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IMPORTANT CONVENTION NOTICES—PAGES 38 & 39

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The President's Message

THE defense program remains the primary interest of our country and its government. It is moving on to its second phase; to a greater Navy, and a larger Army. That means an extended and expanded construction program, greater in volume, probably, than the one just closing. The effect of this expanded construction on the architectural profession will be its main interest for a long time to come.

This message therefore will be devoted to considerations of some phases of the new program.

Construction under the 1940 program is rapidly being completed, and at least one of the federal departments will have enough projects completed by the end of the month to enable it to reach a general conclusion as to the adequacy and competency of the services rendered by the architects and engineers engaged for the projects.

If the authorities are satisfied with those services, then the opportunities for architects and engineers in private practice to plan the Army's defense shelters and sites will be advanced. If, on the other hand, the authorities are not satisfied with the services that have been rendered, then the placing of further work in the hands of those in private practice may be jeopardized.

The March message will have further to say of these things.

As the beginning of the 1941 program approaches, there are some changes in the Washington set up that you should know, though you may have learned of them in the public press.

The new building work for the Navy Department will be large in volume and will include new bases outside of continental America. Apparently that Department intends to continue its general policy of planning its own buildings, for it has just announced it will plan its Caribbean bases in that manner. However, there is no reason why architects should not continue trying to convince the Chief of the Bureau of Yards and Docks that they can aid him in the development of his program.

The probabilities are that the Army building program for 1941 will be larger than the one it is completing. It is generally understood that a greatly increased army is in the making, and that means the immediate construction of new camps, cantonments, centers and air stations, industrial plants and housing. We hope to participate to a greater extent than we have before in the planning of these sites and the buildings on them.

The committee that recommends architects, engineers and contractors to the Quartermaster General for these projects has been augmented this last week by two new members, Brigadier General George R. Spalding and Alonzo B. Hammond. General Spalding, retired, has undertaken the chairmanship of the committee. Mr. Hammond is a Past President of American Society of Civil Engineers and a member of the Construction Advisory Committee to the Munitions Board.

I called attention to this recommending committee in my message of last June, and advised all architects to supplement their questionnaire information by

filing definitive information of their experiences with this committee. The advice is still good.

A change important to the planning professions has taken place within the Construction Division of the Office of the Quartermaster General. General Brehon B. Sommervel is now Chief of the Division. Lt. Col. Edmond H. Leavey has been placed at the head of the Engineering Branch of the Division, and Major Hugh J. Casey at the head of the Engineering and Design Section of that Branch. The latter section is responsible for all architectural and engineering features of the Army construction program under the jurisdiction of the Quartermaster General.

General Sommervel has started to simplify and decentralize the responsibilities of the Construction Division, particularly to facilitate prompt decisions on questons arising in the field. He has consolidated the work of the Washington offices and has set up nine Quartermaster Zones throughout the United States, each Zone being territorially the same as the Corps Areas of the Corps of Engineers. A Zone Constructing Quartermaster has been placed in charge of each Zone and he will have general charge of all construction projects within his Zone. Each construction project is in charge of a Project Quartermaster.

The Zone offices are not in complete operation as yet, but generally they are expected to answer specific questions arising at the various projects unless they relate to administrative or engineering policies, which will be answered in Washington. This decentralizing procedure should eliminate delays by diverting many questions from Washington.

To assist each Zone C. Q. M. in his decisions on field work, he has been given a set of advisers. They comprise (a) an architect, who will advise on architectural matters; (b) a civil engineer, who will advise on civil engineering matters; (c) a mechanical engineer, who will advise on questions involving mechanical and electrical matters, equipment, etc.; (d) a contractor and (e) a labor representative, to advise in their respective fields. Each adviser is engaged on a consulting per diem basis, to act when called upon by the Zone Constructing Quartermaster. None of them is to do any planning or designing nor will have any duty other than that indicated above.

Colonel Leavey has begun to reorganize the procedures of his office concerning its architectural and engineering functions. He has grouped its activities in three parts; an architecture group, to direct all activities relating to buildings; a civil engineering group, to direct civil engineering problems outside of buildings; and a mechanical engineering group, to handle power, fuel and special mechanical engineering problems and equipment outside of buildings.

