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Faculté de Technologie
Département d'Architecture

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Cours : Anglais 1

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Maitre de conférences classe A

Cours destiné aux étudiants de 1ière année Master
Unité d'Enseignement Transversale/ Découverte (UET.D)

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People's Democratic Republic of Algeria MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
University of Abderrahmane Mira – Bejaia

Faculty of Technology
Department of Architecture

SUBJECT : ENGLISH 1 "ENGLISH FOR ARCHITECTS"

Master 1 in Architecture

ABSTRACT

This subject on Architectural English equips students with specialized language skills essential for global collaboration, innovation, and project engagement. Aligned with the architecture curriculum, it focuses on architectural design, sustainability, technologies, heritage, and urban projects through interactive methods like active listening, reading, and group discussions. Emphasizing student participation, it provides practical tools tailored to the profession.

developed by

Dr. MOUHOUBI Nedjima

Preamble

In today's interconnected world, mastering specialized English is crucial for architects. It allows professionals to engage in international projects, stay informed about global innovations, and collaborate with diverse teams. This module focuses on **Architectural English**, offering practical tools tailored to the field, not general English, and aligning with the architecture curriculum. This approach emphasizes **active student engagement** and prepares learners for global opportunities in architecture, focusing on topics like architectural design, sustainability, technologies, heritage, and urban projects that are already on their curriculum

Key **teaching methods** include:

- **Active listening** (podcasts, debates).
- **Active reading** (texts, technical documents).
- **Group discussions** (collaborative exchanges).
- **Interactive sessions** emphasizing **student participation** and **practice**.

Subject Objectives:

This module aims to provide a foundational understanding of key concepts and terms used in the field of architecture in English, empowering students to interpret, analyze, and communicate complex architectural concepts. Specific objectives include:

1. **Enhancing Vocabulary**: Introducing essential architectural terminology, helping students discuss various aspects of design, materials, and structural considerations in English.
2. **Improving Listening Skills**: Engaging with English-language audio materials related to architectural conversations and presentations to develop comprehension and analytical listening skills.
3. **Building Descriptive Abilities**: Enabling students to describe architectural concepts, structures, and drawings in English clearly and professionally.
4. **Interpreting Technical Information**: Teaching students to read, understand, and respond to architectural documents, specifications, and diagrams.
5. **Fostering Collaborative Skills**: Preparing students for collaborative, cross-disciplinary work by building confidence in communicating with international professionals.

This subject will provide students with practical language tools for understanding and discussing architectural concepts, ensuring they are equipped to work and learn in a multilingual and multicultural environment. These skills will form the basis of a more professional and nuanced approach to architectural practice, preparing students for both local and global opportunities in the field.

This subject, structured over twelve sessions, is designed to introduce Master's students in architecture to essential English language skills and terminology specific to their field. Each class focuses on a different aspect of architectural language and practice, incorporating varied learning activities that address practical language applications in an architectural context.

The curriculum includes activities such as vocabulary building, guided explanations, and active listening exercises. Students will work with real-life architectural scenarios, like analyzing conversations between clients and architects or interpreting architectural plans, to develop both

spoken and written proficiency. The module also covers the essentials of communicating structural concepts, interpreting technical drawings, and discussing project requirements with international collaborators, preparing students for multilingual and multidisciplinary work environments.

Key components include vocabulary exercises, technical listening comprehension, and applied tasks like labeling diagrams, explaining concepts, and engaging in guided group discussions. Through these methods, students will build confidence in using architectural English and enhance their ability to participate in global architectural discussions and projects.

Subject syllabus

SYLLABUS

Level	Subject title	Academic year
Master 1	*English 1*	2024/2025

teaching place	Teaching Unit	HHV (H)	Coefficient	Credit
	UET.D	22:30h	01	01

Responsible for the subject	Mr & Mrs	MOUHOUBI Nedjima	Subject team members
	Grade	MCA	
	Professional email	nedjima.mouhoubi@univ-bejaia.dz	
	Tel (optional)		

Description	Mastery of various foreign languages can only be an asset for any student. This subject is designed to strengthen the linguistic skills of architecture students in the English language.
General objective of the teaching subject	Introduction to terms specific to the field of architecture. Initiation to the oral and written comprehension of this universal language, to improve research
Learning Objectives	• Consolidation and improvement of language skills. • Knowledge of terms specific to the field of architecture
Prerequisites	Langue étrangère L3
Indicative overview of the exemption program	**Listening** • Conversations, interviews (audio texts read by a native speaker). • Comment on a table/diagram. • Caption a diagram/illustration. • Complete sentences/a text. • Fill in a questionnaire
Mandatory equipment	No equipment is required!

Organization of the Subject	Course	T.D.	TP	Internship	Study outing
	H	H 01:30	H	H	u

Rating system	Scheduled exam: 100%	Continuous checks: 0%
Teaching schedule	**Date**	**Course title**
WEEK 01		Contact session and Presentation of the syllabus Introduction to Technical English in Architecture • **Objective**: Familiarize students with basic architectural terms and expressions in English. • **Activity**: Listening to a conversation between an architect and a client about a simple residential project (e.g., material choices, dimensions). • **Exercise**: Identify key architectural vocabulary from the conversation and answer questions about the project's specific details.
WEEK 02		Analyzing Professional Architectural Exchanges • **Objective**: Develop the ability to understand technical details in professional discussions. • **Activity**: Listening to a conversation between an architect and an engineer discussing structural challenges. • **Exercise**: Complete a building diagram with the technical details heard (types of materials, dimensions, load calculations).
WEEK 03		Listening to Interviews with Renowned Architects • **Objective**: Learn to extract key information and complex architectural concepts from interviews. • **Activity**: Listening to an interview with a famous architect discussing design philosophy and key projects. • **Exercise**: Fill in a summary table with the main ideas, techniques used, and design philosophies discussed.
WEEK 04		Interpreting Tables and Diagrams (Part 1) • **Objective**: Introduce the analysis of architectural data and understand its significance in a professional context. • **Activity**: Listening to an explanation of a diagram comparing energy efficiency of different construction materials.

		• **Exercise**: Label a diagram using the information provided in the audio, and briefly explain the material choices.
WEEK 05		Interpreting Tables and Diagrams (Part 2) • **Objective**: Deepen understanding of complex data graphs used in design and construction. • **Activity**: Listening to a presentation on the cost curves of a sustainable construction project. • **Exercise**: Orally comment on the data from the diagram and propose recommendations for optimizing costs, based on the audio.
WEEK 06		Labeling Architectural Plans (Part 1) • **Objective**: Understand and describe simple architectural plans. • **Activity**: Listening to a description of a floor plan for a single-family house. • **Exercise**: Label the various sections of the plan with the correct technical terms (living room, open kitchen, etc.).
WEEK 07		Labeling Architectural Plans (Part 2) • **Objective**: Analyze more complex plans of a commercial or institutional building. • **Activity**: Listening to a technical explanation of a cross-sectional drawing of a multi-story building. • **Exercise**: Complete the missing labels on the plan using information from the audio, and write a short explanation of the structural solutions adopted.
WEEK 08		Understanding Advanced Technical Discussions • **Objective**: Develop the ability to grasp detailed discussions on construction and architectural design. • **Activity**: Listening to a conversation between architects on the challenges of building in a dense urban environment. • **Exercise**: Complete a text outlining the strategies adopted to address these challenges, with specific excerpts from the audio.

WEEK 09		Presenting Complex Projects • **Objective**: Understand detailed presentations of architectural projects and their associated challenges. • **Activity**: Listening to a project presentation on urban redevelopment, including public spaces and housing design. • **Exercise**: Complete a project summary with missing information about materials, techniques used, and project goals.
WEEK 10		Filling Out a Questionnaire • **Objective**: Strengthen the ability to extract precise information from a construction project presentation. • **Activity**: Listening to a presentation on the renovation of a listed historical building. • **Exercise**: Fill out a questionnaire focusing on the specific challenges of renovation (e.g., preserving heritage, technical constraints).
WEEK 11		Accents and Linguistic Diversity in International Architecture • **Objective**: Learn to understand different English accents in a professional context. • **Activity**: Listening to architects from diverse backgrounds (American, British, Australian) discussing their respective projects. • **Exercise**: Identify and compare accent differences and technical terminology, then answer questions about project details.
WEEK 12		Synthesis and Listening to a Debate on Contemporary Architecture • **Objective**: Consolidate skills by understanding discussions about contemporary architectural projects. • **Activity**: Listening to a debate among experts on new trends in sustainable architecture. • **Exercise**: Complete a text with the perspectives of different participants and comment on a diagram related to sustainability in architecture.

WEEK 13		Final Test on Listening Comprehension in Architectural English • **Objective**: Evaluate the students' mastery of listening and analysis skills in professional scenarios.
References to existing scientific literature in the university library	Abby Marks-Beale, (2001), Ten days to faster reading, Warner Books. Advanced Grammar in use, a reference and practice book for advanced learners of English chez Cambridge University Press. Bescherelle 6000 verbes anglais et leurs composés, formes et emplois chez Hatier. English Grammar in use, a self-study reference and practice book for intermediate students of English chez Cambridge University press. Journal Ease Exercices, 120 mots pour assimiler le vocabulaire d'un journal anglais ou américain, Chez Bréal. Stierlin Henri, (1996), Islam: les origines de Bagdad à Cordoue, Tome 1, édition	
References to scientific literature to be proposed for future acquisition	• **Schultze, H.-J.** (2007). *English for Architects*. DOM Publishers. • **Rosales, R.** (2016). *Architectural English*. Cambridge Scholars Publishing. • **Walker, T.** (2012). *English for Construction: Vocabulary Builder*. Garnet Education. • **Glendinning, E. H., & Pohl, A.** (2008). *Oxford English for Careers: Technology 2*. Oxford University Press. • **Provasi, C.** (2018). *Architecture in English: Construction & Technology*. Pearson Education. • **Waterhouse, G.** (2009). *English for the Building Industry*. Heinle ELT. • **Pritchard, E.** (2013). *English for Architecture and Civil Engineering*. Cambridge University Press. • **Barovier, A.** (2010). *Technical English for Architects*. McGraw-Hill Education.	
Advice for students	Get involved and participate in the discussions Practice the techniques taught even outside of the classroom Ridicule does not kill!	
Comments		

Content of the subject

Contact session and Presentation of the syllabus
Lesson 1: **Introduction to Technical English in Architecture**
Lesson 2: **Analyzing Professional Architectural Exchanges**
Lesson 3: **Listening to Interviews with Renowned Architects**
Lesson 4 & 5: **Interpreting Tables and Diagrams (Part 1 & 2)**
Lesson 6 & 7: **Labeling Architectural Plans (Part 1 & 2)**
Lesson 8: **Understanding Advanced Technical Discussions**
Lesson 9: **Presenting Complex Projects**
Lesson 10: **Filling Out a Questionnaire**
Lesson 11: **Accents and Linguistic Diversity in International Architecture**
Lesson 12: **Synthesis and Listening to a Debate on Contemporary Architecture**
Final Test on Listening Comprehension in Architectural English

Lesson 1: Introduction to Technical English in Architecture

Lesson Objectives:

- Introduce students to basic architectural vocabulary in English.
- Understand common technical terms used in architectural project descriptions.
- Develop active listening skills in conversations about simple architectural projects.

1. Introduction

As architect you have to be Familiarized with essential technical terms in architecture related to design, materials, and structures.

2. The Key Vocabulary that the student must master are:

Building plan: "Building plans are a graphical representation of what a building will look like after construction". (AEC Moreno Corp, 2019). We use them as a communication tool and they are "…useful when it comes to estimating how much a project will cost, and preparing project budgets" (Ibid.).

