University of Mumbai

Website - mu.ac.in
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Academic Authorities,
Meetings & Services (AAMS)
Room No. 128, M. G. Road, Fort,
Mumbai – 400 032.
Tel. 022-68320033

Re- accredited with A ++ Grade (CGPA 3.65) by NAAC
Category- I University Status awarded by UGC

No. AAMS_UGS/ICD/2024-25/ 449 Date : 24th March, 2025.

To,
The Director,
Garware Institute of Career Education
and Development,
Vidyanagari
Santacruz (East)
Mumbai – 400 098.

Sub : Master of Interior Design (Two year) (Sem I & II).

Sir,

With reference to the subject noted above, this is to inform you that the recommendations made by the **Advisory Committee & Board of Management** of Garware Institute of Career Education & Development at its Meeting held on **4th September, 2023** & resolution passed by the **Board of Deans** at its meeting held on **9th August,2023 vide** Item No. **9.2** have been accepted by the **Academic Council** at its meeting held on **1st November, 2023 vide** Item no. **9.4 (A) 7 (N)** and subsequently approved by the **Management Council** at its meeting held on **5th February, 2024 vide** Item No. **3** that in accordance therewith, in exercise of the powers conferred upon the Management Council under Section 74(4) of the Maharashtra Public Universities Act, 2016 (Mah. Act No. VI of 2017) the following program with Ordinance for Title of the Program, Eligibility and Regulation numbers for Duration of Program, Intake Capacity, Scheme of Examinations, Standard of Passing and Credit Structure along with syllabus of **Master of Interior Design (Sem I & II)** (Appendix – 'A') have been introduced and the same have been brought into force with effect from the academic year **2023-24**.

The New Ordinances & Regulations as per NEP 2020 is as follows :-

Sr. No	Name of the Programme	Ordinance no. for Title	Ordinance no. for Eligibility	Duration
A	P.G Diploma in Interior Design	O.GPA – 13 A	O.GPA – 14 A	Two year
B	Master of Interior Design	O.GPA – 13 B	O.GPA – 14 B	
C	Master of Interior Design	O.GPA – 13 C	O.GPA – 14 C	One year

2/-

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No. AAMS_UGS/ICD/2024-25/ 449 Date : 24th March, 2025.

Regulation Nos	
Duration	R. GPA – 31
Intake Capacity	R. GPA – 32
Scheme of examination	R. GPA – 33
Standard of Passing	R. GPA – 34
Credit Structure	R. GPA – 35 A
	R. GPA – 35 B

(Dr. Prasad Karande)
REGISTRAR

A.C/9.4(A)7(N)/01/11/2023
M.C/3/5/2/2024

****

Copy forwarded with Compliments for information to:-

1) The Chairman, Board of Deans
2) The Dean, Faculty of Interdisciplinary Studies,
3) The Director, Board of Examinations and Evaluation,
4) The Director, Board of Students Development,
5) The Director, Department of Information & Communication Technology,
6) The Co-ordinator, MKCL.

Copy forwarded for information and necessary action to :-	
1	The Deputy Registrar, (Admissions, Enrolment, Eligibility and Migration Dept)(AEM), dr@eligi.mu.ac.in
2	The Deputy Registrar, Result unit, Vidyanagari drresults@exam.mu.ac.in
3	The Deputy Registrar, Marks and Certificate Unit,. Vidyanagari dr.verification@mu.ac.in
4	The Deputy Registrar, Appointment Unit, Vidyanagari dr.appointment@exam.mu.ac.in
5	The Deputy Registrar, CAP Unit, Vidyanagari cap.exam@mu.ac.in
6	The Deputy Registrar, College Affiliations & Development Department (CAD), deputyregistrar.uni@gmail.com
7	The Deputy Registrar, PRO, Fort, (Publication Section), Pro@mu.ac.in
8	The Deputy Registrar, Executive Authorities Section (EA) eau120@fort.mu.ac.in He is requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to the above circular.
9	The Deputy Registrar, Research Administration & Promotion Cell (RAPC), rapc@mu.ac.in
10	The Deputy Registrar, Academic Appointments & Quality Assurance (AAQA) dy.registrar.tau.fort.mu.ac.in ar.tau@fort.mu.ac.in
11	The Deputy Registrar, College Teachers Approval Unit (CTA), concolsection@gmail.com
12	The Deputy Registrars, Finance & Accounts Section, fort draccounts@fort.mu.ac.in
13	The Deputy Registrar, Election Section, Fort drelection@election.mu.ac.in
14	The Assistant Registrar, Administrative Sub-Campus Thane, thanesubcampus@mu.ac.in
15	The Assistant Registrar, School of Engg. & Applied Sciences, Kalyan, ar.seask@mu.ac.in
16	The Assistant Registrar, Ratnagiri Sub-centre, Ratnagiri, ratnagirisubcentar@gmail.com
17	The Director, Centre for Distance and Online Education (CDOE), Vidyanagari, director@idol.mu.ac.in
18	Director, Innovation, Incubation and Linkages, Dr. Sachin Laddha pinkumanno@gmail.com
19	Director, Department of Lifelong Learning and Extension (DLLE), dlleuniversityofmumbai@gmail.com

Copy for information :-	
1	P.A to Hon'ble Vice-Chancellor, vice-chancellor@mu.ac.in
2	P.A to Pro-Vice-Chancellor pvc@fort.mu.ac.in
3	P.A to Registrar, registrar@fort.mu.ac.in
4	P.A to all Deans of all Faculties
5	P.A to Finance & Account Officers, (F & A.O), camu@accounts.mu.ac.in

To,

1	The Chairman, Board of Deans pvc@fort.mu.ac.in
2	**Faculty of Humanities,** **Dean** 1. Prof.Anil Singh Dranilsingh129@gmail.com **Associate Dean** 2. Dr.Suchitra Naik Naiksuchitra27@gmail.com 3.Prof.Manisha Karne mkarne@economics.mu.ac.in
	Faculty of Commerce & Management, **Dean** 1. Dr.Kavita Laghate kavitalaghate@jbims.mu.ac.in **Associate Dean** 2. Dr.Ravikant Balkrishna Sangurde Ravikant.s.@somaiya.edu 3. Prin.Kishori Bhagat kishoribhagat@rediffmail.com

	Faculty of Science & Technology **Dean** 1. Prof. Shivram Garje ssgarje@chem.mu.ac.in **Associate Dean** 2. Dr. Madhav R. Rajwade Madhavr64@gmail.com 3. Prin. Deven Shah sir.deven@gmail.com
	Faculty of Inter-Disciplinary Studies, **Dean** 1.Dr. Anil K. Singh aksingh@trcl.org.in **Associate Dean** 2.Prin.Chadrashekhar Ashok Chakradeo cachakradeo@gmail.com
3	Chairman, Board of Studies,
4	The Director, Board of Examinations and Evaluation, dboee@exam.mu.ac.in
5	The Director, Board of Students Development, dsd@mu.ac.in DSW direcotr@dsw.mu.ac.in
6	The Director, Department of Information & Communication Technology, director.dict@mu.ac.in

AC- 01/11/2023
Item No-9.4(A)7

As Per NEP 2020

University of Mumbai

Title of the program

A- P.G. Diploma in Interior Design

B- Master of Interior Design (Two Year) } 2023-24

C- Master of Interior Design (One Year) -2027-28

(Garware Institute of Career Education and Development)

Syllabus for
Semester- Semester I and II

Ref: GR dated 16th May,2023 for Credit Structure of PG

UNIVERSITY OF MUMBAI

(AS PER NEP 2020)

Sr. No.	Heading	Particulars	
1	Title of program O: GPA -13 A	A	P.G. Diploma in Interior Design
	O: GPA -13 B	B	Master of Interior Design (Two Year)
	O: GPA -13 C	C	Master of Interior Design (One Year)
2	Eligibility O: GPA -14 A	A	1. The candidate shall be Graduate from any stream. 2. Candidate must have appeared Elementary &/or Intermediate Drawing grade examination appeared. 3. In case candidate has secured between 45% to 50% marks in Graduation from any stream and/or in case, candidate has appeared but not cleared elementary &/or intermediate drawing grade examination candidate will undergo 30 hours of Bridge Course with the institute at an extra fee. **OR** 4. In case candidate has not appeared for elementary/Intermediate drawing exam. He must have Technical Drawing as a subject either in 9th & 10th Std. or 11th & 12th Std. **OR** Passed Equivalent Academic Level 5.5
	O: GPA -14 B	B	1. The candidate who has successfully completed P.G. Diploma in Interior Design. 2. Lateral Entry to be granted to the candidate whose Post Graduate Diploma credits are 60% equivalent to Master of Interior Design & he/she earns minimum 8 Credits from P.G. Diploma in Interior Design. 3. As per NEP criteria on the basis of RPL-Recognition of Prior Learning, Candidate to be admitted to 2nd Year subject to He/she securing minimum 50% in the 1st Year assessment of PGDID & proof of employment of Minimum 2 Years. **OR** Passed Equivalent Academic Level 6.0

	O: GPA -14 C	C	1. Graduate with 4-year U.G. Degree in BID 2. Graduate with 4-year any other U.G. Degree (Honours / Honours with Research) with bridge course of 30 hours with the institute at an extra fee Duration or equivalent academic level 6.0
3	Duration of Program R: GPA -31	A	1 Year
		B	2 Years
		C	1 Year
4	R: GPA -32 Intake Capacity	60	
5	R: GPA -33 Scheme of Examination	NEP 50% Internal – Continuous Evaluation 50% External- Semester End Examination Individual Passing in Internal and External Examination	
6	Standards of Passing R: GPA -34	50% in each component	
7	Credit Structure R: GPA -35 A R : GPA -35 B	Attached herewith	
8	Semesters	A	Sem I & II
		B	Sem I, II, III, & IV
		C	Sem I & II
9	Program Academic Level	A	6.0
		B	6.5
		C	6.5
10	Pattern	Semester	
11	Status	New	
12	To be implemented from Academic Year Progressively	A	2023-24
		B	
		C	2027-28

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

Preamble

1) Introduction

Master in Interior Design is a career-oriented course that gives chance and opportunity to the deserving candidates, who have had no exposure to the creative field like 'INTERIOR DESIGN'. After graduation, this course enables the candidate to make meaningful participation in the building industry, gain appropriate employment, become entrepreneurs and be self-supporting.