To head these groups he invited the president of The Institute, the president of the American Society of Civil Engineers, and the president of the American Society of Mechanical Engineers. The proposition was discussed by the members of The Institute Executive Committee and others, and they felt strongly there was a service to be performed for the Government and that I should undertake the job for the architects. I was reluctant to do so and did not consent until other architects who were offered the job declined to serve. When the president of the American Society of Civil Engineers, Mr. Frederick H. Fowler, of San Francisco, agreed to take it for his profession; the immediate past president of the American Society of Mechanical Engineers, Mr. Warren C. McBryde, of San Francisco, agreed to take it for his profession, and the immediate past president of the American Society of Landscape Architects, Mr. A. D. Taylor, of Cleveland, agreed to act as consultant on site planning, I could not refuse.

So your president, with Messrs. Fowler, McBryde and Taylor entered on their new responsibilities last week. The jobs are full-time ones for the duration of the defense program. We are receiving the utmost consideration and cooperation from the officers in charge of the Division, and they have charged us with the direction of the procedures and work, from the reception of the projection in the office to their completion in the field.

We are now organizing our duties and our individual responsibilities, which I will have more to say of in the March OCTAGON. Meanwhile I shall carry on my presidential duties as best I can with what time can be found, though I had a full-time job before I took on this new one.

Please note that neither myself nor the other presidents have anything to do with the awards of contracts or the selection of architects, engineers, or contractors for any project. That job is the function of others, and we cannot help you, individually.

The defense housing program is proceeding in the manner heretofore announced. Practically all allotments of the appropriated moneys have been made. Such of those allotments that went to United States Housing Authority are being offered by it to architects in private practice on a cost-plus-fixed-fee basis, according to members who have been offered the work. The terms of agreement and of compensation that are being offered are inadequate, in the opinion of The Institute, and the Societies of the Landscape Architects, the Civil Engineers, and the Mechanical Engineering Societies who have studied the question of fees and contracts extensively for the last sixty days. The contract terms and schedules we have recommended as a result of our studies have not been accepted by U.S.H.A. but our conferences with the Authority and the Federal Works Administrator are not completed. Meanwhile neither The Institute nor any of the other societies have approved or accepted any schedule or fixed fee form of contract offered by the Authority for recommendation to our members, for either defense housing projects under the Lanham Act or those under the low-cost housing category.

New appropriations for defense housing amounting to more than $150,000,000 are before Congress. The principal bill raises the amount in the 1939 Lanham Act from $150,000,000 to $300,000,000, and makes no other important changes. So we stand as before—the Act permitting architects in private practice to be employed but not directing they should be or that they should be given preference.

EDWIN BERGSTROM,
President

Philosophies Underlying the Teaching in Our Schools of Architecture*

AT the 1940 Convention of The Institute, held in Louisville, Kentucky, a program was presented concerning architectural educational programs and registration to practice architecture. The program was designed to bring before the Convention and the profession generally the real relationship between the educational training of our future architects and the examinations that admit them to practice and to advance the architects' study of that relationship and the means of improving it. As a part of the program, papers were delivered by the deans of several of the schools of architecture setting forth the philosophy underlying the educational program of their schools. These papers were well received and of much interest.

Their value in the study of the entire subject was so evident that, since the Convention, The Institute invited the heads of all the schools of architecture in the United States to present to it for publication and study, papers setting out the objectives of the educational programs of their schools and the philosophies underlying those programs. These are printed on the pages that follow this foreword.

It behooves every architect to study them with care. They do not exhibit a universal philosophy, but rather quite different approaches to preparing students for an architectural practice. Some of the philosophies differ so widely that it is difficult to determine if our educators have a common objective, a common aim, even a common agreement as to what an architect should be and as to what his relationship to society and to his clients and profession should be.

Is this apparent lack of understanding of what the architect needs to maintain his position in his profession and the position of his profession in society a contributing cause and perhaps a primary reason for his failure to secure the recognition he thinks he is entitled to?

This question and many others arise as you read these statements by the heads of our schools of architecture. They should provoke discussion wherever architects gather. Out of these discussions should come a common understanding of what an architect should be, of how he should practice, of what is necessary to produce the competence of service that is going to be a characteristic of our future architects.

A common goal may be approached by many roads.

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* Reprints may be had from The Secretary of The Institute, 1741 New York Avenue, Washington, D. C. at 25 cents each, plus postage.

ALABAMA POLYTECHNIC INSTITUTE

SCHOOL OF ARCHITECTURE AND ALLIED ARTS

FREDERIC CHILD BIGGIN, DEAN

THE man or woman that intends to practice as an architect must go through a rigorous college training, generally of five years in length. But for the prospective architect graduation is literally only a "commencement", and must be followed by years of office and field experience before he can hope to pass the examinations of state registration boards and be allowed to practice. All of which requires a period of from eight to nine years.