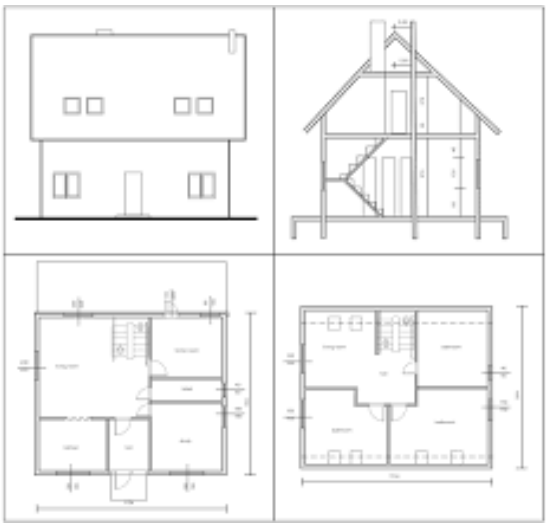


Fig. 1 exemple of a **Building plan** *(edrawsoft.com, s.d.)*

The building plans includes in general these plans (Ibid.):

- **Foundation Plan**: It represents the general design intent of the foundation. In this building plan's section, you can have a slab, crawl space, basement, post, and beams, the extent of structural slabs, and more.

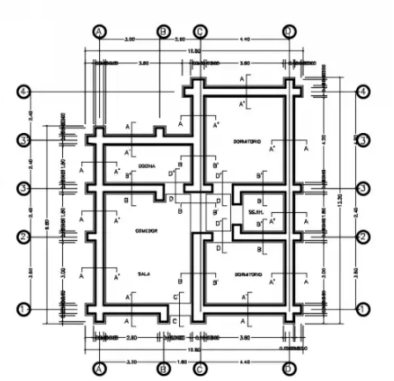


Fig. 2 exemple of foundation plan (Chandresh, 2024)

- **Floor Plan**: It illustrates the layouts of the rooms, walls, doors, and windows.

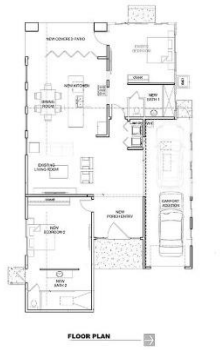


Fig. 3 exemple of a Floor plan (AEC Moreno Corp, 2019)

- **Elevation**: There are two types of building elevations: exterior and interior. Both of these elevations can be illustrated in a building plan.

Fig. 4 exemple of an interior elevation plan (AEC Moreno Corp, 2019)

Fig. 5 example of exterior elevation plan (mangrovebaydesign.com. S/d)

- **Landscape Plan:** Landscape designing is the development of strategies, policies, and plans to create successful environments for the benefit of current and future generations.

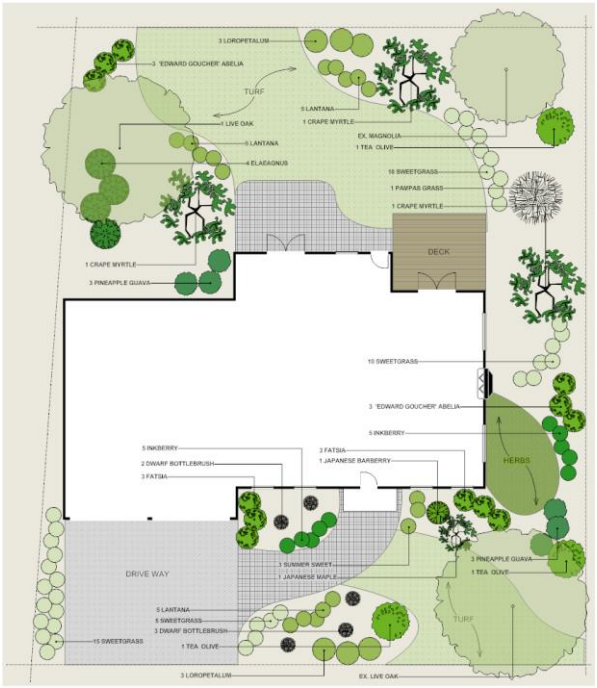


Fig. 6 exemple of landscape plan (smartdraw.com. S/d)

- **…**

In addition to this, a building plan should also include some of the other important features, like:

- Location of walls (both interior and exterior)
- Wall openings, like doors and windows
- Vertical circulation, including stairs
- Structural elements, including columns
- Fixture locations like sinks
- Dimensions
- Reference Symbols
- Notes and Legends

What is *foundation?*

*"*A foundation is the base of a building, situated between the outside ground and the interior of the building. The aim of the system is to evenly transmit the load from the house to the soil. It is vital that it will be capable of handling the load of the building. Normally, foundations could be poured concrete or masonry like brick masonry or concrete block." (Chandresh, 2024)

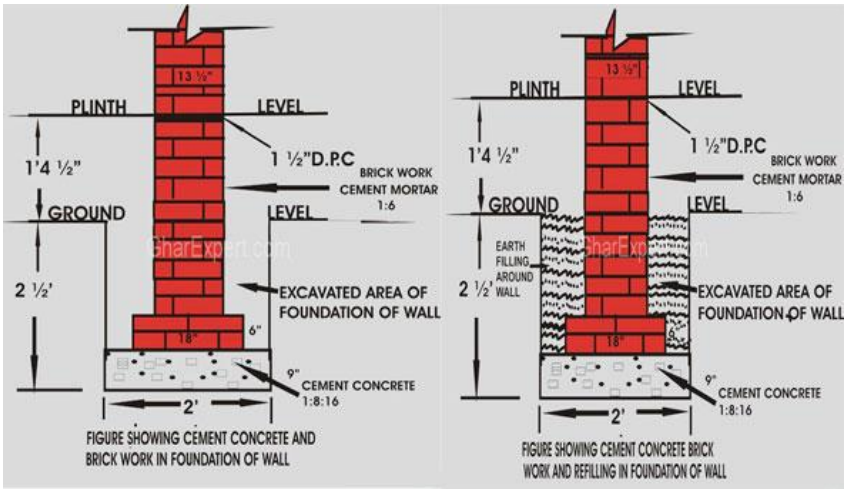


Fig. 7 foundation design (civilarc.com, 2017)

What are Load and non-load bearing walls?

table 1 : the difference between a load and non-load bearing walls (Restoration By L&B, 2016)

Non-load bearing walls are walls inside a property that do not support any structural weight of a building. They do not bear any other weight of the property's structure other than its own. Also referred to as "curtain walls", non-bearing walls are used primarily as room dividers, and generally serve no other purpose.	In contrast to non-bearing walls, load bearing walls are erected to provide structural support for a residential or commercial property. It is possible to bring down an entire home by removing or cutting into just one load-bearing wall!

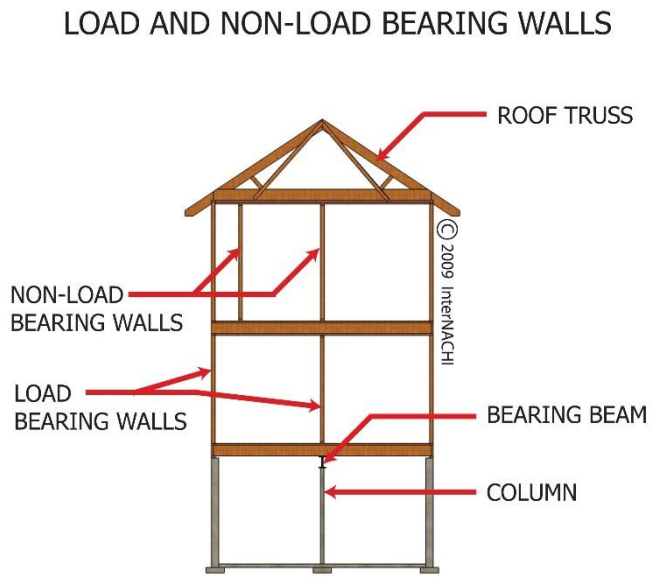
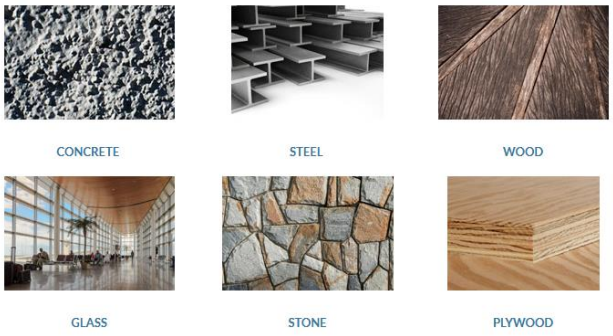


Fig. 8 Load and non-load bearing walls (nachi.org, 2009)

What are the main materials used in the construction?

concrete	"concrete, in construction, structural material consisting of a hard, chemically inert particulate substance, known as aggregate (usually sand and gravel), that is bonded together by cement and water." (britannica.com, s.d.)	 *Fig. 9 concrete composition (betonparszagros.ir, s.d.)*
Wood, stone, glass, steel, …	"Perhaps one of the biggest advantages of using wood as a building material is that it is a natural resource, making it readily available and economically feasible" (understandconstruction.com, s.d.). "One such benefit is its thermal properties, which give it an advantage in terms of its resistance to high temperatures. Unlike steel, which can expand or even collapse in high heat, wood actually dries out and becomes stronger as the heat increases. In addition, the heat conductivity of wood is relatively low in comparison to other materials such as aluminum, marble, steel, or glass." (Ibid.)	 *Fig. 10 different construction materials (understandconstruction.com, s.d.)* 

Building materials should have the following properties (understandconstruction.com, s.d.):

- They must last over time
- They must be strong.
- They must resist wear and tear.

3. *Active Listening: Presentation of a house made by an Architect and his Client*

Listen to this professional presentation about the design of a house project. The link of the YouTube Video: https://youtu.be/YLhfBMk-2iQ?si=ha2ioouRH1ezhb0a

This presentation made by architect and his client is discussing the design of a family house. The discussion includes the client's design preferences, choice of materials, and dimensions.

Exercise: Identify and define the **Key Vocabulary**

4. *Listening Comprehension questions*

The students are asked to watch the video again and respond to the following questions:

- What are the client's requirements?
- What was the architect's responses (material choices, proposed dimensions, estimated cost)?
- How did the architect incorporate energy efficiency and sustainability into the design proposal?

5. *Group Discussion: Comparing with a Local Project*

The students are asked to practice speaking English by discussing architectural projects in their own context. They will compare the house described in the video to their local architectural project by using the key vocabulary learned and emphasis on the types of materials used, climatic differences, design preferences based on local culture.

6. *Homework: Written Exercise*

write a short paragraph in English describing the design of your ideal building, using at least 5 technical terms learned during the lesson.

Lesson 2: Analyzing Professional Architectural Exchanges

Lesson Objectives:
Enable students to develop the skills necessary to understand and interpret technical details in professional discussions between architects and engineers. By the end of the lesson, students will be able to:

- Comprehend technical terminology related to architectural and engineering collaboration.
- Identify key structural details such as materials, dimensions, and load-bearing elements.
- Apply this knowledge to practical architectural tasks.

1. Introduction

The interdisciplinary communication in architecture and engineering is one of the important skill that should be developed by an architect.
The role of this effective communication is to help one another to have a complete vision of the project and create a realistic and doable, particularly in structural design. The architectural aesthetics must work hand-in-hand with engineering feasibility. By the end of the lesson, students will be able to understand and interpret technical terms related to structural challenges and apply them to architectural plans.

