

Professional Regulatory Board of Architecture (PRBoA)

**PROMULGATION OF THE JUNE 2009 SYLLABI FOR THE SUBJECTS
OF THE LICENSURE EXAMINATION FOR ARCHITECTS (LEA)
UNDER R.A. NO. 9266 (THE ARCHITECTURE ACT OF 2004)
(INITIAL DRAFT for Discussion)**

WHEREAS R.A. No. 9266 (The Architecture Act of 2004), requires the examination, certification, and registration of qualified applicants for the state-regulated practice of the architectural profession;

WHEREAS Sec. 14, Article III of R.A. No. 9266 delineates the various subjects to be covered in the licensure examination for architects (the "LEA");

WHEREAS the Professional Regulation Commission (PRC or the "Commission") has issued the following policies and directives in relation to licensure examinations:

- (1) Memorandum Circular No. 8, Series of 1992;
- (2) Resolution No. 265, Series of 1993;
- (3) Memorandum Circular No. 93-03, Series of 1993; and
- (4) Memorandum Circular No. 93-04, Series of 1993.

All of the foregoing provided for the adoption of a syllabus for every subject in the LEA;

WHEREAS each adopted syllabus, which contains the various concepts, principles, and application thereof, shall be the basis for the LEA questions that will be imputed into the test question bank;

WHEREAS after consultation with the various schools of architecture in the Philippines, the Commission on Higher Education (CHED), and the United Architects of the Philippines (UAP, the integrated and accredited professional organization of architects or the "IAPoA"), the Professional Regulatory Board of Architecture (the "PRBoA") formulated a set of syllabi for the various LEA subjects;

WHEREAS the Board of Architecture consulted the Council of Deans and the Heads of Architectural Schools of the Philippines (CODHASP) and the UAP-IAPoA for the final adoption of the syllabi.

NOW, THEREFORE, pursuant to its quasi-legislative (rule-making) power under Sec. 7, Art. II of R.A. No. 9266, the PRBoA hereby RESOLVED, as it now so RESOLVES, to adopt the 2008 Syllabi for the subjects in the LEA, appearing herewith as "Annex A".

FURTHER RESOLVED, that this Resolution, upon its approval by the Commission, shall be effective fifteen (15) days following its publication in the Official Gazette or any newspaper of general circulation, whichever is earlier.

FINALLY, RESOLVED, that this Resolution be disseminated to all recognized schools offering the course of architecture and other concerned entities.

Done in the City of Manila, this ____th day of October 2008.

ARMANDO N. ALLI
Chairman

ANGELINE T. CHUA CHIACO
Member

MARIETTA B. SEGOVIA
Member

Attested to:
CARLOS G. ALMELOR
Secretary, Regulatory Boards

Approved:

NICOLAS P. LAPEÑA, JR.
Commission Chairman

RUTH RAÑA PADILLA
Commissioner

NILO T. ROSAS
Commissioner

Professional Regulatory Board of Architecture (PRBoA)

ANNEX A *(INITIAL DRAFT for Discussion)*

THE 2009 SYLLABI FOR THE LICENSURE EXAMINATION FOR ARCHITECTS (LEA) UNDER R.A. NO. 9266 (THE ARCHITECTURE ACT OF 2004)

PREAMBLE

1. The following syllabi are intended to guide prospective candidates in preparation for the Licensure Examination for Architects (LEA). In general, they cover areas in which examinees are expected to have the **general and specific knowledge**, understanding, skillsets and competencies before they start to legally practice the state-regulated profession of architecture.
2. Such **general and specific knowledge, skillsets and competencies** are expected to be the summation of the **theoretical/ academic instruction** provided by the architectural schools and of the minimum **3,840.0** credited hours (equivalent to **2.0** years) of **practical training** under the certifying Mentor-registered and licensed architect (RLA) in the various aspects of professional architectural practice.
2. The general coverage of the LEA, as administered by the Professional Regulation Commission (PRC) starting 2007, is presently divided into **three (3) major areas** with their corresponding weights as follows:
 - a. Area **A**: History and theory of architecture; principles of planning and architectural practice; and urban design and architectural interiors (30.0%)
 - b. Area **B**: Structural design; building materials and architectural specifications; and methods of construction and utilities (30.0%)
 - c. Area **C**: Architectural design and site planning (40.0%)
3. Each major area is subdivided into specific sub-areas or concerns, as well as into their corresponding rationale and description.
4. These syllabi shall be made available to all recognized schools of architecture in the country, the United Architects of the Philippines (UAP, the integrated and accredited professional organization for architects or IAPoA), and other concerned entities.

