

提升建築師執業素養與職能

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台灣建築師是屬於專門職業及技術人員服務業的一種，必須接受過正規的專業養成教育及訓練，並經過國家考試或相當資格之衡鑑程序，始能取得執業資格。為提升建築師執業素養與職能，分為教育、考試、執業三大層面探討。

以美國建築師為例，在建築教育方面，視建築學位為專業學位(Professional Degree)，專業學位是需經過國家建築認證單位(NAAB)認證的教育學程才能授予應考資格。其在美國國內專業學位的學程目標很明確，就是以訓練建築師為主要目標。台灣的建築教育，在課程編排與美國雷同，大概分為設計、理論、技術，及實務等四大類，但台灣的建築教育評鑑不同於美國是由專業的認證單位(NAAB)來評鑑，而是由教育部來主導。因此為了與國際接軌，中華工程教育學會(IEET)與國際間建築教育之認證機構簽署了坎培拉協定(Canberra Accord)，台灣共有 7 所建築系所通過此協定認證，且多半是 5 年制建築學士學位或 4 年制學士加上 2 年碩士學程。在全國建築師公會理事長劉國隆的帶領下，已與澳洲、美國、加拿大、英國等經濟體/國家的建築機構洽談有關建築師互惠認證與雙邊協定，過程中多數國家的教育認可標準為 5 年學士學位，或可依現有的坎培拉協定作為認證彼此建築教育之標準，唯其多與日本(4 年制建築教育為主)亦有互惠認可的機制。我方認為此範圍限制了台灣大多數 4 年制學校之建築系所，應著重在建築系科目所學之細部課程內容，而非學制年限。

美國掌管建築師考試的機構 NCARB 要求建築師的養成，視各州規定，必須在取得專業學位後，經過 3740 小時(大概 2-3 年)的實習，實習內容包含 6 大類(業務管理、專案管理、程序分析、專案規劃與設計、專案開發與合約、施工與評估)，且完成 Architectural Experience Program (AXP)後，才有資格報名建築師考試(ARE)。這點與台灣的建築系學生的實習有所不同，程序上台灣則是在通過建築師考試後要求 2 年的專業實務經驗。

在考試方面，我國建築師考試採用傳統的筆試和手繪等方式，注重考生的基本繪圖表達及設計能力；美國建築師考試的內容包括建築策劃、設計、施工、管理、竣工驗收的全過程，各科考試內容均考核考生在保護公眾健康、安全和福利等方面的能力，註冊建築師不僅可以承擔建築設計工作，同時還可以作為建築策劃師、建築諮詢顧問、施工管

理、建築評估師等與建築項目有關的工作。美國新版建築師考試大綱（ARE5.0）刪除死記硬背及創新性考核要求，以電腦繪圖方式考核敷地設計與建築物實務設計，減少考試科目和考試時間，增加綜合案例能力考察，注重考生的項目管理、建築成本費用分析能力，強調建築的性能等方面。相較於我國，美國建築師考試純記憶及知識性型考核內容較少，多以案例研究的題型進行考核。

建築師是台灣都市景觀與城市風貌的人文、技術、綜合規劃之專業人士，開業建築師的設計理念、技術施工、整合能力直接影響建築設計質量，進而影響建築產品的質量。綜觀以上之比較，美國註冊建築師養成制度與台灣的養成制度各有優劣項目，國隆期望台灣建築師養成系統與已開發國家能夠多做比較，截取所長，讓台灣建築師們能夠跨足國際競賽，更能為地球環境奉獻台灣建築師的專長，並組成台灣建築國家隊，立足台灣，放眼天下。

NAAB Program Criteria (PC) & Student Criteria (SC)		NAAB Program Criteria (PC)											
		PC1	PC2	PC2	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC8	
PC.1	Career Paths How the program ensures that students understand the paths to becoming licensed as an architect in the United States and the range of available career opportunities that utilize the discipline’s skills and knowledge.												
PC.2	Design How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.												
PC.3	Ecological Knowledge and Responsibility How the program instills in students a holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change responsibly by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy												
PC.4	History and Theory How the program ensures that students understand the histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally.												
PC.5	Research and Innovation How the program prepares students to engage and participate in architectural research to test and evaluate innovations in the field.												
PC.6	Leadership and Collaboration How the program ensures that students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.												
PC.7	Learning and Teaching Culture How the program fosters and ensures a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff.												
PC.8	Social Equity and Inclusion How the program furthers and deepens students' understanding of diverse cultural and social contexts and helps them translate that understanding into built environments that equitably support and include people of different backgrounds, resources, and abilities.												

Incorporating lecture and workshop with US educated and/or licensed architect.

Career Paths
The third year level requires a summer internship for one credit. Students are exposed to various facet of the practice of Architecture..