This closely parallels the training of an architect in Italy during the Renaissance. Then the lucky student was admitted to the "botegha" or workshop of the master, and during half a dozen years or more gave his unpaid services for being taught the craft. This was followed by additional years of experience as a wandering journeyman. Today the college takes the place of the botegha.

But the college goes further than the botegha, for it plans to give the man or woman a background of general education as well as technical training. Our aim at Auburn is to render the latter as practical as possible, and we include in our curriculum a year's course in office practice, where office methods are closely followed.

Study of the history of architecture is fundamental, not only because it is the history of civilization, but because the designer who does not know what men before him have accomplished is in no wise fitted himself to attempt original work. Emphasis therefore is put on purely functional reasoning and "how to think" rather than "what to think".

In the words of Professor E. Walter Burkhardt, head of our courses in architectural design:

"The main object of a school is to teach a student to approach and logically attack those problems with which he will be confronted in later life. Also in this world of rapid changes he must learn to adjust himself to conditions as they arise. Sound architecture should start with the consideration of immediate and anticipated needs, condition of site, orientation and surrounding life. It must adapt itself to new materials, new processes, new inventions, new world refinements and the new social order. These become the factors in the approach to design locally.

"The student begins his five year course with problems in the abstract and subjects manifestly fundamental and essential for the practice of architecture. The greatest emphasis throughout is put on both aesthetic and construction design. Good proportion and mass are stressed. At the start of all design problems, after a short period of research in planning and other considerations, plasticine studies are made. At least three of these small scale models are prepared, one of which is selected after thorough discussion as to adaptability to site, fulfillment of functional requirements, etc. A preliminary study is then made of such type as an architect would offer to his client. This is again thoroughly analyzed before the student proceeds with his final presentation. For the latter, mass studies of models and interior studies are also encouraged.

"Problems are gauged to local regional requirements and trends as to type of buildings. Housing, institutional and commercial design receive a major emphasis. In advanced design also economical, sociological and financial studies are made."

There can be no lasting design without sound construction, and with the criticism of problems the two go hand in hand. All fundamental structural subjects including mechanics of materials, steel and concrete, and construction design are taught by our architectural faculty and from the architect's standpoint.

We believe that a student gains much in his formative years from contact with other branches of an allied arts school. The courses offered by us in landscape architecture, interior decoration, commercial design, mural painting, oil painting, etc., are bound to leave impressions of strong cultural and professional value.

ARMOUR INSTITUTE OF TECHNOLOGY[1]

DEPARTMENT OF ARCHITECTURE

LUDWIG MIES VAN DER ROHE, DIRECTOR

THE curriculum of the Architectural Department of Armour Institute of Technology is designed not only to equip the student with the knowledge and ability required for the professional practice of architecture but also to give him a cul-

[1] Now consolidated with Lewis Institute under name of Illinois Institute of Technology.

tural education to enable him to make the right use of this knowledge and ability.

Architecture in its simplest forms is concerned primarily with the useful. But it extends from the almost purely practical until in its highest forms it attains its fullest significance as pure art. This relationship leads to a curriculum which makes clear, step by step, what is possible in construction, what is necessary for use, and what is significant as art.

This is accomplished in the curriculum by so inter-relating the different fields of instruction that the student is always conscious of, and is always working in the whole sphere of architecture in its fullest sense of designing a structure for a purpose, ordering it so that it attains significance as art, and working out the conception so that it may be realized in the executed building.

The curriculum leads therefore from the study of the means with which one builds and the analysis of the purposes for which one builds into the sphere of architecture as an art. This is the synthesis of the entire curriculum; the fundamentals of the art of architecture, the artistic principles, the means, and their expression in the executed building. The student applies the principles in free creative architectural design and works his designs through in collaboration with the structural design and construction staffs of the department.

Actually, these fields of instruction, at the beginning, are kept separate and developed as far as possible independently, with the limitation that they complement each other at every stage, and as the curriculum advances they result in an architecture which appeals both to the heart and to the mind.

Such a method of instruction must be carried out by a unified faculty.

With these ideas in mind let me briefly describe the curriculum.

The student studies the materials and construction of simple wood, stone, and brick buildings and then the structural possibilities of steel and concrete. This work is studied in such a way that the significant relationship between the materials, the construction, and the architectural expression is made apparent.

The knowledge of materials and construction leads to a study of function. The functions of the principal kinds of buildings are studied on the basis of an exact analysis. This analysis establishes wherein each architectural problem is distinguished from every other; wherein the real essence of each problem lies. After the essentials of each problem have been clearly established buildings are designed whose conception and expression are based on these essentials.