Area 1

HISTORY AND THEORY OF ARCHITECTURE; PRINCIPLES OF PLANNING AND ARCHITECTURAL PRACTICE; AND URBAN DESIGN AND ARCHITECTURAL INTERIORS

Part I

HISTORY OF ARCHITECTURE

A. Rationale and Description

1. Understanding and analyses of architectural manifestations from the beginning of civilization to contemporary periods of development; and
2. Understanding and analyses of the influences of environmental, historical and socio-cultural factors and their relevance to the development of art, buildings, structures and of human settlements.

B. Terminal Competencies for LEA Candidates

1. Ability to relate the history of arts and architecture as well as the technologies and human sciences to considerations of ecology and sustainable development;
2. Ability to identify/ differentiate, analyze and compare evolved architectural styles;
3. Ability to relate past architectural styles to the development of present-day utility and construction systems/ technologies;
4. Ability to help reinforce culture and architecture as reflected in tradition, convention and/ or current practices;
5. Ability to utilize insights in the history of the human community/ settlements planning and design, with special emphasis on Asian structures/ buildings/ settlements;
6. Ability to relate the evolution of Philippine architecture to historical and present-day architecture in Asia and elsewhere.

C. Scope

1. Introduction
 - a. The origin of architecture;
 - b. Historic styles of architecture; and
 - c. Factors affecting architectural solutions and styles.
2. Pre-Historic Architecture
 - a. Centers of development; and
 - b. Dolmen, Menhir, Cromlech.
3. Historic Styles of Architecture
 - a. Period/ extent and centers of development;

- b. Factors that affect the development of architectural solutions and styles (historical, environmental and socio-cultural);
- c. General characteristics (architectural, structural, decorative, etc.);
- d. General contributions; and
- e. Notable examples.

3.1 Ancient architecture and the Western succession

- a. Egyptian;
- b. West Asiatic;
- c. Greek;
- d. Roman;
- e. Early Christian;
- f. Byzantine;
- g. Romanesque Architecture in Europe;
- h. Gothic Architecture in Europe;
- i. Renaissance Architecture in Europe;
- j. Nineteenth and Twentieth Century in Great Britain;
- k. Architecture of Africa, Australia and New Zealand;
- l. Nineteenth and Twentieth Century Architecture in Continental Europe; and
- m. Architecture of the Americas.

3.2 Architecture in Asia and the Pacific Region

3.3 Architecture in the Philippines

- a. Architectural legacies
 - a.1 Vernacular, Folk and Pre-Spanish Architecture (before 1550 A.D.);
 - a.2 Spanish Colonial Architecture (1550-1899 A.D.);
 - a.3 American Colonial Architecture (1900-1945);
 - a.4 Architecture of the Commonwealth Period and of the Post-World War II period (1946-2000); and
 - a.5 21st Century Philippine Architecture (2001 to present).
- b. Architectural preservation, conservation and restoration
- c. Pillars of Philippine Architecture
 - c.1 Philosophies of Famous Filipino Architects; and
 - c.2 Examples of great works.

Part II THEORY OF ARCHITECTURE

A. *Rationale and Description*

1. Understanding of the theories and principles of architectural programming, space planning, architectural planning and design and of the architectural program/ plan/ design process;
2. Understanding and analyses of the anthropometric, proxemic and kinesthetic requirements of space in relation to the architectural program, plan and design preparation; and
3. Understanding and analyses of the socio-cultural and technological influences that contribute to the development of contemporary architecture.

B. *Terminal Competencies for LEA Candidates*

1. Ability to identify, relate to and apply the principles of architectural programming, space planning and architectural planning and design to other art forms;
2. Ability to transform the psychological, visual and perceptual language of architecture to symbols and representations of architectural programs, plans and designs;
3. Awareness of construction and design industry standards for architectural program, plan and design preparation, particularly applicable space planning standards/ practices;
4. Ability to assess current theories and principles on architectural programming, on space planning and on architectural planning and design and to apply these theories and principles in the architectural program/ plan/ design processes;
5. Ability to apply anthropometrics and ergonomics to architectural programming, to space planning and to architectural planning and design;
6. Ability to apply the proxemic and kinesthetic requirements of space for human comfort in the context of Filipino culture, behavior and tradition and to anticipate the effects of these on architectural programs, on space plans and on architectural plans and designs;
7. Ability to apply analytical tools in determining the relevance of architectural programming, space planning and architectural planning and design theories to cultural development;
8. Ability to utilize critical socio-cultural and technological methods for analyzing architectural programming, space planning and architectural planning and design concepts in relation to national/ state development thrusts;
9. Ability to correlate architectural programs, space plans and architectural plans and designs with interior designs and landscape architecture plans and designs through a holistic approach.
10. Ability to effectively address climate, orientation and building environment/ setting considerations in the architectural programming, planning and design process.
11. Ability to employ different processes and instruments that shall result in a climate-/ setting-responsive architectural program, space plan and architectural plan and design;

12. Ability to apply different concepts, theories and principles of tropical architectural programming, planning and design as these apply to different architectural planning and design problems; and
13. Ability to correlate the significance of the philosophies of great/ past architects and their works to contemporary architecture.