2. Key Terminology

1. **Structural Load**

The forces or actions that come from the weight of a building, its contents, and environmental factors such as wind or snow. (Encyclopedia Britannica. (n.d.). *Structural load*. Retrieved from https://www.britannica.com/)

2. **Tensile Strength**

The maximum stress that a material can endure while being stretched or pulled before breaking. (ScienceDirect. (n.d.). *Tensile strength*. Retrieved from https://www.sciencedirect.com/)

3. **Compressive Strength**

The ability of a material to resist forces that compress or shorten it. (The Constructor. (n.d.). *Compressive strength of concrete*. Retrieved from https://theconstructor.org/)

4. **Load-Bearing Wall**

A wall that supports the weight of the structure above it, transferring loads to the foundation. (Civil Engineering Notes. (n.d.). *Load-bearing walls*. Retrieved from https://civilengineeringnotes.com/)

5. **Reinforcement**

Strengthening of concrete or other structures by embedding steel bars (rebar) to resist tensile forces. (Cement Concrete. (n.d.). *Reinforcement in concrete*. Retrieved from https://www.cementconcrete.org/)

6. Deflection

The displacement of a structural element under load. (Engineering Toolbox. (n.d.). *Deflection*. Retrieved from https://www.engineeringtoolbox.com/)

7. Dead Load

The permanent, static load from the building's own components, such as walls, floors, and roofs. (Designing Buildings Wiki. (n.d.). *Dead load*. Retrieved from https://www.designingbuildings.co.uk/)

8. Live Load
The variable, dynamic load from occupants, furniture, equipment, or environmental factors like wind or snow. (Encyclopedia Britannica. (n.d.). *Live load*. Retrieved from https://www.britannica.com/)
9. Compression
A force that acts to shorten or compact an object, commonly relevant in columns or other structural elements. (ScienceDirect. (n.d.). *Compression*. Retrieved from https://www.sciencedirect.com/)
10. Tension
A force that pulls or stretches a material. It is relevant for beams and cables that need to withstand tensile forces. (The Constructor. (n.d.). *Tension in structures*. Retrieved from https://theconstructor.org/)
11. Column
A vertical structural element that carries compressive loads from above to the foundation**.** (Civil Engineering Notes. (n.d.). *Columns in construction*. Retrieved from https://civilengineeringnotes.com/)
12. Beam
A horizontal structural element that spans a gap and transfers loads to supports, such as walls or columns. (ScienceDirect. (n.d.). *Beam in structural engineering*. Retrieved from https://www.sciencedirect.com/)

3. Listening Activity

The student is asked to develop an active listening skills and identify technical details in a professional conversation.

Listen to this professional presentation about the deference between an architect and civil engineer The link of the YouTube Video:
https://youtu.be/pA2y3UaBc6I?si=g7McloN5EyIYlZn_

This video includs details about:

- Materials (e.g., steel, concrete, timber)
- Dimensions (e.g., beam length, wall thickness, height)
- Load-bearing components and load distribution (e.g., columns, beams)

Exercise: Identify the technical vocabulary used.

4. Role Play: Simulating an Architect-Client Meeting

In pairs, students role-play a short architect-client meeting. One student acts as the client explaining their project requirements, while the other takes the role of the architect proposing solutions. The simulation must use of key vocabulary from the lesson.

5. Homework:

Write a short dialogue between an architect and a client, including at least five key phrases from the lesson.

Lesson 3: Interviews with Renowned Architects

Lesson Objectives:

This session provides students with insight into the thought processes and professional language of well-known architects. To engage with professional language used by famous architects and understand their perspectives on design and innovation. This session will help students develop:

- Architectural vocabulary
- Listening comprehension skills in English
- An understanding of real-world architectural perspectives.

Introduction: Discussion "Architects and Their Influence"

Architects shape not only the physical spaces in which we live and work but also our interactions with the environment and with each other. The impact of renowned architects extends beyond individual structures; their visions influence architectural trends, urban landscapes, and sustainable design principles globally. By studying the words and works of influential architects, we gain insight into how architectural theories evolve to meet societal, cultural, and environmental needs.

In this lesson, students will explore the language, ideas, and design philosophies of well-known architects through listening and discussion. By examining real interviews, students will develop an understanding of how these professionals communicate complex ideas, innovate within their field, and create structures that respond to the demands of both aesthetics and functionality. This approach not only enhances students' English skills but also connects them to the broader discourse on architecture, providing a foundation for informed, meaningful contributions to the profession.

Discussion Questions:

- Who is your favorite architect, and why?
- What notable projects inspire you?

1. Key vocabulary

Vision: A Vision in architecture refers to the overarching idea or goal that drives the design process, encompassing the architect's aspirations for the project's impact on users and the environment (Kahn, 2017) (Swanson, 2019).

Design Philosophy: Design philosophy is a set of principles and beliefs that guide an architect's approach to design, influencing choices about aesthetics, functionality, and user experience (Broadbent, 2015) (Kauffman, 2018).

Aesthetic Harmony: Aesthetic harmony refers to the balance and coherence of visual elements within a design, creating a unified and pleasing overall appearance that resonates with the intended message and context (attenbury, 2011).

Transparency: Transparency in architecture refers to the use of clear materials, such as glass, to create openness in design, enhancing the relationship between indoor and outdoor spaces while allowing natural light to penetrate (Broadbent, The role of transparency in modern architecture, 2016).

Form and Function: The principle of form and function in architecture emphasizes that the shape of a building should be directly related to its intended purpose, ensuring that aesthetic considerations do not compromise usability (Laseau, 2012).

Biophilic Design: Biophilic design incorporates natural elements and patterns into architectural design to promote well-being, reduce stress, and connect occupants with nature, enhancing the quality of life in built environments (Kellert, 2015).

2. Active Listening Exercise

Listen to this Interview with **Zaha Hadid (**https://youtu.be/ZaHyKOhammk?si=r-KyE-_7Bm02KQB-)

Questions:

- What are the architect's main ideas?
- How do ZAHA HADID describe their creative process?
- What challenges or principles do they discuss?

3. Small Group Analysis and Vocabulary Practice

Discuss and analyze the architect's views in small groups. Identify terms that capture architectural concepts. The key Vocabulary is: Functional flow, Structural form, Material innovation.

4. Comprehension Activity

In order to Reinforce vocabulary and understanding of interview content, the student are asked to transcript the interview in a text and share it with other students so they can help each other to correct the transcription.

5. Role-Play: Simulating an Interview

Pair up, with one as the architect and the other as the journalist and play as if it's an interview.

Examples of questions to be addressed:

- What inspires your architectural designs?
- How do you integrate sustainability?
- What challenges do you face with innovative structures?

6. Homework

Find an audio or video interview with an architect. Take notes on their key ideas and identify three new architectural terms. Be prepared to summarize in the next class.

Lesson 4: Interpreting Tables and Diagrams (Part 1)

Lesson Objectives:

This session aims to introduce students to the analysis of architectural data presented in tables and diagrams. By focusing on understanding and interpreting data representations, students will gain valuable skills for using architectural data in a professional context. This is particularly relevant for materials comparison, energy efficiency analysis, and selecting sustainable materials—key aspects in contemporary architecture.

Introduction: Architectural Data Interpretation

In architectural practice, interpreting data effectively is crucial, especially when selecting materials for sustainable and energy-efficient building designs. This session introduces students to the analysis of tables and diagrams—a vital skill for architects who rely on visual data representations to make informed design choices.

By learning to interpret diagrams and tables accurately, students can better understand the performance of different materials in terms of energy efficiency, sustainability, and environmental impact.

This session includes hands-on activities that enhance both listening comprehension and visual analysis skills, providing students with practical tools to interpret architectural data confidently in professional contexts. Through exercises focused on diagram labeling and data explanation, students will also improve their ability to communicate technical information in a clear and concise manner. This foundational knowledge supports students in making more sustainable, well-informed material choices in their future architectural projects.

1. Key vocabulary

- **Energy Efficiency**
  Energy efficiency refers to the measure of how well a material or system conserves energy by minimizing heat transfer, reducing the energy required for heating or cooling a building. Improved energy efficiency is essential for minimizing a building's overall energy consumption and enhancing sustainability (Mehta, 2008).
- **Sustainable Materials**
  Sustainable materials are those selected based on their low environmental impact, which includes renewable sourcing, recyclability, or reduced pollution during production. They support energy efficiency by reducing waste and embodying environmentally friendly characteristics in building design (Kibert, 2016)
- **Thermal Performance**
  Thermal performance is a measure of a material's capacity to retain or resist heat, which is critical for regulating the internal temperature of a building. Good thermal performance minimizes temperature fluctuations, reducing energy needs for heating and cooling (Threlfall, 2019).
- **Insulation**
  Insulation involves the strategic use of materials that restrict unwanted heat loss or gain, helping to maintain comfortable indoor temperatures with minimal energy input. Effective insulation reduces heating and cooling costs and plays a vital role in achieving energy efficiency (Brown, 2014).

2. *Active Listening*

Students will watch a video explaining a diagram that compares the energy efficiency of various construction materials and eco-friendly construction materials. The link to the video is: https://www.youtube.com/watch?v=bsQBSVJoV04
The video discusses:

- The concept of energy efficiency in architecture.
- How materials differ in thermal performance, with some providing better insulation than others.
- The impact of material choice on a building's energy consumption and environmental footprint.

Exercise: extract relevant data from spoken explanations

3. *Class Discussion*

Discussion Topics :

- **Energy Efficiency in Architecture**: Why is it important to consider energy efficiency when selecting materials?
- **Material Selection and Sustainable Design**: How does choosing energy-efficient materials affect a building's performance and environmental impact?

4. *homework*

Search for different types of diagrams and tables architects encounter, such as material comparison tables, energy performance charts, thermal conductivity diagrams, and cost-benefit analyses. Explain each type briefly, focusing on how they are used in architectural planning and design.

Lesson 5: Interpreting Tables and Diagrams (Part 2)

Lesson Objectives:

This Students will develop the skills to interpret complex data graphs, such as cost curves, and use them to inform decision-making in sustainable construction projects.

Introduction: Architectural complex data graphs

In the ever-evolving field of architecture and construction, professionals are increasingly required to navigate and interpret complex data presented in tables, diagrams, and graphs. These tools are essential for visualizing trends, comparing options, and making informed decisions about project design, sustainability, and cost efficiency.

This session builds upon the foundational skills of interpreting visual data, focusing on advanced concepts such as cost curves and lifecycle analysis. By understanding these diagrams, students will develop the ability to connect numerical data with real-world architectural challenges, such as optimizing resources and achieving sustainable outcomes.

1. Vocabulary focus: Data and its types in the Construction field

In 2024, a period defined by rapid digital transformation, data visualizations in the construction sector have become indispensable tools for enhancing efficiency, informed decision-making, and fostering innovation. As the complexity of construction data grows, understanding these visualizations is essential for professionals seeking to navigate and leverage the opportunities presented by this digital revolution. But let's ask what are the type of data in the construction field?

1. **Project Progress Data**
   This includes information about the schedule and progress of construction projects, detailing completed tasks, achieved milestones, and delays. Accurate tracking of such data is critical for project managers to ensure the project stays on track (Kerzner, 2023).

2. **Cost Data**
   Cost data involves recording all expenditures related to construction, including labor, materials, equipment, and overhead. Effective cost management is crucial for project profitability and efficiency (RICS, 2022).

3. **Material Data**
   This pertains to information about the quality, quantity, specifications, and sources of construction materials. Proper management ensures efficient procurement and quality control (Ganesh, 2021).

