Universidad San Pablo CEU
Escuela Politécnica Superior

Visiting Team Report

Visit Three for Substantial Equivalency

Grado en Arquitectura* (Degree in Architecture)
Professional Degree

Syllabus 2010. 330 ECTS or 4,050 hours + Final Degree Project (30 ECTS)
ECTS refers to the European Transfer and Accumulation System.
One (1) ECTS "generally corresponds to 25-30 hours of work."

Titulo de Arquitecto (Diploma of Architect Degree)
Professional Degree

Syllabus 2001. 405 LRU or 4,050 hours + Final Degree Project
LRU refers to the Ley e Reforma Universitaria (1983).
One (1) LRU "generally corresponds to 10 hours of class time.

*Currently, the program is phasing out the Diploma of Architect degree (Título de Arquitecto) 2001 plan curriculum and degree nomenclature to fully meet European Council Directives, as well as new Spanish legislation. It is being replaced by the 2010 plan for the Degree in Architecture, a bilingual program. The last class to graduate with a Diploma of Architect degree will be in 2017. Graduates from both curricula are entitled to practice architecture in Spain.

The National Architectural Accrediting Board
April 20–23, 2015

Date of Visit Two: March 2014

Vision: The NAAB aspires to be the leader in establishing educational quality assurance standards to enhance the value, relevance, and effectiveness of the architecture profession.

Mission: The NAAB develops and maintains a system of accreditation in professional architecture education that is responsive to the needs of society and allows institutions with varying resources and circumstances to evolve according to their individual needs.

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I. Summary of Team Findings

1. Team Comments and Visit Summary

The visiting team returned to Universidad San Pablo CEU's architecture program 1 year after Visit Two. It has found that the program has responded to the comments and implemented the necessary adjustments to the five areas that it had not met in Visit Two, including one SPC, B.3. Sustainability. This SPC is now **Met with Distinction**. This attests to both excellent organization and a collaborative working environment. It is noted that the program is administered by a lean academic and support staff.

The team thanks the program, the school, and the university for their hospitality and congratulates the program for its excellent work and the care with which all the materials for the visit were presented. The visiting team met with a significant number of San Pablo CEU chief administrators, including the Escuela Politécnica Superior (EPS) Director, the General Director of the Foundation San Pablo CEU, the Chancellor, the General Secretary, the Vice-Chancellor of Research, the Adjunct Vice-Chancellor of Teaching Staff, and the Vice-Chancellor of Alumni. In conversations with the various administrators, the visiting team confirmed that the architecture program is highly valued. All have fully supported the NAAB SE process. The team's meetings with faculty members and with students were very well attended.

Preparation for the visit and its coordination was provided by the program director, the program's academic secretary, and a team of committed faculty members and non-teaching staff. Materials in the team room were updated as required by the NAAB SE Procedures. The team room was designed and constructed with the collaboration of two of the program's graduates. The contents of the team room were exceptionally well selected and organized. The team room fairly represented a sample of student work in a program with an enrollment of about 700 students. The required examples of high- and low-pass student work were provided on the walls, and additional highs and lows for the projects used as evidence were archived in portfolios for additional support.

The visiting team was thoroughly embraced by the faculty and students of Universidad San Pablo CEU. The team was courteously immersed into the distinct manner of Spain's architectural licensing and regulation systems. We met with two representatives of the Fundación para el Conocimiento Madrimasd (Foundation for Knowledge Madrid) (Jesús Rojo and Guillermo García-Badell). This organization is entrusted by law with the accreditation of academic programs offering "official titles" in the "regulated professions," such as architecture. The program is in compliance with European Higher Education Area directives, as well as national and regional legislation on architecture education.

The program has responded to the university's initiatives for internationalization, increased research activities, new academic offerings, and partnerships with industry. A large majority of the program's faculty members are registered architects, a significant number hold doctoral degrees, and others are both registered architects and have doctorates. They publish and have won awards for their architectural work and for their research. Also noted were the faculty members involved in the activities of the Official College of Architects of Madrid (COAM) (Colegio Oficial de Arquitectos de Madrid); in turn, the COAM is directly involved in the reviews of the Final Degree Project (Proyecto Fin de Carrera, or PFC). The program maintains a number of collaborative efforts with universities nationally and abroad and with nonprofit organizations, and partnerships with construction companies. The program has acted on the university's request for a multidisciplinary approach and collaboration.

We discovered and were very impressed with the creative and colorful expression within the foundational studio work. The students' work was striking with regard to the depth of the integration of the technological systems of buildings into architectural design, as well as their consideration of the urban context. The thoroughness of the PFC is to be commended and

celebrated. It is clear that the students enjoy their experience at the EPS and enjoy learning with their instructors.

The program has many areas that the team found unique and impressive. Among them is the fabrication lab (FabLab), which has shown its potential as an innovation center for the program and the university. The FabLab is part of the program's ongoing reorganization to better serve the students and fulfill the university's mandate. The EPS is currently exploring funding sources for the FabLab. As Spain's architecture community continues to emerge from a period of economic distress, the program at Universidad San Pablo CEU has positioned itself well for the challenges ahead.

2. Conditions Not Met

All have been met.

3. Causes of Concern

A. SPC A.9. Historical Traditions and Global Culture: In the History of Architecture sequence, scant evidence was found regarding an understanding of canons and traditions in the Eastern hemisphere, except for some discussion of select contemporary work. Minimal attention was given to the Southern hemisphere. For a program that has made internationalization one of its goals, more attention to this criterion is expected as more students from Asia and South America are recruited, and as students from the San Pablo CEU program study abroad.

B. Preparation for international practice: The holistic understanding of the architect's role taught at San Pablo CEU may not expose the students to the practice management and project management responsibilities that will come when working internationally. These include the need to understand consultant roles, the definition of scope of services, contractual requirements, etc.

C. Need to strengthen diversity initiatives: The program has established clear policies for ensuring a balance of men and women within the student body, faculty, governance areas, and staff, and it is making outreach efforts to bring a more diverse student body onto the campus (exchanges with China and the Erasmus program); however, the overall composition of the student body and the faculty is homogeneous in the areas of color, ethnicity, and cultural background.

4. Progress Since the Previous Site Visit (2014)

I.1.4 Long-Range Planning: *A substantially equivalent degree program must demonstrate that it has identified multi-year objectives for continuous improvement within the context of its mission and culture, the mission and culture of the institution, and the five perspectives. In addition, the program must demonstrate that data is collected routinely and from multiple sources to inform its future planning and strategic decision making.*

Visit Two Team Assessment (2014): The APR described in great detail an *external* long-range planning process set forth by the Spanish government. However, there is no evidence of an *internal,* departmental process for long-range planning.

Visit Three Team Assessment (2015): This condition has been **Met**. The APR describes in detail the current long-range plans and the processes for reviewing, evaluating, and modifying these plans in the areas of university-level administration and faculty, program-level data and metrics, global and international involvement, and the five perspectives. This was evident in the discussions with the program director and in

documents provided in the team room. Because the core of the curriculum is established by the Spanish government and European Council Directives, there is less opportunity for major curricular changes. However, classroom and studio implementation of this curriculum offer opportunities to create a distinctive program that will also express the uniqueness and identity of the university.

The program participates in the university's effort for internationalization and increased research. The program has enhanced the advising/tutoring system and transformed the PFC into "a space for integrated learning and design." Furthermore, it has established a number of laboratories to integrate knowledge domains and to support multidisciplinary collaboration. It has added an architectural innovation workshop and elective specialization workshops at the fifth-year level to promote a "culture of innovation." The labs offer links to research internally and externally.

The program has updated its admissions policies for national and international students, and it has reorganized its bilingual program to attract international students and increase the employability of its graduates. Also, to attract additional students and expand its position within the design community, a number of programs of study have been added. The school offers an undergraduate degree in interior design—currently pending accreditation—and a postgraduate Master's degree (Máster Universitario Oficial) in advanced architectural design. It offers an advanced diploma (Título Propio - posgrado) in digital fabrication, and another in energy and sustainable building construction. The school initiated a postgraduate Master's-level program (Máster Propio - posgrado) in interior urban design.

I.4—POLICY REVIEW

Visit Two Team Assessment (2014): The information required by Appendix 4 of the Conditions for Substantial Equivalency was not provided in the team room during the visit. Therefore, this condition is not met. The information required in the three sections listed for Policy Review as described above was addressed in the APR.

Visit Three Team Assessment (2015): This condition is **Met**. Copies of the documents listed in Appendix 4 were available in the team room as required.

II.2.3 Curriculum Review and Development:
The program must describe the process by which the curriculum for the substantially equivalent degree program is evaluated and how modifications (e.g., changes or additions) are identified, developed, approved, and implemented. Further, the NAAB expects that programs are evaluating curricula with a view toward the advancement of the discipline and toward ensuring that students are exposed to current issues in practice. Therefore, the program must demonstrate that architects authorized to practice in the country where the program is located are included in the curriculum review and development process.

Visit Two Team Assessment (2014): Although the APR thoroughly discusses the curriculum required and set by the Spanish government, there is no evidence of the internal process utilized by the architecture program administration and faculty at CEU to organize and implement the requirements or changes. There is no evidence of how faculty/staff/students are included in the decision-making process. The team was not able to find evidence of any format or procedure within the department's policies for making changes or updating the curriculum.

Visit Three Team Assessment (2015): The 2014 APR includes a thorough explanation of the changes in the regulation of the professional education of architects in Spain since 2001. The current bilingual program of study for the Degree in Architecture (Grado en Arquitectura) was instituted in 2010. The 2001 plan leading to the Diploma of Architect

degree (Título de Arquitecto) is being phased out, a process that will be completed by 2017. Professor Chiqui Pérez Gutiérrez is responsible for advising students enrolled under the 2001 plan.