2) Aims and Objectives

The Course covers Interior Designing of residential and commercial premises by creating meaningful, functional and habitable spaces. Thus, making the students aware of how the space influences our identity, productivity and wellness. It aims at studying the design and drawing aspects by using Computer aided design methods. As a part of the curriculum the candidate has to undergo project training in the industry to match theory with practical on the job experience. The student has to learn representative skills through theory lectures, studios, workshops, case studies, live projects, field trips, interior exhibitions, industry professional lectures etc. To enhance these skills further, a dedicated team of faculties focus on the holistic approach of overall development and growth of the students. The program helps the student to become an independent and effective learner and opens up a range of prospects on completion of the course.

3) Learning Outcomes

a) To be academically sound within the field of interior and to make connections to related disciplines through oral and graphical communication.
b) To provide the foundation for the further development of the candidate in the professional area so that he/she can contribute towards the society in the respective field as a responsible professional.
c) To develop strong set of values that will provide the basis of a comprehensive critical learning ability which will help the candidate to be technically sound and understand related industry needs.

4) Any other point (if any)

The program focuses on the use and practice of environment friendly sustainable green building materials and technology while designing and planning. The student learns to observe and practice professional ethics while working in the industry with clients, contractors and consultants.

Note: - 60 hours Remedial Session to be added.

5) Credit Structure of the Program - Parishishta – 1

R: GPA -35 A

Master in Interior Design

Year (2 Yr PG)	Level	Sem. (2 Yr)	Major		RM	OJT / FP	RP	Cum. Cr.	Degree
			Mandatory	Electives					
I	6.0	Sem I	Design -I (4 Cr) Construction-I (4 Cr) Theory of Materials and Products-I (4 Cr) ICT-AutoCad-I (2 Cr)	Interior Drawing and Graphics-I (4 Cr) **OR** Free- Hand Sketching & Rendering-I (4 Cr) **OR** Landscape Design (4 Cr)	Research Methodology (4 Cr)			22	**PG Diploma (after 3 Yr Degree)**
			14	**4**	**4**	**0**	**0**	**22**	
		Sem II	Design -II (4 Cr) Construction II (4 Cr) Theory of Materials and Products-II (4 Cr) ICT-AutoCad-II (2 Cr)	Interior Drawing and Graphics-II (4 Cr) **OR** Free- Hand Sketching & Rendering-I (4 Cr) **OR** Landscape Design (4 Cr)		**FP** Specialization Case Study (4 Cr)		22	
			14	**4**	**0**	**4**	**22**	**22**	
Cum. Cr. For PG Diploma			**28**	**8**	**4**	**4**	**-**	**44**	

Exit option: PG Diploma (44 Credits) after Three Year UG Degree Commerce, Science & Arts

R: GPA -35 B

Year (2 Yr PG)	Level	Sem. (2 Yr)	Major		RM	OJT / FP	RP	Cum. Cr.	Degree
			Mandatory	Electives					
II	6.5	Sem III	Design -III (4 Cr) Construction-III (4 Cr) Theory of Materials and Products-III (4 Cr) ICT-AutoCad-III (2 Cr)	Free- Hand Sketching & Rendering-II (4 Cr) **OR** Landscape Design (4 Cr)			RP on One Material (4 Cr)	22	**PG Degree After 3- Yr UG Or PG Degree after 4- Yr UG**
		Sem IV	Working Drawing (4 Cr) Construction IV (4 Cr) Theory of Materials-IV (Professional practice, BOQ, Estimation) (4 Cr)	Free- Hand Sketching & Rendering-II (4 Cr) **OR** Landscape Design (4 Cr)			Design Dissertation (6 Cr)	22	
Cum. Cr. for 1 Yr PG Degree			**26**	**8**			**10**	**44**	
Cum. Cr. for 2 Yr PG Degree			**54**	**16**	**4**	**4**	**10**	**88**	

2 Years-4 Sem. PG Degree (88 credits) after Three Year UG Degree or 1 Year-2 Sem PG Degree (44 credits) after Four Year UG Degree

Dr. Keyurkumar M. Nayak
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

SEMESTER- I								
Subject Code	Core Subject	Assessment Pattern			Teaching Hours			
	Topics	Internal Marks	External Marks	Total Marks (CA)	Theory Hours	Practical hours	Total Hours	Total Credits
Major Mandatory								
PGDIDS1MJP 1	Design -I	50	50	100	60	-	60	4
PGDIDS1MJP 2	Construction-I	50	50	100	60	-	60	4
PGDIDS1MJP 3	Theory of Materials and Products- I	50	50	100	60	-	60	4
PGDIDS1MJP 4	ICT-AutoCAD-I	50	-	50	30	-	30	2
Electives								
PGDIDS1P5A	Interior Drawing and Graphics-I	50	50	100	60	-	60	4
PGDIDS1P5B	Freehand Sketching and Rendering-I	50	50	100	60	-	60	4
PGDIDS1P5C	Landscape Design	50	50	100	60	-	60	4
Research Methodology (RM)								
PGDIDS1P6	Furniture Details	50	50	100	60	-	60	4
	Total	**300**	**250**	**550**	**330**	**-**	**330**	**22**
SEMESTER- II								
Major Mandatory								
PGDIDS2MJP 7	Design -II	50	50	100	60	-	60	4
PGDIDS2MJP 8	Construction-II	50	50	100	60	-	60	4
PGDIDS2MJP 9	Theory of Materials and Products- II	50	50	100	60	-	60	4

	PGDIDS2MJP 10	ICT-AutoCAD-II	50	-	50	30	-	30	2
	Electives								
	PGDMIDS2P11A	Interior Drawing and Graphics-II	50	50	100	60	-	60	4
	PGDMIDS2P11B	Freehand Sketching and Rendering-I	50	50	100	60	-	60	4
	PGDMIDS2P11C	Landscape Design	50	50	100	60	-	60	4
	Field Project (FP)								
	PGDIDS2P 12	Specialization Case Study	50	50	100	60	-	60	4
		Total	**300**	**250**	**550**	**330**	-	**330**	**22**

SEMESTER- III								
Major Mandatory								
MIDS3MJP13	Design -III	50	50	100	60	-	60	4
MIDS3MJP14	Construction-III	50	50	100	60	-	60	4
MIDS3MJP15	Theory of Materials and Products- III	50	50	100	60	-	60	4
MIDS3MJP16	ICT-AutoCAD-III	50	-	50	30	-	30	2
Electives								
MIDS3P 17A	Freehand Sketching and Rendering-II	50	50	100	60	-	60	4
MIDS3P 17B	Landscape Design	50	50	100	60	-	60	4
Research Project (RP)								
MIDS3P 18	Specialization in One Material	50	50	100	60	-	60	4
	Total	**300**	**250**	**550**	**330**	**-**	**330**	**22**
SEMESTER- IV								
Major Mandatory								
MIDS4MJP19	Working Drawing	50	50	100	60	-	60	4
MIDS4MJP20	Construction-IV	50	50	100	60	-	60	4
MIDS4MJP21	Theory of Materials – IV (Professional practice, BOQ, Estimation)	50	50	100	60	-	60	4
Electives								

	MIDS4P 22A	Freehand Sketching and Rendering-II	50	50	100	60	-	60	4
	MIDS4P 22B	Landscape Design	50	50	100	60	-	60	4
	Research Project (RP)								
	MIDS4P 23	Design Dissertation	100	100	200	60	-	60	6
		Total	**300**	**300**	**600**	**300**	**-**	**300**	**22**

Sem.-I

M ID SYLLABUS (2 YEARS) SEM I TO SEM IV

SEMESTER I

The First Semester covers a range of fundamental studies of interior space and build form at human scale, developing skills, which include drawing techniques, surveying and building constructions. Designing of objects, spaces which start in the first week of the course, provides the student with a means of achieving a high degree of proficiency in both theory and practice of interior design. The First Semester offers a comprehensive view and experience of the field of interior with the knowledge and skills, which can be assumed at this stage. Along with design study, the student will study a number of theoretical subjects including history; technology and humanities. In process and skills, they will learn about design process and management. Students will be able to develop their visualization skills through basic 3D models and explore different ways of viewing them to build up a creative approach. They will also become familiar with using computers and AutoCAD right from the First Semester along with some basic computer applications.

Paper No.	SUBJECT
MIDS1MJP1	**DESIGN 1**
	Unit - 1 ➢ Basic Terminology – Plan, Elevation, Section Etc. ➢ Developing observational skills (This will be monitored till Sem II in all lectures) ➢ Basic Design - Model Making – Cube, Pyramid Etc. ➢ Understanding of volume and space using different 3d objects, studying their arrangements and its effect on space and volume. ➢ Understanding flow of space around objects, aesthetical reasonings. ➢ Geographical and astronomical orientation and introduction to surroundings. ➢ Relation of Geography, natural phenomenon like and light and ventilation with architectural and Interior design. ➢ Understanding different Design styles, themes etc. International, Modern, Contemporary. **Unit - 2** ➢ Revisions and application of British and metric scales taught in technical drawing classes. ➢ Understanding Furniture Units, Their Functions. ➢ Anthropometric Data – Human behavior and movements for residential applications. ➢ Ergonomics and Its Application in Interior Design. ➢ Sketching basic furniture **Unit - 3**

	➢ Understanding the fundamental of design – Form Follows Function ➢ Living Room items and circulation (Plan /Section /Elevation) ➢ Bedroom circulation items and circulation (plan/ section/ elevation) ➢ Students will be taught how to make and use cutouts of furniture units to try different layout arrangements and select the correct one from the options worked out. ➢ Kitchen + Toilet Introduction Fundamental Design ➢ Understanding Kitchen Triangle. Studying various types of kitchen layouts and shapes. Selecting the right type for required application ➢ Studying own house plan **Unit - 4** ➢ Introduction to 1 Bedroom apartment design ➢ Designing of 1 bedroom apartment. ➢ Layout plan - Studying various arrangements and understanding pros and cons by using scaled furniture cutout ➢ Sections/ Elevations ➢ Sections and elevations in detail. ➢ Converting technical plan/ elevation into realistic design by adopting right style and detailing. ➢ Spot views and details **Reference Books:** Time Saver Standards Design Data -Chiava. J. & Callender. J. Interior Design - Kasu Ahmed Sanskruti - Sudhir Diwan Architectural Picture Dictionary - Francis D. K. Ching

Paper No.	SUBJECT
MIDS1MJP2	**CONSTRUCTION I**
	Unit - 1 ➢ Terminology – Introduction to various building components, common terms used in interior design. ➢ Natural Materials– Study of soil, sand, gravels, pebbles, boulders, rocks, and their use in construction and application in interiors. **Unit – 2** ➢ Stone –Terms, Types, Stone Masonry, (Random Rubble & Ashlar Types), Masonry Tools, Stone dressing, Pointing, and use in interiors. **Unit - 3**