4. **Weather Data**
   Weather data provides critical information on climatic conditions, such as temperature, humidity, and precipitation, that influence construction activities (Smith, 2023).

5. **Environmental Data**
   This refers to the impact of construction on the environment, covering areas like waste production, emissions, and regulatory compliance (Johnson, 2022).

6. **Safety Data**

   Safety data involves tracking incidents, near-misses, and adherence to safety regulations on construction sites. This data is vital for reducing risks and ensuring worker safety (OSHA, 2023).

2. The Benefits of Data Visualizations for Construction

Here a listing of the benefits of data visualizations for construction (Forough, 2023)

1. Enhanced Understanding

Data visualizations simplify complex construction data into clear, easily interpretable formats, such as charts or graphs.

2. *Improved Decision-Making*

With visualized data, construction professionals can make more informed decisions. Visual tools allow for the clear comparison of different project scenarios, enabling faster, data-driven decision-making.

3. *Effective Communication*

Data visualization improves communication by presenting technical data in a more digestible and engaging manner. It ensures that stakeholders, including those with limited technical knowledge, can easily comprehend project performance, risks, and progress.

4. *Rapid Insights*

Data visualization allows for quicker insights into project metrics, such as budget tracking or resource allocation, enabling teams to identify issues and areas for improvement immediately, thus reducing delays.

5. *Spotting Anomalies*

Visualized data helps easily identify irregularities or anomalies in the data, such as unexpected cost spikes, delays, or resource usage patterns.

6. *Storytelling*

Data visualization transforms raw data into a narrative, making it easier for stakeholders to follow the story behind the numbers. It helps build a compelling case for decisions, actions, and the overall progress of a project.

7. *Data Exploration*

Visualization tools provide the ability to explore large datasets interactively. This exploration allows construction professionals to test hypotheses, explore different scenarios, and uncover hidden patterns in the data.

8. *Improved Memory Retention*

Visual data is easier to remember than raw data because it engages the visual memory. By using graphs and diagrams, construction professionals are more likely to retain critical project information.

9. *Collaboration*

Visualization tools promote collaboration by providing a shared, easy-to-understand platform for team members to discuss project data. This fosters collective problem-solving and alignment across teams.

10. *Measuring Progress*

Data visualizations are essential in tracking and measuring construction progress against set goals and benchmarks. This helps stakeholders to visually assess whether the project is on track and enables timely adjustments.

3. *Types of visuals for construction data*

Here are the types of chart and visualization commonly used in construction field, Each of these visualizations serves a specific purpose, improving the understanding, planning, and management of construction projects. They are integral tools that help manage complexities and improve project outcomes.

1. *Bar Charts and Column Graphs*

Bar charts and column graphs are used to compare quantities across different categories, such as expenditures, material usage, or workforce distribution. They help visualize differences and trends in construction project data, making it easier to assess resource allocation and efficiency.

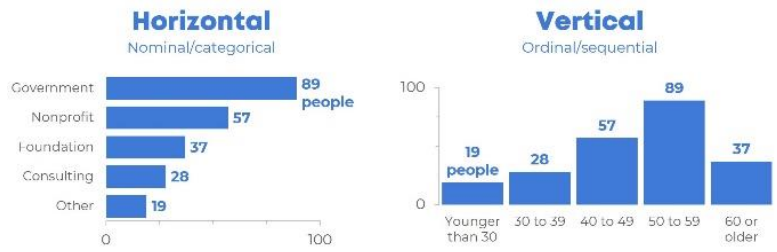


Fig. 11 Bar charts. (depictdatastudio.com, s.d.)

In the construction field the most used is the GANTT chart witch is a Bar chart. Gantt charts are essential tools for project planning. They visualize project tasks, deadlines, and

dependencies, helping project managers organize complex construction schedules and track progress.

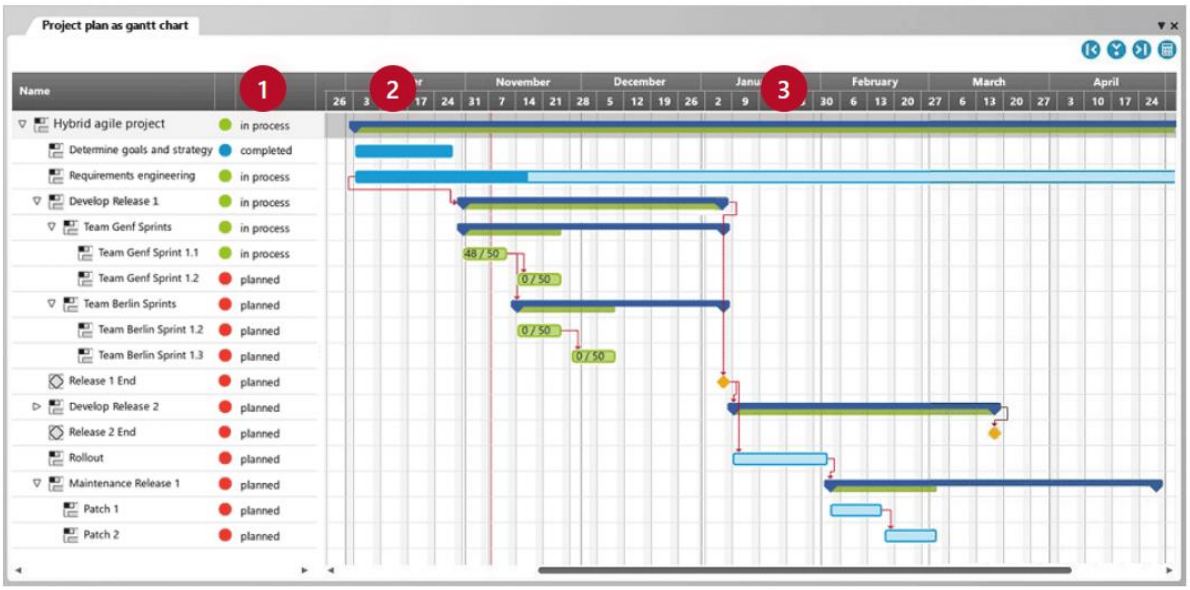


Fig. 12 (microtool.de, s.d.)GANTT Chart

2. *Line Charts*

Description: Line charts are ideal for showing trends over time. They are commonly used to track progress in construction projects, such as schedule adherence, phases of building progress, or identifying potential delays.

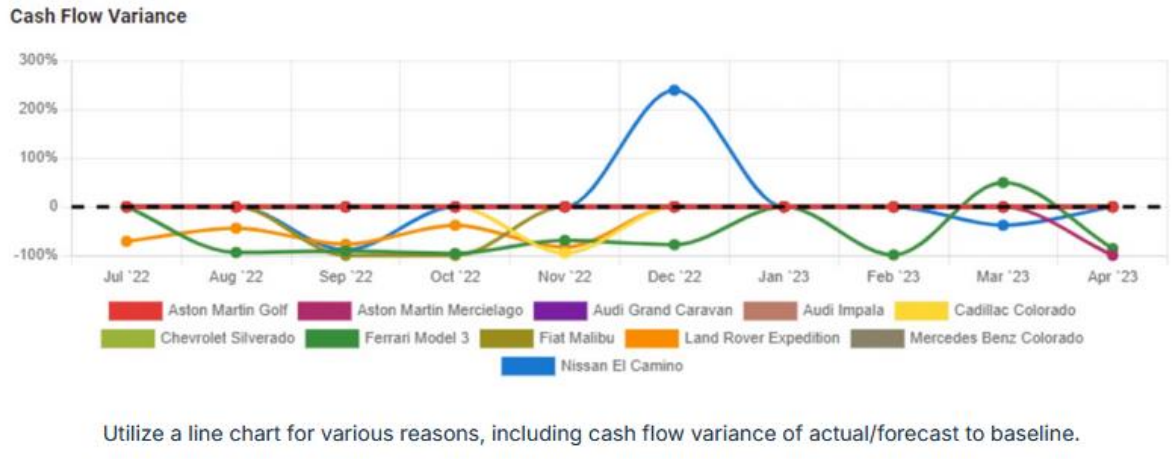
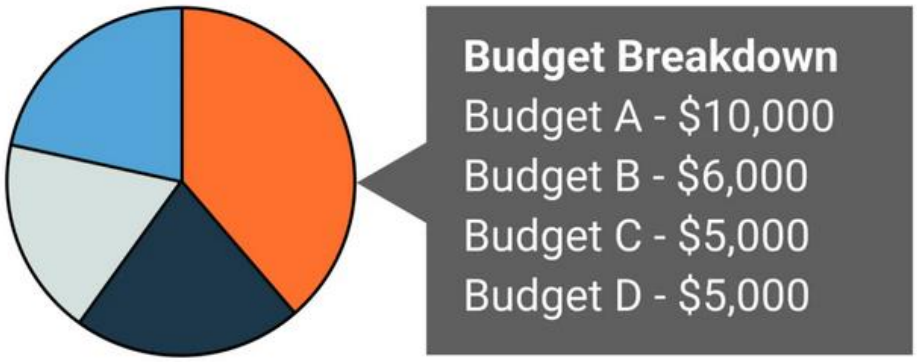


Fig. 13 Line charts (www.mastt.com, s.d.)

3. *Pie Charts*

Pie charts are used to show how different components contribute to a whole. In construction, they are often used to visualize how a project budget is allocated across various categories, like materials, labor, and equipment costs.

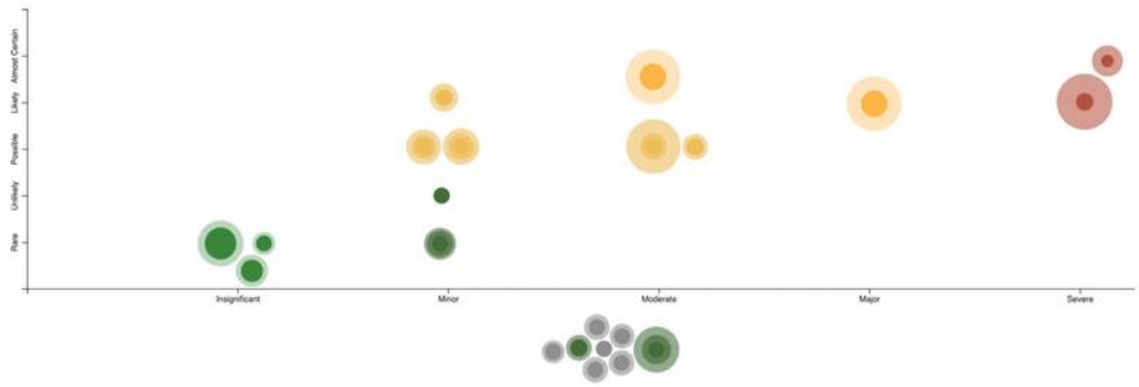


A clear representation of the project budget allocated across various categories, helping stakeholders understand financial distribution.

Fig. 14 A Pie chart (www.mastt.com, s.d.)

4. *Scatter Plots*

Scatter plots display the relationship between two variables. In construction, these plots are useful for showing how project duration correlates with costs, helping project managers identify cost-saving opportunities or trends.



Analyze risks by their likelihood and impact within a scatter plot visualization.

Fig. 15 Scatter Plots (www.mastt.com, s.d.)

5. *Geographic Information System (GIS) Maps*

GIS maps integrate construction data with geographic locations. They are useful for mapping construction site locations, planning material delivery routes, or evaluating environmental impacts related to construction activities.

