

Private University of Tacna (UPT)
Faculty of Architecture and Urban Planning
School of Architecture



Book of short descriptions by course

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Equipo de Trabajo

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1.1 AR1D1. Design Studio I

Design Studio I: Foundations is the student's first encounter with the studio culture that defines architectural education: short, intensive design exercises, physical model-making, pin-up and desk-crit critique, and iterative revision. Starting from purely abstract explorations of space, form, and light, the course progressively scales up these operations into the student's first habitable proposal – a minimal pavilion or similar small object-to-space exercise – while introducing the orthographic and three-dimensional drawing conventions needed to communicate spatial ideas. This course has no prerequisite within the Design Studio sequence and is the foundation for Design Studio II (AR1D2).

1.2 MA100. Basic Mathematics

The Basic Mathematics course is mandatory and provides the conceptual tools necessary for logical reasoning and problem solving. The course ranges from propositional logic and set theory to the study of real numbers, complex numbers, polynomials, and matrices. These concepts are fundamental for developing the abstraction and mathematical formalization skills required in the later stages of the Computer Science program.

1.3 MA111. Calculus I

This course introduces the fundamental concepts of differential calculus of single-variable real functions. It provides the mathematical foundations necessary for analyzing change and motion in science and engineering, developing logical reasoning through the study of limits, continuity, and derivatives.

2.1 AR1D2. Design Studio II

Design Studio II: Single-Family Housing is the student's first complete, habitable design project, building on the spatial, formal, and representational foundations developed in Design Studio I (AR1D1, prerequisite). Students design a single-family house on a real lot, resolving a full domestic program – living, sleeping, service, and outdoor spaces – while responding to accessibility requirements, daylight and thermal comfort, and the specific conditions of the site. The studio introduces the residential structural systems – confined masonry, timber framing, and reinforced adobe – most commonly used to build a single-family house in Peru. It continues the pin-up/desk-crit critique culture and introduces the communication skills (design boards, physical models, verbal presentation) needed to defend a complete design proposal. This course is the foundation for Design Studio III (AR1D3).

2.2 ID101. Technical and professional English I

English is the primary language of science, engineering, and technology worldwide. For computing and engineering students, mastering English means gaining direct access to technical documentation, research papers, and professional

collaboration without translation barriers. This course builds foundational English skills using contexts drawn from computing systems, hardware, and the everyday work of engineers and scientists.

3.1 AR1D3. Design Studio III

Design Studio III: Collective Housing moves the student from the single dwelling designed in Design Studio II (AR1D2, prerequisite) to medium-density collective housing. Students explore housing typologies – blocks, duplexes, row houses – and the relationship between the individual unit, the building, and shared community space. The studio places particular emphasis on the lateral structural systems that medium-density housing requires, and on designing equitably for the social diversity of a collective housing community. This course is the foundation for Design Studio IV (AR2D1), which introduces the program’s first public building typology.

3.2 ID102. Technical and professional English II

Building on foundational English skills, this course develops the student’s ability to communicate in technical and scientific contexts with greater fluency. Grammar structures are practiced through reading and producing descriptions of technological systems, scientific phenomena, and engineering processes. Students gain vocabulary relevant to computing, data, and the physical sciences.

4.1 AR2D1. Design Studio IV

Design Studio IV: Neighborhood Facilities is the student’s first public-building project, following Design Studio III (AR1D3, prerequisite). Working at the scale of a neighborhood library or a community health post, students design a medium-scale public facility and, for the first time in the sequence, develop its structural system explicitly as part of the architectural proposal – selecting and sizing the vertical and lateral load-resisting elements, and coordinating them with construction assemblies, natural ventilation strategies, and the applicable building codes. This course is the foundation for Design Studio V (AR2D2).

4.2 ID201. Technical and professional English III

At this level, students engage with English as the primary medium for accessing and producing technical content in computing, engineering, and the sciences. Grammar structures are applied to reading scientific articles, writing technical reports, describing engineering processes, and participating in professional discussions. The course bridges everyday English fluency with the demands of technical communication.

5.1 AR2D2. Design Studio V

Design Studio V: Educational/Cultural Building develops a medium-scale building with a markedly more complex program than Design Studio IV (AR2D1, prerequisite) – a school, library, or small cultural center – in which an explicit long-span structural system and a deliberately performance-driven design process generate, rather than merely accommodate, the architectural proposal. The studio asks students to resolve daylight, acoustic, and mechanical comfort criteria for spaces with specific performance requirements (classrooms, auditoria, galleries), and to detail a high-performance building envelope that supports those criteria. This course is the foundation for Design Studio VI (AR2D3).

5.2 AR400. Methodology of Research

Architectural Research Methodology equips students with the general methodological toolkit of architectural research before they begin the thesis sequence (Thesis I-III, AR401-AR403). The course covers quantitative research methods (surveys, experiments, statistical analysis), qualitative and ethnographic methods (interviews, observation, grounded theory), evidence-based design (translating research evidence into design decisions), and post-occupancy evaluation and building science (assessing measured building performance and user satisfaction). Unlike Thesis I (AR401), which applies research design, theoretical frameworks, and hypothesis formulation directly to each student's own thesis topic, this course builds the broader, topic-independent methods foundation that AR401 later draws on and specializes.