C. Scope

1. Introduction
 - a. The nature of architecture;
 - b. Architecture as an art and as a science;
 - c. Processes in architectural programming and space planning; and
 - d. Processes in architectural programming, planning and design.
2. Elements of Architecture and the Basic Principles of Architectural Programming, Space Planning and Architectural Planning and Design
 - a. Need-specific elements;
 - b. Structural, circulatory, protective and decorative elements;
 - c. Influences in architectural programming, space planning and in architectural planning and design;
 - d. Basic principles of architectural programming, space planning and of architectural planning and design; and
 - e. Principles of Composition.
3. Architectural Planning and Design Perception
 - a. Anthropometric bases of architectural programming, planning and design;
 - b. Space articulation and territoriality;
 - c. Visual and perceptual language;
 - d. Psychology of space; and
 - e. Proxemics and culture.
4. Tropical Architecture - Architectural Programming, Planning and Design with Climate
 - a. Climatic Design : elements, factors, concepts, analysis and application for comfort;
 - b. Theories and Principles of Tropical Architectural Programming/ Planning/ Design;
 - c. Influences and elements of Tropical Architecture; and
 - d. Specific examples of Tropical Architecture.
5. Masters of Architecture
 - a. Philosophies of the Great Architects; and
 - b. Examples of great works.

Part III PRINCIPLES OF PLANNING

A. Rationale and Description

1. Understanding and analysis of the concepts and techniques in **macro**-planning process at its various levels i.e. site and physical planning (specifically subdivision planning and master planning), human settlements planning, urban and regional planning, land and water use planning, transportation planning, environmental planning, etc.; and
2. Understanding of the art and science of site and physical planning with emphases on their ecological, socio-psychological, aesthetic and functional bases.

B. Terminal Competencies for LEA Candidates

1. Ability to utilize the art and science/s of site and physical planning with emphases on their ecological, socio-psychological, aesthetic and functional bases;
3. Ability to relates the social issues and implications of site and physical planning;
4. Ability to correlate history and **macro**-planning theories to ecology and sustainable development;
5. Ability to employ the basic foundations of site and physical planning and the different **macro**-planning processes.
6. Ability to utilize useful planning techniques relevant to the rank of the architect as a planning and/ or design professional;
7. Ability to relate history and theories of site and physical planning, urban and regional planning, etc. to ecology and sustainable development; and
8. Ability to apply current thoughts and practices as regards site and physical plan formulation, implementation and monitoring.

C. Scope

1. General Principles of Site and Physical Planning
 - a. Hierarchy of site and physical plans, definitions and classifications;
 - b. History and scope of site and physical planning; and
 - c. General planning process.
2. Urban and Regional Planning
 - a. History of the urban and regional planning;
 - b. Theories of urban and regional planning;
 - c. Comprehensive land and water use planning (CLWUPs);
 - d. Zoning ordinances (ZOs); and
 - e. Urbanization and urban social relationships.
3. Housing and Human Settlements Planning
 - a. Definitions and classifications;
 - b. State housing policies, programs and agencies;

- c. State housing finance, production and practices;
4. The Art and Science of Site and Physical Planning
 - a. Map and plan typology, identification and reading/ appreciation;
 - b. Site appreciation, analyses and programming;
 - c. Primary considerations in site and physical planning e.g. physical, aesthetic, ecological, socio-psychological, management, maintenance, etc.;
 - d. Subdivision Planning, Deed of Restriction and Development Guidelines;
 - e. Master Development Planning (MDP); and
 - f. Site Development Planning (SDP) for areas immediately surrounding buildings/ structures.

Part IV.A PRINCIPLES OF ARCHITECTURAL PRACTICE

A. *Rationale and Description*

1. Understanding of the role, legal rights and obligations and responsibilities of the registered and licensed architect (**RLA**);
2. Understanding, analyses and application of the various statutes, codes, and regulations affecting the state-regulated practice of the profession of architecture in the Philippines;
3. Understanding, analyses and application of the various international agreements affecting the global practice of the profession of architecture i.e. by duly-qualified Philippine **RLAs** outside the Philippines and by duly-qualified foreign architects (**FAs**) within Philippine territory; and
4. Understanding of the various aspects of the professional practice of architecture as well as the efficient conduct of client and business-oriented relations for architectural planning/ design projects and for construction projects.