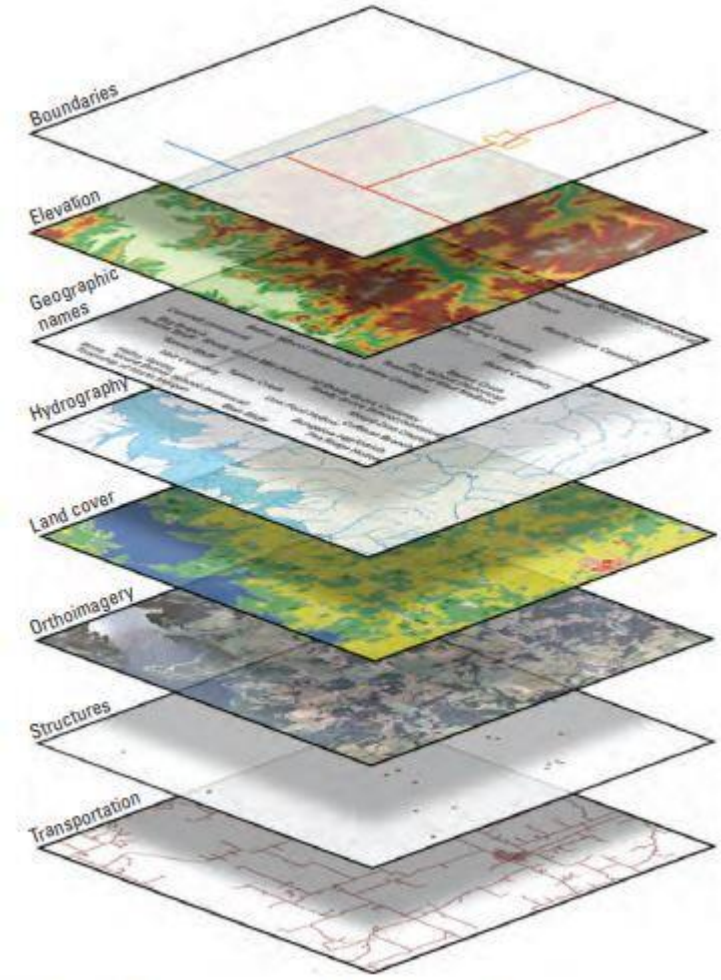


Fig. 16 GIS Map (usgs.gov, s.d.)

6. *Dashboard Visualizations*

Dashboards combine multiple visualizations and key performance indicators (KPIs) in one interface. They provide an overview of project progress, financial health, safety statistics, and other metrics, helping construction managers make informed decisions quickly.

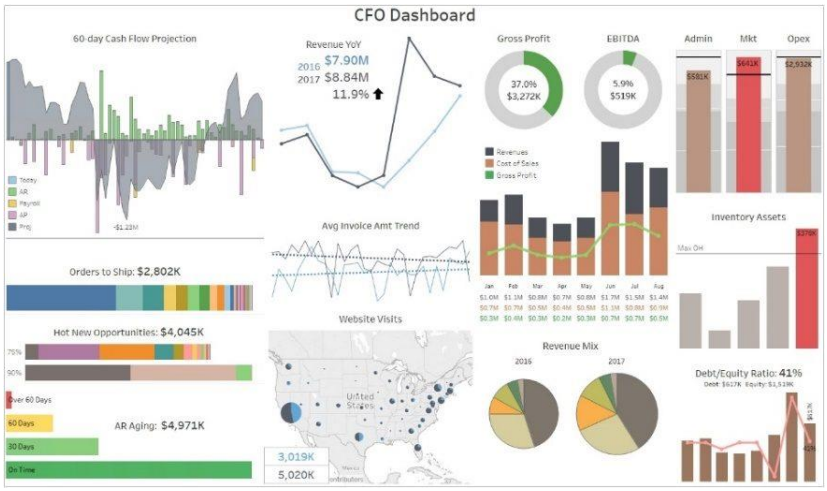


Fig. 17 construction Dashboard (dataself.com, s.d.)

7. *3D Models and BIM Visualizations*

Building Information Modeling (BIM) uses 3D models to visualize construction projects in detail. These models help stakeholders identify design issues, potential conflicts, or logistical challenges before construction begins.

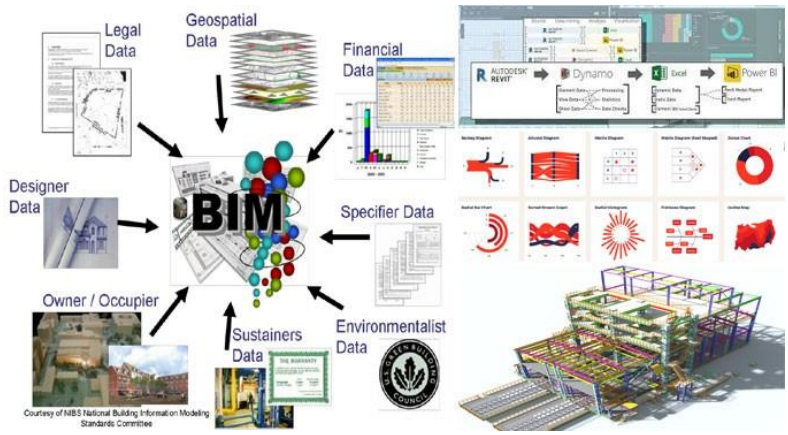


Fig. 18 Data visualisation and BIM (Roy, 2024)

4. Homework

1. Find and bring a complex graph related to construction or sustainability (e.g., energy savings vs. insulation type).
2. Write a brief explanation of the graph, focusing on how it could be used to make cost-effective decisions.
3. Prepare to present it in the next session.

Lesson 6: Labeling Architectural Plans (Part 1)

Lesson Objectives:

By the end of this session, students will be able to:

- Recognize and understand the main components of simple architectural floor plans.
- Use technical terms to accurately label areas such as living spaces, kitchens, and utility rooms.
- Build foundational vocabulary to describe architectural layouts confidently.

Introduction

Architectural plans are the foundation for understanding building designs and layouts. Being able to interpret and label these plans accurately is crucial for architects, contractors, and stakeholders in communicating ideas and executing projects effectively. This course introduces students to the basics of reading architectural floor plans and equips them with the vocabulary to label common sections correctly.

1. Vocabulary Introduction

Living Room : A space in a residence meant for general social and leisure activities, often furnished with sofas, chairs, and sometimes entertainment units.(Ching, 2021)
Open Kitchen: A kitchen designed to integrate seamlessly with other living spaces, such as the dining or living room, to promote openness and interaction. (Ballast, 2020)

Hallway: A passage or corridor that connects rooms within a structure and facilitates circulation. (Neufert, 2019)
Patio : An outdoor, paved area adjoining a house, typically used for leisure or dining purposes. (Watson, 2018)

Master Bedroom: The primary bedroom in a home, often larger than the other bedrooms and featuring an en-suite bathroom or walk-in closet. (Ching, 2021)
Bathroom: A room equipped with fixtures for personal hygiene, such as a toilet, sink, and either a bathtub or shower. (Neufert, 2019)

Garage: A covered, enclosed space used to store vehicles and often additional equipment or tools (Ching, 2021).

Here an example of a plan that integrates those spaces:

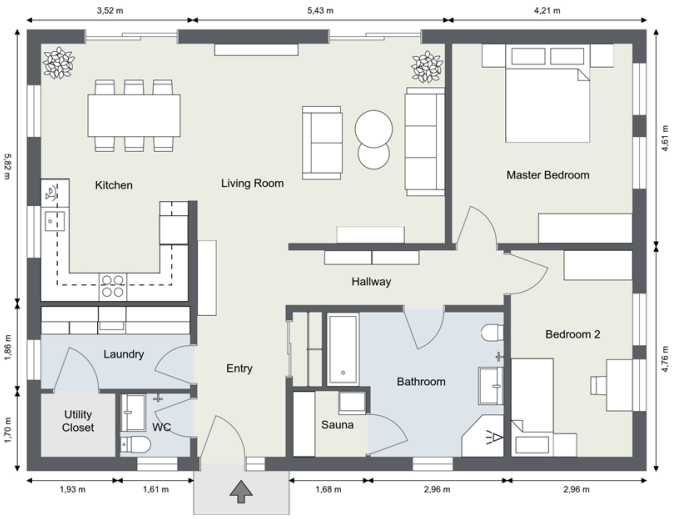


Fig. 19 exemple of a floor plan (Applegate, s.d.)

2. Labelling exercise

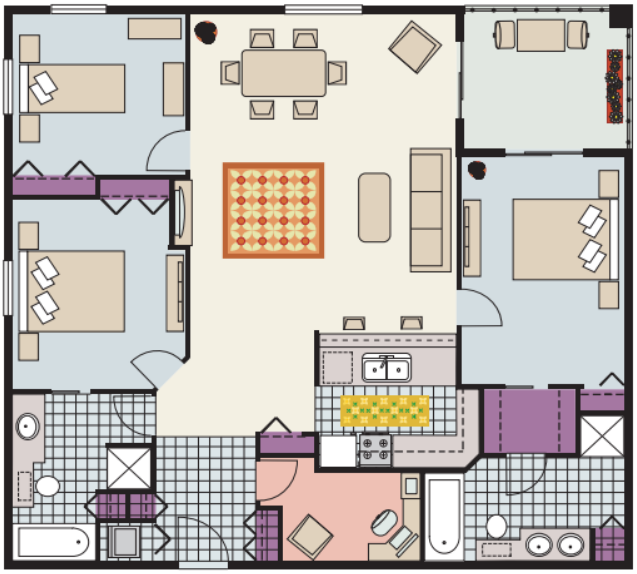


Fig. 20 a Floor plan to label

3. Listening Activity: Exploring a Single-Family House Floor Plan

Listen to this presentation and identify the different vocabulary used in the description of the house.
https://www.youtube.com/watch?v=eQ4cit9nhas

4. In-Class Assessment

Describe the floor plan below using the vocabulary that's used in the session

Fig. 21 floor plan exemple (Applegate, s.d.)

Lesson 7: Labeling Architectural Plans (Part 2)

Lesson Objectives:

To develop the ability to analyze and label complex architectural plans, focusing on commercial or institutional buildings. This session introduces students to interpreting cross-sectional drawings and identifying structural and design elements.

Introduction

Understanding the intricacies of architectural plans is an essential skill for architects and professionals in the built environment. In this session, we advance from basic plan labeling to analyzing complex cross-sectional drawings of commercial and institutional buildings. These drawings represent not only the structural framework but also the functional design choices that influence the building's performance and usability.

In this session, we focus on recognizing and labeling advanced features like vertical circulation (stairs and elevators), HVAC systems, and structural frames. Through listening exercises and hands-on tasks, students will build their vocabulary and analytical skills, preparing them for the demands of real-world architectural practice.

1. Vocabulary Introduction

Core (Vertical Circulation): The "core" of a building refers to the central structural zone housing vertical circulation systems like elevators, staircases, and escalators. It also often contains mechanical shafts, utility ducts, and sometimes restrooms or service rooms. The core is integral to building functionality, offering access and connectivity across floors while maintaining structural stability (Ching, 2014).

HVAC Systems: HVAC (Heating, Ventilation, and Air Conditioning) systems regulate indoor climate and air quality. These systems include ductwork, vents, and mechanical equipment that distribute conditioned air. HVAC is critical for occupant comfort, energy efficiency, and meeting building codes related to air quality and thermal comfort (ASHRAE, 2017).

Service Areas: Service areas in a building are spaces designated for utilities and operations, such as electrical rooms, boiler rooms, storage spaces, and kitchens. These areas ensure the functional efficiency of a building without interfering with primary uses like living or working (Ballast, 2018).

