

## Course guides

# 290623 - TAPV14 - TAP Housing and Technique

Last modified: 15/10/2020

**Unit in charge:** Vallès School of Architecture  
**Teaching unit:** 735 - PA - Department of Architectural Design.  
753 - TA - Department of Architectural Technology.

**Degree:** DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Compulsory subject).

**Academic year:** 2020    **ECTS Credits:** 12.0    **Languages:** Catalan, Spanish

### LECTURER

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**Coordinating lecturer:** JOAN LLECHA CAPDEVILA

**Others:**

Primer quadrimestre:  
PERE BUIL CASTELLS  
ANNA CASAS PORTET  
DAVID LOPEZ LOPEZ  
JOSE GOMEZ SERRANO  
JOAN LLECHA CAPDEVILA  
JOSEP PRATDESABA FARGAS  
JOSE ZABALA ROJI

Segon quadrimestre:  
PERE BUIL CASTELLS  
ANNA CASAS PORTET  
DAVID LOPEZ LOPEZ  
JOSE GOMEZ SERRANO  
JOAN LLECHA CAPDEVILA  
JOSEP PRATDESABA FARGAS  
JOSE ZABALA ROJI

### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Specific:**

- EP4G. The ability to conceive, execute and develop basic and detailed designs, sketches and drafts (T).
- EP1G. An aptitude for removing architectural barriers (T).
- EP6G. The ability to design, practise and implement construction site management (T).
- EP7G. The ability to design functional programmes for buildings and urban spaces (T).
- ET1G. An aptitude for conceiving, calculating, designing and executing foundation solutions and integrating them into existing buildings and urban areas (T).
- ET7G. The ability to conceive, calculate, design and implement systems for the division of interiors, carpentry, stairs and other finishing work and integrate them into existing buildings and urban areas (T).
- ET6G. The ability to conceive, calculate, design and erect building structures and integrate them into existing buildings and urban areas (T).
- EP17G. Adequate knowledge of methods for studying symbolisation processes, practical functions and ergonomics.
- ET8G. The ability to conceive, calculate, design and erect enclosures, roofs and other structural work and integrate them into existing buildings and urban areas (T).
- EP18G. Adequate knowledge of methods for studying social needs, quality of life, habitability and basic housing programmes.
- EP20G. Adequate knowledge of architectural, urban planning and landscaping traditions in Western culture, as well as their technical, climatic, economic, social and ideological foundations.
- EP22G. Adequate knowledge of the relationship between cultural patterns and the social responsibilities of architecture.
- EP27G. Knowledge of feasibility analysis and the supervision and coordination of integrated projects.
- ET9G. The ability to conceive, calculate, design and install water supply, sewage, heating and air conditioning systems and integrate them into existing buildings and urban areas (T).



**Generical:**

CE5. The ability to understand the relationship between people and buildings, and between buildings and their environment, and the necessity of relating buildings to the spaces between them in view of needs and human scale.

CE1. An aptitude for creating architectural projects that meet both aesthetic and technical demands.

## TEACHING METHODOLOGY

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## LEARNING OBJECTIVES OF THE SUBJECT

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Understand and respond to all architectural sensibilities and needs of future users.

Control and give significant answers to all the variables of domestic quality (dimensional, environmental, etc.).

Judiciously manage the environmental conditions of the site (orientation, visual, trains, etc.).

Resolve constructively the project, both general (structural) and particular (facade, roof, etc.).

Integrate significantly technical decisions with formal ones.

Know, respect and integrate the regulations and norms.

Identify opportunities to provide innovative solutions in the field of housing.

Ability to project from the point of view of sustainability.

Organize work properly in the time available and the objectives sought.

## STUDY LOAD

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Type	Hours	Percentage
Hours small group	112,0	37.33
Self study	168,0	56.00
Hours large group	20,0	6.67

**Total learning time:** 300 h

## CONTENTS

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### Syllabus

#### Description:

The course deals exclusively with housing. It covers all the variables that influence the qualities of a dwelling, and those that arise when these qualities have to be achieved in a building which includes a number of flats. If in the first case we must address the needs -physical and psychological- of the users, in the second we must pay attention to the conditions -formal and technical- imposed by the repetition of units and the size of the building. The course maintains a double commitment: first, the utmost respect for the people, to all his needs and sensibilities; and on the other hand, a like respect for the environment, recognizing the importance that the architecture of housing has in the formal and functional definition of urban systems.

#### Specific objectives:

1. Comfort. Definition and conditions.
2. Housing and environment: architecture as elaboration of landscape.
3. The building as a system: integration of formal, functional and constructive qualities.
4. The house as a system of 'areas': the activities.
5. The house as itinerary: circulations.
6. Distribution or organization? The design of the spaces and the design of relationships.
7. Flexibility and adaptability: design for change.
8. Equipment and furniture: immediate forms.
9. The structure: the construction of lift
10. Envelopes and covers: building protection.
11. Service spaces and technical systems.