The current plan of study responds to a number of directives, among them the European Higher Education Area directives (Bologna process). The plan was approved by the Council of Ministers of the Spanish government (Consejo de Ministros). Adjustments involved the renumbering and recalculation of the number of credits per knowledge area. The credits are now designated as ECTS (European Credit Transfer and Accumulation System). The curricular structure is composed of three modules with a minimum number of ECTS credits, which is mandated by the Bologna process and accepted by the Spanish government.

The program complies with several regulations. Among them are European Council Directives 85/384/EEC and 2005/36/EEC, Order from the Spanish Ministry of Education ECI/3856/2007, and Royal Decree RD 314/2006. Significantly, and in relation to curriculum review and development, the San Pablo CEU program's compliance with ECI/3856/2007 is on the cutting edge in Spain, as it is not yet compulsory. This directive mandates the participation of "at least a distinguished architect recommended by the professional organizations" in the jury reviewing the Final Degree Project (PFC). The program at San Pablo CEU already includes, as a matter of practice, one distinguished architect and a COAM representative in the jury of every student presenting his or her PFC.

II.4.1 Statement on Substantially Equivalent Degrees:
In order to promote an understanding of the substantially equivalent professional degree by prospective students, parents, and the public, all schools offering a substantially equivalent degree program or any candidacy program must include in catalogs and promotional media the exact language found in the NAAB Conditions for Substantial Equivalency*, Appendix 6.*

Visit Two Team Assessment (2014): The link to the website provided in the APR was broken. During the visit, the team found that San Pablo CEU had developed a new website since the time the APR was written. Since the link to the Statement on Substantially Equivalent Degrees is no longer available, this condition is not met.

Visit Three Team Assessment (2015): This condition is **Met**. The NAAB language on Substantial Equivalency is found via a link on the school's website.

II.4.2 Access to NAAB Conditions and Procedures:
In order to assist parents, students, and others as they seek to develop an understanding of the body of knowledge and skills that constitute a professional education in architecture, the school must make the following documents available to all students, parents, and faculty:
The 2012 NAAB Conditions for Substantial Equivalency
The NAAB Procedures for Substantial Equivalency (edition currently in effect)

Visit Two Team Assessment (2014): The link to the website provided in the APR was broken. During the visit, the team found that San Pablo CEU had developed a new website since the time the APR was written. Since the link to the NAAB Conditions and Procedures is no longer available, this condition is not met.

Visit Three Team Assessment (2015): This condition is **Met**. Reference to the NAAB Conditions and Procedures and links to the NAAB website are provided via the school's website.

B.3. Sustainability: *Ability* to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

Visit Two Team Assessment (2014): Not yet met. No evidence of ability to design projects that provide healthful environments for occupants was found. In fact, the team room was constructed with paper products, glues, and paints that caused allergic reactions for two of the team members. The team work area had to be relocated to the mezzanine and windows and doors had to be left open. Fans were run for one day. However, the other areas of sustainability were well covered and well represented through studio projects and technical drawings. There is also a sustainability laboratory.

Visit Three Team Assessment (2015): This criterion is **Met with Distinction**. Evidence is found throughout the upper-level studio and theory coursework, including A304 Environmental Systems, A311 Urban Design II, A505 Architectural Innovation Workshop, and the Final Degree Project (PFC).

C.1. Collaboration: *Ability* to work in collaboration with others and in multi-disciplinary teams to successfully complete design projects.

Visit Two Team Assessment (2014): No evidence of the students' ability to work in multidisciplinary teams was available. However, architecture students were observed working together on many projects and in quite a few classes. The team enjoyed seeing teams of students create and test (destroy) beams for a structures course. This SPC is not *yet* met.

Visit Three Team Assessment (2015): The criterion is **Met**. Evidence has been demonstrated in A404 Urban Planning. All students in the program are required to collaborate with others on the Sierra Leone Project in this course. Collaboration is also found in the Building Construction and the Structures sequences. Collaboration is practiced in the A505 Architectural Innovation Workshop. Additional opportunities for collaborative work are through enrollment in the vertical studio (Taller Transversal [TT]), which is open to students from the second to the fifth year, and in the joint studios with Politecnico di Milano, Syracuse University, MIT in Sestao in the Basque country, and Zhejiang University in China. Evidence was also found in elective coursework such as A512 Restoration Theory and Techniques: Çatalhöyük Project, a workshop that offers significant team collaboration experience working with a multidisciplinary team (with archeologists) under the guidance of an architect.

II. Compliance with the Conditions for Substantial Equivalency

PART ONE (I): INSTITUTIONAL SUPPORT AND COMMITMENT TO CONTINUOUS IMPROVEMENT

PART ONE (I): SECTION 1—IDENTITY AND SELF-ASSESSMENT

I.1.1 History and Mission: *The program must describe its history, mission and culture and how that history, mission, and culture is expressed in contemporary context. Programs that exist within a larger educational institution must also describe the history and mission of the institution and how that history, mission, and culture is expressed in contemporary context.*

The substantially equivalent degree program must describe and then provide evidence of the relationship between the program, the administrative unit that supports it (e.g., school or college) and the institution. This includes an explanation of the program's benefits to the institutional setting, how the institution benefits from the program, any unique synergies, events, or activities occurring as a result, etc.

Finally, the program must describe and then demonstrate how the course of study and learning experiences encourage the holistic, practical and liberal arts-based education of architects.

[X] The program has fulfilled this requirement for narrative and evidence.

Visit Three Team Assessment: This condition is **Met**. The narrative in the APR describes the history and mission at both the university level and the architecture program level. During the visit, additional information was shared in meetings with Federico de Isidro Gordejuela, the director of the Architecture and Construction Engineering division of the EPS. The team met with key faculty members serving in the following capacities: as the academic secretary, heads of knowledge areas, coordinator of advisement, coordinator of the bilingual program, and coordinator of international relations. The team also met with the director of the EPS, David Santos Mejía. All confirmed and added to the information in the APR.

The team's conversations with the San Pablo CEU chief administrators, which included Chancellor Juan Carlos Domínguez Nafría, reinforced the impression that the architecture program is a highly valued asset because of its high visibility and its strong traditions and connections to the university. Maintaining and enhancing the presence of the architecture program is part of the strategic vision of the university.

I.1.2 Learning Culture and Social Equity:

- *Learning Culture: The program must demonstrate that it provides a positive and respectful learning environment that encourages the fundamental values of optimism, respect, sharing, engagement, and innovation between and among the members of its faculty, student body, administration, and staff in all learning environments, both traditional and nontraditional.*

  Further, the program must demonstrate that it encourages students and faculty to appreciate these values as guiding principles of professional conduct throughout their careers, and it addresses health-related issues, such as time management.

  Finally, the program must document, through narrative and artifacts, its efforts to ensure that all members of the learning community (faculty, staff, and students) are aware of these objectives and are advised as to the expectations for ensuring they are met in all elements of the learning culture.

- *Social Equity: The substantially equivalent degree program must first describe how social equity is defined within the context of the institution or the country in which it is located and then demonstrate how it provides faculty, students, and staff with a culturally rich educational environment in which each person is equitably able to learn, teach, and work.*

[X] The program has demonstrated that it provides a positive and respectful learning environment.

[X] The program has demonstrated that it provides a culturally rich environment in which each person is equitably able to learn, teach, and work.

Visit Three Team Assessment: The visiting team assessed these terms positively, but considers it worthwhile to briefly state the rationale and evidence for the team's conclusions. The program has demonstrated achievement of both objectives, first, through its instituted policies and, second, in the responses of administrators, faculty, staff, and students to questions posed by the visiting team. The observations of the team while at San Pablo CEU also confirmed that these objectives have been achieved.

During our interactions with the faculty, staff, and students, the team observed a positive and respectful culture among the various constituencies. The expansion of the building provides a fresh learning environment for all users. The program offers opportunities and support for student leaders to excel in various areas, as well as opportunities to travel and study abroad. Some grants and scholarships are available. Travel opportunities enrich student learning, allow familiarization with architectural practices in other parts of the world, and provide faculty members with opportunities to research and collaborate.

I.1.3 Response to the Five Perspectives: *Programs must demonstrate, through narrative and artifacts, how they respond to the following perspectives on architecture education. Each program is expected to address these perspectives consistently within the context of its history, mission, and culture and to further identify as part of its long-range planning activities how these perspectives will continue to be addressed in the future.*

A. Architecture Education and the Academic Community. *That faculty, staff, and students in the substantially equivalent degree program make unique contributions to the institution in the areas of scholarship, community engagement, service, and teaching.*[1] *In addition, the program must describe its commitment to the holistic, practical, and liberal arts-based education of architects and to providing opportunities for all members of the learning community to engage in the development of new knowledge.*

[X] The program is responsive to this perspective.

Visit Three Team Assessment: The program supports the institution's efforts in three major areas: internationalization, interdisciplinary collaboration, and research activities. The program's faculty members, students, and graduates showcase the university regionally, nationally, and internationally. The program attracts students with strong academic backgrounds. Faculty members and graduates make individual contributions to important national and regional projects. One example is the Madrid Think Tank, coordinated by the COAM, which has had an impact on the built environment of the Madrid region. Other contributions are articles published in journals such as *Future Architecture* and in the program's own journal *Constelaciones/Constellations*, as well as presentations at conferences, exhibitions, and competitions.

The program contributes to the academic environment by participating in the development of postgraduate studies in collaboration with other university research centers and schools. Examples are the collaboration with the School of Medicine and with the School of Humanities and Media Studies. The school has developed programs with Zhejiang University in China, Milan Polytechnic in Italy, Makeni University in Sierra Leone, and Abomey-Calavi University in Benin, among others. These partnerships have resulted in research funded by Spain's Ministry of

[1] See Boyer, Ernest L. *Scholarship Reconsidered: Priorities of the Professoriate*. Carnegie Foundation for the Advancement of Teaching. 1990.

Science and Innovation and its Ministry of Economy, as well as the Airbus international aircraft manufacturing company, among others. Faculty members have an active research agenda in a number of areas, including historic conservation, sustainable development, contemporary architecture, urban planning, and architectural representation.