5.3 ID202. Technical and professional English IV

At the intermediate level, students apply English to the full range of technical communication required in computing and engineering practice: reading research papers, writing structured technical documents, analyzing case studies, and engaging in professional dialogue. Grammar structures are taught through authentic computing and engineering contexts, reinforcing both linguistic competence and disciplinary knowledge.

6.1 AR2D3. Design Studio VI

Design Studio VI: Mixed-Use Building raises the program and scale complexity introduced in Design Studio V (AR2D2, prerequisite) to a taller, mixed-use building that stacks residential, commercial, and/or civic uses and requires explicit coordination with building systems (structural, envelope, and MEP). Students design a building whose viability depends as much on development feasibility as on architectural resolution, and practice the project-management skills needed to carry a complex proposal from concept through a coordinated construction-ready design. This course is the foundation for the Urban Design Studio sequence that begins with Design Studio VII (AR3D1).

6.2 ID203. Technical and professional English V

A fundamental part of the integral formation of a professional is the ability to communicate in a foreign language in addition to the native language itself. In the engineering and computing career, technical English is the most critical tool for accessing the forefront of knowledge and research, writing scientific papers, participating in international conferences, and collaborating in global teams. This course brings students to the level of autonomous technical communicators capable of producing and critically evaluating academic and professional content.

7.1 AR3D1. Design Studio VII

Urban Design Studio VII: Public Space and Landscape shifts the sequence's scale of operation from the single building, the focus of Design Studio VI (AR2D3, prerequisite), to the city: streets, blocks, public space, and the urban tissue that frames every building the students have designed so far. Students analyze the morphology of an existing urban fabric and the planning frameworks (zoning, master-planning, contemporary urban theory) that shape it, then propose an urban design and landscape intervention at the scale of a public space, a street, or a neighborhood. The course is the foundation for Design Studio VIII (AR3D2), the first of the two more specialized, higher-complexity studios that close the sequence.

8.1 AR3D2. Design Studio VIII

Design Studio VIII: Heritage and Complex Project follows the urban scale of Urban Design Studio VII (AR3D1, prerequisite) with a return to the building scale, now at a markedly higher level of complexity: students choose between the adaptive reuse of a historic building, or a large institutional project, as the specialization axis of this studio. The heritage track introduces the philosophical foundations and documentation methods of architectural conservation, the structural assessment of existing historic fabric, and the design strategies for adapting a historic building to new uses, including circular-economy principles for material reuse. This course is the foundation for Design Studio IX (AR3D3).

8.2 AR401. Capstone project I

Thesis I: Research and Program introduces students to the systematic process that precedes architectural design development: selecting and scoping a thesis topic, conducting a rigorous review of precedents, case studies and literature, building a theoretical and conceptual framework, and – where applicable to the chosen thesis approach – formulating research hypotheses and operationalizing their variables. The course closes by applying design research methods to translate these findings into an architectural program (design brief) that will directly drive the preliminary design developed in Thesis II (AR402).

9.1 AR3D3. Design Studio IX

Design Studio IX: Metropolitan Infrastructure and Civic Facility raises the sequence's scale and program complexity once more after Design Studio VIII (AR3D2, prerequisite), to the metropolitan scale: students design a high-complexity civic facility – a transit terminal, a stadium, a convention center – whose scale requires long-span structural systems and an explicit integration with the city's urban structure, alongside the development feasibility analysis appropriate to a project of this magnitude. This course is the foundation for the sequence's final, most comprehensive studio, Design Studio X (AR3D4).

9.2 AR402. Capstone project II

This course develops the architectural preliminary design (anteproyecto) of the student's own thesis project, building directly on the program and theoretical framework produced in Thesis I (AR401, prerequisite). Each student works under the individualized supervision of a thesis advisor whose expertise matches the chosen project typology, developing a design proposal that responds to the program, site context, and evidence-based design criteria through continuous and final evaluation.

10.1 AR3D4. Design Studio X

Design Studio X: Comprehensive Architectural Project closes the Design Studio sequence that began in Design Studio I (AR1D1) and continued through Design Studio IX (AR3D3, prerequisite). Students develop a high-complexity anteproyecto (preliminary design) that integrates, for the first time within a single project, every major dimension practiced across the sequence: a complex building program, a fully coordinated structural and systems assembly, net-zero-oriented sustainability strategies, and Building Information Modeling as the representational and coordination platform, all verified against applicable building codes. Unlike the Thesis sequence (AR401-AR403), this course does not involve thesis research or an individual defense: it is the Design Studio sequence's comprehensive, integrative capstone project.

10.2 AR403. Capstone project II

This course develops the student's anteproyecto (AR402, prerequisite) into a complete executive-level architectural project: full technical construction documentation, coordination of building systems and assemblies, compliance with applicable building codes and regulations, and selection of an appropriate project delivery method and contract framework. The course culminates in the final defense (sustentación) of the thesis before a jury, under the continued individualized supervision of the thesis advisor.