B. *Terminal Competencies for LEA Candidates*

1. Ability to efficiently and effectively utilize legally-recognized types/ forms of architectural services in response to the needs of clients within the context of state-regulated professional architectural practice;
2. Ability to employ organized professional practice activities, basic concepts, tools and areas of application of business and office management, meeting/ monitoring project milestones and operational targets, etc.;
3. Ability to conduct the post-evaluation and monitoring of completed projects and services;
4. Ability to implement the basic services of the registered and licensed architect (**RLA**) for effective organization, management and operation-related activities to satisfactorily deliver the **RLA**'s contracted services;
5. Ability to undertake comprehensive architectural planning and design services and the expanded role of the **RLA** beyond the regular architectural services;
6. Ability to prepares the various types of architectural specifications and contract documents;
7. Ability to compute and evaluate architectural and other cost estimates involving construction, resource allocation and project management;
8. Ability to applies codes and standards of the profession and the laws, rules and regulations, guidelines, etc. relevant to the professional practice of architecture;
9. Ability to understand and comply with the different laws that affect the professional practice of architecture in the Philippines;
10. Ability to understand and effectively address the legal consequences of an **RLA**'s actions as these relate to the pertinent laws, rules, regulations, guidelines and standards;
11. Ability to apply in practice the principles of public safety through building laws and codes;
12. Ability to comply with quality, cost and delivery standards;
13. Ability to apply ethical standards and professionalism in the practice of architecture i.e. ethical parameters applicable to situations in the practice of the profession;
14. Ability to comply with the moral responsibilities and obligations of a **RLA** to peers, clients, colleagues in the industry and society in general;
15. Ability to understand and describe the processes involved in the generation of a globally competitive office/ project management system;
16. Ability to understand and appreciate the implications of a globally open practice; and
17. Ability to assume responsibility for personal and professional growth and the development of leadership qualities.

C. *Scope*

1. Current state regulations for the registration, licensing and practice of architecture, the Standards of Professional Practice and the Code of Ethical Conduct
 - a. Statutes regulating the practice of architecture in the Philippines
 - a.1 Republic Act (R.A.) No. 9266 (The Architecture Act of 2004) and its 2004 implementing rules and regulations (IRR), particularly those focusing on the relationships of the **RLAs** with the PRBoA and of the PRBoA with the PRC;
 - a.2 R.A. No. 8981 (The PRC Modernization Act of 2000) and its IRR; and
 - a.3 Professional Regulation Commission (PRC) and Professional Regulatory Board of Architecture (PRBoA) Resolutions related to the Practice of Architecture in the Philippines.
 - b. Integrated and Accredited Professional Organization of Architects (IAPoA) - The United Architects of the Philippines as the IAPoA;
 - c. **RLA**'s Code of Ethical Conduct;
 - d. **RLA**'s Credo;
 - d. Rights and responsibilities of the **RLA**;
 - e. Spectrum of architectural services;
 - e.1 Pre-Design Services
 - e.2 Design Services

- e.3 Specialized Allied Services
 - e.4 Construction Services
 - e.5 Post-Construction Service
 - e.6 Comprehensive Services
 - e.7 Design-Build Services
 - f. Architectural fees and charges;
 - g. Selection of the Architect and Methods of Compensation (including the conduct of architectural competitions); and
 - h. Global Practice : GATS, APEC Architect, ASEAN Architect and its Mutual Recognition Agreements (MRAs)
2. General Laws, Building Laws and Related Regulations and Standards;
- a. Architectural design standards, building and construction-related laws and their IRRs;
 - a.1 Presidential Decree (P.D.) No. 1096 : The 1977 National Building Code of the Philippines (NBCP) and its 2004 Revised IRR;
 - a.2 R.A. No. 8293 : 1997 Philippine Intellectual Property Code and IRR;
 - a.3 The Philippine Civil Code, particularly Article 1723 on the civil liability of **RLAs**;
 - a.4 R.A. No. 9285 : The 2004 Alternative Dispute Resolution (ADR) Act and Executive Order (E.O.) No. 1008 : The Construction Industry Arbitration Law;
 - a.5 Build-Operate-Transfer (BOT) Law;
 - a.6 R.A. No. 9184 : The Government Procurement Reform Act of 2003 and IRR; and
 - a.7 E.O. No. 278 : Practice of Architecture and Related Consulting Services for Foreign-Assisted Projects and its IRR and Guidelines;
 - b. Laws on real estate and subdivisions e.g. P.D. No. 957 and its 2001 IRR, etc.;
 - c. Laws on housing and human settlements e.g. Batas Pambansa (B.P.) No. 220 and its 2001 IRR, etc.;
 - d. Awareness and general appreciation of P.D. No. 1096/ 1977 NBCP Referral Codes and their respective IRRs:
 - d.1 P.D. No. 1185 : Fire Code of the Philippines and IRR;
 - d.2 B.P. No. 344 : Accessibility Law and IRR;
 - d.3 Philippine Electrical Code;
 - d.4 Plumbing Code of the Philippines;
 - d.5 Sanitation Code of the Philippines;
 - d.6 Environmental Laws e.g. Clean Air, Water and Solid Waste Management Acts, etc.; and
 - d.7 National Structural Code of the Philippines.
 - e. Awareness and general appreciation of other professional regulatory laws (PRLs):
 - e.1 R.A. No. 1582 : Amended Civil Engineering Law of 1956, particularly its Sec. 24;
 - e.2 R.A. No. 8534 : Interior Design Law of 1997 and IRR; and
 - e.3 P.D. No. 1308 : Environmental Planning Law.
3. Other aspects of regulated architectural practice
- a. Operating divisions of architectural practice, development, production, administration, and management (with emphases on preparation of tender and contract documents);
 - b. General quantity surveying for architectural works;
 - c. Legal aspects of architectural practice e.g. administrative, criminal and civil cases, etc.;
 - d. Business aspects of architectural practice;
 - e. 2008 Regional Trial Court (RTC) Decisions promulgated in support of **RLAs**; and
 - f. Various legal documents and issuances posted at the PRBoA website i.e. www.architectureboard.ph.