	➢ Brick – Manufacturing Process, Types (Common bricks, Wire cut bricks, Fire clay bricks, Concrete blocks etc), Std Sizes, Closers & Bats, Various Bonds (Stretcher, Header, English & Flemish) & Partition walls, Steps & Guidelines for Brick Masonry Construction, Piers & Paving. ➢ Brick work features such as Corbelling, Toothing, Stepping, Coping, Terracing, etc. **Unit - 4** ➢ Bamboo & Cane Construction – ➢ Understanding its character and use in interior. ➢ Terms, Characteristics, Types of Bamboo, Construction Basic Joineries, ➢ Individual Case Study. ➢ Details of Roof, seating in bamboo & fixing of bamboo frame work to floor. **Reference Books:** Building Construction Vol. 1 & 2 - W. B. Mackey Construction and material handbook - P. N. Khanna Building Construction Handbook - R. Chudley and R. Greeno Technology of Interior Construction by Vasudeo Channapattam - Part 1 Design Fundamental in Architecture by V.S Parmar Interior Design Illustrated by Francis DK Ching

Paper No.	SUBJECT
MIDS1MJP3	**THEORY OF MATERIALS AND PRODUCTS- I**
	Unit -1 ➢ Introduction to Design elements and principles, basic art elements, optical illusions, design as a visual language. ➢ Introduction to building elements and spaces, structuring spaces ➢ Introduction to 5 senses and sensory based design + colour psychology + interaction of humans and surrounding spaces. ➢ History of materials- Traditional materials and evolution of materials. ➢ Introduction to building components and materials applicable which we interact with on daily basis (List of basic materials and information) ➢ Services-Introduction, Terminologies. ➢ Units Under Services, Concepts of Services, Introduction to term MEP (Ventilation, Plumbing – Water supply + drainage, Electrical & Lighting, HVAC, Firefighting etc.) ➢ Understanding concepts with case studies ➢ Importance of services in lifestyle and in architecture and interior design. Identifying services around us which may have gone unnoticed. **Unit – 2** ➢ Regional revolution- India ➢ India and Traditional Indian folk and tribal arts and handicrafts, such as madhubani, Kalamkari,

warli, etc.

- Study of inlay and meenakari in relation to interior.
- Traditional designs and motifs used on surface, objects including pottery, stone, metal ware, wood crafts etc.
- Units and conversion
  Measurements of past, SI system,
  British, Metric absolute system
- Introduction to all Fundamental quantities in SI system
- Learning British scale inches
- Unit Conversions for length, area, vol.
- Tools for measurement, Paper sizes
- Understandings drawing scales
- Services
- Plumbing – Introduction, Norms and Terms. (Pipes, appliances, stack, drain, sewage, manhole, chambers)
- Study of residential/ commercial places

Unit – 3

- Nature, Geography, Seasons
- Manmade and natural environment, Climatic factors to be considered
- Understanding earth, sun, seasons, nature, Maps, Sun path.
- Orientation- Climate responsive designs. Directions based building orientation.
- Window openings- Sun- Natural light, solar heat gain, shading devices
- Understanding different Design styles, themes etc. Indian – (east, west, north, south)
- Regional houses around the globe
- Climatic zones of India.
- Variation in traditional housing based on different regions
- Climate based vernacular architecture of India, Traditional materials
- Services
- Basics of water supply. Source, collection, purification, distribution. storage. Various types water supply systems within residential and commercial premises of different sizes, high-rise buildings, towns and cities.

Unit – 4

- Theory of materials- Natural and man made
- Introduction, classification of rocks; Stones, history.
- Introduction of stones- Quarrying methods, Natural Bed, Stone Dressing, seasoning, finishes on stone
- Uses of stones- flooring, construction, methods of cladding, Properties of good stone as a building material, deterioration, Artificial stones,
- Preservation of stones, sizes of stone slabs available, brands, Finishes.
- Comparative analysis of types of stones under parent rock, its uses, properties, availability in India
- Services
- Basics of drainage. Types of drainage systems. Traps, Branches of drainage system. Drainage in building blocks, high-rise buildings, complexes, towns and cities. Types of drainage discharge. Septic tanks and sewer lines.

Reference Books:

	➢ Building Construction Vol. 1 & 2 - W. B. Mackey, Barry, Roy Chudley ➢ Architecture form, space and order, Picture Dictionary- Francis D.K. Ching ➢ Construction and material handbook: P. N. Khanna

Paper No.	SUBJECT
MIDS1MJP4	**ICT -AutoCAD-I**
	Unit - 1 ➢ Understanding difference between hardware & software ➢ Understanding various input and output devices & methods ➢ Understanding basics of Windows ➢ Understanding Basics in Microsoft Words **Unit – 2** ➢ Using Word for documentation ➢ Editing in word files ➢ Understanding and creating Basic Presentation for projects in PPT ➢ Editing in presentation files **Unit – 3** ➢ Introduction to AutoCAD, understanding interface, Understanding input methods. ➢ Setting units & drawing area & drawing basic 2D shapes ➢ Modifying 2D shapes with basic modification tools ➢ Drawing 2D shapes & editing the shapes **Unit – 4** ➢ Using various object selection methods, Dimensioning drawing with using basic dimensioning tools ➢ Understanding advanced dimension styles with applying various properties to dimensioning objects Editing existing dimensions ➢ Workshop/activity session **Reference Books:** ➢ Mastering AutoCAD (George Omura Brian Benton) ➢ AutoCAD for engineers and designers basics & intermediate (Sham Takko)

Paper No.	SUBJECT (ELECTIVES)
MIDS1P5	**INTERIOR DRAWING AND GRAPHICS– I**
	Unit - 1 ➢ Introduction to Technical Drawing ➢ Define, Identify and Explain concepts/ provisions/ principles relating to Technical Drawing. ➢ Eye, Hand, Brain Coordination. ➢ Introduction of subject, nameplate & its construction/ format with Introduction to Arithmetic & Geometry. ➢ Measurement & scale (Units/system of measurements) with its application & introduction to instruments with application. ➢ Technical Lettering, Free hand exercise for hand assessment & hand writing improvement. **Unit - 2** ➢ Understanding two-dimensional objects such as Square, hexagons, and circle etc. ➢ Define, Identify and Explain concepts/provisions/ principles relating to Technical Drawing. ➢ Introduction of orthographic Projection - Primary / Simplified Objects (cubes, cuboids etc.) ➢ Developed Objects - Introduction to Surfaces /edges / corners. ➢ Developed Objects - Prism / Pyramids with Square & Polygonal Base. ➢ Advance Structure - Ref. Interior Layout - composing of multiple objects with different size/ dimensions **Unit – 3** ➢ Graphic exercise - Optical impression & awareness ➢ Introduction to Section with various planes ➢ Developed Objects - Composite multiple objects with different size/ Dimensions. ➢ Developed Objects. ➢ Advance / Complicated objects - Circular – Cylinder & cone etc. **Unit - 4** ➢ Tracing work for Training Hand & Drafting. ➢ Advance / Complicated objects – Practical application with live furniture in classroom. **Reference Books:** Time Saver Standards- Design Data - Chiava. J. Callender J. Perspective & Sciography - Shankar M Rendering With Pen & Ink -Robort W. Gill

Paper No.	SUBJECT (ELECTIVES)
MIDS1P5	FREEHAND SKETCHING AND RENDERING- I

Unit - 1

- Free hand skills improvement. (For lines, curves etc).
- Line work improvement
- Understanding different line weights, values, meaning, uses, functions in interiors.
- Drafting tools – Understanding drafting tools, aligning paper, pencil pressure techniques (2B, 4B etc)
- Lettering improvement.
- Understanding and studying different fonts, styles and their uses, applications.
- Lettering for templates, heading, sub-heading with sizes.
- Understanding tracing techniques.
- Expressing words with the help of Alphabet.

Unit – 2

- Understanding basic shapes, 2D, 3D (square, hexagon, circle etc) with pencil rendering, awareness of light, shade and shadows. Square, hexagon, cuboid, hexagon, pentagon their different angles.
- Freehand drawing techniques: Perspective drawing – Introduction to one point, object drawing, 3D shapes, pencil rendering in light and dark shades.
- One point perspective with different furniture items, home appliances.
- Different views, angles with simple objects. Table, Chair etc.
- Perspective - Interiors and exterior (rendered in pencil).

Unit – 3

- Colour Theory: Colour Wheel – Primary, Secondary, Tertiary schemes etc.
- Different mediums of colouring – Poster colours, Water colours, Oil pastels etc.
- With the help of colour wheel make 2D Design, Make colour scale and grey scale
- Understanding colour theory with relation to interiors.
- Application of colour theory in interiors
- Make interior layout colour with the help of poster, water and colour pencil.

Unit – 4

- Basics of human figures,
- Drawing human figures with proportions, hands, feet etc. (Its relation with objects, furniture etc.
- Rendering with pencil human figures.
- Still life Drawing, Sketching still life
- Still life rendering in Poster/Watercolour
- Outdoor sketching – Urban Sketching
- Visit outdoor drawing and sketching
- Same outdoor do it on a various angles.