The creation of four laboratories has facilitated focused academic and research work: Sustainability, Habitability and Development, Digital Fabrication, and Innovation. In turn, such work has brought about new programs of study, degree programs, and research projects. The FabLab-MIT relationship helps place the program on the cutting edge of design and fabrication, and is the locale for interdiscisplinary and interuniversity collaboration. In 2014, the FabLab, in conjunction with archaeology and architecture faculty members, collaborated with the Universidad Técnica Particular de Loja in Ecuador to document and reconstruct a site in Loja. The recently founded Laboratory of Innovation already has partnerships with construction companies, has generated research, and has provided content for the Ph.D program (the Airbus project). It supports the Laboratory of Innovation and the A505 Architectural Innovation Workshop.

Faculty members, students, and staff coordinate design competitions on campus, contribute to exhibitions and lecture series, and bring distinguished architects to the campus. In turn, faculty members benefit from research fellowships and sabbaticals. Students draw knowledge and experience from volunteer programs and scholarships. Students in both groups benefit from the international agreements of exchange programs abroad.

The program expands its possibilities through its proximity to the Engineering department. This allows cross-disciplinary collaboration through programs of study, research labs, and projects. The architecture program's academic and research activities are also supported by faculty members in Humanities, Quantitative Methods, Pharmacy, and Medicine.

B. Architecture Education and Students. *That students enrolled in the substantially equivalent degree program are prepared to live and work in a global world where diversity, distinctiveness, self-worth, and dignity are nurtured and respected; to emerge as leaders in the academic setting and the profession; to understand the breadth of professional opportunities; to make thoughtful, deliberate, informed choices; and to develop the habit of lifelong learning.*

[X] The program is responsive to this perspective.

Visit Three Team Assessment: The program complies with the most recent Spanish government's legislation and European Council Directives for higher education and professional education. The program is committed to integrating sustainability and real-world contexts and problems.

Students are an important asset of the program and the institution. They have a strong academic background, and are focused on and committed to their studies. The program also attracts international students. Students interact with a body of faculty members where approximately 67 percent are registered architects and 23 percent have a doctoral degree in architecture. In addition, students study with faculty members who have advanced knowledge in urban planning, geography, archaeology, history, art, civil and industrial engineering, mathematics, chemistry and physics, and ecclesiastical studies.

Students can take advantage of joint studios, summer and exchange programs, and research opportunities locally, nationally, and abroad. They participate in design competitions, and their work is published in architecture journals. They interact with distinguished architects from Spain and other countries. The work for the Final Degree Project (PFC) is assessed by members of the professional community, specifically, representatives of the COAM and architects from abroad. This is a unique aspect of the program, which is not yet found in other programs in the region. Students have access to four laboratories, where they collaborate with Engineering students and

others. They also work with the Engineering department in the building structures and construction materials labs. The university supports an employment advice and information center (Center for Professional Practice in Spain and Abroad), which facilitates internships prior to graduation and job placement upon graduation. The program provides three levels of academic advisement: a personal tutor, an academic tutor, and a mentor. The latter is a student nearing the end of his or her studies. This encourages vertical, or transversal, communication among the student body and lays the groundwork for professional collegiality and collaboration. Academic work is coordinated by group coordinators, teaching unit administrators, and module/subject coordinators to minimize conflict and to ensure that every student has access to the requisite skills and knowledge.

C. Architecture Education and the Regulatory Environment. *That students enrolled in the substantially equivalent degree program are provided with a sound preparation for the transition to licensure or registration. The school may choose to explain in the APR the degree program's relationship with the process of becoming an architect in the country where the degree is offered, the exposure of students to possible internship requirements, the students' understanding of their responsibility for professional conduct, and the proportion of graduates who have sought and achieved licensure or registration since the previous visit.*

[X] The program is responsive to this perspective.

Visit Three Team Assessment: This condition is **Met**. The licensure process in Spain is different from that of the United States. Graduates with a Diploma of Architect degree are entitled to practice as architects under European Council Directives (1985, 2005), the Spanish Royal Decree (2006), and the Spanish Order (2007). Registration as an architect is granted through the COAM in Madrid and other such regional advocacy/regulatory organizations of architectural practice in Spain. Each region has its own registration organization. A majority of faculty members are members of the COAM. The students' understanding of the regulations and practice within the profession was evident in coursework and in conversations with the administration and faculty. A member of the COAM participates in the jury that evaluates the Final Degree Projects. This is a unique aspect of the program, not yet practiced in other programs in the region.

D. Architecture Education and the Profession. *That students enrolled in the substantially equivalent degree program are prepared: to practice in a global economy; to recognize the positive impact of design on the environment; to understand the diverse and collaborative roles assumed by architects in practice; to understand the diverse and collaborative roles and responsibilities of related disciplines; to respect client expectations; to advocate for design-based solutions that respond to the multiple needs of diverse clients and populations, as well as the needs of communities; and to contribute to the growth and development of the profession.*

[X] The program is responsive to this perspective.

Visit Three Team Assessment: This condition is **Met**. Students have a strong desire to enter the profession, and they work at a high level to achieve the required level of understanding of the profession. The presence of faculty members who are practicing architects, the interaction of the COAM as part of the review of the PFC projects, and the exposure students have when participating in the international study options all prepare students for practice. There is some concern, however, that the uniqueness of the professional structure within Spain may not provide students with a full understanding of the professional practice methods used internationally.

E. Architecture Education and the Public Good. *That students enrolled in the substantially equivalent degree program are prepared: to be active, engaged citizens; to be responsive to the needs of a changing world; to acquire the knowledge needed to address pressing environmental, social, and economic challenges through design, conservation, and responsible professional*

practice; to understand the ethical implications of their decisions; to reconcile differences between the architect's obligation to his/her client and the public; and to nurture a climate of civic engagement, including a commitment to professional and public service and leadership.

[X] The program is responsive to this perspective.

Visit Three Team Assessment: This condition is **Met**. Studio work involves documentation, analysis, as well as synthesis for historical neighborhoods and districts in transition in the city of Madrid and in its region. The program promotes the value of architecture with activities such as the TransFormMad exhibition, and with the COAM. Students and faculty also tackle projects in other regions of Spain that consider ecological, social, and cultural dimensions, as well as compositional and technical factors. A number of recent projects demonstrate the program's commitment to engaging students with the idea of civic responsibility in an ethical and responsible practice. Students volunteer for activities through the San Pablo CEU University Foundation's Cooperation for International Development (Cooperación al Desarrollo International). This entity supports some of the program's projects, such as collaboration with universities in Benin and Sierra Leone. At the program level, service to the larger community is rendered through projects such as the collaboration with Arabarri for the Álava region in Spain. It is also achieved via research projects with student participation such as "Teaching Spaces," "Parameters of basic habitability that promote human health," and "Redeploying convents and other religious buildings to create new urban spaces," among others. Recently, a collaboration with Makeni University in Sierra Leone generated a series of student and faculty projects that received an award from the Global Dimension in Engineering Education.

I.1.4 Long-Range Planning: *A substantially equivalent degree program must demonstrate that it has identified multi-year objectives for continuous improvement within the context of its mission and culture, the mission and culture of the institution, and the five perspectives. In addition, the program must demonstrate that data is collected routinely and from multiple sources to inform its future planning and strategic decision making.*

[X] The program's processes meet the standards as set by the NAAB.

Visit Three Team Assessment: This condition is **Met**. The APR describes in detail the current long-range plans and the processes for reviewing, evaluating, and modifying these plans in the areas of university-level administration and faculty, program-level data and metrics, global and international involvement, and the five perspectives. These details were evident in discussions held with the program director. The majority of the curriculum is established by the government (approximately 85 percent), thereby providing fewer opportunities for major curricular changes. Classroom and studio implementation of this curriculum leave room for distinctiveness. To attract additional students and expand the program's position within the design community, a doctoral-level program of study has been created. A new interior design program has been added, and other design-related programs are under consideration.

In our meetings with the program director, the ongoing successful implementation of the bilingual Degree in Architecture program was discussed. The team confirmed that most of the course syllabi and other documents up to the third-year level were presented both in English and Spanish. In 2 to 3 years, it is to be expected that all documents—including the various evaluation reports for the PFC, both public and confidential, such as the Tutor's Report (Informe de Tutor)—will be available in Spanish and English.

I.1.5 Self-Assessment Procedures: *The program must demonstrate that it regularly assesses the following:*

- *How the program is progressing toward its mission.*
- *Progress against its defined multiyear objectives (see I.1.4 Long-Range Planning) since the objectives were identified and since the last visit.*

- *Strengths, challenges, and opportunities faced by the program while developing learning opportunities in support of its mission and culture, the mission and culture of the institution, and the five perspectives.*
- *Self-assessment procedures shall include, but are not limited to:*
    - *Solicitation of faculty's, students', and graduates' views on the teaching, learning, and achievement opportunities provided by the curriculum.*
    - *Individual course evaluations.*
    - *Review and assessment of the focus and pedagogy of the program.*
    - *Institutional self-assessment, as determined by the institution.*

The program must also demonstrate that results of self-assessments are regularly used to advise and encourage changes and adjustments to promote student success as well as the continued maturation and development of the program.

[X] The program's processes meet the standards as set by the NAAB.

Visit Three Team Assessment: This condition is **Met**. Self-assessment is mandated by law as a requirement for accreditation by the University Foundation San Pablo CEU (FUSP) (Centro de Estudios Universitarios) at the Montepríncipe campus, where the architecture program is located, and at the program level within the Escuela Politécnica Superior (EPS) through the Internal Quality Control System, which formalizes proposals for the Quality Improvement Plan. The APR identifies the organization and processes for self-assessment, and the visiting team reviewed documents in the team room that were generated from such efforts. Student performance, faculty teaching quality and productivity, management and operation, and communication are among the indicators assessed.