Structural Frame: A structural frame is the load-bearing skeleton of a building, typically made of steel, concrete, or timber. It supports the building's weight, resists environmental forces, and defines its overall shape. Structural frames include beams, columns, and slabs that transfer loads to the foundation (Allen & Iano, 2019).

Fire Egress: Fire egress refers to the design and implementation of safe escape routes in case of emergencies like fires. These include staircases, doors, and corridors designed to comply with fire safety codes, ensuring swift evacuation for occupants (NFPA, 2018).

A Cross-sections provide a detailed view of the relationships between different building elements, such as structural systems, circulation paths, and service areas. By interpreting these diagrams, students gain insights into how design and engineering come together to create sustainable, efficient, and aesthetically pleasing spaces. The ability to accurately label and describe these elements enhances comprehension and supports effective communication in professional settings.

2. Listening activity

1. Structural components:

Watch this video from Minute 26 to 38; https://www.youtube.com/watch?v=6EQpM2JcnVM
Its explains the structure principles of High Rises.
Activity: identify the key structural components such as beams, columns, and slabs. And other vocabulary concepts related to structural components.

2. Explanation of spatial distribution and design process for a commercial building

Watch this video: https://www.youtube.com/watch?v=EgDQJ34On54
It explains The Architectural Drawings Design Process for a Commercial Real Estate Development Project
Activity: identify the key vocabulary concepts detailed in the video.

3. Labeling activity

Label the images below using the vocabulary from the session.

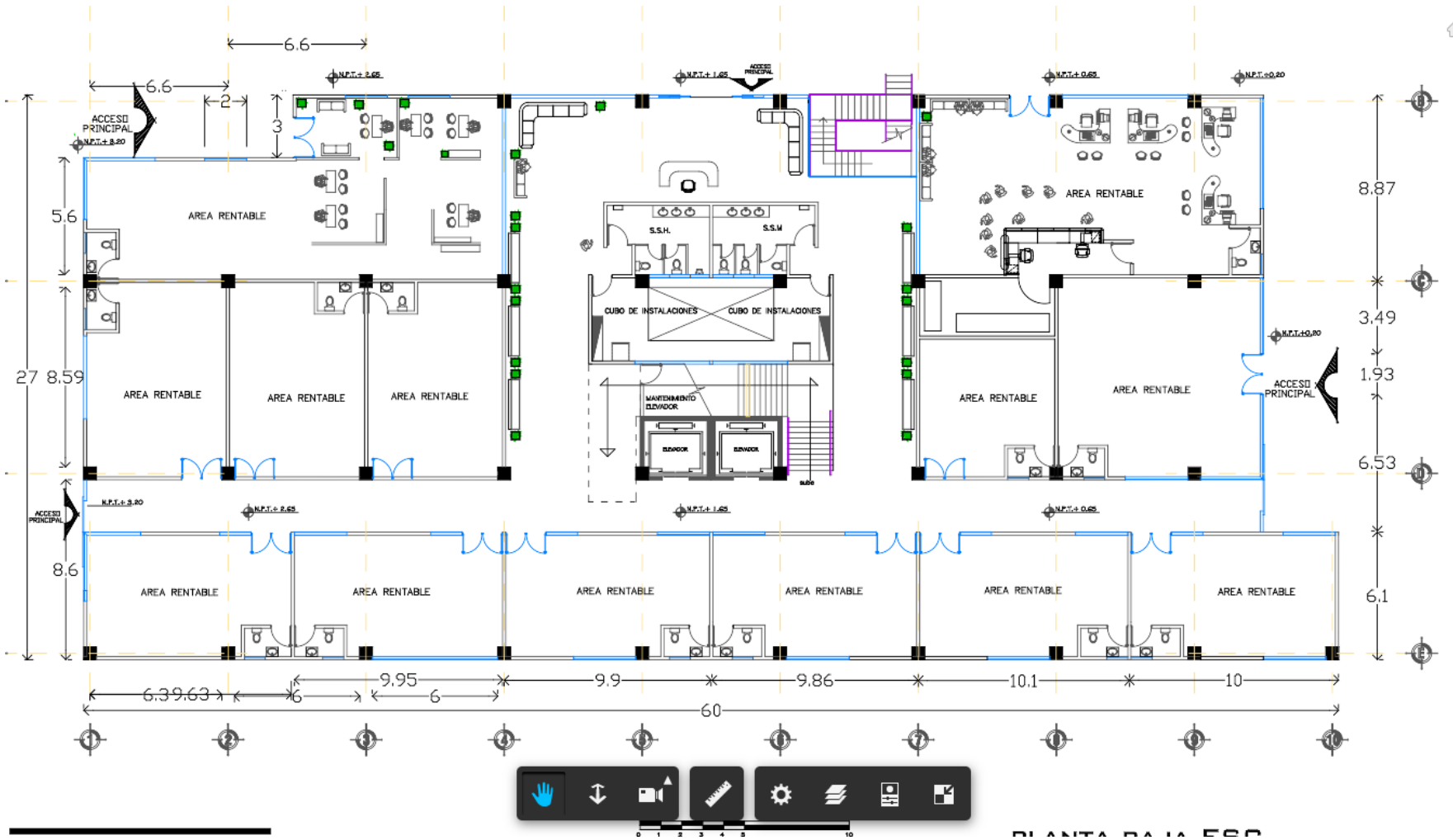


Fig. 22 plan to label (Applegate, s.d.)

Lesson 8: Understanding Advanced Technical Discussions

Lesson Objectives:

Develop the ability to grasp, interpret, and analyze detailed technical conversations in the context of architecture and urban planning. The session will emphasize identifying key points and strategies in overcoming urban design challenges.

Introduction

This session aims to deepen students' understanding of advanced discussions related to construction and architectural design, particularly in complex environments. The focus will be on enhancing listening comprehension, note-taking, and analytical skills.

1. Vocabulary Focus

1.1.Class discussion

What are the Challenges of Building in Dense Urban Environments? And what are the strategies that we can apply to face these challenges?

1.2.Challenges of Building in Dense Urban Environments: Overview and Strategies

1. Limited Space: *Urban areas have scarce land for development, necessitating creative solutions to maximize usable space. This constraint often leads to vertical expansion and efficient land-use strategies.*

Example Strategy: **Vertical Expansion** — Skyscrapers and multi-story buildings maximize space by increasing capacity on limited land. This approach is critical in high-density areas (Glaeser, 2011).

2. Zoning and Regulations: *Navigating zoning laws, building codes, and environmental regulations is essential for compliance. These rules affect land use, building height, density, and environmental impact.*

Example Strategy: **Mixed-Use Development** — Combining residential, commercial, and recreational spaces can meet zoning requirements and optimize land use (Duany et al., 2010).

3. Infrastructure Strain: *Urban construction often faces challenges with existing utilities, transportation networks, and aging infrastructure. Addressing these issues requires integrating modern systems without disrupting current operations.*

Example Strategy: **Innovative Foundation Techniques** — Techniques like micro-piles and pile-driving systems help developers work in constrained sites while preserving surrounding structures (Allen & Iano, 2019).

4. Noise and Pollution Control: *Construction in urban settings can significantly impact local communities due to noise and pollution. Effective mitigation strategies are crucial to minimize disruption and comply with regulations.*

Example Strategy: **Sustainability Practices** — Implementing green roofs and energy-efficient materials helps reduce noise, pollution, and environmental impact (Brophy & Smith, 2014).

5. Community Impact: *Balancing new developments with neighborhood preservation is essential to maintain social harmony and community support.*

Example Strategy: **Community Engagement** — Developers often involve community stakeholders in the planning process to address concerns and align projects with local needs.

2. Active listening

Listen to this video that is discussing challenges in real estate and urban design. Key topics include:

- The relationship between real estate and urban design
- Challenges that real estate faces in the urban areas.

The link of the video: https://youtu.be/t2j3eOgW2qg?si=GIxlRz3-Ki6ZPvsR

Follow-Up Exercise

- Summarize all the points that are discussed in the video.

Lesson 9: Presenting Complex Projects

Lesson Objectives:

- Understand key elements in architectural project presentations.
- Analyze challenges and solutions in urban redevelopment projects.
- Summarize project details, focusing on materials, construction techniques, and objectives.

Introduction

This session focuses on developing skills to comprehend and present complex architectural projects, with a special emphasis on urban redevelopment. Participants will analyze detailed project presentations, identifying challenges, materials, techniques, and design goals.

1. Vocabulary Focus

• term	Definition
Urban Redevelopment	Process of improving and renewing areas in cities to meet modern standards. Gehl (2011). Life Between Buildings.
Mixed-Use Development	Combining residential, commercial, and leisure spaces within a project. Duany et al. (2010). Suburban Nation.
Sustainable Materials	Eco-friendly materials that minimize environmental impact, e.g., recycled steel, bamboo. Brophy & Smith (2014). Green Vitruvius
Modular Construction	Construction using prefabricated modules that are assembled on-site. Allen & Iano (2019). Building Construction.
Green Roofs	Roofs that incorporate vegetation to improve insulation and reduce heat. Brophy & Smith (2014). Green Vitruvius.
Passive Design	Design strategies that reduce energy use, such as natural ventilation and daylighting. Olgyay (2015). Design with Climate

2. Active listening

Listen to this project presentation on an urban redevelopment (shopping) the link of the video is: https://youtu.be/k_pc1HZ9sI0?si=s5l5PEwitlKVr_Wp

Key topics will include:

- Sustainable materials used in construction.
- Innovative techniques and design for space optimization.
- Integration of public spaces.

Activity: Summarize the primary objectives of the project and the design principles and process.

3. Making a project presentation

3.1. Project Summary Template

- **Project Name**: Urban Renewal in Downtown District.
- **Materials**: Recycled concrete, cross-laminated timber, solar panels.

- **Techniques**: Passive cooling systems, green facades, modular units.
- **Goals**: Improve access to affordable housing, reduce carbon footprint, enhance community spaces.

3.2. Homework

Using one of yours project that you have designed this year or the previous years in your cursus, prepare a project presentation for the next session.

Lesson 10: Filling Out a Questionnaire

Lesson Objectives:

- Identify key information from a script about heritage building renovation.
- Understand the challenges associated with preserving historical structures while updating them for modern use.
- Complete a detailed questionnaire based on a script.

Introduction

This session will enhance students' comprehension skill by focusing on extracting precise information from a script about the restoration of the Imedghassen Tomb in Batna in Algeria. The script covers the historical significance of the monument, the restoration efforts, and the challenges faced in preserving such a valuable heritage site.

1. Vocabulary Focus

Term	Definition
Listed Building	A structure officially recognized as having historical or architectural significance. Historic England (2021).
Heritage Preservation	The process of conserving the original features of a historic site or building Feilden (2003). Conservation of Historic Buildings.
Retrofit	The addition of new systems or technologies to an existing structure. Allen & Iano (2019). Building Construction.
Adaptive Reuse	Re-purposing an old building for a new use while retaining its historic elements. Brooker & Stone (2018). Rereading Architecture.
Structural Integrity	Ensuring that a building remains safe and stable during and after renovation. Allen & Iano (2019). Building Construction.
Conservation Materials	Specialized materials used to match or preserve historical features. Feilden (2003). Conservation of Historic Buildings.
Restoration	The process of returning a historic building or site to its original state, while preserving its significance. (UNESCO / ICCROM / ICOMOS / IUCN, 2013)
Heritage Building	A building or structure of historical, cultural, or architectural importance. (UNESCO / ICCROM / ICOMOS / IUCN, 2013)
Cultural Heritage	The legacy of physical artifacts and intangible attributes passed down from past generations. (UNESCO / ICCROM / ICOMOS / IUCN, 2013)
Archaeological Site	A location where historical or cultural artifacts are found. (UNESCO / ICCROM / ICOMOS / IUCN, 2013)

2. Active reading

The article bellow discusses the restoration of the Imedghassen tomb, one of Algeria's oldest monuments, located in Batna. The tomb, a symbol of Numidian heritage, is receiving significant

funding for its restoration, including contributions from the Algerian government and a partnership with the U.S. The project aims to preserve the tomb, which is architecturally significant, combining Greek and Egyptian styles. It will also enhance the site's tourism potential. Restoration work is overseen by local experts and aims to secure and promote the site's historical and cultural value.

