DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF THE PUNJAB, LAHORE.

BACHELORS OF ARCHITECTURE (B. ARCH)
5 YEARS PROGRAM

COURSE OUTLINE

Course Title	**Architecture Design I**
Course Code	**ARCH-201**
Credit Hours	**7**
Semester	**Fall**
Prerequisites	**NA**
Tutor	**As per Timetable**
Student Advising	**As per Timetable**
Contact	-

Teacher Signature **Chairman Signature**

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Project Brief

TITLE: Architecture Design Studio-I

COURSE CODE: AR-201

CLASS: Batch-21

RESOURSE PERSONS:

PROJECT TITLE:

Anthropometric Data

Duration: 2 Weeks

1. INTRODUCTION:

Anthropometrics can be stated as the study of human measurements and statistical data regarding the sizes and shapes of a population. Whereas Ergonomics is the relationship between a space and its users. Hence, user population, number of users utilizing a space, clearance and reach etc. are significant aspects of anthropometrics and ergonomics, which are the fundamentals of the spatial understanding of any given architecture.

The students are required to become familiar with the concept of data collection, it's analysis and implementation. However, it is also essential to understand the target population and their needs and customizing the data as per their needs. This assignment aims to achieve a manual based on the anthropometric data of Pakistani users both male and female. This data will be helpful for the students for subsequent projects.

This studio aims to equip students with the fundamental knowledge of architectural concepts essential for the better understanding of future projects.

2. OBJECTIVE:

- To collect and analyze statistical data about body measurements of users specifically Pakistani population such as reach, general height etc.(anthropometrics);
- To get acquainted with the concept of user and space relationship (ergonomics);

3. PROCESS AND METHODOLOGY

The students are required to become familiar with Anthropometrics and Ergonomics through:

- Data collection and analysis
- Regeneration of standards from the collected data as per the anthropometrics of Pakistani users

The Research should be based (not limiting to) on the data collected from:

- Time Saver Standards (TSS) Building Types
- Architectural Graphic Standards
- Architect's Data by Neufert
- Architectural Graphics
- Other relevant resources

4. PROJECT OUTCOME

- A manual with standardized measurements customized to cater to the Pakistani users
- An in depth understanding of anthropometrics and their significance in spatial configuration
- Familiarization with data collection and literature review

5. MARKS BREAKDOWN:

Week No	Milestone	Marks
1.	• Introduction to project • Literature review Class will review TSS building types and collect data. The research should include relevant literature, statistical and graphical data etc.	**50 %**
	1. Complete data collection 2. Shortlisted relevant data in the form of drawings (as shown in TSS building types- dimensions of the human figure pg. 3,4,5)	
2.	• Submission and presentation of the completed manual	**50 %**

	The manual will now comprise of drawings based on regional data (i.e., anthropometrics of Pakistani population)	

6. RECOMMENDED READINGS:

(i) De Chiara J., Michael J. C. (2001), Time Saver Standards for Building Types, McGraw-Hill; 4th edition

(ii) Ching F. (2003), Architectural Graphics, John Wiley publication, New York.

(iii) Ramsey C. G., Sleeper H. (2016) Architectural Graphic Standards Series, John Wiley publication, New York; 12th edition

(iv) Neufert E. (2012), Architect's Data, Wiley-Blackwell; 4th edition

7. SUBMISSION REQUIREMENTS:

- Submission will be in the form of a neat manual which can be bound later, students can also buy a new sketch book for this purpose and transfer the data directly onto it.
- The manual will comprise of statistical as well as sketches for the thorough understanding of the subject matter.
- The students will be marked for the legibility, understanding of the data presented and the graphical content of the manual.
- Students are required to quote the resources/references/books for the data they have compiled.

The students are always required to keep the manual handy.