Part IV.B URBAN DESIGN

A. *Rationale and Description*

1. Understanding of the concepts and techniques in the general planning of physical settings and in the systematic/ comprehensive design of a community on an urban plane;
2. Understanding of the art and science of urban design with emphasis on its ecological, socio-psychological, aesthetic and functional bases.

B. *Terminal Competencies for LEA Candidates*

1. Ability to apply a sense of spatial order, scale, culture and history in handling urban design and community architecture problems;
2. Ability to develop an awareness of the need for expression and communication in the design of specific places in towns and cities;
3. Ability to utilize the knowledge of organization and behavior in the design of specific towns and cities through expression and communication;
4. Ability to associate the importance of community involvement/ participation and techniques in urban/community architecture; and
5. Ability to describe the built environment in the context of ecological balance, sustainable development and conservation of cultural and historical heritage.

C. *Scope*

1. General Principles of Urban Design and Community Architecture
 - a. Elements of urban design;
 - b. Community architecture e.g. orientation, identity, etc.;

- c. Spaces in urban design, urban aesthetics and urban patterns;
 - d. Creating and identifying the sense of space;
 - e. Images of cities and symbols of urban design;
 - f. Cultural Basis of the design of communities;
 - g. Documenting the city: the system of design and process of presentation; and
 - h. Current public policy and concerns and legal considerations in urban design.
2. Urban Design Theories, Rules and Processes
 3. Applications of design requirements for specific places in towns and cities:
 - a. Cluster Housing and Planned Unit Development (PUD);
 - b. Areas for Priority Development (APDs)/ Mixed Used Developments and Commercial Centers;
 - c. Industrial Parks and Districts;
 - d. Planning Educational Campuses;
 - e. Government/ Civic Centers and the Plaza Complex;
 - f. Village Planning, Ecological Communities, Coastal/ Lakeshore Community Planning;
 - g. Resort Community Planning and Design;
 - h. Parks and Open Spaces; Recreational Areas;
 - i. Urban Renewal;
 - j. Streetscapes; and
 - k. Road rights-of-way (RROWs), ROWs and legal easements.

Part IV.C

ARCHITECTURAL INTERIORS (AI)

A. Rationale and Description

1. Understanding the theories and principles of Architectural Interiors (AI); and
2. Understanding and analyses of anthropometric, proxemic and kinesthetic requirements of space in relation to AI.

B. Terminal Competencies for LEA Candidates

1. Ability to identify and use properties of AI finishing materials, their applications and articulations in an AI setting, system of construction and method of specifying their character when in use;
2. Ability to relates new trends in AI construction and detailing;
3. Ability to identify the different historical AI styles and how these evolved and their influence/s on the work of an Architect;
4. Ability to effectively apply the theories and principles of AI planning and design;
5. Ability to effectively apply anthropometric, proxemic and kinesthetic requirements of space relative to AI elements; and
6. Ability to compose acceptable and harmonious AI ensembles.

C. Scope

1. Theories and Principles of Architectural Interiors (AI);
2. Anthropometrics, Proxemics and Kinesthetics of AI;
 - a. Space planning standards and practices;
 - b. Furniture, fixtures, equipment and accessories;
 - c. andInterrelationship of the AI to the architectural exterior and the building grounds;
3. AI styles, finishes and furnishings on various building types;
 - a. Filipiniana AI;
 - b. Minimalist AI;
 - c. Oriental AI;
 - d. Mediterranean AI;
 - e. Neo-classical AI;
 - f. Hi-tech & Postmodern AI;
 - g. Art Deco AI; and
 - h. Art Nouveau AI.

