

MINIMUM STANDARDS OF ARCHITECTURAL EDUCATION REGULATIONS 1983

seal Of the regard to ith regarä Inspeæ Council of Architecture (Incorporated under the Architects Act, 1972) MINIMUM STANDARDS OF ARCHETECTURAL EDUCATION REGULATIONS, 1983* _ i exercise of the powers conierred by ctauses (h) and (j) of sub-section (2) OF section 45 read with section 21 oi the Archi!ects Ac;t. "Q.7Z - of 1972). the Council of Architecture. with the approve/ of the Central Government hereby makes the name!v Shoå Tifie and Cornmencemeü{ ('r) These regu2ations may be called the Council} of Architecture (fvfinimum Standards cf Architectural Education) Regulaüons. 1983. (2) They shah come into force on the dete of their publication in he Official Gazette. e Definitions In these regulations, unless the context otherwise requires dy and ndards Mion turn 2. •3. '4. (a) (b) (f) "Act" means the Architects Act, 1972 (20 of 1972); "Council" means of Council of Architecture constituted under Section 3; "Executive C.ommttee" means the Executive Committee constituted under Section 3; "Faculty ' means the fulPüme teaching staff members in the serviée of the institution; "Institutions" means me coiieges/departments/schools of architecture in India impaing instuctjons for recognized qualifications; "Recognised qualifications' means any quahfication in archfctecture fOF the time being included in the Schedule or notified under section 15 of Act. Duration and Stages of the Course (1) (2) (3) (4) (5) The architecture course shall be of minimum duration of 5 academic years or 10 semesteÆ of approximately 16 working weeks each inclusive of six months/one semester of approximately 16 working weeks of practical training aner me first stage in a professional Office. The architecture course may be conducted in two stages. The first 3 academic years I e semesters of approximately 16 working weeks each of the course shalt be a basic standard course and shall be the first stage: Provided that candidates admitted to the course shal complete the first stage within 5 years of admission to the course. The second stage of the course shall be of 2 academic years 1 4 semesters of approximately 16 working weeks each. The completion of first stage shall not qualify candidates for registration underthe Architects Act, 1972. Admission to the Architecture Course (1) No candidate, with less. than marks in aggregate. shall be admitted to course unless he/she has passed an examination at the end ofthe new 10+2 scheme of Senior School Certificate Examination or equivalent with Mathematics as subject of examinations at the 10+2 level." - (2) Where 10+2 scheme is not introduced. candidates must have passed aner 11 years schooling the Higher Secondary/pre-university/ pre-engineering or equivalent examinations in the Science group of any recongnized Universty or Board with English, Physics, Chemistry and Mahematics as compulsory subjects. (3) The Institutions may subject the candidates, seeking admission to the architecture course, to aptitude tests specially designed to assess the candidates' aptitude; Provided that no separate aptitude tests may be conducted where Qdmissions are made ihrough competitive examinations. (4) The instiutions shall not give weightage ot more than 50% marks for tests in the matter of admissions. z'Pubiished in the Gazette of Part Section 4, 2Sü7 March. 1983 and 27th August 1983. - "Amended by Notification in the Gazette of India dated January 7, 2006 37 5. 6. 7

8. Inbke and MigraBon (1) The sanctioned intake of candidates at the first year level shali not exceed a maximum of 40 in a class.If more than 40 candidates are admitted, separate classes Shail be organised. (2) The institutions may permit, at their discretion, migration of students from one institution to another subject to the maximum number of students not exceeding the permitted maximum intake in a class. Courses and periods of Stüdiés (1) The institutions imparting in architecture required for granting recognized qualifications may follow the couæes and periods of studies as prescribed in Appendix-A. (2) The institution Sha", as an integraF part of ar&lifectura' education curriculum and as a part of teaching programme. arrange 'for study tours, visits to places of architectural interests. Professional examination, Sbdnards of proficiency and conditions of admissions, qualification of examiners (2) (3) {4) (5) (6) The University or an independent examining body shall conduct the examinations at the end of each stage. The sessional work shall. as far as possible. be assessed by a jury of intenal and extenal examiners. The weightage of marks for subjects having boh class work marks as weft as examination marks may not exceed the ratio of 50:50. The pass percentage shall not be less than 45% in each subject and shall not be less than 50% in fie aggregate. Candidates who have passed in the internal assessment. only be permitted to appear in an examination. An examiner for any of tt'E subjects of examination shall have a minimum of 3 years teaching/professiona* experience in his/her fie4d of study. Standards of staff, equipment,