2.1.Follow-Up Discussion

- Read the article and discuss as a group:
    - Why is it important to preserve historical monuments like Imedghassen?
    - What challenges arise when restoring ancient monuments while ensuring their structural integrity?

2.2. Assignment

- Complete the questionnaire based on the script, identifying key points about the restoration process, the funding sources, and the projected outcome.

Questionnaire:

1. What is the historical significance of the Imedghassen Tomb?
2. What is the main objective of the restoration project for the Imedghassen Tomb?
3. What are the primary sources of funding for the restoration project?
4. Who is responsible for overseeing the restoration work at the Imedghassen Tomb?
5. What specific challenges are mentioned regarding the preservation of the tomb?
6. What was the condition of the tomb before the current restoration efforts?
7. How does the restoration project aim to address the risk of the monument’s collapse?
8. Why is it important to use Algerian experts for the restoration of the tomb?
9. How long is the restoration project expected to take?
10. What role does the Association of Friends of Imedghassen play in the restoration project?
11. What previous restoration efforts were made to preserve the tomb?
12. How will the restoration project contribute to tourism in the region?

Restoration of the oldest historical monument in Algeria raises hope. A symbol of the authenticity of Algerian heritage and a living witness to glorious Numidia, the tomb of Imedghassen, located in the commune of Boumia, in Batna, has benefited from an ambitious budget program intended for its in-depth restoration, raising real hope among specialists who ardently wish for the preservation of the oldest historical monument in Algeria and North Africa. Decided in favor of the lifting of the freeze on the project announced by the government, the restoration of the tomb, which will be supervised by Algerian specialists in coordination with companies under the Ministry of Culture and the Association of Friends of Imedghassen, was allocated an estimated amount of 150 million dinars, in addition to 500,000 dollars granted under an agreement with the United States. According to Bilal Benaziz, head of the Imedghassen site and representative of the National Office for the Management and Exploitation of Cultural Property (OGEBC), the tomb mentioned for the first time by the historian Abou Oubeid El Bakri (1030-1094) under the name of "tomb of Madghous" refers to an important period in the history of Algeria "because of its technical and architectural characteristics marking the transition between Greek and Egyptian art". "From there appears the importance of this monument which constitutes a living witness to the cultural mix of this period, in addition to its inestimable historical and aesthetic value," added the same official, affirming that this site is called to become, after the restoration, a tourist destination likely to promote the culture of the region, including the Numidian remains sometimes eclipsed by certain Roman sites. Recalling that this monument has been the subject of several projects aimed at its preservation, in particular the study relating to the plan for the protection and renovation of the site and its region, Mr. Benaziz indicated that the first stage has been completed, while the second is currently at a standstill following reservations not lifted by the design office. This, in addition to the project of securing and enhancing in accordance with the program of support and enhancement of cultural heritage, within the framework of an agreement between the European Union and Algeria dating from 2016. The same source noted, in addition, that the "tomb d'Imedghassen benefited, prior to this operation, from several renovations between 1972 and 1973 led by a joint Algerian-Italian commission with the aim of consolidating certain parts of the monument". For his part, Nabil Bertella, a university lecturer and member of the Association of Friends of Imedghassen, believes that "the prominent fact in this project to restore the tomb of Imedghassen, approved by the Ministry of Culture and Arts and supported by the State is that it is being undertaken by Algerian experts". "The Association of Friends of Imedghassen will contribute to this project by monitoring the work as well as supporting local authorities and companies tasked by the supervisory authority with its implementation using scientific methods to put an end to its deterioration in order to preserve it", he emphasizes to this effect. According to this academic and member of this association who has been working for several years to protect the tomb, notably through the organization of the Imedghassen marathon, the restoration will be launched soon with the cooperation of local authorities. And to specify: "following the visit of the Minister of Culture and Arts to the site, the wali of Batna, Toufik Mezhoud, decided to connect the site to the water supply network and the electricity network to facilitate the work which will last five years". "The vulnerability of the monument has increased in recent years, which means that the interventions scheduled on the site must be carried out with particular attention and meticulous technicality, taking into account in particular all the studies and previous restoration attempts", he added. Preventing the collapse of the mausoleum For their part, specialists, actors of the associative movement and other experts in archaeological heritage consider that "this project comes at the right time and is an emergency to avoid the degradation of other parts of the tomb that could precipitate its collapse". To this end, the expert in archaeology and advisor to the Minister of Culture and Arts, Abderrahmane Khalifa, stated that the tomb of Imedghassen displays significant damage to the dome, the destruction of which has favored the infiltration of rainwater deep down, including in the burial chamber and the already weakened foundation of this archaeological monument". (radioalgerie, 2021) teacher's translation

Lesson 11: Accents and Linguistic Diversity in International Architecture

Lesson Objectives:

- Discuss how language and communication impact collaboration in architecture.
- Emphasize the importance of understanding different English accents in a professional context, particularly for architects working on international projects.

Introduction

Linguistic diversity plays a critical role in the field of global architecture, as it directly influences communication, collaboration, and the exchange of ideas across different cultures and regions. Understanding various linguistic and regional nuances is essential for architects working internationally, as it allows them to better grasp local architectural practices, client expectations, and the cultural significance embedded in design projects. This diversity not only enhances the depth of an architect's expertise but also promotes inclusivity and the recognition of a wide array of perspectives in the design process.

The field of architecture is inherently global, with designers and professionals coming from diverse linguistic backgrounds. This multilingualism brings unique approaches to problem-solving and creativity. For example, an architect from the United States may emphasize efficiency and functionality in a design, influenced by the American practical approach, while a British architect may focus on historical context and aesthetic harmony, drawing from a tradition steeped in European design. Meanwhile, an Australian architect might emphasize environmental sustainability, reflecting the country's challenges with climate change and natural resources.

1. Overview of Key Accents and Regional Influences in Architecture

Accents in the architectural field not only reflect geographical origins but also highlight the distinct cultural influences that shape architectural practices in various regions. Each accent, whether American, British, or Australian, carries with it a wealth of historical, social, and environmental contexts that influence the architectural discourse.

1. **American Accent**: The American accent is often associated with an innovative and forward-thinking approach to architecture. U.S. architects are known for their focus on modernity, cutting-edge technology, and practical functionality. This is reflected in the rise of iconic skyscrapers, eco-friendly buildings, and technologically advanced urban designs. The American accent also represents a diverse cultural heritage, where architects often seek to blend global styles with local identity.
2. **British Accent**: British architects frequently emphasize historical preservation and context-driven design. The British accent in architecture is closely linked to a rich architectural history, including the classical influences of Greek and Roman designs, as well as the rise of Victorian and modernist architecture. British architects often seek to harmonize innovation with tradition, ensuring new developments respect and complement historical landscapes.

3. **Australian Accent**: The Australian accent is often associated with a deep connection to the natural environment, as architects in Australia are often pioneers in sustainable design and eco-friendly practices. Australian architecture reflects the country's geographic diversity, from coastal designs to urban high-rises. The emphasis on environmental sustainability and adaptive design techniques is central to Australian architecture, particularly in response to the challenges posed by the harsh climate and diverse landscapes.

Incorporating these accents into professional communication and collaboration is essential for architects who work across borders. Understanding the subtle differences in terminology, professional practices, and local architectural values helps architects navigate global projects more effectively, ensuring that they respect and integrate regional influences into their designs.

2. Active listening

Here are three podcasts featuring different English accents, relevant to architecture and design:

1. Life of an Architect (American Accent)

- **Host:** Bob Borson, an architect from Texas.
- **Content Focus:** Personal stories, design challenges, and advice on pursuing an architecture career.
- **Accent Traits:** Clear enunciation, typical American pronunciation with some regional variations.

2. The Register Podcast (British Accent)

- **Host:** Business of Architecture UK (primarily British architects and designers).
- **Content Focus:** Architecture and business strategy, design philosophy, and urban planning.
- **Accent Traits:** British Received Pronunciation (RP) with occasional regional dialects.

3. The Site Visit (Australian Accent)

- **Hosts:** David Keir and guests from Australia.
- **Content Focus:** Project management, site operations, and construction practices in Australia.
- **Accent Traits:** Australian English with typical vowel shifts and informal speech patterns.

These podcasts offer a diverse range of accents and professional insights into architecture.

Task: Listen to these selected podcasts:
Life of an architect episode 163. Architectural Wanderlus
https://podcasts.apple.com/dz/podcast/architectural-wanderlust/id1399009172?i=1000675535789

AJ Climate Champions podcast – Maria Smith: ‘It’s depressing how much architects are the problem’ Hosted by AJ sustainability editor Hattie Hartman, Climate Champions is a new podcast from the AJ
https://www.architectsjournal.co.uk/news/aj-climate-champions-podcast-maria-smith

What makes a city
https://open.spotify.com/episode/2doqJD2xPcwq4IGtRlwQ7T?si=0hve79fGTh-8QjUJ6rbBbQ

- A**ctivity:** In pairs, identify accent differences, technical terms, and cultural references. Discuss how these may influence professional communication in architecture.

3. Vocabulary Focus

Exercise: Comparison and Analysis
Form small groups to analyze:

- Identify the main pronunciation difference in the word architect between American and British English.
- List two architectural terms used in Australia that differ from American usage.
- Explain one challenge mentioned by each architect in their project.
- Propose strategies for bridging communication gaps in international architectural teams.

Example Table:

Accent	Pronunciation Example	Vocabulary	Technical Terms
American	“r” in "floor" pronounced	Apartment	Lumber
British	Silent "r" in "floor"	Flat	Timber
Australian	Distinct vowel in "floor" (sounds like "flaur")	Flat	Timber

4. Discussion

- Why is understanding accents important in architecture?
- How can linguistic diversity enhance creativity and collaboration in projects?

5. Homework

Find and listen to a podcast or video featuring architects from different English-speaking countries. Write a brief summary highlighting accent differences and key project details.

Lesson 12: Synthesis and Listening to a Debate on Contemporary Architecture

Lesson Objectives:
This session aims to consolidate students' listening and comprehension skills, specifically focusing on understanding complex discussions about contemporary architectural trends and projects, particularly in the area of sustainable architecture.
By the end of the session, students will:

- Gain an understanding of the modern and contemporary architecture through expert debates.
- Complete a text **summarizing key perspectives** from the debate.

Introduction

In today's globalized world, architecture is no longer about just aesthetic beauty; it is increasingly focused on sustainability, environmental responsibility, and innovative design solutions. The concept of sustainable architecture is shaping the future of the built environment, with experts from around the world debating and developing strategies for creating eco-friendly, energy-efficient, and resilient structures. In this course, we will engage with a debate on contemporary architecture, focusing on sustainable design trends. Students will learn how different experts approach contemporary and modern architecture, discussing topics such as green building materials, energy-efficient systems, and urban sustainability practices.