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Project Brief

TITLE: Architecture Design Studio-I

COURSE CODE: -

CLASS: -

RESOURSE PERSONS: -

PROJECT TITLE:

Parking Lot

Duration: 7 Weeks

INTRODUCTION:

Parking is becoming an issue of grave importance today. Whether commercial or institutional, parking requires understanding and holistic insight on part of the designer to attain an efficient and practical design solution.

However, parking is often neglected and not properly designed which often results in chaos, inconvenience, compromised user safety and wastage of time. These are the intangible issues which are often not considered while designing.

Students are required to design a parking lot, taking in account the turning radii of vehicles and corresponding area requirements.

The requirements are as follows:

i 20 Cars

(Average calculation of clearance for turning, after collecting all the different vehicular radii)

ii 10 Bikes
iii Shades/sheds for parking
iv 1 Guard room
v 1 toilet
vi Security System
vii A sitting area/ landscaped area with a tuck shop

OBJECTIVE:

- Develop Understanding of various vehicular requirements (cars, bikes)
- To collect and analyze statistical data about turning radii of different vehicles.
- Familiarization with parking as an independent issue to develop its in depth understanding among students.
- Learning about the intangible aspects of parking lot design such as avoidance of chaos in parking, providing shade for pedestrians as well as vehicles, appropriate placement of walkways/ footpaths etc.
- Developing holistic understanding of parking by exploration of all possible layouts and then shortlisting the best possible layout for given site configuration.

SITE PLAN:

The Site is a hypothetical plot of 150'-0"x200'-0". On North, East and West orientations it is flanked by low-rise office buildings. On South, it faces a 30'-0" wide two-way road. Students are required to design keeping in view all the existing given information including cardinal directions and the Sun path diagram of Lahore.

MARKS BREAKDOWN:

Week No	Milestone	Marks
1.	• Introduction to project • Literature review • Shortlisted Data Class will review books on parking areas/lots and collect data. The research should include relevant literature, statistical and graphical data etc.	**10 %**
2.	Students are required to bring 10 proposals for the parking lot. The students are required to use butter sheets with graph paper beneath for on-scale proposals. • Discussions will be marked • **Prepare the final shortlisted proposal in class and discuss with instructors.** **PHASE 1** • Students are expected to complete phase 1 of Design. It includes: i Complete and relevant shortlisted data Freehand but on-scale final proposal **PHASE 2** • Students are required to have these completed on-scale drawings for discussion i Plan ii Site Section x1 iii Elevations x 1 Intangible and additional aspects (to be discussed and incorporated in design): • Intangible aspects as earlier mentioned will be discussed including orientation, shade and shadows. • Material Selection- Considering appropriateness and durability etc. Facilities for disabled- Old age/disabled friendly design- catering for these aspects and incorporating in design	**20 %**
3	Revision of mistakes and table discussion on: i Plan ii Site Section x2 iii Elevations x 2	**20%**
6	**Final Submission** **Jury**	**50%**

	(Final product to be shown with all previous stages)	

RECOMMENDED CASE STUDIES:

A Case study provides a valuable information for the development of project. In continuation with your studio project you are required to prepare case study of the following projects

PROPOSED CASE STUDIES

No	Architect	Name of Project
1	JAJA Architects	Park n Play
2	Christian Kerez Designs	Parking Structure in Bahrain as Part of the Pearl Path Project
3	Birk Heilmeyer und Frenzel Architekten	Parking Garage

RECOMMENDED READINGS:

I. De Chiara J., Michael J. C. (2001), Time Saver Standards for Building Types, McGraw-Hill; 4th edition

II. Ching F. (2003), Architectural Graphics, John Wiley publication, New York.

III. Ramsey C. G., Sleeper H. (2016) Architectural Graphic Standards Series, John Wiley publication, New York; 12th edition

IV. Neufert E. (2012), Architect's Data, Wiley-Blackwell; 4th edition

SUBMISSION REQUIREMENTS:

- Site plan
- Plans
- Sections
- Elevations
- 3D Views

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BACHELORS OF ARCHITECTURE (B. ARCH)
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Project Brief

TITLE: Architecture Design Studio-I

COURSE CODE:

CLASS:

RESOURSE PERSONS:

PROJECT TITLE:

Translation of Poetry/Prose into Architecture

Duration: 5 Weeks

INTRODUCTION:

Architecture has long been used to represent nations, civilizations, and group of people. Over the period, architecture has garnered the significance of being a very strong medium to convey messages or ideas about power, authority, identity or even an event in history as an emblem of remembrance and pride for the future generations. On individual level, architecture becomes a mirror of the architect's mind depicting his beliefs, interpretations about truths and opinions.