Area 2

STRUCTURAL DESIGN; BUILDING MATERIALS AND ARCHITECTURAL SPECIFICATIONS; AND METHODS OF CONSTRUCTION AND UTILITIES

Part I

STRUCTURAL DESIGN

(CONCEPTUAL LEVEL)

A. Rationale and Description

1. Understanding of the fundamentals of mechanics, strength of materials and theory of structures; and
2. General conceptualization of the structural design for a building/ structure, its principles and analyses of the structural elements for the various types of construction materials, methods and systems to be used for the foundation, superstructure and shell of the building/ structure.

B. Terminal Competencies for LEA Candidates

1. Ability to apply in practice the principles of public safety and structural stability;
2. Ability to generally conceptualize the building/ structure under combined loads and seismic forces;
3. Awareness, appreciation and general understanding of the principles of stress and strain, bending, shear, torsion under plain and combined loads, shear and moment, determinate and indeterminate structures and elastic stability of columns;
4. Ability to conceptualize structural design for simple timber, steel, reinforced concrete and composite buildings/ structures;
5. Ability to apply relevant provisions of P.D. No. 1096 (the 1977 National Building Code of the Philippines/ NBCP), the National Structural Code of the Philippines and other NBCP Referral Codes for simple timber and steel structures and simple reinforced concrete and composite buildings/ structures.
6. Ability to read, understand and generally interpret structural plans, details, drawings, documents and soil investigation reports.

C. Scope

General conceptualization of structural design (including a basic understanding of seismic analysis), in the following building materials and construction systems:

- a. Timber;
- b. Reinforced concrete;
- c. Structural steel;
- d. Composite structures; and
- e. Advanced construction methods.

Part II BUILDING MATERIALS, ARCHITECTURAL SPECIFICATIONS AND METHODS OF CONSTRUCTION

A. Rationale and Description

1. Understanding of the properties of building construction and finishing materials; their application and articulation; systems and methods of specifying and construction;
2. Awareness of the different types/ formats of architectural specifications and presentations i.e. specifications brief, outline specifications, specifications matrix, technical specifications, schedules of finishes/ fenestrations (doors and windows)/ fixtures (sanitary, electrical, etc.)/ furniture (assembled, custom, etc.)/ equipment/ hardware, etc. ;
3. Understanding of the types of construction systems and methods; and
4. Application of certain management principles relative to the realization of the various stages of construction (including pre-construction and post-construction)

B. Terminal Competencies for LEA Candidates

1. Ability to promote awareness and to apply in practice the principles of public safety through the correct specification and application of construction and finishing materials;
2. Ability to utilize the basic properties and compositions of construction and finishing materials, including their basic application and articulation for the building envelope;
3. Ability to specify appropriate building materials considering their applicability, practicability and functionality and in accordance with the standard and uniform system of architectural and/ or building specification e.g. Masterformat, etc.;
4. Ability to express the language of building materials, both in English and the vernacular e.g. Filipino, as used in the construction and design industries;
5. Ability to apply the essentials of architectural specification writing in identifying, recommending and using the appropriate type of materials for a particular building situation and/ or condition;
6. Ability to utilize architectural specifications as non-graphical tool to fully complement architectural working drawings;
7. Ability to promote awareness and to apply in practice the principles of public safety through systems and methods of construction;
8. Ability to describe the essentials of working drawing production through the language of graphical presentation;
9. Ability to translate conceptual architectural designs into architectural working drawings;
10. Ability to do detailing for architectural working drawings;
11. Ability to apply methods and techniques in the production of construction drawings/ documents for the construction, erection or assembly of a building/ structure;
12. Ability to describe essential concepts and principles relative to construction, erection, assembly and fabrication of various types of common buildings;
13. Ability to apply the different methods and techniques of estimating different quantities of materials, equipment and labor for use as a basis for sound project programming, scheduling and control;
14. Ability to describe the fundamental principles governing the design, purpose and application of the different types of non-conventional systems of construction and the advantages of using such systems;
15. Ability to provide some architectural working details for the various types of alternative building construction systems and components;
16. Ability to describe the latest system/s available in the construction industry; and
17. Ability to comprehend tender and construction documents and to understand the basic functions and legal importance of such documents.

C. Scope

The applicable architectural specifications for the following conventional and alternative building works:

- a. Non-engineering civil works;
- b. Carpentry and joinery;
- c. Concrete and masonry;

- d. Various metal works;
- e. Structural steel for architectural applications;
- f. Concrete and reinforced concrete for architectural applications;
- g. Waterproofing, damp-roofing, insulation and the like;
- h. Glass and glazing;
- i. Painting and varnishing;
- j. Doors, Windows and Other Fenestrations;
- k. Hardware; and
- 1. Specialty works (pre-fabrication, vaults, signage, parking systems, etc.)