accommodation, training and other facilities for technical education (1) (2) (3) (4) (5) (6) The institutions shall maintain a teacher/student ratio of 1:8. The institutions shall have a minimum number of 12 faculty members for a student strength of 100. The institution with the maximum intake of 40 in a class may have the faculty pattern as prescribed in Appendix-B. The institutions shall encourage faculty members to involve in professional practice including research. The institutions shall provide facilities as indicated in Appendix-C. The institutions shall encourage exchange of faculty members for academic programmes. Notwithstanding anything contained in these regulations, the institutions may prescribe minimum standards or Architectural Education provided such standards does not, in opinion of the Council, fall below the minimum standards prescribed from time to time by the Council to meet the requirements of profession and education thereof. 38 out of 3. 4. 5. 6. 7. 8 10. 11. 12. 13. 2. 3

4. Courses, Periods of Study and Subjects of Examination Stage I - Basic Course Subjects of Examination Architectural Design Building Construction Building Materials and Sciences Architectural Drawing and Graphics History of Architecture Workshop Practice Design Structural Mechanics and Theory of Structure Surveying and Levelling Building Services & Equipment Humanities Estimating & Costing Principles of Human Settlements APPENDIX -A Minimum No. of periods of 50 to 60 minutes duration 600 360 60 360 720 120 60 300 60 90 60 60 60 2310 The names given to the subjects of study are suggestive only. The same subjects pertaining to the architecture may be taught under different names. The emphasis on teaching various may vary from institution to institution. New subjects may be introduced certain subjects given less emphasis depending upon the requirement and educational philosophy of an institution. The subjects of Landscape Design, Humanities and Estimating & Costing may, if desired, be taught in the second stage of the course. For the purpose of calculating the periods of study, 30 periods per week per class are considered to be adequate. For 3 years of study at the rate of 16 weeks per semester term, the total for first stage works out to be 2880 periods. In order to give to the institutions to orient the Course as per their own philosophy, approx. 75 percent of the total periods of study have been taken into account for calculating the minimum hours of study for each subject while the institutions may allot balance approx. 25 percent of the study periods to the subjects of the Minimum total course* periods should be 2880. Thus, 570 periods are to be allotted by the institution to the subjects of their choice. 39 Brief description of the subjects listed in the Stage-I of the Course 1. ARCHITECTURAL DESIGN Applying the knowledge gained in other subjects and to design buildings of medium complexity e.g. Schools, Colleges, Dispensaries, Shops and Houses, etc., and present them in graphic form

2. BUILDING CONSTRUCTION Knowledge of various methods of building construction of medium complexity with timber, stone, bricks, concrete etc. including foundation, walls, roofs, staircase, joinery and finishes

3. BUILDING MATERIAL AND SCIENCES Knowledge of basic building materials and their behaviour such as bricks, stones, metals, timber and finishing materials. Effects of climate on built environment to be able to design for comfortable conditions

4. ARCHITECTURAL DRAWING AND GRAPHICS Ability to present in graphic form all elements of design - Study of shades and shadows, textures, tones, colours, geometrical form, perspectives and projections, free hand drawing and rendering_ 5. HISTORY OF ARCHITECTURE Study of various styles of Architecture and methods of construction through the ages in the world with emphasis on Indian Architecture

6. WORKSHOP PRACTICE Ability to make building models with various materials such as cardboard, wood, plastics, plaster of paris and metals. Ability to make simple joints in timber, pipes and other materials 7. LANDSCAPE DESIGN Understanding of Landscape elements like trees, shrubs, plants, water, rocks and development of Landscape planning and application in architectural design