As architecture has the significance of being a direct product of a person's beliefs, opinions and creative expertise, hence, it can be used as an efficient tool to make the students aware of their own beliefs and interpretations of ideas and creating their own ideology of design.

This project is the creative depiction of a verse/textinto architecture by the students. Students will explore this very attribute of architecture as a medium to convey ideas.

The students are required to choose a poetry verse/ paragraph from any literary article/essay/poem and translate it into series of sketches to develop their concept for singlestorey building or a pavilion. The Architectural program will be devised by students and building type will also be chosen by the students.

OBJECTIVE:

- To stir up the creativityof students and make them understand the process of translation of an idea into architecture.
- To think creatively and out of the box without many restrictions to create a link between creativity and its expression in form of architecture
- Introduction to depiction/translation of concept in architecture
- Learning how this translation will occur from unseen ideas(intangibles) to physical objects (tangibles)

Following methodology will be followed to achieve the objectives:

i. Case Studies Analysis
   - Study of similar paradigms
   - Understanding how they are used to convey an idea or a belief e.g Jewish Museum by Daniel Libeskind.

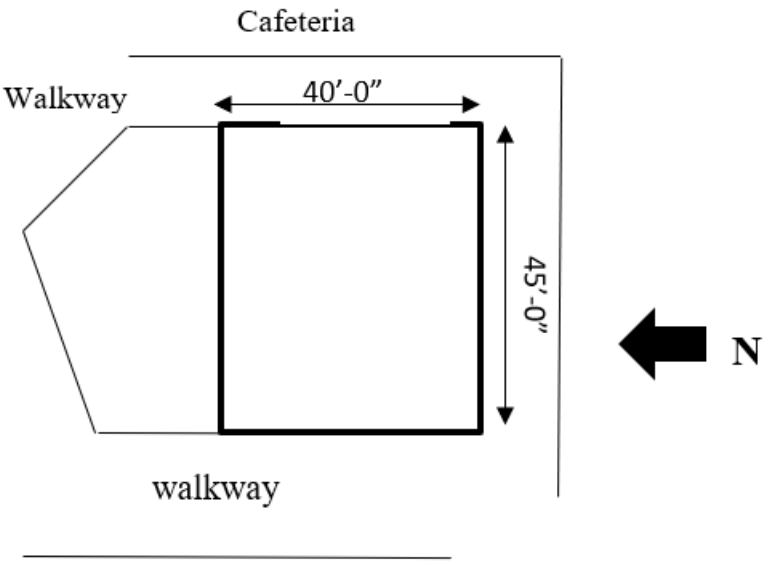
ii. Schematic design
   - sketches/ study models,
   - development of ideas

iii. Detailed design
   - Detailed final conceptualization and pavilion design i.e. plan

iv. Presentation-
   - Sketches, model
   - plan, elevation, section

SITE PLAN:

The site is situated infront of Punjab University Cafeteria. The area of the site is 1800sq.ft.