	Reference Books: Rendering with Pen and Ink - W. Robert Gill Water Colour Sketching - Milind Mulik Art – Noveau - Constantino Maria Magazines, and periodicals

Paper No.	SUBJECT (ELECTIVES)
MIDS1P5	**LANDSCAPE DESIGN**
	Unit - 1 ➢ Introduction, Terminology, Purpose of landscaping, Graphical representation ➢ Names of trees and shrubs, types, Lawn, Turf – Natural/Artificial ➢ Features in Landscape (with details and sections) – Garden elements, Tree/plant guard, parking, turning radius of vehicles, contours, paving, walkways, driveways, terracing, retaining wall, angle of repose, water bodies etc. ➢ Types of soil, advantages/ disadvantages **Unit - 2** ➢ Climate, Sun path diagram, orientation ➢ Placement of trees and shrubs ➢ Landscape elements – Gazebo, Pergola, sand pit, trellis, children's play area etc. ➢ Introduction to Terrace garden - construction, maintenance, details, sections etc. ➢ Layout – Placement, planning, flow chart etc. **Unit - 3** ➢ Hardscape – Fencing, Compound wall, bunds, gate, Island formation. ➢ Services in Landscape design – Water supply, drainage, Lighting etc. **Unit - 4** ➢ Latest market trends -New techniques used in landscape, Green building, organic gardens, water retention techniques, solar garden lighting, treatment for ponds, pools, green walls etc. ➢ Application of all landscape features in small design project and submission **Reference Books:** Time saver standards for Landscape Design Ernst Neufert standards for Interior Design Construction and materia! handbook - P. N. Khanna Garden structures -Wiles Richard Magazines, and periodicals

Paper No.	SUBJECT (RESEARCH METHODOLOGY)
MID MIDS1P6	**FURNITURE DETAILS**
	Unit - 1 ➢ Introduction, Terminology (Upholstery, Partitions Built-in-Furniture etc.), Anthropometry, Ergonomics, bracing, strutting. ➢ Indian Tradition in furniture – moulding, lipping, beading, edging, termination etc. ➢ Basic components of furniture (framework, support, hardware etc.) ➢ Materials used for furniture - Stone, Timber, Metals etc. **Unit - 2** ➢ Design of furniture items with details, data, finishing, hardware etc. (Dining Table, Study Table, T.V. Unit etc.) ➢ Hollow core flushed shutter for wardrobe, cabinet etc. ➢ Wardrobe design ➢ Knock-down furniture **Unit - 3** ➢ Research and Case Study :- ➢ Reception Table - Types, Ergonomics, Materials etc. ➢ Sofa Design **Unit - 4** ➢ Modular furniture - Types, uses, advantages (Residential/Commercial) ➢ Effective use of spaces (Converting unused/empty spaces into functional spaces) **Reference Books:** Neufert's Standards for Interior Design Building construction by Francis D.K. Ching Construction and material handbook - P. N. Khanna

Sem.II

SEMESTER II

In the **Second Semester** more emphasis is placed on functional and contextual considerations through projects concerned with residential premises, building put to new use with additional project options concerned with public services design. The visual research studies continue through the **Second Semester** exploring the sensory understanding of interior space as a component of the built environment, which may be both sensitive and experimental in application. The studios are the base for the student's academic activities and in addition, teach design related to formal and cultural values.

Paper No.	SUBJECT
MIDS2MJP7	**DESIGN II**
	Unit – 1 ➢ Converting 1 BHK apartment to 2 BHK apartment ➢ Choosing right position for the additional room or the re-positioned room from circulation point of view. ➢ Understating services and structural issues for such conversions. ➢ How services play important role in such conversions/ modifications ➢ Re-routing services to suit the revised layout. **Unit – 2** ➢ Introduction to bigger residential units ➢ Design of 2/3 bedroom flats, bungalows, duplex, triplex, condominium houses ➢ Layout plan - Studying various arrangements and understanding pros and cons by using scaled furniture cutout ➢ Sections/ Elevations ➢ Sections and elevations in detail. ➢ Converting technical plan/ elevation into realistic design by adopting right style and detailing. **Unit – 3** ➢ Preparing and developing various layouts ➢ Flooring, Electrical layout – Understanding the function, symbols, legends etc. **Unit - 4** ➢ Mood board: developing ambiance for the selected design style and selecting right colour palette. ➢ Selection of material/ textures and colours for various applications ➢ Total project presentation with drawings, sketches, mood boards and sample boards, views. ➢ Final marking. ➢ Conversion of existing flats for maximum efficiency of available space.

	Reference Books: Time Saver Standards Design Data -Chiava. J. & Callender. J. Interior Design - Kasu Ahmed Sanskruti - Sudhir Diwan Architectural Picture Dictionary - Francis D. K. Ching

Paper No.	SUBJECT
MIDS2MJP8	**CONSTRUCTION II**
	Unit - 1 ➢ Structural Systems overview, Load bearing structure in depth, terms, characteristics. ➢ Load distribution, parts of a typical load bearing building including, pitched roofs, brackets, awning, arched openings. Wall thicknesses in a load bearing structure. ➢ RCC framed structure introduction & basics only (Terms, load distribution characteristics). ➢ Typical plan section elevation of a load bearing structure explaining lintel, sill and all other important components. ➢ Brief introduction to RCC for comparison. ➢ Introduction to terminologies and concepts: canopy, porch, portico, chajja, verandah, balcony, deck, gallery, corridor, vestibule etc. **Unit - 2** ➢ Stone Arches- (Introduction, elements of arches, norms & terms, types, concept of load distribution, construction method), Corbelling, Stepping, Toothing, Copings, etc. ➢ Most common and popular type of Arches in Stone masonry in different type of dressing techniques. ➢ Brick Arches- Introduction, elements of arches, norms and terms, types, construction method. Researching through Books & observe the interior & architectural use of arches. ➢ Site visit to South Mumbai ➢ Other facial elements as Niche, String Band, Cornice, Plinth Profiles, and overall application of all above in interiors. **Unit - 3** ➢ Mud House Construction – ➢ Introduction, understanding its character and use in Interior. ➢ Cob wall construction ➢ Plan Section Elevation of a Mud House ➢ Individual Case Study. **Unit – 4** ➢ Introduction of Timber, timber types and their application (briefly). ➢ Timber frame structure ➢ Typical characteristics of a timber structure (Roof, brackets, railings etc), flooring basics, timber posts.

	Reference Books: Building Construction Vol. 1, 2, &3 - W. B. Mackey Construction and material handbook P. N. Khanna Building Construction Handbook - R. Chudley and R. Greeno Technology of Interior Construction by Vasudeo Channapattam - Part 1 Design Fundamental in Architecture by V.S Parmar Interior Design Illustrated by Francis DK Ching

Paper No.	SUBJECT
MIDS2MJP9	**THEORY OF MATERIALS AND PRODUCTS- II**
	Unit – 1 ➢ Timber- Introduction of Timber as a natural product, Uses of timber in building construction, timber structure, timber floors, roofs, etc. ➢ Types of timbers (softwood, hardwood) and its characteristics- (knots, Slope of grain, density etc.) ➢ Conversion of timber, sawing techniques, Seasoning methods; ➢ Defects of timber natural and seasoning, strengthening of timber, preservatives application, properties, advantages, uses. ➢ Engineered wood products- Glulam, Plywood, engineered wood, chip boards, fibre board, Laminated veneer lumber, block board, laminates, veneers etc. Artificial Timber ➢ Plywood- Types, grading, uses- finishes. ➢ Introduction to Wood and Wood based- Hardwood, softwood- Strip flooring, plank flooring, block flooring ➢ Services- ➢ Water supply in dwellings individual toilets, kitchen and other locations. ➢ Drainage in dwellings - toilets, kitchen and other locations. ➢ Water supply/ Drainage piping layout in toilets and kitchen ➢ Effect of water supply and drainage on toilet and kitchen design and layout and tiling layout in particular. **Unit – 2** ➢ Study of various natural & man - made materials –Wall material & Finishes ➢ Introduction of Brick as a material ➢ Cement- contents, types, categories, uses, advantages, cement products. ➢ Introduction to Sand as an aggregate material

- Mortar- understanding mortar and its necessity, uses, properties of good mortar, Process of application, preparation, properties, types - Cement mortar, lime mortar, surkhi mortar, gauged mortar, mud mortar.
- Concrete- concrete contents, uses and types, Grade of concrete, preparation of concrete mix, compaction, curing of concrete.
- Understanding formwork, Shuttering, scaffolding.
- Introduction to concrete Blocks- sizes and uses, Dry wall Partitions, screens, dividers etc.
- Plaster- contents, Use, method and process of application, surface preparation, lathing, understanding coats of plaster based on use and finish
- Types of plaster- Gypsum plaster, Portland cement plaster/ stucco plaster, waterproof plaster, lime plaster, composite plaster, acoustic plaster, keene's cement plaster
- Wall finishes- Understanding paints & types of paints with application, charcoal sheet, tile cladding, wood panelling, plaster finishes, laminates, skirting, dado
- Services –
- Water supply Hardware: types of pipes, materials: advantages/disadvantages sizes of pipes, applications
- Understanding pipes routing and it's accessories: couplings, elbows (L), T junctions, Y junctions terminators and it's testing etc.
- Drainage hardware: types of pipes,materials: advantages/disadvantages, sizes of pipes and their applications
- Understanding drainage pipe routing and it's accessories: couplings, elbows (L), T junctions, Y junctions terminators and it's testing etc.

Unit – 3

- Glass- manufacturing process, defects, uses, Application.
- Types of glass- patterned glass, wire glass, heat absorbing/ tinted glass, reflective coated glass, tempered glass, toughened glass etc.
- Different uses of glass, tools for cutting, hardware used for fixing, methods of fixing, thicknesses etc.
- Introduction to glazing system (SGU, DGU) - energy performance of window system.
- Advantages and disadvantages
- Clay and Clay products- Classification of clay based on products- Brick clay, China clay, Fire clay, Bentonite
- Clay -advantages, disadvantages, sizes, application- Terracotta, stoneware, Vitreous China, Porcelain

- Plastic-Properties, resistance, durability of plastic as a material, Application in buildings.
- Types of plastic- polymers, pvc, polyurethanes, polystyrene etc.
- Products based on plastic types- Wall tiles, Coatings, Adhering films, flooring, vinyl carpet, products for ceiling, Use in sanitary fixtures, pipes
- Introduction to flooring and ceiling –
- Type of flooring-Joint less/ seamless- Cement screed, granolithic, resin based- epoxy, PU, mastic asphalt, Flexible thin sheet and tiles- Linoleum, vinyl, rubber sheet.
- Rigid tiles and stone slabs- ceramic, vitrified, porcelain, glass tile etc.
- Wood and Wood based- Hardwood, softwood- Strip flooring, plank flooring, block flooring
- Type of Ceiling-Advantages of false ceiling, material used for ceiling- gypsum ceiling, pop, levelling and re plastering of ceiling.
- conventional, suspended, coffered, tray, coved, beam, exposed ceiling,
- Mouldings, method of installation of ceiling.
- Brands and tentative rates

Unit – 4

- History of architecture period furniture (Indian/Foreign)
- History - Regional revolution- Chinese, Japanese, Moghul
- Transition of design, materials, design revolution from ancient time till modern times, reference images, styles, design elements motifs etc.,
- Egypt, (Greek empire, roman empire, dark ages,)
- Byzantine empire, Renaissance period, gothic, Baroque, Traditional, Industrial Revolution, Neoclassical, Contemporary etc.
- Period furniture- specific reference of designs and designers based on design eras and transition
- Understanding mood boards, Type of furniture, furniture fixing details, fabrics, floor covers for mentioned eras.
- Use of historical themes in modern furniture, materials
- Services
- Application of Services in design project. Effect on tiling layout and overall design.
- Additional civil work requirements to suit site conditions and design requirements.
- Final presentation and marking

Reference Books:

- Building Construction Vol. 1 &2 - W. B. Mackey
- Construction of Buildings Volume 1 Seventh Edition- R. Barry
- Building Construction Illustrated second edition Francis D. K. Ching
- A Global History of Architecture. 2nd edition - Ching, Francis, Mark
- Jarzombek, and Vikram Prakash.