8. STRUCTURAL MECHANICS AND THEORY OF STRUCTURES Understanding the structural concepts and behaviour of structural elements, simple calculations for columns, beams, frames, footings, 9. SURVEYING AND LEVELLING Understanding of various survey and levelling instruments, carrying out surveys of land of medium complexity and preparation of survey 10. BUILDING SERVICES & EQUIPMENT Study of and designing for water supply, drainage, sewage disposal, electricity supply, wiring and lighting for buildings

11. HUMANITIES Study of sociology, economics and culture. as applicable for design of human settlements

12. ESTIMATING AND COSTING Systems of taking out quantities and estimating for all trades involved in construction of medium complexity

13. PRINCIPLES OF HUMAN SETTLEMENTS Man and environment : Biological and behavioural responses to human settlements; Design for living, natural and built-environment. Ancient texts and treatises on settlement and area planning in India Human settlements during ancient medieval and modern periods in India, Europe and other parts of the world. Characteristics of human settlements built by Muslims and Hindu rulers in India. 40 Stage-II 2 4. -6. Subjects of Examination Architectural design, planning and thesis Building Construction, Materials and Specifications Building Sciences & Services Town Planning (Theory) Professional Practice Building Bye-laws Structure System Electives such as : Housing Urban Design Interior Design Building Management Landscape Design Urban Planning Minimum No. of periods of 50 to 60 minutes duration 570 210 60 60 90 15 45 60 The names given to the subjects of study are suggestive only. The same subjects pertaining to architecture may be taught under different names. The emphasis on teaching various subjects may vary from institution to institution. New may be introduced certain subjects given less emphasis depending upon the requirement and educational philosophy of an institution. Teaching in the second stage may be a lot more flexible. Students may obtain employment and may come back to complete the prescribed course later. It may also be possible to complete the second stage of the course as a part time course depending upon the facilities available in an institution. For the purpose of calculating the periods of study, 30 periods per week per semester/term of class are considered to be adequate for 1½ years of study at the rate of 16 weeks per semester/term, the total for second stage work out to be 1440 hours. In order to give freedom to the institutions to orient their course as per their own philosophy, approx. 75 per cent of the total periods of study have been taken into account for calculating the minimum period of study for each subject while the institutions may allot the balance approx. 25 per cent of the study periods to the subject of their choice. Minimum total contact period should be 140. Thus 360 periods are to be allotted by the institution to the subjects of their choice. 3 Brief Description of the Subjects Listed in the Stage-II of the Course .3. ARCHITECTURAL DESIGN, PLANNING AND THESIS Design of complicated buildings and campuses involving analytical studies of building and spaces from sociological, economic and cultural points of view such as Universities, industrial Estates, Housing Schemes etc. Thesis on a subject requiring detailed analytical study to lay down validity and design criteria presented in graphic form, models and report. Thesis may also be on research projects presented as a written report. BUILDING CONSTRUCTION, MATERIALS AND SPECIFICATIONS Study of advanced building construction methods with new materials as-plastics, metals, synthetic boards and latest techniques in the use of concrete. BUILDING SCIENCES & SERVICES Study of Acoustics, Air-Conditioning, Heating, Cooling, Mechanical installations, Fire-control. Water supply and Drainage system for complicated buildings. 41 4. 5. 6. 7