Design
How the program instills in students a holistic understanding of the dynamic between built and natural environments. *enabling future architects to mitigate*

Design
How the program instills in students a holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change

1. building environmentl control system 2. site planning 3. Design Studio

1. Architecture History 2. Contemporary Design 3. Architecture programming 4. other related classes introducing relevant case study

Fifth year studio is open thesis research + design course. Fourth year is theme related one semester studio that allows students to explore possible innovative research

students are encouraged to work in teams for multiple lecture classes as well as participating in oen call competitions

Students are encouraged to work in teams for all the lectures class; also, all site models are made in teams to allow ssstudents to learn to coordinate and support each other.

co-working studio allows studentns to interact with fellow students and faculty members. Also, by having student association allows students to promote their events or projects.

program allows students to understand uniform code compliance that are common in many countries. Particular lecture classes will bring case studies from the US. Site Planning, Architecture System and Contemporary Thoughts

NAAB Program Criteria (PC) & Student Criteria (SC)		NAAB Student Criteria (SC)											
		SC1	SC1	SC2	SC2	SC3	SC3	SC4	SC4	SC5	SC5	SC5	SC6
SC.1	Health, Safety, and Welfare in the Built Environment How the program ensures that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.												
SC.2	Professional Practice How the program ensures that students understand professional ethics, the regulatory requirements, the fundamental business processes relevant to architecture practice in the United States, and the forces influencing change in these subjects.												
SC.3	Regulatory Context How the program ensures that students understand the fundamental principles of life safety, land use, and current laws and regulations that apply to buildings and sites in the United States, and the evaluative process architects use to comply with those laws and regulations as part of a project.												
SC.4	Technical Knowledge How the program ensures that students understand the established and emerging systems, technologies, and assemblies of building construction, and the methods and criteria architects use to assess those technologies against the design, economics, and performance objectives of projects.												
SC.5	Design Synthesis How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions.												
SC.6	Building Integration How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.												

Building environmental system, urban planning, landscape urbanism, contemporary thoughts expose students to the health topic

Students are encouraged to participate in community design projects by working with the residents on actual design-build projects, interacting with users and understanding the impact of health to people and community

Practical training class allows students to intern on the summers for credit. Also, lecture classes invite architects to share their practice experience

Students are encouraged to understand the business of design in terms of design phase to parametric fabrication and curtain wall design. Therefore, the intricate subdivision of the practice are taught in various classes

program allows students to understand uniform code compliance that are common in many countries. Particular lecture classes will bring case studies from the US. Site Planning, Architecture System and Contemporary Thoughts

Students are encouraged to incorporate building code into design. The environmental control system class incorporates mechanical system and green building design requirement into the class

Architecture System, Structure and form, Construction management classes offer realte theme and topic

Students have several courses that are in the architecture technology realm. It is incorporated with professional lecture series as well as digital fabrication and envelope design.

Architecture System, Structure and form, Construction management classes offer realte theme and topic

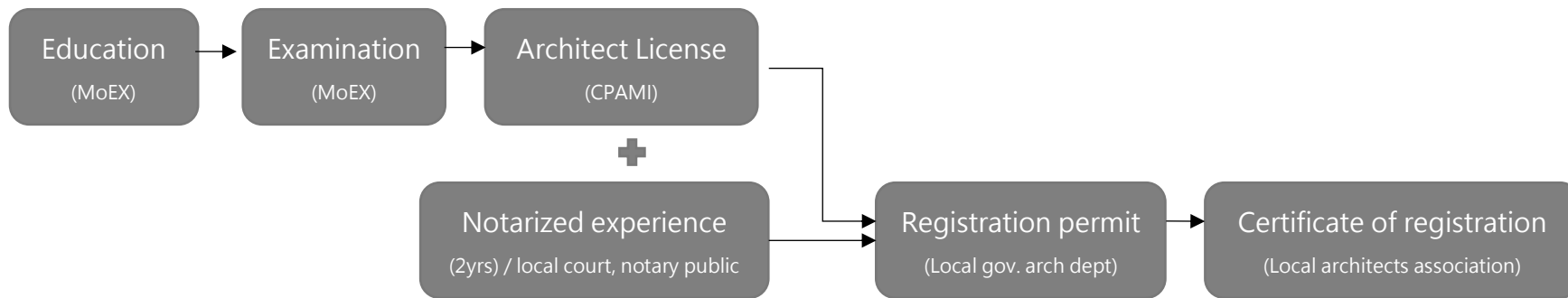
From second year studio class on, the classes allow students to learn urban planning, code relevance, structure system, social design and architecture system design to studio classes.

architecture system, construction management and structure and form classes allow students to learn

Students are required to complete a building type design from the first year onward. The synthesis of the design and building tectonic as well as construction are required for design studio.

Path of Taiwan architects

After meeting education requirement, the candidates can take architect exam. The architect license will be issued upon passing the exam. In addition to architect license, two years architectural experience (with notarization) will be required for registration.



Path of US architects