PART ONE (I): SECTION 2—RESOURCES

I.2.1 Human Resources and Human Resource Development:

- *Faculty and Staff:*
  - *A substantially equivalent degree program must have appropriate human resources to support student learning and achievement. This includes full- and part-time instructional faculty, administrative leadership, and technical, administrative, and other support staff. Programs are required to document personnel policies, which may include, but are not limited to, faculty and staff position descriptions.*[2]
  - *Substantially equivalent programs must document the policies they have in place to further social equity or diversity initiatives appropriate to the cultural context of the institution.*
  - *A substantially equivalent degree program must demonstrate that it balances the workloads of all faculty and staff to support a tutorial exchange between the student and teacher that promotes student achievement.*
  - *A substantially equivalent degree program must demonstrate it is able to provide opportunities for all faculty and staff to pursue professional development that contributes to program improvement.*
  - *Substantially equivalent programs must document the criteria used for determining rank, reappointment, tenure, and promotion as well as eligibility requirements for professional development resources.*

[X] Human resources (faculty and staff) are adequate for the program.

Visit Three Team Assessment: This condition is **Met**. The APR documents the faculty and staff opportunities and resources for instruction, research, instructional and tutorial workloads, and faculty rank/advancement. The ratio of faculty to students is approximately 1 to 8, which enables the students to have good access to the faculty for personal tutoring. Faculty exchanges through university-sponsored research, collaboration agreements, and Erasmus and other programs have begun to enhance diversity outreach among faculty and students. Policies and criteria for hiring, promotion, tenure, and reappointment exist and were available for review in the team room. Also available was evidence of faculty activity supported by sabbatical leave, funded travel, and funded research.

- *Students:*
  - *A substantially equivalent program must document its student admissions policies and procedures. This documentation may include but is not limited to application forms and instructions, admissions requirements, admissions decisions procedures, financial aid and scholarships procedures, and student diversity initiatives. These procedures should include first-time, first-year students as well as transfers within and outside of the university.*
  - *A substantially equivalent degree program must demonstrate its commitment to student achievement both inside and outside the classroom through individual and collective learning opportunities.*

[X] Human resources (students) are adequate for the program.

Visit Three Team Assessment: This condition is **Met**. The visiting team had access to the admissions policies and procedures, and reviewed samples of academic files for newly admitted students and transfer students, which contained admission communication in addition to transfer credit decisions. The visiting team was made aware that the cost of private education is at least 50 percent higher than that of public education, and that access to scholarship funding is limited. San Pablo CEU offers some scholarships and work-study opportunities, but all agree that more funding is necessary. In meetings with students, the visiting team learned that some students transfer to public institutions in their second and third year to reduce financial stress.

[2] A list of the policies and other documents to be made available in the team room during a substantial equivalency visit is in Appendix 4 of the 2012 Conditions for Substantial Equivalency.

The program demonstrates a commitment to its students in the implementation of a strong advising/tutoring system consisting of three tiers: personal advisor, academic tutor, and student mentor. It supports the Final Degree Project (PFC) by providing faculty resources, equipment, and space. It facilitates internships and job placement after graduation. It facilitates interaction between students and practicing architects in class, with lectures, and through PFC reviews. The program has developed agreements with other higher education institutions nationally and abroad that expose students to other cultures and conditions. It offers students opportunities for learning and research through the university's volunteer extra-curricular activities program, the program's laboratories and service facilities such as the plotting center, study field trips, and summer programs.

I.2.2 Administrative Structure and Governance:

- **Administrative Structure:** *A substantially equivalent degree program must demonstrate it has a measure of administrative autonomy that is sufficient to affirm the program's ability to conform to the conditions for substantial equivalency. Substantially equivalent programs are required to maintain an organizational chart describing the administrative structure of the program and position descriptions describing the responsibilities of the administrative staff.*

  [X] Administrative structure is adequate for the program.

  Visit Three Team Assessment: This condition is **Met**. The APR and other official university publications include an organizational chart, which establishes that the Degree in Architecture (Grado de Arquitectura) program is led by a head of the academic unit. In this case, Federico de Isidro is the program director. He also serves as the EPS administrator and reports to the EPS director, David Santos Mejía, the chief academic officer of the EPS. The program's director works closely with the EPS academic secretary. If needed, they have full access to the University Governing Council and the University Senate. The responsibilities of all administrative positions are defined, and detailed information regarding these responsibilities can be found in the APR. Updated information was available in the team room.

  Governance: *The program must demonstrate that all faculty, staff, and students have equitable opportunities to participate in program and institutional governance as appropriate to the context and culture of the institution.*

  [X] Governance opportunities are adequate for the program.

  Visit Three Team Assessment: This condition is **Met**. The program's director works closely with the EPS academic secretary. The governing bodies for the EPS are the school's Governing Council and its Management Board, which responds to the Board of Trustees and the University Governing Council. Members of the school's board are both elected and ex-officio. Faculty and students have representatives on the school's board. Administrative assistance staff and other service personnel are also represented on the board. Students can directly access the university's ombudsman. There is also a Faculty Senate.

I.2.3 Physical Resources: *The program must demonstrate that it provides physical resources that promote student learning and achievement in a professional degree program in architecture. This includes but is not limited to the following:*

- *Space to support and encourage studio-based learning.*
- *Space to support and encourage didactic and interactive learning.*
- *Space to support and encourage the full range of faculty roles and responsibilities, including preparation for teaching, research, mentoring, and student advising.*

[X] Physical resources are adequate for the program.

Visit Three Team Assessment: This condition is **Met**. The program shares facilities with the other programs in the EPS. The building is relatively new and is kept in flawless condition. It was designed by architects M. Ángel Cámara, Iñaki Carnicero, and Alejandro Virseda, and is located on the San Pablo CEU campus in the Montepríncipe neighborhood. The campus is in Boadilla del Monte, a municipality of the Madrid region.

The drawing studios, library, computer labs, structures lab, materials lab, fabrication lab, and printing lab all contribute to the successful learning environment. There are conference rooms, an exhibition space, and two lecture halls, which are all designed to provide opportunities for interaction and group work outside the classrooms and lecture halls. Faculty members have offices for tutoring. Studios are not dedicated, as students work at home and meet with faculty at scheduled times in a flexible studio environment. However, a dedicated studio is provided for the culminating PFC project, where students and faculty are able to meet and converse in a collaborative manner. A cafeteria is also in the building. Recently, the students participated in a San Pablo CEU-sponsored design competition to redesign the shared areas of the campus, including connecting the EPS to it. Students are hopeful that the design implemented will involve adding green spaces adjacent to the EPS building.

I.2.4 Financial Resources: *A substantially equivalent degree program must demonstrate that it has access to appropriate institutional and financial resources to support student learning and achievement.*

[X] Financial resources are adequate for the program.

Visit Three Team Assessment: This condition is **Met**. The program has the necessary human resources, maintains physical and information resources, and meets Spanish legislation and European Council Directive requirements for offering a professional degree in architecture. The budget appears to be unchanged between 2011 and 2014. The university has embarked on a program to secure research projects, create new partnerships, internationalize the programs, offer new programs while phasing out existing programs, enhance its facilities, provide new construction, reduce operational costs, and increase the return on investment.

I.2.5 Information Resources: *The substantially equivalent program must demonstrate that all students, faculty, and staff have convenient access to literature, information, and visual and digital resources that support professional education in the field of architecture.*

Further, the substantially equivalent program must demonstrate that all students, faculty, and staff have access to architecture librarians and visual resources professionals who provide information services that teach and develop research, evaluative, and critical thinking skills necessary for professional practice and lifelong learning.

[X] Information resources are adequate for the program.

Visit Three Team Assessment: This condition is **Met**. The EPS has its own library. It is a node in the network of university libraries (CEUNET) that are managed by the San Pablo CEU University Foundation, which, in turn, belong to the Network of Spanish University libraries. The EPS library is funded by the university. The library schedule is the same as the schedule for the school building. When the team visited the library facility, it was packed with students, and it was quiet. The library serves both architecture and engineering students. The architecture collection is multilingual. It includes books, periodicals, and audiovisual material. The facility is also a testing location (docimoteca) and a media library. A library commission determines acquisitions. The program's faculty are represented on the commission and can directly make suggestions for materials. The library also provides access to electronic databases, including the Avery Periodical Architecture Index and some that are unique to

Spain, such as the Fundación Alejandro de la Sota archives. In the library, students have access to group study rooms and independent study space. Wi-Fi access is available.

PART ONE (I): SECTION 3—INSTITUTIONAL AND PROGRAM CHARACTERISTICS

I.3.1 Statistical Reports: *Programs are required to provide statistical data in support of activities and policies that support social equity in the professional degree and program as well as other data points that demonstrate student success and faculty development.*

- *Program student characteristics*
  - *Number of students enrolled in the substantially equivalent degree program(s).*
  - *Qualifications of students admitted in the fiscal year prior to the upcoming visit compared to those admitted in the fiscal year prior to the last visit.*
  - *Time to graduation.*
    - *Percentage of matriculating students who complete the substantially equivalent degree program within the normal time to completion for each academic year since the previous visit.*
    - *Percentage who complete the substantially equivalent degree program within 150% of the normal time to completion for each academic year since the previous visit.*

- *Program faculty characteristics*
  - *Number of faculty by rank (e.g., assistant professor, associate professor)*
  - *Number of full-time faculty and part-time faculty*
  - *Number of faculty promoted each year since the last visit*
  - *Number of faculty maintaining licenses in the country of the program each year since the last visit, and where they are licensed*

[X] Statistical Reports were provided and provide the appropriate information.

