	Building Services – IV (Acoustics)	2	0	1	3	3	3	40	60
6	E	23ACC606	BS	Theory of Structures – VI	2	1	0	2	3	3	40	60
7	F	23ARE607	EC	Elective – II	3	0	0	3	3	3	40	60
TOTAL								**26**	**28**	**28**		

PC- 16; BS -9; EC-3 (PE-3); PAC- 0; SEC- 0

SEVENTH SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARP701	PAC	Internship or Practical Training	0	0	0	0	12	12	-	100
2	T	23ARP702	PAC	Critical Analysis, Material Study/ Market Survey	0	0	0	0	3	3	-	50
TOTAL									**15**	**15**		

PC- 0; BS -0; EC- 0; PAC- 15; SEC- 0

EIGHTH SEMESTER												
Sl. No.	Slot	Code	Category	Title	L	T	P	S	No. of Hours	Credits	Total Marks	
											CIA	ESE
1	S	23ARD801	PC	Architectural Design - VI	0	0	10	10	10	10	100	100
2	A	23ARS802	PC	Urban Design	3	0	0	3	3	3	40	60
3	B	23ARS803	PC	Housing	3	0	0	3	3	3	40	60
4	C	23ARE804	EC	Elective III	3	0	0	3	3	3	40	60
5	D	23ARE805	EC	Elective – IV	3	0	0	3	3	3	40	60
6	E	23ARP806	PAC	Professional Practice	3	0	0	3	3	3	40	60
7	F	23ARP807	PAC	Research Methodology	3	0	0	3	3	3	40	60
TOTAL								**28**	**28**	**28**		

PC- 16; BS -0; EC- 6(PE-6); PAC- 6; SEC- 0

NINTH SEMESTER													
Sl. No.	**Slot**	**Code**	**Category**	**Title**	**L**	**T**	**P**	**S**	**No. of Hours**	**Credits**	**Total Marks**	
											CIA	**ESE**
1	S	23ARD901	PC	Architectural Design- VII	0	0	12	12	12	12	100	100
2	A	23ARE902	EC	Elective V	3	0	0	3	3	3	40	60
3	B	23ARE903	EC	Elective VI	3	0	0	3	3	3	40	60
4	C	23ARE904	EC	Elective VII/ Management course/ Entrepreneur skills	3	0	0	3	3	3	40	60
5	D	23ARP905	PAC	Project Management	3	0	0	3	3	3	40	60
6	T	23ARP906	PAC	Seminar in Architecture	0	2	0	0	2	2	100	-
TOTAL								**24**	**26**	**26**		

PC- 12; BS -0; EC – 9(PE-3, OE-6); PAC- 5; SEC- 0

TENTH SEMESTER												
Sl. No.	**Slot**	**Code**	**Category**	**Title**	**L**	**T**	**P**	**S**	**No. of Hours**	**Credits**	**Total Marks**	
											CIA	**ESE**
1	S	23ARD1001	PC	Architectural Thesis	0	0	18	18	18	18	250	250
2	T	23ARE1002	EC	Elective VIII – MOOC*	To be completed successfully					3	100	-
TOTAL								**18**	**18**	**21**		

PC- 18; BS -0; EC – 3(OE-3); PAC- 0; SEC- 0

List Of Electives_2023

Elective 1		**GROUP 1 Humanities**
SEM 5	23ARE507.1	Principles of Human settlements
	23ARE507.2	Appreciation of Art in Architecture
	23ARE507.3	Behavioral and Environmental Studies in Architecture
	23ARE507.4	Architectural Journalism
Elective 2		**GROUP 2 Building Technology**
SEM 6	23ARE607.1	Tropical Architecture
	23ARE607.2	Ergonomics and Product Design
	23ARE607.3	Glass Technologies in Architecture
	23ARE607.4	Industrial Architecture
Elective 3		**Advanced Technology**
SEM 8	23ARE804.1	Long-span Structures
	23ARE804.2	Modular Coordination
	23ARE804.3	Earthquake-resistant Buildings
	23ARE804.4	Construction Mechanization
	23ARE804.5	Appropriate Building Technologies
Elective 4		**GROUP 3 Architectural Specialization**
SEM 8	23ARE805.1	Traffic and Transportation Planning
	23ARE805.2	Architectural Conservation
	23ARE805.3	Urban Planning
	23ARE805.4	Hospital Design
	23ARE805.5	Campus Planning
	23ARE805.6	Tourism and Environment
	23ARE805.7	Architecture of South East Asia
	23ARE805.8	Services in high rise buildings
	23ARE805.9	Energy Conscious Architecture
Elective 5		**OPEN Elective**
SEM 9	23XXXXXX	
Elective 6		**GROUP 4 Emerging Concerns**
SEM 9	23ARE903.1	Parametric Design
	23ARE903.2	Bio-mimicry in Design
	23ARE903.3	Building Automation and Management Systems
	23ARE903.4	Urban Resilience
	23ARE903.5	Disaster Risk Management
	23ARE903.6	Real Estate management
	23ARE903.7	Remote Sensing and GIS in Planning
Elective 7		**GROUP 5 Professional Practice/Management/MOOC**
SEM 9	23ARE904.1	Management Information Systems
	23ARE904.2	Transforming Self to nurture leadership traits
	23ARE904.3	Entrepreneurship Skills for Architects
Elective 8		**GROUP 6 MOOC**
SEM 10	23ARE1002	Urban Governance and Development Management (NPTEL)
		Entrepreneurship Skills for Architects

SEM 10	23ARE1002	Building Performance and Compliance
		Role of Craft and Technology in Interior (NPTEL)
		Urban Land Use and transportation planning (NPTEL)
		Structural System in Architecture (NPTEL)
		Culturally Responsive Built Environments (NPTEL)
		Building Materials and Composites (NPTEL)
OPEN ELECTIVES THAT MAY BE TAKEN BY ARCHITECTURE STUDENTS		
ELECTIVE 5 **SEM 9**		Introduction To Augmented Reality and Virtual Reality
		Safety Engineering and Management
		Communication, Happiness and Well-Being
		Sports And Well-Being
		Happiness At Work

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