Furthermore, students are required to analyze the site for the following factors and incorporate the conclusions in their design:

- Sun path diagram
- Wind direction
- Views

MARKS BREAKDOWN:

Week No	Milestone	Marks
1.	**Introduction to Project** • Selection of shair/verse/paragraph • Selection of Building type • Literature review for architectural Program • Shortlisted Data	**10 %**
	Presentation on Case studies	
2.	**Formulation on Requirements** *(Area Calculation)*	**30%**
	Site Analysis	
	Planning of Building *(Working on site plan, floor plan)*	
3.	**Discussion on Elevations & Sections**	**10%**
4.	**Working on Final Drawings** *(case studies, site analysis, Site plan, Floor plan +3D &Model)*	**20%**
5.	**Final Submission** **Jury** *(Final product to be shown with all previous stages)*	**30%**

RECOMMENDED CASE STUDIES:

A Case study provides a valuable information for the development of project. In continuation with the studio project, students are required to prepare case study of the following projects.

PROPOSED CASE STUDIES

No	Architect	Name of Project
1	O.M.SHUMELDA	Blurred Border, Mini Auto Terminal
2	Nudes	Straw bale school, Malawi
3	TRS Studio	Low cost-shipping container housing, Lima, Peru
4	Hayri Atak Architectural Design Studio	Preikestolen boutique hotel, Rogaland, Norway
5	AmeyKandalgoankar	House Inside a Rock, Saudi Arabia
6	Antony Gibbon	Twine
7	Studio Vural	Dune House

Other Projects of Interest

No	Architect	Name of Project
1	Daniel Libeskind	Jewish Museum, Berlin
2	MAD Architects	East 34th Street, New York, USA
3	Margot Krasojević Designs	Self-Excavation Hurricane House

RECOMMENDED READINGS:

I. Ching D.K, Form, Space and Order

II. De Chiara J., Michael J. C. (2001), Time Saver Standards for Building Types, McGraw-Hill; 4th edition

III. Ching F. (2003), Architectural Graphics, John Wiley publication, New York.

IV. Ramsey C. G., Sleeper H. (2016) Architectural Graphic Standards Series, John Wiley publication, New York; 12th edition

V. Neufert E. (2012), Architect's Data, Wiley-Blackwell; 4th edition

VI. Frederick M. (2007), 101 Things I Learned in Architecture School; The MIT Press

VII. Mari A. D. (2014), Conditional Design: An introduction to elemental architecture

VIII. White, W. T. (1975), A Vocabulary of Architectural Forms, Architectural Media Ltd.

IX. Baker, G.H, (1996) Le Corbusier: An Analysis of forms, Spon Press; 3rd edition

SUBMISSION REQUIREMENTS:

- Site plan
- Plans
- Sections
- Elevations
- 3D Views
- Model

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Project Brief

TITLE: Architecture Design Studio-I

COURSE CODE: -

CLASS: -

RESOURSE PERSONS: -

PROJECT TITLE:

DESIGNING UNIVERSITY CAFETERIA IN BRICK MASONRY

Duration: 5 Weeks

INTRODUCTION:

A university cafeteria is a space that holds various meanings for its users. It can be a space to sit back, relax and rejuvenate even for a few moments. It can be a place to dine and interact with friends, hence, provide a break from the busy academic routine of students.

It can also be a platform for informal academic discourse among students.

This project requires students to re-interpret an institutional (university) cafeteria keeping in view how such a space should interact with its specific users and cater to their needs.

This project requires students to delve into creative understanding of space that would not only fulfill the tangible aspects of café design but would be a fun/creative/explorative/ simulative space which will resonate with different users differently at their own levels of perception.

Furthermore, the students are required to study brick masonry construction techniques and methodology and implement it in design.

OBJECTIVE:

- Implementing knowledge of anthropometrics attained in previous projects.
- Creative re-analysis of a space as in how a cafeteria for students at university really should be.
- To develop understanding of space as an interactive entity, one that communicates with the users, context, has reference to culture and student psychology and can evoke an array of emotions in users (e.g. a space can make you happy or sad).
- Understanding of brick masonry construction

SITE PLAN:
The existing site of University, Cafeteria.