Visit Three Team Assessment: This condition is **Met**. Information was provided in the APR, and additional data was available in the team room. The program has noted a reduction in the number of students in the program. The number of incoming students between 2013-2014 and 2014-2015 decreased approximately 30 percent. There are many reasons for this change. Among them is the state of the national economy. The program has taken this situation as an opportunity to explore new offerings. The total number of students in architecture is approximately 705, of which 53 percent are women. The faculty-to-student ratio is approximately 1 to 8. In the 2013-2014 academic year, 39 percent of the students in the program had been studying for 7 years. The university requires the program to closely monitor the progress of the students. Self-assessment procedures at the university are used to collect the data highlighted under this condition to satisfy, among other regulations, the regulations mandated by the National Spanish Agency for Quality and Accreditation (ANECA). The EPS submits a "degree quality report" for each degree program, including architecture, to the university's Commission for Internal Quality (CIC) (Comisiones Internas de Calidad). The university closely monitors the employment of graduates and their satisfaction with the education offered and the services provided at the university.

Teaching quality and diversity are also monitored. Updated data on the characteristics of the faculty body was available in the team room. As of 2014–2015, there are 87 faculty members, of which 65 percent are full time, 70 percent are architects, and 37 percent hold doctoral degrees. Thirty-two faculty members hold Ph.Ds (20 Ph.Ds in Architecture, 7 Ph.Ds in Engineering, and 5 Ph.D Graduates). The majority of the faculty members are senior lecturers. Thirty-one percent of the faculty members are women, of which the majority are senior lecturers. Thirty-seven percent of the associate professors are women, while 8 percent of the faculty are associate professors.

I.3.2 Faculty Credentials: *The program must demonstrate that the instructional faculty are adequately prepared to provide an architecture education within the mission, history, and context of the institution.*

In addition, the program must provide evidence through a faculty exhibit[3] that the faculty, taken as a whole, reflects the range of knowledge and experience necessary to promote student achievement as described in Part Two. This exhibit should include highlights of faculty professional development and achievement since the last substantial equivalency visit.

[X] Faculty credentials were provided and demonstrate the range of knowledge and experience necessary to promote student achievement.

Visit Three Team Assessment: This condition is **Met**. The APR provided the credentials of the faculty. More than 70 percent of the faculty have a professional degree in architecture and are registered in their professional associations. Many are actively involved with the COAM, the regional entity that promotes and regulates the architectural profession, and other such organizations throughout Spain. The exhibition of faculty work in the team room evidenced current activity in research, publications, and professional work.

[3] The faculty exhibit should be set up near or in the team room. To the extent the exhibit is incorporated into the team room, it should not be presented in a manner that interferes with the team's ability to view and evaluate student work.

PART ONE (I): SECTION 4—POLICY REVIEW

The information required in the three sections described above is to be addressed in the APR. In addition, the program shall provide a number of documents for review by the visiting team. Rather than being appended to the APR, they are to be provided in the team room during the visit. The list is available in Appendix 4 of the Conditions for Substantial Equivalency.

[X] The policy documents in the team room met the requirements of Appendix 4.

Visit Three Team Assessment: This condition is **Met**. Copies of the documents listed in Appendix 4 were available in the team room.

PART TWO (II): EDUCATIONAL OUTCOMES AND CURRICULUM

PART TWO (II): SECTION 1—STUDENT PERFORMANCE—EDUCATIONAL REALMS AND STUDENT PERFORMANCE CRITERIA

The substantially equivalent degree program must demonstrate that each graduate possesses the knowledge and skills defined by the Student Performance Criteria set out below. The knowledge and skills are the minimum for meeting the demands of an internship leading to registration for practice.

The school must provide evidence that its graduates have satisfied each criterion through required coursework. If credits are granted for courses taken at other institutions or online, evidence must be provided that the courses are comparable to those offered in the substantially equivalent degree program.

The criteria encompass two levels of accomplishment[4]:

***Understanding**—The capacity to classify, compare, summarize, explain and/or interpret information.*

***Ability—**Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.*

The NAAB establishes student performance criteria to help substantially equivalent degree programs prepare students for the profession while encouraging educational practices suited to the individual degree program. In addition to assessing whether student performance meets the professional criteria, the visiting team will assess performance in relation to the school's stated curricular goals and content. While the NAAB stipulates the student performance criteria that must be met, it specifies neither the educational format nor the form of student work that may serve as evidence of having met these criteria. Programs are encouraged to develop unique learning and teaching strategies, methods, and materials to satisfy these criteria. The NAAB encourages innovative methods for satisfying the criteria, provided the school has a formal evaluation process for assessing student achievement of these criteria and documenting the results.

For the purpose of substantial equivalency, graduating students must demonstrate understanding or ability as defined below in the Student Performance Criteria (SPC):

II.1.1 Student Performance Criteria: *The SPC are organized into realms to more easily understand the relationships between individual criteria*.

Realm A: Critical Thinking and Representation:
Architects must have the ability to build abstract relationships and understand the impact of ideas based on research and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. This ability includes facility with the wider range of media used to think about architecture, including writing, investigative skills, speaking, drawing, and model making. Students' learning aspirations include:

- *Being broadly educated.*
- *Valuing lifelong inquisitiveness.*
- *Communicating graphically in a range of media.*
- *Recognizing the assessment of evidence.*
- *Comprehending people, place, and context.*

[4] See also *Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* L. W. Anderson and D. R. Krathwold, eds. (New York: Longman, 2001).

- *Recognizing the disparate needs of client, community, and society.*

A.1. Communication Skills: *Ability to* read, write, speak, and listen effectively.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence of reading comprehension and writing for critical analysis and interpretation is found in A112 History and Society and in the History of Architecture sequence. The criterion is met comprehensively in A405 History of Architecture.

A.2. Design Thinking Skills: *Ability to* raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence demonstrating required skills is found early in the student's development in work for A201 Architectural Design in analysis and synthesis projects, including design iteration and the testing of multiple outcomes. Further development of design skills is found in the work of midlevel and upper-level studios and workshops.

A.3. Visual Communication Skills: *Ability to* use appropriate representational media, such as traditional graphic and digital technology skills, to convey essential formal elements at each stage of the programming and design process.

[X] Met

Visit Three Team Assessment: The criterion is **Met with Distinction**. Development of these skills starts in the first year with A102 Descriptive Geometry I, where students explore a variety of media and types of representation to achieve different objectives. Skills are further developed in A109 Architectural Drawing I, where hand-drawn analytical representations are combined with digital representations. Skills are enhanced in a broad set of courses: on an urban scale in A205 Urban Theory I and A211 Urban Theory II; in the analytical drawings of seminal buildings for A212 History of Architecture II; and in the analytical drawings for A207 Architectural Design II and A208 Drawing and Geometry. Overall work in A307 Architectural Design IV, including diagrams, architectural orthographic drawings, axonometric projection, perspectives, and 3D models, makes it evident that the criterion is met by this point in the student's education. Work in the architectural design studios in the fourth and fifth years and in the Final Degree Project (PFC) shows that excellence is evident in a wide range of representation techniques and forms.

A.4. Technical Documentation: *Ability* to make technically clear drawings, write outline specifications, and prepare models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

[X] Met

Visit Three Team Assessment: The criterion is **Met with Distinction**. Explicit demonstration of the ability to produce technical documentation is found in A308 Building Construction II. Evidence of comprehensive ability is found in A502 Building Construction Design I. This includes writing outline specifications in the Final Degree Project (PFC).

A.5. Investigative Skills: *Ability to* gather, assess, record, apply, and comparatively evaluate relevant information within architectural coursework and design processes.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in A208 Drawing and Geometry regarding the analysis of form and construction and in A207 Architectural Design II regarding the application of the criterion to the design processes. It is further enhanced in A211 Urban Theory II through analysis of an urban district, in A303 and A309 Structural Analysis I and II, in A305 Urban Design I through workshop analysis and design, and culminating in A505 Architectural Innovation Workshop, which considers emerging uses, systems, and materials.

A.6. Fundamental Design Skills: *Ability to* effectively use basic architectural and environmental principles in design.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in A307 Architectural Design IV and A311 Urban Design II, including an urban scale.

A.7. Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make choices regarding the incorporation of such principles into architecture and urban design projects.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Some evidence is found in A211 Urban Theory II. Additional evidence is found in A506 Architectural Design VIII. Although students engage in the analysis of seminal projects in many courses across the curriculum, explicit evidence of the selection and analysis of precedents in the pre-design stage is not present.

A.8. Ordering Systems Skills: *Understanding* of the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Some evidence is found in A103 Introduction to Architecture, while most of the evidence is found in A107 Architectural Form Analysis II and A109 Architectural Drawing I. A202 Architectural Drawing II reinforces competency in this area.

A.9. Historical Traditions and Global Culture: *Understanding* of parallel and divergent canons and traditions of architecture, landscape and urban design including examples of indigenous, vernacular, local, regional, national settings from the Eastern, Western, Northern, and Southern hemispheres in terms of their climatic, ecological, technological, socioeconomic, public health, and cultural factors.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. The required understanding is achieved via the History of Architecture sequence, A205 and A211 Urban Theory I and II, and A411 Architectural Composition. The emphasis is primarily on a classical tradition, both Northern and Western. In the History of Architecture sequence, little evidence is found regarding an understanding of canons and

traditions in the Eastern hemisphere, except for some discussion of select contemporary work, and minimal attention is given to the Southern hemisphere. For a program that has made internationalization one of its goals, more is expected regarding this criterion as more students from Asia and South America are recruited, and students from the San Pablo CEU program study abroad. These gaps are an area of concern.

A.10. Cultural Diversity*: Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the implication of this diversity on the societal roles and responsibilities of architects.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Some evidence is found in A206 History of Architecture I in the analysis of urban districts. Additional evidence is found in A305 Urban Design I in the analysis of social space and in A311 Urban Design II, where the analysis is used for determining design moves. More evidence is found in A404 and A410 Urban Planning I and II in the analysis and design at the community and district levels. Evidence is also found in A501 Architectural Design VII.

A.11. Applied Research: *Understanding* the role of applied research in determining function, form, and systems and their impact on human conditions and behavior.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in A305 Urban Design I in the research and analysis work, in A411 Architectural Composition focusing on the architectural elements, and in A408 Building Construction Analysis focusing on the tectonic elements.