The goal of this session is to not only develop students' comprehension and listening skills but also help them synthesize different perspectives on the current trends in architecture. The field of architecture is inherently global, with designers and professionals coming from diverse linguistic backgrounds. This multilingualism brings unique approaches to problem-solving and creativity. For example, an architect from the United States may emphasize efficiency and functionality in a design, influenced by the American practical approach, while a British architect may focus on historical context and aesthetic harmony, drawing from a tradition steeped in European design. Meanwhile, an Australian architect might emphasize environmental sustainability, reflecting the country's challenges with climate change and natural resources.

1. The Debate

Listen to this debate on contemporary and modern architecture. The debate can be accessed through the following link: https://youtu.be/5uM1Srw5vwM?si=DpOjQQybDe-ViaAz . The participants shared their viewpoints on modern and contemporary architecture. Take notes and try to summarize the debate.

2. Group discussion

Take notes on the different point view and the debate process then share your opinion on the debate process and what you think about the modern architecture.

3. Completing the Text

This is a transcript summarizing the key points of debates on contemporary and modern architecture.

Fill in the Gaps Exercise with the options proposed:

The debate on modern and contemporary architecture explores their principles, evolution, and cultural significance. Modern architecture emerged in the early _____ century, promoting functionality, minimalism, and _____. It is characterized by _____ forms, open layouts, and the use of materials like _____, concrete, and _____, symbolizing efficiency and progress.

Contemporary architecture, however, is not tied to a single style but reflects the current era's _____. It incorporates cutting-edge _____, environmental _____, and adaptability to social and cultural needs. Themes like climate change, urban _____, and local _____ significantly influence contemporary designs.

The debate often contrasts the timelessness of _____ architecture with the flexibility and responsiveness of contemporary works. Critics of _____ argue it can feel sterile or _____, while supporters see it as visionary. In contrast, contemporary architecture is praised for _____ but sometimes criticized for lacking a cohesive _____.

Key discussions include how these styles address urban _____, engage with _____, and push creative _____, showing the dynamic interplay between the past, present, and future in architecture.

Proposed options:

1. **20th / 19th / 21st**
2. **simplicity / decoration / innovation**
3. **organic / geometric / abstract**
4. **wood / steel / marble**
5. **glass / clay / stone**
6. **uniformity / diversity / monotony**
7. **technologies / traditions / materials**
8. **sustainability / luxury / preservation**
9. **density / expansion / sparsity**
10. **heritage / infrastructure / landscapes**
11. **modern / classical / futuristic**
12. **modernism / postmodernism / realism**
13. **impersonal / vibrant / inspiring**
14. **inclusivity / exclusivity / consistency**
15. **identity / appeal / materiality**
16. **challenges / aesthetics / development**
17. **communities / architects / investors**
18. **boundaries / materials / norms**

4. Homework

synthesize diverse perspectives into a coherent understanding texte of **contemporary architectural issues based** on a research of different debates on the contemporary architecture on YouTube.

Lesson 13: Final Test

This is just an example of a test that aims to Evaluate the students' mastery of analysis skills in professional scenarios. This exam evaluates technical knowledge, and critical thinking in architectural contexts

I. Vocabulary and Technical Concepts (6 points)

1. **Define the following terms:** *(3 points)*
   a. Building Plan
   b. Load-Bearing Wall
   c. Sustainability in Architecture

2. **Complete the sentences using the correct terms:** *(3 points)*
   a. A _____ allows visualizing the relationships between different elements in a building's section.
   b. _____ ensure vertical circulation within a building.
   c. _____ refers to a design strategy that reduces energy consumption through natural ventilation and lighting.

Is it possible to become one of the greatest modern architects of our time if you are only noted for one building? When the building is the most recogniz- able hotel in Dubai, yes. British architect, **Tom Wright** is responsible for the Burj Al Arab in Dubai. Acclaimed for its luxurious amenities as a hotel and also one of the most recognizable buildings in modern architecture. Noted with the world's tallest atrium, and equipped with its own helicopter landing pad and tallest tennis court at the top, Tom Wright definitely deserves to join the list of great modern architects.

The Burj Al Arab (Tower of the Arabs) was conceived in October 1993 and completed on site in 1999. Tom Wright′s first drawing of the Burj al Arab concept was shown to the client in October 1993 which along with the simple card model convinced the client that the tower should be built. The felt pen illustration was an early development sketch of the hotel drawn by Wright on a paper serviette whilst he sat on the terrace of the Chicago Beach hotel which stood adjacent to the site of the Burj al Arab.

The brief to the architect was to create an icon for Dubai. The Tower of the Arabs was founded in 1993 and completed on site in 1999. The building became the symbol of the place, as Sydney has its opera house, so Dubai was to have the Burj al Arab.

II. Reading Comprehension (6 points)

Read the texts about two famous architects and answer the questions below

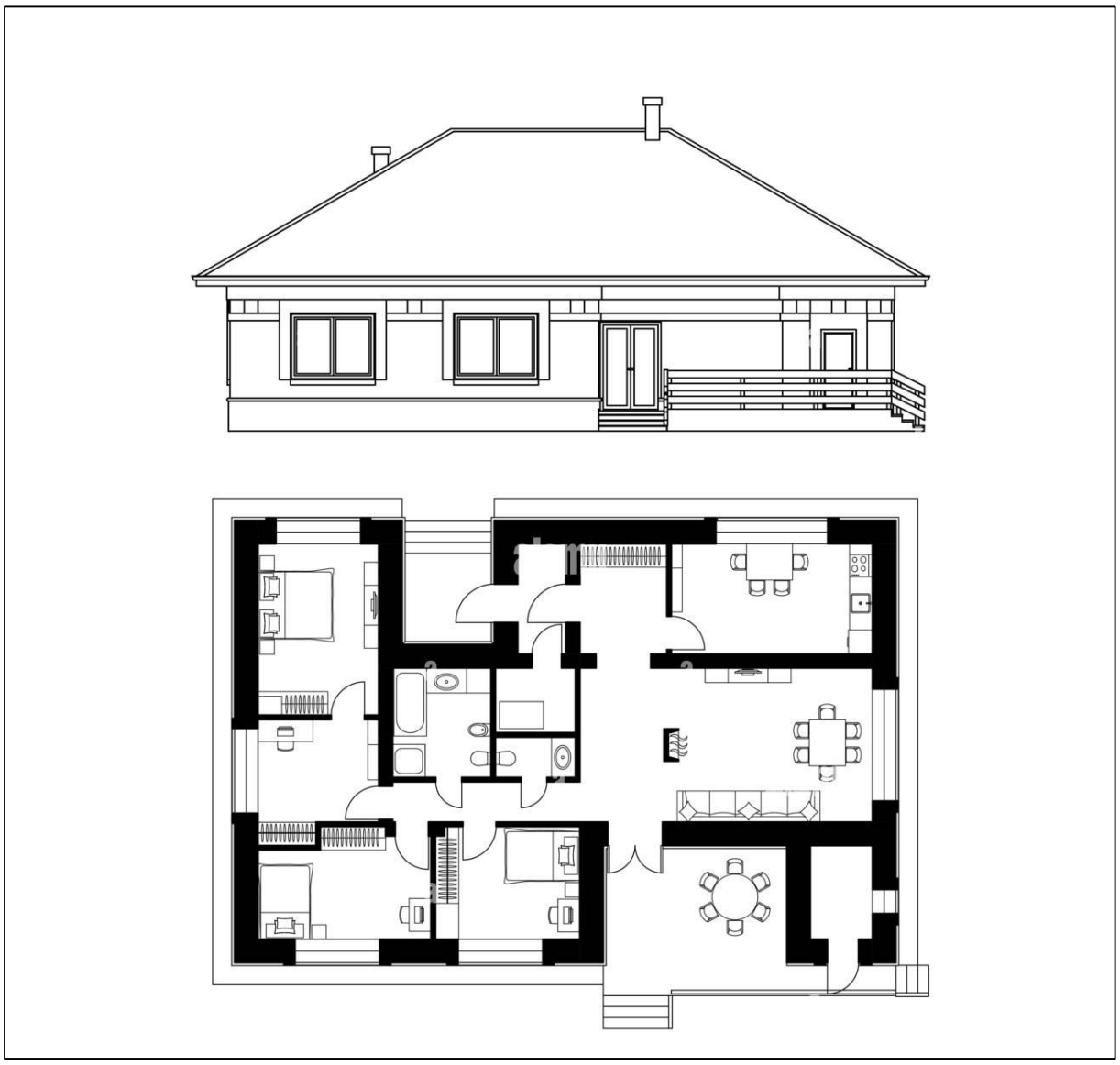
Questions:

1. What are the features of Burj al Arab that make it so unusual? *(2 points)*
2. How did Tom Wright develop the idea of the building? *(2 points)*
3. Why was the Burj Al Arab designed to be an icon for Dubai? *(2 points)*

III. Analysis and Reflection (8 points)

Study the provided architectural plan and answer the following questions:

1. Identify and label three main elements of the plan using appropriate technical terms. *(1.5points)*
2. Is the design suitable for a single-family home? Why? *(2.5 points)*
3. Describe the project by presenting its main architectural and functional features. (Minimum of 4 sentences) *(4 points)*



Answer Key for English Exam

I. Vocabulary and Technical Concepts (6 points)

Define the following terms:

a. Building Plan: A graphical representation of a building's design, including layouts of rooms, walls, and key structural elements.

b. Load-Bearing Wall: A structural wall that supports the weight of the building above it, transferring loads to the foundation.

c. Sustainability in Architecture: The practice of designing buildings with minimal environmental impact, using energy-efficient materials and systems.

Complete the sentences using the correct terms:

a. A cross-section allows visualizing the relationships between different elements in a building's section.

b. Vertical cores ensure vertical circulation within a building.

c. Passive design refers to a design strategy that reduces energy consumption through natural ventilation and lighting.

(3 points: 1 point per correct answer)

II. Reading Comprehension (6 points)

1. What are the features of Burj Al Arab that make it so unusual? (2 points)

- The **world's tallest atrium**, which enhances its architectural grandeur.
- Equipped with **luxurious amenities**, including its own **helicopter landing pad** and the **tallest tennis court** located at the top of the building.

2. How did Tom Wright develop the idea of the building? (2 points)

- The concept was first sketched as a **felt pen illustration on a paper serviette** while Wright sat on the terrace of the Chicago Beach Hotel, adjacent to the site.
- The **early sketch and a simple card model** were shown to the client in October 1993, convincing them to proceed with the project.

3. Why was the Burj Al Arab designed to be an icon for Dubai? (2 points)

The Burj Al Arab was designed to be an icon for Dubai to give the city a recognizable symbol, much like the Sydney Opera House represents Sydney.

III. Analysis and Reflection (8 points)

1. Identify and label three main elements of the plan using appropriate technical terms: (1.5 points)

Bedroom, kitchen, hallway.

2. Is the design suitable for a single-family home? Why? (2.5 points)

Yes, the design is suitable for a single-family home because it includes all essential spaces (bedrooms, living room, kitchen, and bathroom), a well-organized layout, and ample living areas for family activities.

3. Describe the project by presenting its main architectural and functional features. (Minimum of 4 sentences) (4 points)

This project is a single-family house designed for comfortable living. It features a functional and balanced layout. The house includes three bedrooms located in a dedicated area to ensure privacy, a spacious and bright living area combining the living room and dining space, and a practical kitchen adjacent to the dining area. A central bathroom is conveniently accessible from all rooms. The exterior is characterized by a simple and elegant facade with a sloped roof, large windows to maximize natural light, and an inviting entrance with a porch and railing. The house plan emphasizes smooth circulation between spaces and an optimal organization suited for family living.

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