History of Architecture by Serem Andrew

Paper No.	SUBJECT
MIDS2MJP10	**ICT - (Auto CAD) II**
	Unit – 1 ➢ Organising projects drawings with using Layers; advance editing tools. ➢ Drawing advance 2D shapes for designs elevation ➢ Changing and matching the properties of existing objects, ➢ Modifying shapes with advance Modification tools ➢ Creating blocks & wblocks & inserting blocks/wblock **Unit – 2** ➢ Editing blocks, wblocks, using enquiry for finding out information about objects. ➢ Creating & using design centre ➢ Creating, using and editing multiple lines with advance tools ➢ Printing 2D drawing **Unit – 3** ➢ Using editing tools. ➢ Using express tools to create shapes ➢ Editing objects with express tools ➢ Workshop **Unit – 4** ➢ Creating and using readymade title blocks for organised time saving permanent setting. ➢ Using utility tools ➢ Revision of tools/ problem solving session **Reference Books** Mastering AutoCAD (George Omura) AutoCAD for engineers and designers basics & intermediate (Sham Tickoo)

Paper No.	SUBJECT (ELECTIVES)
MIDS2P 11	**INTERIOR DRAWING AND GRAPHICS - II**
	Unit - 1. ➢ Study of complex solid objects through Orthographic Projection System ➢ Introduction to isometric View, Explain from Notes & References. ➢ Isometric Projection. Ex. On primary Objects: Solid

	Objects - square, rectangles etc. Ex. On Advance Object: circular type (Cylinder & Cone) **Unit - 2.** ➢ Perspective Drawing: One Point Perspective as technical way. ➢ Introduction to 1 Pt Perspective View: Primary / Simple Objects. ➢ 1 Pt Perspective View: Advance / complicated Objects & Solid Objects- square, rectangles etc. ➢ 1 Pt Perspective View: Application into a Furniture / fixture designed. **Unit -3.** ➢ A Test: Developed Objects with Interior Layout. ➢ Developed Objects - Ref. Interior Layout. **Unit -4.** ➢ Perspective Drawing: Two Point Perspective Drawing. ➢ Introduction to 2 Pt perspective view: Primary / Simple Objects. **Reference Books:** Perspective and Sciography - Shankar Mulik Rendering with Pen and Ink - W. Robert Gill

Paper No.	SUBJECT (ELECTIVES)
MIDS2P 12	**FREEHAND SKETCHING AND RENDERING I**
	Unit – 1 ➢ Freehand techniques – making cubes, pyramid with paper, arranging them as 3D structure ➢ Draw that 3D structure in one point perspective. ➢ With the help perspective of 3D structure Draw 5 different angles. ➢ Render with Colour same perspective. ➢ 3D structure rendering with Poster, water colour etc. ➢ Advanced pencil rendering **Unit – 2** ➢ Study of human anatomy ➢ Perspective view of the human figures. ➢ Colour wheel and colour scheme – analogous and complementary ➢ Colour schemes contd. Triads, understanding hue, tint, tone, shade. ➢ Make some commercial Design out of these colours. (Activity) **Unit - 3** ➢ Freehand drawing techniques: ➢ Two and Three Perspective drawing. ➢ Perspective drawing – Introduction to two point, object drawing, 3D shapes, pencil rendering in light and dark shades. ➢ Bird's eye view and ant views. ➢ Two point perspective with different furniture items, home appliances. ➢ Perspective - Interiors and exterior (rendered in pencil).

	➢ Natural and technical way of drawing human figures with proportion, front view, 2 point perspective with pencil rendering. ➢ Freehand perspective – one point, two point perspective interior/exterior with reference to layouts with rendering, colouring (water colours, poster colours) **Unit – 4** ➢ Outdoor sketching – Nature, Cityscapes ➢ Creative application of design principles – Making 2D, 3D Mural, sculpture design, with texture ➢ Final Mural or sculpture output. **Reference Books:** Rendering with Pen and Ink - W. Robert Gill Water Colour Sketching - Milind Mulik

Paper No.	SUBJECT (ELECTIVES)
MIDS2P 13	**LANDSCAPE DESIGN**
	Unit - 1 ➢ Introduction, Terminology, Purpose of landscaping, Graphical representation ➢ Names of trees and shrubs, types, Lawn, Turf – Natural/Artificial ➢ Features in Landscape (with details and sections) – Garden elements, Tree/plant guard, parking, turning radius of vehicles, contours, paving, walkways, driveways, terracing, retaining wall, angle of repose, water bodies etc. ➢ Types of soil, advantages/ disadvantages **Unit - 2** ➢ Climate, Sun path diagram, orientation ➢ Placement of trees and shrubs ➢ Landscape elements – Gazebo, Pergola, sand pit, trellis, children's play area etc. ➢ Introduction to Terrace garden - construction, maintenance, details, sections etc. ➢ Layout – Placement, planning, flow chart etc. **Unit - 3** ➢ Hardscape – Fencing, Compound wall, bunds, gate, Island formation. ➢ Services in Landscape design – Water supply, drainage, Lighting etc. **Unit - 4** ➢ Latest market trends -New techniques used in landscape, Green building, organic gardens, water retention techniques, solar garden lighting, treatment for ponds, pools, green walls etc. ➢ Application of all landscape features in small design project and submission **Reference Books:** Time saver standards for Landscape Design Ernst Neufert standards for Interior Design Construction and material handbook - P. N. Khanna Garden structures -Wiles Richard

	Magazines, and periodicals

Paper No.	SUBJECT (FIELD PROJECT)
MIDS2P 14	**SPECIALIZATION CASE STUDY**
	Unit – 1 ➢ Introduction to the subject ➢ Understanding design of commercial spaces through case studies (minimum 5 case studies), ➢ Developing reasoning attitude, analysing various aspects needed to develop a particular design ➢ Study of different materials furnishings/ services/agencies involved, direct market research, foresight and problem solving skills gained through live experience. ➢ Studying the given topic, choosing a Case. **Unit - 2** ➢ Understanding and studying the design of the case, analysing the circulation pattern, focusing on the function ➢ Study of construction details, anthropometry/ergonomics, materials used, finishes etc. ➢ Drafting the measurement plan, layout plan, flooring, RCP layout, elevations, sections, furniture details. **Unit – 3** ➢ Reviewing the case study ➢ Proposing changes as per review ➢ Drafting proposed plan, furniture, details etc. **Unit - 4** ➢ Inference, knowledge gained ➢ Comparison between real and proposed layouts ➢ Presentation with Auto CAD drawings **Reference Books:** Time Saver Standards Design Data -Chiava. J. & Callender. J. Ernst Neufert standards for Interior Design Building bylaws PDF Periodicals and Magazines

Sem.-III

SEMESTER III

The **Third semester** provides a focus for individual specialty, interest or creativity covering more complex design issues which may be concerned with urban environments, application of traditions, detailing and construction. The third semester introduces environmental planning and landscape studies and aims to give a flavor of the sorts of problems and issues faced by town and country planners, landscape architects and environmental managers. You examine ecological, social, economic, and historical aspects of the environment, and learn about gathering, analyzing, and presenting information.

The planning and management of the environment is becoming of ever - increasing importance as government and societies all over the world struggle to meet increasing demands against the requirements of sustainable development. These problems are the central concern of the landscape design, which is taught, in third semester. Theory and Construction will run parallelly where materials learnt will be applied in practical design.

Paper No.	SUBJECT
MIDS3MJP15	**DESIGN III**
	Unit - 1 ➢ Understanding Commercial spaces and difference from residential units and its effect on interior design. ➢ Anthropometric/ Ergonomics data for commercial interiors and furniture units ➢ Understanding big-size project like branch of multinational Bank/ corporate office of business house/restaurant having high-end requirements like auditorium, conference hall etc. ➢ Designing small-sized commercial/ retail outlet ➢ Understanding and analyzing given premises. (Case study, research) ➢ Drawing possible options for layout and circulation ➢ Finalizing right option while thinking about the style that will be adopted ➢ Understanding services: Utilizing knowledge of services taught separately. ➢ Preparing and developing flooring layout with legend **Unit – 2** ➢ Designing big-sized commercial/ retail outlet

	➢ Understanding and analyzing given premises. (Case study, research) ➢ Drawing possible options for layout and circulation ➢ Introduction to suspended ceilings: Reason/ advantages/ dis- advantages. Introduction to the concept reflected ceiling plans. ➢ Working out reflected ceiling plan keeping in alignment with services being provided: Air-conditioning, firefighting, lighting, electrical circuits, sound systems, data network etc. ➢ Designing sections: ➢ Designing sections in details: Sections will be developed further from sections into detailed sections by adding executive detailing. ➢ Adopting right design style by Applying things learnt in furniture detailing to sections to make it a workable realistic design. **Unit – 3** ➢ Lighting design (artificial): Functional lighting, task lighting and decorative lighting. ➢ Wall treatments: Paneling, painting, texture panting, wall papers etc. ➢ Applying finishes in design ➢ Focus on elevation treatment, with rendering ➢ Flooring layout – Material selection, sizes etc. **Unit – 4** ➢ Mood board: developing ambiance for the selected design style and selecting right colour palette. ➢ Selection of material/ textures and colours for various applications ➢ Total project presentation with drawings, sketches, mood boards and sample boards. ➢ 3D views/ sketches ➢ Final marking. **Reference Books:** ➢ Time Saver Standards Design Data -Chiava, J. & Callender, J. ➢ Interior Design - Kasu Ahmed ➢ Sanskruti - Sudhir Diwan ➢ Architectural Picture Dictionary - Francis D. K. Ching

Paper No.	SUBJECT
MIDS3MJP16	**CONSTRUCTION III**
	Unit – 1 ➢ Timber as carpentry and joinery. (Butt Joint, Rebate Joint, Dado Joint, Mitred Joint, Mortise Tenon, Tongue & Groove, Halved-Lapped Cross Joint, Half Lapped Mitred Joint, Halved and Lapped Linear Joint, Dovetail Housed Joint, Dovetail Corner Joint, Dovetail Mitred Joint)