Realm A. General Team Commentary: The curriculum has a strong humanistic orientation that supports development of critical thinking and communication skills. Design and representation skills are well developed. The representation skills for design thinking, presentation, and technical documentation are excellent. Design inquiry is embedded in studios, workshops, and lecture courses.

Realm B: Integrated Building Practices, Technical Skills and Knowledge:
Architects are called upon to comprehend the technical aspects of design, systems, and materials, and be able to apply that comprehension to their services. Additionally, they must appreciate their role in the implementation of design decisions, and their impact of such decisions on the environment. Students learning aspirations include:

- *Creating building designs with well-integrated systems.*
- *Comprehending constructability.*
- *Incorporating life safety systems.*
- *Integrating accessibility.*
- *Applying principles of sustainable design*.

B.1. Pre-Design: *Ability* to prepare a comprehensive program for an architectural project, such as preparing an assessment of client and user needs, an inventory of space and equipment requirements, an analysis of site conditions (including existing buildings), a review of the relevant laws and standards and assessment of their implications for the project, and a definition of site selection and design assessment criteria.

[X] Met

Visit Three Team Assessment: This criterion is **Met**. Evidence is found in A506 Architectural Design VIII and in the Final Degree Project (PFC).

B.2. Accessibility: *Ability* to design sites, facilities, and systems to provide independent and integrated use by individuals with physical (including mobility), sensory, and cognitive disabilities.

[X] Met

Visit Three Team Assessment: This criterion is **Met**. Evidence is found in A501 Architectural Design VII and in A509 Design of Environmental and Mechanical Systems.

B.3. Sustainability: *Ability* to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

[X] Met

Visit Three Team Assessment: This criterion is **Met with Distinction**. Evidence is found throughout the upper-level studio and theory coursework, including A304 Environmental Systems, A310 Electrical and Lighting Systems, A311 Urban Design II, A505 Architectural Innovation Workshop, and the PFC. Projects show a well-defined understanding of the technical aspects required to apply appropriate illumination systems to buildings, taking into consideration equipment performance and maintenance, and energy conservation methods, which defines a strong sustainable practice.

The criterion is met with distinction considering the clear calculations, and the mechanical equipment selection and representation within the building design scheme. In addition, supporting specification-related information validates the systems as appropriate for the structure. The PFC is reviewed based upon compliance with net zero energy use, the electrical companies' investment to accept and purchase energy from projects.

B.4. Site Design: *Ability* to respond to site characteristics such as soil, topography, vegetation, and watershed in the development of a project design.

[X] Met

Visit Three Team Assessment: This criterion is **Met**. Evidence is shown in A401 Architectural Design V.

B.5. Life Safety: *Ability* to apply the basic principles of life-safety systems with an emphasis on egress.

[X] Met

Visit Three Team Assessment: This criterion is **Met**. Evidence is found in the PFC, where student work demonstrates the ability to use the principles of this criterion. Student work produced for A403 Mechanical Systems also shows evidence in fire compartment diagrams, fire structural resistance diagrams, dimensioning of stairs and egress diagrams, and the diagrams and the required fire

assessment report for the PFC.

B.6. Comprehensive Design: *Ability* to produce a comprehensive architectural project that demonstrates each student's capacity to make design decisions across scales while integrating the following SPC:

A.2. Design Thinking Skills	**B.2. Accessibility**
A.4. Technical Documentation	**B.3. Sustainability**
A.5. Investigative Skills	**B.4. Site Design**
A.8. Ordering Systems	**B.7. Environmental Systems**
A.9. Historical Traditions and Global Culture	**B.9.Structural Systems**
B.5. Life Safety	

[X] Met

Visit Three Team Assessment: This criterion is **Met with Distinction**. The culminating student effort within the PFC shows a high level of achievement regarding the students' understanding of, and ability to, integrate the performance criteria in a singular, comprehensive manner. Graphic and written evidence within projects highlights technical design and documentation, creative expression and representation, and project organization and responsibility.

B.7 Financial Considerations: *Understanding* of the fundamentals of building costs, such as acquisition costs, project financing and funding, financial feasibility, operational costs, and construction estimating with an emphasis on life-cycle cost accounting.

[X] Met

Visit Three Team Assessment: This criterion is **Met** and is evidenced at the level of ability required. Evidence is found in A505 Architectural Innovation Workshop and in the PFC. The PFC requires students to provide detailed building costs, including life-cycle costs, project financing and funding, and operational costs. Students are introduced to financial feasibility in A511 Professional Practice in Architecture II.

B.8. Environmental Systems: *Understanding* the principles of environmental systems' design such as embodied energy, active and passive heating and cooling, indoor air quality, solar orientation, daylighting and artificial illumination, and acoustics; including the use of appropriate performance assessment tools.

[X] Met

Visit Three Team Assessment: This criterion is **Met with Distinction**. Evidence is found in A304 Environmental Systems and A403 Mechanical Systems. Work produced in A304 Environmental Systems shows the wide range of bioclimatic strategies that the students have applied in their projects. These include the application of passive and active sytems. The students design heat recovery systems, generate concept diagrams to show how the systems will improve their designs in a

sustainable way, and perform daylighting studies to improve the comfort of the end users, etc. More evidence is found in A310 Electrical and Lighting Systems.

B.9. Structural Systems: *Understanding* of the basic principles of structural behavior in withstanding gravity and lateral forces and the evolution, range, and appropriate application of contemporary structural systems.

[X] Met

Visit Three Team Assessment: This criterion is **Met with Distinction**. Student knowledge moves well beyond understanding to high levels of ability in this area. With the early introduction of this ability into the curriculum (the first and second years), there is evidence that this ability continues to be developed throughout all levels of the curriculum. The selecting, dimensioning, testing, analyzing, and integrating of structural systems into project work is impressive. Evidence is shown in A111 Fundamentals of Physics in Architecture II, A210 Structural Systems, and A302 Building Construction I, and continuously throughout the design studio project work.

B.10. Building Envelope Systems: *Understanding* of the basic principles involved in the appropriate application of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

[X] Met

Visit Three Team Assessment: This criterion is **Met** and is evidenced at the level of ability required. Evidence is shown in A304 Environmental Systems, A506 Architectural Design VIII, and the PFC.

B.11. Building Service Systems Integration: *Understanding* of the basic principles and appropriate application and performance of building service systems such as plumbing, electrical, vertical transportation, security, and fire protection systems

[X] Met

Visit Three Team Assessment: This criterion is **Met** and is evidenced at the level of ability required. Evidence is shown in A310 Electrical and Lighting Systems, A403 Mechanical Systems, and A509 Design of Environmental and Mechanical Systems.

B.12. Building Materials and Assemblies Integration: *Understanding* of the basic principles utilized in the appropriate selection of construction materials, products, components, and assemblies, based on their inherent characteristics and performance, including their environmental impact and reuse.

[X] Met

Visit Three Team Assessment: This criterion is **Met with Distinction** and is evidenced at the level of ability required. Evidence is found in A302 Building Construction I, throughout most design studio work, and in A505 Architectural Innovation Workshop.

Realm B. General Team Commentary: The students' work shows a high level of being able to successfully integrate the wide variety of systems into their project work. This remains consistent throughout the levels of studio instruction and into other coursework. The Architectural Innovation Workshop indicates application of these skills within a service environment, and the work in the Final Degree Project reflects a maturation of this pedagogical approach.

Realm C: Leadership and Practice:
Architects need to manage, advocate, and act legally, ethically, and critically for the good of the client, society, and the public. This includes collaboration, business, and leadership skills. Student learning aspirations include:

- *Knowing societal and professional responsibilities.*
- *Comprehending the business of building.*
- *Collaborating and negotiating with clients and consultants in the design process.*
- *Discerning the diverse roles of architects and those in related disciplines.*
- *Integrating community service into the practice of architecture.*

C.1. Collaboration: *Ability* to work in collaboration with others and in multi-disciplinary teams to successfully complete design projects.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in A308, A408, and A404, and in the elective course A512, specifically in the collaboration with others. In A308 Building Construction II/A404 Urban Planning I – Sierra Leone Project and in A408 Building Construction Analysis/A512 Restoration Theory and Techniques, collaboration occurs in a multidisciplinary team. The visiting team is aware that A512 is an elective advanced workshop. Work in this course demonstrates significant multidisciplinary team collaboration under the guidance of an architect.

C.2. Human Behavior: *Understanding* of the relationship between human behavior, the natural environment, and the design of the built environment.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in two courses: A205 Urban Theory I and A305 Urban Design I**.** Work in these courses shows an in-depth understanding of all required aspects of the criterion.

C.3. Client Role in Architecture: *Understanding* of the responsibility of the architect to elicit, understand, and reconcile the needs of the client, owner, user groups, and the public and community domains.

[X] Met

Visit Three Team Assessment: This criterion is **Met**. Evidence is found in A504 and A511 Professional Practice in Architecture I and II. In A511, students study and are tested on the Spanish code of professional conduct (Codigo deontológico). Evidence is also found in A503 City and Territorial Planning I, where students are asked to apply knowledge gained in A503 City and Territorial Planning I to work previously completed for A211 Urban Theory II. Additional evidence is found in A404/A410 Urban Planning I and II in work for the Sierra Leone Project.

C.4. Project Management: *Understanding* of the methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence of project management is found in A504 Professional Practice in Architecture I, in work dealing with methods for competing for commissions, selecting consultants and assembling teams, and recommending project delivery methods primarily according to Spanish law. The visiting team is concerned that students may not be aware that, when practicing internationally, they may need to team and interact with a wide range of consultants under different business models, with implications regarding fees, contracts, and management responsibilies.