The methods of construction for the following conventional and alternative building works:

- a. Non-engineering civil works;
- b. Carpentry and joinery;
- c. Concrete and masonry;
- d. Various metal works;
- e. Structural steel for architectural applications;
- f. Concrete and reinforced concrete for architectural applications;
- g. Waterproofing, damp-roofing, sound and thermal insulation and the like;
- h. Glass and glazing;
- i. Painting and varnishing;
- j. Doors, Windows and Other Fenestrations;
- k. Hardware; and
- 1. Specialty works (pre-fabrication, vaults, signage, parking systems, etc.)

Part III UTILITIES

A. Rationale and Description

- 1. Understanding of the basic practices, principles, general design and installation and/or construction of utilities required for a building/ structure and its grounds/premises;
- 2. Understanding and analyses of utility, facility, and equipment requirements in relation to aesthetics, function, and stability of a building/ structure and its premises.

B. Terminal Competencies for LEA Candidates

- 1. Ability to identify and apply the fundamentals of building utilities and systems;
- 2. Ability to apply fundamental concepts and principles covering the general design and installation of electrical, mechanical, electronic/ communications, fire protection, building management, plumbing and sanitary systems, waste management systems, and the like in buildings and its grounds, consistent with trade practices and recommendations by the pertinent professionals;
- 3. Ability to apply the pertinent code provisions relative to the planning/ lay-outing, design, installation, operation and maintenance of such utility systems and their components;
- 4. Ability to converse and coordinate with the professionals and their staff concerned with such utility systems and components;
- 5. Ability to apply the basic principles of planning, designing, operating and maintaining such utility systems and components;
- 6. Ability to identify and to apply the different important aspects of acoustics and lighting as these relate to planning and design principles for buildings/ structures and their grounds; and
- 7. Ability to relate the psychological and physiological effects of such utility systems, sound and light on building occupants/ end-users.

C. Scope

Design and construction and/or installation of the following utility systems and their respective components:

- 1. Sanitary and Plumbing Systems and Equipment
 - a. Water source, storage, supply and distribution;
 - b. Plumbing rough-in and fixtures;
 - c. Drainage and sewerage systems; and
 - d. Waste collection, disposal, treatment and/or recycling.
- 2. Mechanical Systems
 - a. Heating, ventilating, and air-conditioning (HVAC) systems;
 - b. Conveyors and other building mechanical equipment e.g. elevators, funiculars, escalators, walkalators, etc.;
- 3. Electrical and Other Power Systems
 - a. Electrical power and lighting supply, distribution and fixtures; and
 - b. Electrical power source and alternative power sources.
- 4. Acoustics and Illumination
 - a. The psycho-physics of acoustics and lighting; and
 - b. Acoustical treatment and corrections.
- 5. Disaster Prevention and Protection Systems; Security Systems
 - a. Building fire-fighting, prevention, and protection apparatus;
 - b. Installation and/or construction of the different protection systems;
 - c. Materials and fixtures; and
 - d. Disaster prevention and mitigation systems.

6. Communication Systems
 - a. Electronics system; and
 - b. Telephone, intercom, internet/ DSL, cable TV, audio/video facilities, public address (PA) system, etc.
7. Building management and other systems
 - a. Climate/ lighting/ security controls and related applications for buildings/ structures;
 - b. Robotics and related intelligent building features.

Area 3

ARCHITECTURAL DESIGN AND SITE PLANNING

A. *Rationale and Objectives*

1. Application of the structured and logical approaches to solving architectural and site/ physical planning problems with the use of the various tools available to the registered and licensed architect (**RLA**) e.g. architectural research, architectural programming, space planning, architectural planning and design (including architectural interiors), site/ physical analyses, programming and planning, urban design and related solutions with emphases on design and construction methodologies, quantitative and qualitative aspects of spatial organization/ hierarchies, circulation, and interrelationships of space, structural form, design of the building envelope using historical references, the integration of the applicable building utilities and facilities and general/ specific compliances with the applicable laws, rules and regulations; and
2. Application of acquired skillsets and ability to fully conceptualize program, plan and design solutions to architectural design problems and to present such solutions in the appropriate graphical language.