	Unit – 2 ➢ RCC Framed Structure Introduction ➢ Common Terms, Characteristics ➢ Research on Environmental impact of RCC framed structures ➢ RCC Strip Section explaining details ➢ Plan section elevation of a RCC structure ➢ Drawings explaining all terms & features ➢ Do's & Don'ts ➢ Site visit ➢ Comparison between Load bearing & RCC Structures. **Unit – 3** ➢ Timber Doors: Origin, History, Terms, Types, Hardware, Details. ➢ Timber doors with various types of shutters as per function/ orientation / location & their details ➢ All terms and details related to doors (Architrave, sill, threshold etc.) **Unit – 4** ➢ Timber Windows: Origin, History, Terms, Types, ➢ Hardware, Details. ➢ Timber windows with various types of shutters as per function/ orientation / location & their details. ➢ All terms and details related to windows. **Reference Books:** ➢ Time Saver Standards Design Data -Chiava. J. & Callender. J. ➢ Interior Design Illustrated by Francis DK Ching ➢ Building Construction Vol. 1, 2, &3 - W. B. Mackey ➢ Construction and material handbook - P. N. Khanna ➢ Building Construction Handbook - R. Chudley and R. Greeno

Paper No.	SUBJECT
MIDS3MJP17	**THEORY OF MATERIALS AND PRODUCTS- III**
	Unit – 1 ➢ Ventilation – Importance in interiors ➢ Natural, Mechanical, Hybrid (Types- Single sided, Cross, stack ventilation and its effects) ➢ Lack of cross ventilation and its effects ➢ Elements influencing indoor air pattern

- Techniques to achieve Natural ventilation (Stack effect, wind tower, courtyard effect, Evaporative cooling)
- Case study, Research
- Ventilation in different zones
- Ways and means to improve comfort
- Mechanical ventilation- Introduction
- Types, ducts, fans etc uses, location, materials used.
- Case Study-Residential, Commercial, Industrial, Basement Parking etc.
- Paints, Polishes, Lacquers-
- Terminology, Constituents of paints, Characteristics of good paint, Bases
- Types of paint, Preparation and Painting of different surfaces (new/old)
- Varnish, Polish, Distempers, Different finishes, Advantages/ Disadvantages of certain paints
- Defects in paints
- Waterproofing – Methods, materials, uses

Unit - 2

- Flooring- Introduction, History
- Terminology (ceramic, glazing, enameling, vitrifying, porcelain, stoneware, earthenware etc.)
- Types of flooring (mud, murram, brick, flagstone, ceramic, porcelain, vitrified, terrazzo, chequered, PVC, terracotta, cement concrete, cement tiles, marble mosaic, cork, linoleum, timber, glass, stone etc.)
- Tools required, operations for tiling work, laying, skirting etc.
- Flooring calculations
- Door frames and frame calculations
- Acoustics- Definition, Functions, Properties
- Classification of sound- Airborne, Impact
- Terminology- Wavelength, Frequency, Velocity, Resonance, Noise, Sound reflection
- Defects in sound- Echo, Reverberation
- Sound Absorption, Materials- Porous absorbents, Cavity resonators, Resonant panels, composite type materials
- Acoustical material Tiles, Plaster, Quilts and mats, Hairfelt, Pulpboard, Glasswool, Perforated plywood, Compressed fibre board/particle board

Unit – 3

- Metals – Ferrous & Non- Ferrous(iron, steel, aluminium, copper, brass, bronze, zinc, tin, lead, nickel, silver, gold, chromium etc.)
- Introduction, Terminology -(ore, smelting, mining, corrosion, rusting, galvanization, Electroplating, Powder coating)
- Alloys- Uses in interiors
- Properties & uses of metals in interiors
- Ferrous/Nonferrous metals – composition, protection, application in interiors etc.
- Insulation (Thermal, Fire, Termite, Dampness, Waterproofing)
- Introduction- Norms and Terms
- Thermal insulation- conduction, convection, radiation

- Materials used for thermal Insulation (fiberglass, mineral wool, cellulose, polystyrene, cementitious foam etc.), advantages/disadvantage Cavity wall insulation, double glazing, Applications
- Damp proofing and Water proofing norms and terms (permeation, seepage, leaching, dampness, leakage, thawing, efflorescence)
- Causes, defects, preventive methods, curative methods, materials used for damp proofing
- Membrane damp proofing, integral treatment, surface treatment, guniting, cavity wall construction.
- Termite protection- types, causes, preventive methods, curative methods
- Fire insulation- Causes of fire, preventive measures
- Fire resisting properties of materials- timber, brick, stone steel, glass etc.
- Fire protection requirement for multi storeyed buildings, fire detection systems, Fire extinguishing systems, fire hydrant, dry/wet risers etc.

Unit - 4

- Adhesives & Sealants-
- Terminology, Properties, Characteristics, Types, Applications, Uses in Interiors
- Adhesives (Polymer, Acrylic, Resin, Epoxy, Hot-melt, Water based, PVA, contact spray, Cement based Adhesives etc.)
- Sealants (Latex, Acrylic, Silicone, Polyurethane, Thread sealant etc.
- Soft Furnishings
- Upholstery, Fabrics, Curtains, Blinds, Carpet – Types, materials, Uses & application in interiors.
- Lighting, Advanced lighting
- Natural lighting, day light factor, guidelines for natural lighting
- Advanced lighting- Terminology, ambient, cove, pendant, recessed, wall wash, wall scones, valance, soffit, cornice, task, accent, decorative, guidance, safety lighting etc.
- Different types of lighting arrangements (direct, indirect, diffused, composite, concealed)
- Variety of lamps- types, uses
- Lighting accessories-switches, sockets, dimers etc.
- Guidelines for lighting design, choosing a light fixture, lighting as per function
- Composite materials- Types, Composition, Uses in interiors & exteriors (FRP, WPC, PVC, GWB, FCB, ACP, GRC, Geotextile, Rattan material etc.)

Reference Books:

- Building Construction Vol. 1, 2, 3, & 4 -W. B. Mackey

	➢ Construction and material handbook - P. N. Khanna ➢ Construction and Materials – Parmar ➢ Building materials – Rangwala

Paper No.	SUBJECT
MIDS3MJP18	**ICT -(Auto CAD) III**
	Unit - 1 ➢ Understanding user co-ordinate system ➢ Using tool pallets ➢ Converting various grouped objects into normal objects ➢ Using OLE for inserting & linking other software files in AutoCAD, editing OLE files **Unit - 2** ➢ Using paper & model space in layout with various settings ➢ Changing settings for properties of text, dimensions in different viewports for paper & model space ➢ Inserting & using external reference drawings for interiors projects Editing ex-re files ➢ Creating attributes & attaching them with blocks **Unit - 3** ➢ Inserting, using & editing attributes ➢ Exporting CAD files in different formats, Importing different format files in AutoCAD. ➢ Recovering dwg files, using OPTION tools. ➢ ACTIVITY SESSION **Unit – 4** ➢ Editing values in OPTION tool for changing default setting in AutoCAD file. ➢ Understanding and using various interfaces. ➢ Brief revision of 2D tools, Problem

	solving. **Reference Books** ➢ Mastering AutoCAD (George Omura & Brian Benton) AutoCAD for engineers and designers basics & intermediate (Sham Tickoo)

Paper No.	SUBJECT (ELECTIVES)
MIDS3P 19	**FREEHAND SKETCHING & RENDERING- II**
	Unit - 1. ➢ Perspective Drawing: Two Point Perspective Drawing as technical way. ➢ Perspective Drawing : Two Point View Individual Objects ➢ Two Pt Perspective View: Application into a Furniture / fixture designed. ➢ Sketching of furniture objects **Unit - 2.** ➢ Two Pt Perspective View: Interior Layout Residential plan etc. ➢ Two Pt Perspective View: Complicated Layout Plans with Raised Levels etc. ➢ A Test: Developed Objects with Interior Layout. ➢ Sketching of furniture objects ➢ Two Pt Perspective View: Interior Layout commercial office plan etc. **Unit -3.** ➢ Introduction to Perspective Drawing: Three Point View Individual Objects ➢ Three Pt Perspective View: Application into a Furniture / fixture designed. ➢ Sketching & Rendering **Unit -4.** ➢ Three Pt Perspective View: Interior Layout Residential plan etc. ➢ Three Pt Perspective View: Complicated Layout Plans with 45 angle etc. ➢ A Test: Developed Objects with Interior Layout. ➢ Sketching & Rendering **Reference Books:** ➢ Time Saver Standards -Design Data - Chiava. J. & Callender. J. ➢ Perspective and Sciography - Shankar Mulik Rendering with Pen and Ink - W. Robert Gill

Paper No.	SUBJECT (ELECTIVES)
MIDS3P 20	**LANDSCAPE DESIGN**
	Unit - 1 ➢ Introduction, Terminology, Purpose of landscaping, Graphical representation ➢ Names of trees and shrubs, types, Lawn, Turf – Natural/Artificial ➢ Features in Landscape (with details and sections) – Garden elements, Tree/plant guard, parking, turning radius of vehicles, contours, paving, walkways, driveways, terracing, retaining wall, angle of repose, water bodies etc. ➢ Types of soil, advantages/ disadvantages **Unit - 2** ➢ Climate, Sun path diagram, orientation ➢ Placement of trees and shrubs ➢ Landscape elements – Gazebo, Pergola, sand pit, trellis, children's play area etc. ➢ Introduction to Terrace garden - construction, maintenance, details, sections etc. ➢ Layout – Placement, planning, flow chart etc. **Unit - 3** ➢ Hardscape – Fencing, Compound wall, bunds, gate, Island formation. ➢ Services in Landscape design – Water supply, drainage, Lighting etc. **Unit - 4** ➢ Latest market trends -New techniques used in landscape, Green building, organic gardens, water retention techniques, solar garden lighting, treatment for ponds, pools, green walls etc. ➢ Application of all landscape features in small design project and submission **Reference Books:** Time saver standards for Landscape Design Ernst Neufert standards for Interior Design Construction and material handbook - P. N. Khanna Garden structures -Wiles Richard Magazines, and periodicals

Paper No.	SUBJECT (ELECTIVES)
MIDS3P 21	**ICT IV (SKETCH UP)**
	Unit – 1 ➢ Understanding model info, setting up units for any new file. ➢ Navigation tools- move. Orbit, Pan ➢ Understanding Getting started toolbar- Selection, Various Shapes, arcs, Push pull, Offset, and rotate.