C.5. Practice Management: *Understanding* of the basic principles of architectural practice management such as financial management and business planning, time management, risk management, mediation and arbitration, and recognizing trends that affect practice.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Course-related work and tests produced in A511 Professional Practice in Architecture II offer evidence that students understand the basic principles of architectural practice management via preparation of detailed budgets, speculative scenarios, and detailed work schedules following Spanish law.

C.6. Leadership: *Understanding* of the techniques and skills architects use to work collaboratively in the building design and construction process and on environmental, social, and aesthetic issues in their communities.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence of leadership is demonstrated in four courses: in collaborative work in building design in A404 Urban Planning I – Sierra Leone Project; in the construction process in A504 Professional Practice in Architecture I; and in environmental, social, and aesthetic issues in the community in A305 Urban Design I and A410 Urban Planning II – Sierra Leone Project.

C.7. Legal Responsibilities: *Understanding* of the architect's responsibility to the public and the client as determined by registration law, building codes and regulations, professional service contracts, zoning and subdivision ordinances, environmental regulation, and historic preservation and accessibility laws.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in A504 Professional Practice in Architecture I regarding registration law and professional service contracts. Evidence is also found in A511 Professional Practice in Architecture II regarding the study of the concept of "regulated profession," building codes and regulations, zoning regulations, and service contracts. Furthermore, work generated for the PFC demonstrates an ability to design following codes, regulations, and ordinances, including those studied in A509 Design of Environmental and Mechanical Systems, A402 Dimensioning of Structures, A409 Foundations, and A404 and A410 Urban Planning I and II.

C.8. Ethics and Professional Judgment: *Understanding* of the ethical issues involved in the formation of professional judgment regarding social, political, and cultural issues, and responsibility in architectural design and practice.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in two courses: A504 and A511 Professional Practice in Architecture I and II.

C.9. Community and Social Responsibility: *Understanding* of the architect's responsibility to work in the public interest, to respect historic resources, and to improve the quality of life for local and global neighbors.

[X] Met

Visit Three Team Assessment: The criterion is **Met**. Evidence is found in four required courses. On the issues of community and social responsibility, and on the architect's role in improving life, it is found in work produced for A404 and A410 Urban Planning I and II – the Sierra Leone Project. Evidence regarding respect for historic resources is found in documentation and analysis work, and in design proposals for A205 and A211 Urban Theory I and II. Additionally, evidence regarding this subject is found in the elective specialized studio A512 Restoration Theory and Techniques.

Realm C. General Team Commentary: It is clear that the curriculum exposes the students to all the elements involved in Realm C and that some of the critical assessments and explorations require an understanding of constituencies in other countries and cultures. The team believes that more work can be done parallel to internationalization efforts to explain the similarities and differences of other countries and cultures in the area of practice and the architecture profession.

PART TWO (II): SECTION 2—CURRICULAR FRAMEWORK

II.2.1 National Authorization: *The institution offering the substantially equivalent degree program must be or be part of an institution that has been duly authorized to offer higher education in the country in which it is located. Such authorization may come from a federal ministry or other type of agency.*

[X] Met

> **Visit Three Team Assessment:** The 2010 curricular plan leading to the Degree in Architecture was approved by the Council of Ministers of the Spanish government (Consejo de Ministros). It complies with European Council Directives 85/384/EEC and 2005/36/EEC, Order from the Spanish Ministry of Education ECI/3856/2007, and Royal Decree RD 314/2006.

II.2.2 Professional Degrees and Curriculum: *For substantial equivalency, the NAAB requires degree programs in architecture to demonstrate that the program is comparable in all significant aspects to a program offered by a U.S. institution. This includes a curricular requirement that substantially equivalent degree programs must include general studies, professional studies, and electives.*

Curricular requirements are defined as follows:

- ***General Studies**. A professional degree program must include general studies in the arts, humanities, and sciences, either as an admission requirement or as part of the curriculum. It must ensure that students have the prerequisite general studies to undertake professional studies. The curriculum leading to the architecture degree must include a course of study comparable to 1.5 years of study or 30% of the total number of credits for an undergraduate degree. These courses must be outside architectural studies either as general studies or as electives with content other than architecture.*

  This requirement must be met at the university or tertiary school level. Post-secondary education cannot be used to meet this requirement. At least 20% of the credits in the professional architecture degree must be outside architectural studies either as general studies or as electives with other than architectural content.

- ***Professional Studies**. The core of a professional degree program consists of the required courses that satisfy the NAAB Student Performance Criteria (SPC). The professional degree program has the discretion to require additional courses including electives to address its mission or institutional context.*

- ***Electives.** A professional degree program must allow students to pursue their special interests. The curriculum must be flexible enough to allow students to complete minors or develop areas of concentration, inside or outside the program.*

[X] Met

> **Visit Three Team Assessment:** The current 2010 plan of study leading to the Degree in Architecture responds to the European Higher Education Area directives (Bologna process) accepted by the Spanish government. It mandates a structure composed of three modules and a minimum number of ECTS credits. One ECTS credit equals 25 to 30 hours of work, not contact hours. Order from the Spanish Ministry of Education ECI/3856/2007 requires at least three modules: Propaedeutic (Basic Science and Drawing 60 ECTS/San Pablo 63), Technical (Structures, Construction, and Systems 68 ECTS/San Pablo 84), and Project Design (Composition, Architectural Design, and Urbanism 112 ECTS/San Pablo 117). It also defines 11 conditions or competencies, which the Foundation for Knowledge Madrid states are "detailed in specific competencies comparable to the 32 NAAB Student Performance Criteria." The San Pablo CEU curriculum for the Degree in Architecture has four additional modules: Humanities (24), Modern Language (6), Specialization (Electives 6), and the Final Degree Project (San Pablo 30).

The program has organized the credits into three levels: 2 years of foundational studies, 3 years of specialized studies, and the 6- to 9-month Final Degree Project (PFC).

II.2.3 Curriculum Review and Development: *The program must describe the process by which the curriculum for the substantially equivalent degree program is evaluated and how modifications (e.g., changes or additions) are identified, developed, approved, and implemented. Further, the NAAB expects that programs are evaluating curricula with a view toward the advancement of the discipline and toward ensuring that students are exposed to current issues in practice. Therefore, the program must demonstrate that architects authorized to practice in the country where the program is located are included in the curriculum review and development process.*

[X] Met

Visit Three Team Assessment: Education at San Pablo CEU complies with the laws and stipulations that govern higher education in Spain, including the Royal Decrees (1393/2007 and 861/2010) and the Monitoring Framework of University Qualifications. San Pablo CEU's Internal Quality Control System (SGIC) is a response to the latter. The architecture program follows this system, as do other programs in the institution. The program has an internal quality commission (Comision Interna de Calidad [CIC]), which is charged with proposing "procedures to implement the planning, monitoring, and performance evaluation goals established by the SGIC." The program's CIC is composed of the chief academic officers of the program, faculty members, representatives of the staff, and students.

The program's curriculum complies with the framework established by the European Higher Education Area directives. It also meets the Spanish government's and the Madrid region's regulations for the education of an architect. In Madrid, as is true for Spain, the regulatory environment is in flux, and the program is attentive to changes that may be set in place.

The visiting team met with representatives from the Fundación para el Conocimiento Madrimasd (Foundation for Knowledge Madrid). In May 2014, this foundation was designated by Decree 63/2014 as the official accrediting body for higher education in the Madrid region. Among its functions is collaboration with other organizations in international accreditation processes, such as the NAAB SE. The Foundation for Knowledge Madrid has acquired the role previously assigned to the now defunct Agencia de Calidad, Acreditación, y Prospectiva de las Universidades de Madrid (Quality Control, Accreditation, and Forward Planning Agency of the Universities of Madrid [ACAP]), which is mentioned in the VTR for Visit Two, as well as in the 2015 APR for Visit Three. The Foundation for Knowledge Madrid verifies compliance with national legislation. At the regional level, it authorizes the implementation of professional programs, and monitors and renews accreditation.

The team also met with members of the board of directors of the Official College of Architects of Madrid (COAM) (Colegio Oficial de Arquitectos de Madrid), the organization that oversees the registration of architects and the practice of architecture. There is no equivalent organization in the United States and its jurisdictions, except for the Colegio de Arquitectos y Arquitectos Paisajistas de Puerto Rico (College of Architects and Landscape Architects of Puerto Rico). The program has direct communication with both the Foundation for Knowledge Madrid and the COAM.

PART TWO (II): SECTION 3—EVALUATION OF PREPARATORY/PREPROFESSIONAL EDUCATION

Because of the expectation that all graduates meet the SPC (see Part Two, Section 1, above), the program must demonstrate that it is thorough in the evaluation of the preparatory education of individuals admitted to the NAAB substantially equivalent degree program.

In the event a program relies on the preparatory educational experience to ensure that students have met certain SPC, the program must demonstrate it has established standards for ensuring these SPC are met and for determining whether any gaps exist. Likewise, the program must demonstrate it has determined how any gaps will be addressed during each student's progress through the substantially equivalent degree program. This assessment should be documented in a student's admission and advising files.

[X] Met

Visit Three Team Assessment: The majority of the students are admitted directly into the program. The program has set clear standards for transfer students. Compliance with Spanish law and the European Higher Education Area directives frames the process. The visiting team reviewed examples of records of both newly admitted and transfer students. The program reviews the transcript and record equivalencies on a form. Each student is informed via a letter regarding the courses transferred and the courses pending, followed by a meeting with a personal tutor who discusses the courses to be taken with the student.

PART TWO (II): SECTION 4—PUBLIC INFORMATION

II.4.1 Statement on Substantially Equivalent Degrees: *In order to promote an understanding of the substantially equivalent professional degree by prospective students, parents, and the public, all schools offering a substantially equivalent degree program or any candidacy program must include in catalogs and promotional media the exact language found in the NAAB Conditions for Substantial Equivalency, Appendix 6.*

[X] Met

Visit Three Team Assessment: This condition is **Met**. The NAAB language on substantial equivalency is found via a link on the school's website.