B. *Terminal Competencies for LEA Candidates*

1. Ability to understand an architectural and/or space program and to prepare the architectural plan and design through basic written/ drawn media and through the orderly presentation of the required architectural solutions;
2. Ability to prepare or to understand and translate an architectural program;
3. Ability to apply the appropriate methodologies for architectural plan and/ or design preparation;
4. Ability to evaluate, process, analyze, interpret and establish architectural criteria and/ or to derive conclusions and prepare the required architectural plan and design solutions from the given information on the architectural problem;
5. Ability to apply architectural forms evolved through a thorough and prior understanding of the building function;
6. Ability to express creativity and skill through manipulation of shapes and forms while simultaneously analyzing the architectural relationships of various interior and exterior spaces to attain the desired harmony of building form and function;
7. Ability to conceptualize the structural stability of the required buildings/ structures;
8. Ability to properly apply anthropometrics, ergonomics, kinesthetics and proxemics to the required architectural program, space plan, architectural plan and design, etc.;
9. Ability to consider cost implications for project viability;
10. Ability to apply principles, techniques and accepted practices related to architectural planning and design for various classes of buildings/ structures in tropical environments, particularly those prescribed by the 2004 Revised Implementing Rules and Regulations (IRR) of Presidential Decree (P.D.) No. 1096 (1977 National Building Code of the Philippines/ NBCP);
11. Ability to utilize site and physical planning principles on complex architectural solutions with emphases on the manipulation of the site through proper orientation (solar/ wind/ noise/ view, etc.) and consideration of other site conditions such as topography, access, hazards, privacy considerations, site sensitivities, etc.;
12. Ability to apply the basics of site development planning and landscaping while considering basic architectural relationships of the spaces to be created;
13. Ability to apply fundamental concepts and principles related to utility systems forming part of the total building/ structure plan and design consistent with industry practices;
14. Ability to thoroughly comply with building laws and regulations into the required architectural solutions;
15. Ability to apply graphic and drafting conventions in the production of simple to complex architectural drawings using pencil or pen and ink as the only media; and
16. Ability to apply principles of perspective drawing (exterior and interior) and the plotting of shades and shadows and limited entourage to complete the required architectural solution.;
17. Ability to utilize site and physical planning principles on complex architectural solutions with emphases on the manipulation of the site through proper orientation (solar/ wind/ noise/ view, etc.) and consideration of other site conditions such as topography, access, hazards, privacy considerations, site sensitivities, etc.;
18. Ability to relate the theories of arts and architecture, the technologies and the human sciences for the plan and design of a stable and functional building/ structure that fully addresses considerations for ecology and sustainable development;
19. Ability to apply the basics of site development planning and landscaping while considering basic architectural relationships of the spaces to be created; and
20. Ability to apply the site and physical planning rules and regulations, particularly those prescribed by the 2004 Revised IRR of P.D. No. 1096 (1977 NBCP)

C. *Scope*

The architectural design and site planning problems involve the following general types of buildings/ structures and their grounds:

1. Residential
 - a. Houses/ residential structures and residential subdivisions, apartments, housing for special groups (low-cost housing, housing for the aged, etc.);
 - b. Lodging houses, etc.;

2. Commercial and Business Establishments
 - a. Business (office, bank, hotel, etc.);
 - b. Commercial (department store, market, retail store, etc.); and
 - c. Mixed business-commercial or mixed business-residential developments, etc.
3. Industrial and Agricultural Buildings/ Structures or Estates
 - a. Heavy industry (manufacturing, shipyard, etc.);
 - b. Medium to light industry (factory, workshop, etc.);
 - c. Mixed industrial-residential developments;
 - d. Agro-industrial development.
4. Public, Civic and Government Buildings/ Structures
 - a. Educational and cultural (schools, research laboratory, public hall, library, museum, historical/ monumental building/structures, etc.);
 - b. Health and medical (hospital/ clinic, health fitness club, specialized medical center, etc.);
 - c. Governmental and quasi-public developments (national or public building, police/ fire stations, embassy/ consulate, penitentiary, etc.);
 - d. Parks and recreational developments (ecological/ botanical gardens, theater, cinema, casino, beach resort, etc.);
 - e. Sports and athletics (sports plaza, stadium, gymnasium, golf course, tennis/ basketball courts, billiard hall, etc.); and
 - f. Religious and funerary Establishments (church/ chapel, temple, mosque, monastery, convent, seminary, crematorium, memorial park, cemetery, etc.).
5. Facilities, Services and Utilities
 - a. Transportation (airport, seaport, railway station, terminal, depot, pier, transit sheds, etc.);
 - b. Utilities (power station, water treatment/ filtering plant, sewerage, crematory, slaughterhouse, TV-Radio-Telephone stations, newspaper plant, etc.); and
 - c. Military (military camp, depot, etc.); and
6. Complex Projects (involving a combination of several buildings and structures in a given site or area and therefore requiring site programming and various levels of site and physical planning).

The **PRBoA**, subject to the approval of the **PRC**, may revise or exclude any of the foregoing subjects and their syllabi, and add new ones at any time or as the needs arise to fully address and/or conform to technological changes brought about by continuing trends in the practice of the architectural profession locally and globally.

Nothing follows.