- Introduction to copy, array, commands
- Introduction to Groups and components.
- Jpeg Import and achieving correctly dimensioned model making from jpeg
- Section plane in sketch up

Unit – 2

- Cad Import- cad units' vs sketch - up units.
- Creating a model from design subject- 3 BHK Residential
- Understanding Solid, Surface and Wireframe models
- Understanding layers, Outliner, Working and managing layers.
- Follow me command for creating skirting, cornice.
- Application of Dimensions and text in Sketch up
- Creating a mood board for the house with colour scheme and material list
- Introduction to paint bucket

Unit – 3

- Understanding material import, editing materials, changing the Scale of the same.
- Application of materials selected from mood board onto the model
- Detailed work for bathrooms and kitchen while retaining the layers.
- Import jpeg- Matched photo - to create reference images into actual 3d model and projecting the texture over model
- Focus on Material and Texture of each room in depth.

Unit – 4

- Making detailed 3d model for- Wardrobe, chair, Doors, and Windows.
- Components and import components.
- Completion of 3BHK with Materials
- Understanding and applying Styles (Tray)
- Understanding Camera, Scenes, Animation and exporting scenes to jpeg

	➢ Understanding skb files and how to retrieve any model if file is crashed. **Reference Books** ➢ Sketchup for Interior Design: 3D visualizing, Designing and space planning (Lydia Cline)

Paper No.	SUBJECT (RESEARCH PROJECT)
MIDS3P 21	**SPECIALIZATION IN ONE MATERIAL**
	Unit – 1 ➢ Importance of subject – Specialization in One material ➢ Understanding and studying different materials used in Interior Design, analysing various aspects, perception of material. ➢ Choosing a material for research and study **Unit – 2** ➢ Introduction of the material, history, origin, manufacturing process etc. ➢ Detailed research of the above in India, abroad. ➢ Suitability in various conditions, anthropometry, sizes, thickness, texture etc. ➢ Collecting samples, site visit, market research, shop visits, Industrial visit etc. to support material study with live research. **Unit – 3** ➢ Uses of the material in interiors, types, ecological requirements. ➢ Technical properties, limitations, scope of the material. ➢ Advantages/disadvantages over other materials **Unit –4** ➢ Detailed study of the material considering market demands, costing. ➢ Bibliography and its importance ➢ Plagiarism ➢ Final review of soft copy of book, alignment of pages, contents etc. **Reference Books:** ➢ Architecture form, space and order, Picture Dictionary- Francis D.K. Ching ➢ Construction and material handbook : P. N. Khanna ➢ Construction and Materials – Parmar ➢ Building materials – Rangwala

Sem.-IV

SEMESTER IV

The **Fourth Semester** opens up an entirely new world for the students, one that is challenging, fulfilling, and one that helps to contribute to the society. Students learn about gathering, analyzing, and presenting information. Students are encouraged to develop design skills in response to the spirit of place, working alone as well as with artist and practitioners of other design disciplines.

The fourth semester introduces environmental planning and landscape studies and aims to give a flavour of the sorts of problems and issues faced by town and country planners, landscape architects and environmental managers. The planning and management of the environment is becoming of ever - increasing importance as government and societies all over the world struggle to meet increasing demands against the requirements of sustainable development. These problems are the central concern of the landscape design, which is taught, in fourth semester. Students are made aware of the technical requirements through Working Drawing. Professional Practice helps them build character, learn ethical ways of working and personality traits necessary for a fruitful career.

The **Fourth Semester** is a crucial semester as students venture out for their first internship. It is here that they are made to apply the knowledge and grooming of the previous semesters to prepare for the real world. They would learn to communicate the design concept and ideas verbally and through drawings to client, contractors, consultants and other skilled workers.

The use of modern design software efficiently and effectively for generating technically sound computer aided presentation drawings will help them to match with Industry standards.

Paper No.	SUBJECT (FIELD PROJECT)
MIDS4MJP 22	**WORKING DRAWING**
	Unit - 1. ➢ Transition from design drawing to working drawing. ➢ Fundamentals of working drawing. ➢ Grid lines, various types of levels and datums etc. ➢ Architectural working drawing. ➢ Structural/ architectural elements ➢ Setting-out and measurements **Unit - 2.** ➢ Architectural working drawing. ➢ Plans and layouts ➢ Sections and Elevations ➢ Elemental details like staircases/ parapets/ balconies ➢ Spot details like door frames/ window frames/ tile drops/ drip moulds/threshold etc. **Unit -3.** ➢ Understanding Interiors working drawings. ➢ Schedules- Furniture fixture and

	equipment. (Bought out, Custom made) ➢ Revisiting the design project from 5th Semester for Working Drawings ➢ Grid lines, Furniture setting out layout. ➢ Understanding levels. ➢ Flooring, Enlarged details for typical floor patterns. ➢ Wall elevations with appropriate details, Typical wall finishes sections **Unit -4.** ➢ Integration of services in working drawing ➢ Toilet Details. ➢ Ceiling layout working drawings with coordinated services ➢ Electrical diagrams. ➢ Working details- Custom made furniture ➢ Spot details ➢ Interface details **Reference Books:** ➢ Time Saver Standards -Design Data - Chiava. J. & Callender. J. ➢ Perspective and Sciography - Shankar Mulik

Paper No.	SUBJECT
MIDS4MJP23	**CONSTRUCTION IV**
	Unit – 1 ➢ Timber partitions and paneling ➢ Metal Stud Partitions & Paneling ➢ Insulation techniques & details ➢ Glass fixing/ installation in construction as glass ➢ Glass railings **Unit – 2** ➢ Suspended Ceiling ➢ Terms, characteristics & details Types: Fiberboard, Gypsum, POP, Wooden, PVC, Metal perforated ceiling, Aluminum panels insulated ceilings etc. ➢ Insulation techniques & details **Unit – 3** ➢ Timber Flooring ➢ Single flooring & Double Flooring ➢ Typical details, terms & characteristics **Unit – 4**

	➢ Timber Staircases ➢ Terms, Types & details ➢ RCC Staircase, types & details. **Reference Books:** ➢ Interior Design Illustrated by Francis DK Ching ➢ Building Construction Vol. 1, 2, &3 - W. B. Mackey

Paper No.	SUBJECT
MIDS4MJP24	**THEORY OF MATERIALS -IV (Professional practice, BOQ, Estimation)**
	Unit – 1 ➢ Electricity - Sources, production, distribution: cities, towns, building blocks, premises. ➢ Different power requirements – heavy industry, heavy works, commercial and residential units. ➢ Three-phase and single-phase requirements. Application in industrial and residentiai use. ➢ Main incoming, ELCBS and MCBs, migration from double-pole main switches, fuses to circuit breakers ➢ Circuit diagrams – Switches, plugs, sockets, various types of outlets for various requirements. Two-way switching. ➢ Switch-boards – locations, layout, types, grouping, specifications, scheduling. ➢ Automation and its application in interior and architecture. ➢ Lighting – light fittings, luminaires and lighting scheduling. ➢ Evolution from Filament bulbs - Incandescent lights - LEDs. Drivers and controllers. Effect on interior design and provisions/ arrangements to be made in layouts. ➢ Codes and standards. Fire ratings of electrical wirings.

- Understanding IP rating. Indoor/ outdoor/water submerged electrical units and installations
- Wires, cables – Sizes, capacities.
- Coupling and connections.
- Fire ratings – fire resistant and fire proof wiring and cabling.
- IP rating of switches, sockets, outlets and equipment, fixtures and fittings
- Application in Design project
- Presentation and final marking
- Introduction to mechanical branch of services – HV & AC
- Air conditioning and its effect on design, Fundamentals
- Types of air-conditioning. Thumb rules of tonnage, requirements.
- Window air-conditioners, Ductable splits type air-conditioners, Split type air-conditioners, VRVs/ VRFs, Central air-conditioning – Chill water – Fundamentals, advantages and limitations, applications
- District cooling – applications, Advantages
- Application in design project.
- Final review and marking

Unit - 2

- Building bylaws: Importance in interiors/codes for residential and commercial premises – Mumbai region/metropolitan region
- Understanding the 3C (Client- Consultant-Contractor) relation.
- Understanding Client's/ Consultant's/ Contractor's roles responsibilities
- Modes of measurements
- BOQ (Bill of quantities) and its components.
- Specific techno-legal language of BOQs
- Understanding relation of BOQ/ Specifications/ drawings
- Listing of project specific material and it's components.
- Logical and practical separation of material and processes into categories and modes of measurements

Unit – 3

- Understanding tendering process.
- Components of tender set
- Flow of information and it's relation to the evolution of concept drawing till as built drawing and it's various stages in between
- Flow and development of information and all components of tender set.
- Specifications, standards and codes, Types of contracts
- Quotations and estimates
- Rate analysis

	Unit - 4 ➢ Understanding Professional practice ➢ Understanding codes of conduct and ethics of professional practice ➢ Staying away from malpractices and Bribery ➢ Applying knowledge gained on any interior project / residential /commercial etc. Writing specifications, Preparing estimates, quotations etc. **Reference Books:** ➢ Electrical & mechanical services in high rise buildings (Design & estimation manual- including Green buildings) – AK Mittal ➢ Building services (Electrical services) – Krunal Thanki ➢ Building services (Part 1) – Krunal Thanki ➢ Periodicals and Manuals

Paper No.	SUBJECT (ELECTIVES)
MIDS4P 25	**FREEHAND SKETCHING & RENDERING- II**
	Unit - 1. ➢ Perspective Drawing: Two Point Perspective Drawing as technical way. ➢ Perspective Drawing: Two Point View Individual Objects ➢ Two Pt Perspective View: Application into a Furniture / fixture designed. ➢ Sketching of furniture objects **Unit - 2.** ➢ Two Pt Perspective View: Interior Layout Residential plan etc. ➢ Two Pt Perspective View: Complicated Layout Plans with Raised Levels etc. ➢ A Test: Developed Objects with Interior Layout. ➢ Sketching of furniture objects ➢ Two Pt Perspective View: Interior Layout commercial office plan etc. **Unit -3.** ➢ Introduction to Perspective Drawing: Three Point View Individual Objects ➢ Three Pt Perspective View: Application into a Furniture / fixture designed. ➢ Sketching & Rendering **Unit -4.** ➢ Three Pt Perspective View: Interior Layout Residential plan etc. ➢ Three Pt Perspective View: Complicated Layout Plans with 45 angle etc. ➢ A Test: Developed Objects with Interior Layout. ➢ Sketching & Rendering **Reference Books:** ➢ Time Saver Standards -Design Data - Chiava. J. & Callender. J.