Students are required to analyze the site for the following factors and incorporate the conclusions in their design:

- Sun path diagram
- Wind direction
- Views
- Vehicular and Pedestrian Circulation

MARKS BREAKDOWN:

Week No	Milestone	Marks
1.	**Introduction to Project**	**10 %**
	Presentation on Case studies	
2.	**Formulation on Requirements** *(Area Calculation)*	**30%**
	Site Analysis	
	Planning of Building *(Working on site plan, floor plan)*	
3.	**Discussion on Elevations & Sections**	**10%**
4.	**Working on Final Drawings** *(case studies, site analysis, Site plan, Floor plan + 3D & Model)*	**20%**
5.	**Final Submission** **Jury** *(Final product to be shown with all previous stages)*	**30%**

RECOMMENDED CASE STUDIES:

A Case study provides a valuable information for the development of project. In continuation with the studio project, students are required to prepare case study of the following projects.

PROPOSED CASE STUDIES

No	Architect	Name of Project
1	-	Existing University Cafeteria
2	-	New Campus, main Cafeteria
3	Schemata Architects	Blue Bottle Coffee Kanda Manseibashi Cafe / Schemata Architects
4	Atelier Waterside	Renovation of Largo Ning Yang Road Shop

Projects of Interest for Brick Construction

No	Architect	Name of Project
1	Various	Lahore Fort
2	Kamil Khan Mumtaz	Baba Hassan Din
3	KKM	Dar-ul- Hikmat
4	KKM	Syed Sardar Ali Residence

RECOMMENDED READINGS:

I. Ching D.K, Form, Space and Order

II. De Chiara J., Michael J. C. (2001), Time Saver Standards for Building Types, McGraw-Hill; 4th edition

III. Ching F. (2003), Architectural Graphics, John Wiley publication, New York.

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SUBMISSION REQUIREMENTS:

- Site plan
- Plans
- Sections
- Elevations
- 3D Views
- Model

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Project Brief

TITLE: Architecture Design Studio-I

COURSE CODE: -

CLASS: -

RESOURSE PERSONS: -

PROJECT TITLE:

MEASURED DRAWINGS OF UNIVERSITY CAFETERIA

Duration: 2 Weeks

INTRODUCTION:

Understanding and acquiring a sense of scale are fundamental requirements for architectural students.

The project requires students to measure the university cafeteria with measuring tapes/ equipment and produce on-scale drawings based on the dimensions taken. The real time experience of space helps students to develop a sense of scale.

The students will measure all the areas, such as:

- Dining areas
- Kitchen
- Storage spaces
- Toilets

- Any other associated spaces/ facilities etc.

OBJECTIVE:

- Understanding of scale and developing a sense of scale
- Reinforcement of the data collected during the first project regarding anthropometrics.

SITE PLAN:

Students are required to measure the cafeteria and generate the site-plan of the cafeteria based on their findings.

Furthermore, students are required to analyze the site for the following factors and consider the current interaction of site/buildings with these factors:

- Sun path diagram
- Wind direction
- Views

MARKS BREAKDOWN:

Week No	Milestone	Marks
1.	**Introduction to Project** • Measuring the cafeteria • Raw plans, site plan, sections and elevations with dimensions (Students are encouraged to draw raw plans on butter sheets with graph paper beneath to limit errors)	**50 %**
5.	**Final Submission** **Jury**	**50%**

RECOMMENDED READINGS:

I. Ching D.K, Form, Space and Order

II. De Chiara J., Michael J. C. (2001), Time Saver Standards for Building Types, McGraw-Hill; 4th edition

III. Ching F. (2003), Architectural Graphics, John Wiley publication, New York.

IV. Ramsey C. G., Sleeper H. (2016) Architectural Graphic Standards Series, John Wiley publication, New York; 12th edition

V. Neufert E. (2012), Architect's Data, Wiley-Blackwell; 4th edition

SUBMISSION REQUIREMENTS:

Final Submission

(plan, elevations, sections-on-scale 1/4" = 1'-0", site plan- 1/8"=1'-0"):

- Site plan
- Plan
- Elevations
- Sections
- Internal and external Perspectives