8. TOWN PLANNING (THEORY) A general understanding of Town Planning principles as they have evolved through the ages PROFESSIONAL PRACTICE The examination in professional practice designed to assess the knowledge, and maturity which fit the architect to fulfil his professional duties and his understanding of the management of an office organisation for such as a purpose. The syllabus should cover the following General principles of Indian Contract Act; Building Contracts generally, Conditions and forms of contract Administration of contracts, principles of arbitration. Indian Arbitration Act, 1940, valuation of properties, Architectural competitions; Easements of properties; Report writing; Codes of Practice; Conditions of Engagement; Duties and responsibilities of an architect in relation to owner, contractor, relate professional and public; Indian Standards & Codes of Practice. (Planning and Building legislation etc has been omitted because this is covered under Building Bye-laws - item 6) BUILDING BYE-LAWS Study of building regulations to enable to design and prepare drawings for submission to concerned bodies. STRUCTURE SYSTEMS Study of new structural technology such as space frames, prestressing, shells and understanding of the limitations and scope of these techniques. Calculations for these techniques are not expected. ELECTIVES SUCH AS: (a) Housing (b) Urban Design Interior Design (d) Building Management (e) Landscape Design (f) Urban intensive study of one or more of the subjects offered as elective depending upon the expertise available to an

institution. The list of the subjects may be enlarged but they should be related to Architecture. 42

APPENDIX - B statement showing the designation, pay-scale and qualification etc. required to be prescribed for faculty positions 2. 4. 5. No. Designation Lecturer Reader JAsstt. Professor Professor Principal/Head of Department Pay-Scale Rs. 700-40-11 OWSO-1600 Rs. 1200-50-1300-60-1900 Rs 2000-125/2-2500 Rs. 1500-60-1800- 100-2000-12512-2500 plus special pay •Qualifications Bacheior's Degree in Architecture or equivalent plus two yearæ of relevant professional experience. OR Master's Degree in Architeai-#or equivalent and one year's reevant professional experience. Provided further that if a does not possess a Master's Degree in Architecture and professiona experience or a person possessing such experience is not found the person pppointed will be required to obtain the desired professional experience within a period •offiVe years on his appointment iaiiing which he will not be able to earn future increment until hé fulfils this requirement. B.Arch. or equivalent with 7 years experience in Teaching- / Research/ ProfessionalWork, OR M. Arch. Or equivalent 'vytth 5 years experience in Teaching]Professional Work. B.Arch. or equivalent witi 10 years of experience in TeadlingfResearch Work. Experience of guiding research. OR M. Arch. or equiva*ent with 8 years of experience in Teaching/Research/ Professional Work. B.Arch. or equivalent wiân IO years experience in Teaching/Research]Pmfessional Work. Experience of guiding research. OR M. Arch. Or equivalent with 8 years of experience in Teaching/ Research/ Professional work. The institution may appoint Professor of Eminence. Note : 2. 3

4. It is advisable that approx.25% of the teaching load should be allotted to the visiting faculty so that the students are brought in closer contact with me persons actively engaged in practice. Each institution may have a staff smucture consisting of the following : Principai or Head of Department and Professors, Asstt. Professors'Readers and Lecturers in ratio of 1:2:4. -me Institutions may recruit qualifed persons in the fidd of Engineering/Qty. Surveying/Art/Humanities dependirw on aâuel requirements against the total sanctioned strength. The equivalent qualification shall mean any such qualification as recognised by me Council of Architecture for registration as an Architect under section 25 of the Ar\$liteäs Act

1972. APPENDIX - C Physical Facilities The Institution of Architecture should be located in a building to have a Boor area of about 15 sq.m. per student. The building should include class rooms and at least 5 studios, adequate space for faculty members, library, workshop, materials museum, iaboratories. exhibition/confer- ence room, office accommodation and common area for students and staff. The space requirements per student for architectural education whether in the Institution or jn me Hoste! are apt to be more than for most other types of professional courses like engineering and medicine because of the large space required for preparation of drawings. This factor should be borne in mind in the design of Hostels and Studios. Fâcilities may also be provided for extra-curricular and sports. The equipment in the workshop/laboratories has also to be provided to meet-with-the special requirement for architectural education. It is desirable to provide locker facilities in the studios for students. The Library, Workshops, Laboratories and Photography unit should be managedby professionally qualified staff with adequate supporting staff Io assist the students and faculty members in their academic programmes. There should also be administrative supporting staff to run the Arc*litectural Institutions. It is desirable to provide hostel accommodation and residential accommodation for staff and students in close proximity of the institution.