	➢ Perspective and Sciography - Shankar Mulik ➢ Rendering with Pen and Ink - W. Robert Gill

Paper No.	SUBJECT (ELECTIVES)
MIDS4P 26	LANDSCAPE DESIGN
	Unit - 1 ➢ Introduction, Terminology, Purpose of landscaping, Graphical representation ➢ Names of trees and shrubs, types, Lawn, Turf – Natural/Artificial ➢ Features in Landscape (with details and sections) – Garden elements, Tree/plant guard, parking, turning radius of vehicles, contours, paving, walkways, driveways, terracing, retaining wall, angle of repose, water bodies etc. ➢ Types of soil, advantages/ disadvantages **Unit - 2** ➢ Climate, Sun path diagram, orientation ➢ Placement of trees and shrubs ➢ Landscape elements – Gazebo, Pergola, sand pit, trellis, children's play area etc. ➢ Introduction to Terrace garden - construction, maintenance, details, sections etc. ➢ Layout – Placement, planning, flow chart etc. **Unit - 3** ➢ Hardscape – Fencing, Compound wall, bunds, gate, Island formation. ➢ Services in Landscape design – Water supply, drainage, Lighting etc. **Unit - 4** ➢ Latest market trends -New techniques used in landscape, Green building, organic gardens, water retention techniques, solar garden lighting, treatment for ponds, pools, green walls etc. ➢ Application of all landscape features in small design project and submission **Reference Books:** Time saver standards for Landscape Design Ernst Neufert standards for Interior Design Construction and material handbook - P. N. Khanna Garden structures -Wiles Richard Magazines, and periodicals

Paper No.	SUBJECT (ELECTIVES)
MIDS4P 27	**ICT IV (SKETCH UP)**
	Unit – 1 ➢ Understanding model info, setting up units for any new file. ➢ Navigation tools- move. Orbit, Pan ➢ Understanding Getting started toolbar- Selection, Various Shapes,

arcs, Push pull, Offset, and rotate.
- Introduction to copy, array, commands
- Introduction to Groups and components.
- Jpeg Import and achieving correctly dimensioned model making from jpeg
- Section plane in sketch up

Unit – 2

- Cad Import- cad units' vs sketch - up units.
- Creating a model from design subject- 3 BHK Residential
- Understanding Solid, Surface and Wireframe models
- Understanding layers, Outliner, Working and managing layers.
- Follow me command for creating skirting, cornice.
- Application of Dimensions and text in Sketch up
- Creating a mood board for the house with colour scheme and material list
- Introduction to paint bucket

Unit – 3

- Understanding material import, editing materials, changing the Scale of the same.
- Application of materials selected from mood board onto the model
- Detailed work for bathrooms and kitchen while retaining the layers.
- Import jpeg- Matched photo - to create reference images into actual 3d model and projecting the texture over model
- Focus on Material and Texture of each room in depth.

Unit – 4

- Making detailed 3d model for- Wardrobe, chair, Doors, and Windows.
- Components and import components.
- Completion of 3BHK with Materials
- Understanding and applying Styles (Tray)
- Understanding Camera, Scenes, Animation and exporting scenes to

	jpeg ➢ Understanding skb files and how to retrieve any model if file is crashed. **Reference Books** ➢ Sketchup for Interior Design: 3D visualizing, Designing and space planning (Lydia Cline)

Paper No.	SUBJECT (RESEARCH PROJECT)
MIDS4P29	**DESIGN IV -DISSERTATION**
	Unit - 1 ➢ Design based on commercial unit or bungalow with landscape ➢ Understanding site- landscape features, contours, location, climate, wind direction, sun path etc. ➢ Working with theme, concept, requirements- Need to merge bldg. structure with landscape. ➢ Drawing measurement plan, placement, flow chart. ➢ Developing layout with Hardscape, Softscape **Unit - 2** ➢ Designing and detailing of elements: ➢ Lawn areas, walk ways, drive ways, ➢ Terracing, Retaining walls, Tree/ Plants guards, water bodies, curb, ➢ Island formation, Season flower bed, fencing, focal points, pergola, gazebo. ➢ Placement of proper major & medium trees. ➢ Parking – 45, 60, 90, parallel. ➢ Working out the turning radius of vehicles ➢ Designing Compound wall, gate and security Cabin giving details of construction and materials. ➢ Detailed interior planning of any one structure (with all necessary plans, sections, elevations, details etc.) **Unit - 3** ➢ Working out elevations with all landscape features (Rendered) ➢ Details of - Plumbing, Lighting (Exterior) ➢ Rendered Views (Focal points, Islands ➢ etc.) **Unit - 4** ➢ Preparation of Mood board, Landscape chart, Material chart (Details of all features) ➢ Final presentation of portfolio with Auto CAD drawings, rendered views etc. **Reference Books:** ➢ Time Saver Standards Design Data -Chiava. J. & Callender. J. ➢ Interior Design - Kasu Ahmed ➢ Sanskruti - Sudhir Diwan

PASSING PERFORMANCE GRADING :
The Performance Grading of the learner shall be on ten point scale be adopted uniformly.

Letter Grades and Grade Point

Semester GPA/ Program CGPA Semester / Program	% of Marks	Alpha-Sign/Letter Grade Result	Grading Point
9.00 – 10.00	90.0 - 100	O (Outstanding)	10
8.00 - < 9.00	80.0 < 90.0	A+ (Excellent)	9
7.00 - < 8.00	70.0 < 80.0	A (Very Good)	8
6.00 - < 7.00	60.0 < 70.0	B+ (Good)	7
5.50 - < 6.00	55.0 < 60.0	B (Average)	6
5.00 - < 5.50	50.0 < 55.0	C (Pass)	5
Below 5.00	Below 50	F (Fail)	0
AB (Absent)		Absent	

NOTE : VC : Vocational Courses, SEC : Skill Enhancement Courses, AEC . Ability Enhancement Courses, VEC : Value Education Courses, VSC : Vocational Skill Course, IKS : Indian Knowledge System, OJT: On The Job Training, FP: Field Projects.

The performance grading shall be based on the aggregate performance of Internal Assessment and Semester End Examination.

The Semester Grade Point Average (SGPA) will be calculated in the following manner: SGPA = □CG / □C for a semester, where C is Credit Point and G is Grade Point for the Course/ Subject.

The Cumulative Grade Point Average (CGPA) will be calculated in the following manner: CGPA = □CG / □C for all semesters taken together.

PASSING STANDARD:

Passing 50% in each subject /Course separate Progressive Evaluation (PE)/Internal Evaluation and Semester-End/Final Evaluation (FE) examination.

A. Carry forward of marks in case of learner who fails in the Internal Assessments and/ or Semester-end examination in one or more subjects (whichever component the learner has failed although passing is on total marks).
B. A learner who PASSES in the Internal Examination but FAILS in the Semester-end Examination of the Course shall reappear for the Semester-End Examination of that Course. However, his/her marks of internal examinations shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.
C. A learner who PASSES in the Semester-end Examination but FAILS in the Internal Assessment of the course shall reappear for the Internal Examination of that Course. However, his/her marks of Semester-End Examination shall be carried over and he/she shall be entitled for grade obtained by him/her on passing

ALLOWED TO KEEP TERMS (ATKT)

A. A learner shall be allowed to keep term for Semester II irrespective of the number of heads/courses of failure in the Semester I.

B. A learner shall be allowed to keep term for Semester III wherever applicable if he/she passes each of Semester I and Semester II.

OR

C. A learner shall be allowed to keep term for Semester III wherever applicable irrespective of the number of heads/courses of failure in the Semester I & Semester II.

D. A learner shall be allowed to keep term for Semester IV wherever applicable if he/she passes each of Semester I, Semester II and Semester III.

OR

E. A learner shall be allowed to keep term for Semester IV wherever applicable irrespective of number of heads/courses of failure in the Semester I, Semester II, and Semester III

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University of Mumbai's

Garware Institute of Career Education and Development
Board of Studies – Committee members
Master in Interior Design
Held on 10th July, 2023 at 11.00 a.m.

Sr. No.	Name	Signature
1	Dr. Keyurkumar M. Nayak Director, UM-GICED	
2	Arc. Rajeev Mishra, Principal, Sir J J College of Architecture, University of Mumbai,Mumbai.	
3	Ms. Shilpa Borkar, Placement officer & Course Coordinator, UM-GICED	
4	Arc. Ms. Aishana Pradhan, Head of Department, School of Interior Design, Rachna Sansad, 278, Shankar Ghanekar Marg, Prabhadevi, Mumbai 400 025.	
5	Arc. Rupali Mande R design architects, office no.1312, Suswagatam, building no.41, Opposite to PMC Bank, Tagore Nagar, Vikhroli (East), Mumbai.	
6	Arc. Vikram Apte, Faculty, UM-GICED	
7	Arc. Shama Kulkarni, Faculty, UM-GICED	
8	Arc. Mehvish Qureshi Faculty, UM-GICED	
9	Arc. Sushmita Shivdas Faculty, UM-GICED	
10.	Ms. Nirmala Vishwakarma	

Dr. Keyurkumar M. Nayak,
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies

Appendix B

Justification for Master in Interior Design

1.	Necessity for starting the course	The University of Mumbai's Garware Institute of Career Education & Development plans to introduce a two-year full time Master in Interior Design. The society today has become quite aware of aesthetics and beautiful way of living the life. Accordingly, the people are conscious of getting their bungalows, apartments, offices designed and decorated with the latest ideas. Hence there is good demand for interior designers from the best interior designing colleges in Mumbai in cities and small towns, giving opportunity to Interior designers to build their career.
2.	Whether the UGC has recommended the course:	Yes, UGC has recommended the course as per gazette no. DL(N)-04/0007/2003-05 dated 11th July 2014. UGC encourages the incorporation of skill oriented and value-added courses to develop skilled manpower.
3.	Whether all the courses have commenced from the academic year 2023-2024	Yes, it would be commencing from the Academic year 2023-24 as per NEP 2020.
4.	The courses started by the University are self-financed, whether adequate number of eligible permanent faculties are available?	Yes, this course is self-financed. The expert visiting faculty from industries come to teach this course.
5.	To give details regarding the duration of the Course and is it possible to compress the course?	The duration of the course is two years (Four Semesters). It cannot be further compressed.
6.	The intake capacity of each course and no. of admissions given in the current academic year:	The intake capacity of this course is 40 students. The admission procedure is still ongoing.
7.	Opportunities of Employability/ Employment available after undertaking these courses:	Job opportunities are as Interior Designers, Landscape Designers, Set Designers, Event Management, Doing Office Work as Designer and Site Supervisor, Freelancing.

Dr. Keyurkumar M. Nayak
Director,
UM-GICED

Prof.(Dr.) Anil Kumar Singh
Dean,
Faculty of Interdisciplinary Studies