II.4.2 Access to NAAB Conditions and Procedures: *In order to assist parents, students, and others as they seek to develop an understanding of the body of knowledge and skills that constitute a professional education in architecture, the school must make the following documents available to all students, parents, and faculty:*

The 2012 NAAB Conditions for Substantial Equivalency
The NAAB Procedures for Substantial Equivalency (edition currently in effect)

[X] Met

Visit Three Team Assessment: This condition is **Met**. Reference to the NAAB Conditions and Procedures and links to the NAAB website are provided on the school's website.

II.4.3 Access to Career Development Information: *In order to assist students, parents, and others as they seek to develop an understanding of the larger context for architecture education and the career pathways available to graduates of substantially equivalent degree programs, the program must make appropriate resources related to a career in architecture available to all students, parents, staff, and faculty.*

[X] Met

Visit Three Team Assessment: This condition is **Met**. The EPS has a faculty member that assists with summer internships and career opportunities. Students are assigned faculty members as career and academic tutors throughout the duration of their studies. Multiple career development informational links are provided via the school's website.

II.4.4 Public Access to APRs and VTRs: *In order to promote transparency in the process of substantial equivalency in architecture education, the program is required to make the following documents available to the public:*

The final decision letter from the NAAB
The most recent APR
The final edition of the most recent Visiting Team Report, including attachments and addenda

These documents must be housed together and accessible to all. Programs are encouraged to make these documents available electronically from their web sites.

[X] Met

Visit Three Team Assessment: This condition is **Met**. The information is provided on the school's website, which has been updated to include the APR and VTR from the SE Visit Two.

III. Appendices

Appendix 1. Program Information

A. History and Mission of the Institution and the Program

APR, page 6

B. Long-Range Planning

APR, page 31

C. Self-Assessment

APR, page 36

Appendix 2. Conditions Met with Distinction

A.3. Visual Communication Skills: Development of these skills starts in the first year with A102 Descriptive Geometry I, where students explore a variety of media and types of representation to achieve different objectives. The skills are further developed in A109 Architectural Drawing I, where hand-drawn analytical representations are combined with digital representations. They are enhanced in a broad set of courses: on an urban scale in A205 and A211 Urban Theory I and II; in analytical drawings of seminal buildings in A212 History of Architecture II; and in analytical drawings in A207 Architectural Design II and A208 Drawing and Geometry. Overall work in A307 Architectural Design IV—including diagrams, architectural orthographic drawings, axonometric projection, perspectives, and 3D models—indicates that the criterion has been met by this point. Work in the architectural design studios in the fourth and fifth years, and in the Final Degree Project (PFC) demonstrates excellence in a wide range of representation techniques and forms.

A.4. Technical Documentation: Explicit demonstration of the ability to produce technical documentation was found in A308 Building Construction II. Evidence of comprehensive ability was found in A502 Building Construction Design I. The criterion is met, including outline specifications, in the Final Degree Project (PFC). The students' work shows excellent use of working drawings as a means for design inquiry and an understanding of structures, construction systems, and materials.

B.3. Sustainability: Evidence is found throughout the upper level studio and theory work, including the Environmental Systems, Electrical and Lighting Systems, and Urban Design courses, the Architectural Innovation Workshop, and the PFC. The student coursework shows a well-defined understanding of the technical aspects required to apply appropriate active and passive systems to buildings, taking into consideration equipment performance and maintenance, and energy conservation methods, which defines a strong sustainable practice. A component of each PFC is sustainability, and the PFC is reviewed based upon compliance with net zero energy use, as the electrical companies' investment to accept and purchase energy from projects.

B.6. Comprehensive Design: The culminating student effort within the PFC shows a high level of achievement regarding the student's thorough understanding of, and ability to, integrate the performance criteria in a singular, comprehensive manner. Graphic and written evidence within projects highlights technical design and documentation, creative expression and representation, and project organization and responsibility.

B.8. Environmental Systems: Student work produced in the area of environmental systems exhibits a wide range of bioclimatic strategies that the students have applied in their projects. Examples of this work are the diagramming and calculation of heat recovery systems, concept diagrams demonstrating the sustainable performance of a design, performing daylighting studies to improve the comfort of the end users, etc.

B.9. Structural Systems: Student knowledge moves well beyond understanding to high levels of ability in this area. The ability is introduced into the curriculum early (in the first and second years). There is evidence that this ability continues to be developed throughout all levels of the curriculum, including selecting, dimensioning, testing, analyzing, and integrating structural systems into design project work, and this evidence is impressive.

B.12. Building Materials and Assemblies Integration: Evidence of this ability is found beginning in the foundational levels of the program, and it continues at a high level throughout the coursework. It is shown most clearly in the Building Construction course sequence and in most design studio work. It is highlighted in an exemplary manner in the Architectural Innovation Workshop.

Appendix 3. The Visiting Team

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IV. Report Signatures

Respectfully Submitted,

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Team member

Paula Ibarrondo Giron
Local facilitator

Program Response

Some precisions about VTR points (formalities)

These notes are either formal or informative to the VTR

Cover Page

Grado en Arquitectura* (Degree in Architecture)
330 ECTS or 4,050 hours + Final Degree Project (30 ECTS)
ECTS refers to the European Transfer and Accumulation System.
One (1) ECTS "generally corresponds to 25-30 hours of work."

*Currently, the program is phasing out the Diploma of Architect degree (Título de Arquitecto) 2001 plan curriculum and degree nomenclature to fully meet European Council Directives, as well as new Spanish legislation. It is being replaced by the 2010 plan for the Degree in Architecture, a bilingual program. The last class to graduate with a Diploma of Architect degree will be in 2017. Graduates from both curricula are entitled to practice architecture in Spain.

NOTE:
The text perfectly explains the continuity between the 2001 and the 2010 Architecture Program plans and the need to conform to the Bolonia system. The VT has in fact examined equal number of evidences from both plans of study (or even more from the 2001 plan giving that it is being phased out). Nevertheless it may seem from the text that for the plan 2001 has also established substantial equivalency. If the VT and NAAB deems adequate we suggest a phrase in line with the texts in the other Spanish schools. For example:

Grado en Arquitectura* (Degree in Architecture).
Professional Degree.
Syllabus 2010. 330 ECTS or 4,050 hours + Final Degree Project (30 ECTS)
ECTS refers to the European Transfer and Accumulation System.
One (1) ECTS "generally corresponds to 25-30 hours of work."

Título de Arquitecto (Diploma of Architect Degree)
Professional Degree.
Syllabus 2001. 405 LRU or 4,050 hours + Final Degree Project
LRU refers to the Ley e Reforma Universitaria (1983).
One (1) LRU "generally corresponds to 10 hours of class time."

*Currently, the program is phasing out the Diploma of Architect Degree (Título de Arquitecto) 2001 plan curriculum and degree nomenclature to fully meet European Council Directives, as well as new Spanish legislation. It is being replaced by the 2010 plan for the Degree in Architecture, a bilingual program. The last class to graduate with a Diploma of Architect degree will be in 2017. Graduates from both curricula are entitled to practice architecture in Spain.

Page 4
I.2.3 Curriculum Review and Development:
The program complies with several regulations. Among them are European Council Directives 85/384/EEC, 2005/36/EEC, **and ECI/3856/2007**, and Royal Decree RD 314/2006. Significantly, and in relation to curriculum review and development, the San Pablo CEU program's compliance with **European Council Directive ECI/3856/2007** is on the cutting edge in Spain, as it is not yet compulsory. This directive mandates the participation of "at least a distinguished architect recommended by the professional organizations "in the jury reviewing the Final Degree Project (PFC). The program at San Pablo CEU already includes, as a matter of practice, one distinguished architect and a COAM representative in the jury of every student presenting his or her PFC.

NOTE:
The text is correct except for a small detail: ECI/3856/2007 is described as a European Directive, but it is an Order from the Spanish Ministry of Education.

Page 14
I.2.3 Physical Resources
Visit Three Team Assessment: This condition is **Met**. The program shares facilities with the other programs in the EPS. The building is relatively new and is kept in flawless condition. It was designed by architects **Carnicero, Vila, and Virseada**, and is located on the San Pablo CEU campus in the Montepríncipe neighborhood. The campus is in Boadilla del Monte, a municipality of the Madrid region.

NOTE:
The correct names of the architects and authors of the EPS building are: M.Ángel Cámara, Iñaki Carnicero y Alejandro Virseda.

Page 15
I.3.1 Statistical Reports
Teaching quality and diversity are also monitored. Updated data on the characteristics of the faculty body was available in the team room. As of 2014–2015, there are 87 faculty members, of which 65 percent are full time, 70 percent are architects, and **32 percent hold doctoral degrees**. The majority of the faculty members are senior lecturers. Thirty-one percent of the faculty members are women, of which the majority are senior lecturers. Thirty-seven percent of the associate professors are women, while 8 percent of the faculty are associate professors.

NOTE:
Currently the number of Professors with PhDs in the architectural program is 32 (20 PhD in Architecture, 7 PhD in Engineering, 5 PhD Graduates). The total number of professors in the architecture program is 87. The percentage of doctors is 37%.

Page 25
C.2. Human Behavior
Visit Three Team Assessment: The criterion is **Met**. Evidence is found in two courses: **A205 Human Behavior and the Natural Environment** and A305 Urban Design I**.** Work in these courses shows an indepth understanding of all required aspects of the criterion.

NOTE:
The A205 course name is Urban Theory I.

Page 28
II.2.1 National Authorization
Visit Three Team Assessment: The 2010 curricular plan leading to the Degree in Architecture was approved by the Council of Ministers of the Spanish government (Consejo de Ministros). It complies with European Council Directives 85/384/EEC, 2005/36/EEC, **and ECI/3856/2007**, as well as Royal Decree RD 314/2006.

NOTE:
The text is correct except for a small detail: ECI/3856/2007 is described as a European Directive, but it is an Order from the Spanish Ministry of Education.