**Full-or-part-time:** 132h

Theory classes: 20h

Laboratory classes: 112h

## GRADING SYSTEM

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## BIBLIOGRAPHY

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#### Basic:

- Leupen, Bernard; Mooij, Harald; Uytengaak, Rudy. Housing design : a manual. Rotterdam: NAI Publishers, cop. 2011. ISBN 9789056628260.
- BRE housing design handbook : energy and internal layout. Garston: Building Research Establishment, 1993. ISBN 0851256015.
- Schneider, Tatjana; Till, Jeremy. Flexible housing. Oxford: Architectural Press, 2007. ISBN 9780750682022.
- French, Hilary. Vivienda colectiva paradigmática del siglo XX : plantas, secciones y alzados. Barcelona: Gustavo Gili, DL 2009. ISBN 9788425222986.
- De Woningplattegrond : standaard & ideal = The residential floor plan : standard & ideal. Rotterdam: NAI Publishers, cop. 2010. ISBN 9789056627577.
- Solanas Cànovas, Antoni. Vivienda y sostenibilidad en España. Barcelona: Gustavo Gili, cop. 2007-2008. ISBN 9788425221040.
- Arnold, Françoise. Le Logement collectif. Paris: Le Moniteur, cop. 1996. ISBN 2281190919.
- Ebner, Peter. Typology + : innovative residential architecture. Basel: Birkhäuser, cop. 2009. ISBN 9783034600873.

#### Complementary:

- Edwards, Brian; Turrent, David. Sustainable housing : principles & practice. London: E & FN Spon, 2000. ISBN 0419246207.
- García Navarro, Justo; Peña Pareja, Eduardo de la. El Cuarto de baño en la vivienda urbana : una perspectiva histórica. Madrid: Fundación Cultural COAM, [etc.], 1998. ISBN 8488496265.
- Leupen, Bernard. Frame and generic space. Rotterdam: 010 Publishers, 2006. ISBN 9789064505980.
- Kloos, Maarten; Wendt, Dave. Formats for living : contemporary floor plans in Amsterdam. [Amsterdam]: Arcam : Architectura & Natura Press, cop. 2000. ISBN 9071570991.
- Aicher, Otl. La Cocina para cocinar : el final de una doctrina arquitectónica. Barcelona: Gustavo Gili, cop. 2004. ISBN 8425219795.



- Nylander, Ola. Architecture of the home. Chichester: Wiley-Academy, cop. 2002. ISBN 0470847875.
- Monteys, Xavier. Rehabitar en nueve episodios. Madrid: Ministerio de Fomento, 2012. ISBN 9788461600540.
- Monteys, Xavier; Mària i Serrano, Magdalena; Fuertes, Pere; Puigjaner, Anna; Sauquet Llonch, Roger; Marcos, Carles; Callís Freixas, Eduard. Rehabitar en nueve episodios [1] [on line]. Madrid: Ministerio de Vivienda, 2010Available on: <http://www.habitar.upc.edu/2010/03/11/rehabitar-1/>. ISBN 9788496387492.
- Rehabitar [Recurs electrònic] : más puertas [5] [on line]. Madrid: Ministerio de Fomento, 2011Available on: <http://www.habitar.upc.edu/2010/06/11/rehabitar-5/>.
- Rehabitar [Recurs electrònic] : fuera de lugar [6] [on line]. Madrid: Ministerio de Fomento, 2011Available on: <http://www.habitar.upc.edu/2010/07/11/rehabitar-6/>.
- Rehabitar [Recurs electrònic] : entrar por el balcón [7] [on line]. Madrid: Monisterio de Fomento, 2011Available on: <http://www.habitar.upc.edu/2011/02/11/rehabitar-7/>.
- Rehabitar [Recurs electrònic] : abandono y oportunidad [8] [on line]. Madrid: Ministerio de Fomentp, 2011Available on: <http://www.habitar.upc.edu/2011/04/11/rehabitar-8/>.
- Rehabitar [Recurs electrònic] : la calle [3] [on line]. Madrid: Ministerio de Fomento, 2011Available on: <http://www.habitar.upc.edu/2010/05/12/rehabitar-3/>.
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- Monteys, Xavier. Rehabitar : habitaciones satélite [2] [on line]. Madrid: Área de Difusión y Calidad de la Arquitectura, 2010Available on: <http://www.habitar.upc.edu/2010/04/11/rehabitar-2/>. ISBN 9788496387546.