The study of function is carried beyond individual buildings into groups of buildings and then into communities in the field of city planning in order to demonstrate the interdependence of all building in relation to the city as an organic whole.

Throughout the curriculum the student is given training to develop a feeling for the expression of and relationship between form, proportion, structure and materials.

In conjunction with the curriculum there is a clarification of the cultural situation today so that the student may learn to recognize the sustaining and compelling forces of his times, and to comprehend the intellectual and spiritual environment in which he lives. The material, intellectual and cultural aspects of our era are explored to see wherein they are similar to those of former epochs and wherein they differ from them. The buildings of the past are studied so that the student will acquire from their significance and greatness a sense for genuine architectural values, and because their dependence upon a specific historical situation must awaken in him an understanding for the necessity of his own architectural achievement.

BEAUX-ARTS INSTITUTE OF DESIGN

DEPARTMENT OF ARCHITECTURE

OTTO TEEGEN, DIRECTOR

CONTRARY to an erroneous impression on the part of some, the Beaux-Arts Institute of Design is not an architectural school, nor is it in competition with any architectural school or method of teaching. The Beaux-Arts Institute of Design has no architectural curriculum, nor teaching staff. It is an organization whose membership is comprised of practising architects and others interested in student education in the fine arts. Its function is to stimulate and promote architectural, as well as sculptural and mural, design, by a series of graded competitions, and to regulate the advancement of the individual student by a system of awards. The department of architecture concerns itself solely

with architectural design and does not attempt to include other essentials of an architectural course. Students entering these competitions work either by themselves or under the guidance of instructors, begin and end these problems at the same time, and then send their solutions to the central headquarters in New York where they are judged by a common jury. From the results of these judgments the competitors are able to measure the merit of their solutions with the work of all others submitting drawings. The juries making these awards are comprised of members and non-members of the Beaux-Arts Institute of Design, architects, artists and engineers. Most judgments are held in New York but many are held in such cities as Chicago, St. Louis, Detroit, Cleveland, Boston, and Philadelphia, where the juries are comprised of local architects.

By allowing a comparison of work being done independently or in schools, which include most of the largest and most important in the country, it can be truly said that the Institute is the clearing house for student architectural design in America. It also serves as a link between students and those judging their work, and is beneficial to both;—to the student because he is matching his talents against others, and because his work is being judged by some of the best men in the profession, and to the practicing architect because he is being stimulated by the new ideas and enthusiasms of the students.

The Beaux-Arts Institute of Design advances no theories regarding architectural style or teaching, and takes issue with no schools having individual doctrines. It bases its whole and only opinion on the quality of the solutions submitted to it. Only in the opinion stated at the judgments and in the kind and character of the problems given out can the Institute be said to influence design. The opinions represent a progressive point of view and the problems have been consistently timely and well stated, and applicable to any good approach to architectural design regardless of method.

The Beaux-Arts Institute of Design is an entirely American organization. Its purpose was conceived by a group of American students of the Ecole Nationale et Speciale des Beaux-Arts in Paris, who returned to this country at the close of the last century and in the spirit of camaraderie as well as with a genuine desire to promulgate the teaching of architectural design in this country, which at that time was practically devoid of architectural schools, inaugurated these competitions with a method very similar to that used in the Paris ateliers. This group was and is known today as the Society of Beaux-Arts Architects. As time went on and as more individuals and architectural schools availed themselves of the services offered by this organization, the Society found it advisable to plan this agency of architectural work under a charter of the Regents of the University of the State of New York, and called it the Beaux-Arts Institute of Design. It has carried on the work under this name since 1916.

CARNEGIE INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ARCHITECTURE

W. Frank Hitchens, Head

WESTERN Pennsylvania, with its rugged natural beauty and its great industrial activity, is a challenge to the architect because of its unusually difficult planning problems. At the same time it provides him with most of the material for its buildings. The advantages of such a locality to the student are twofold—its stimulus to effort and the opportunity it affords for varied experience in the art and science of building. Special effort is made by the department to employ these advantages for effective training outside the draughting room, particularly by contact with materials factories, testing laboratories, research institutions and housing projects.

In the training of the student, perhaps too great emphasis has been placed on the implications of change. He is just starting out in a new world, and changes are not too apparent to him. His first interest must be in solving the problems facing his generation. He needs to understand that the architect cannot depend entirely on patronage for a livelihood but that he must assume an active part in directing the profession to its most useful place in the social structure.

College curricula in architecture often include considerable time for liberal arts subjects intended to broaden the student's concept of his responsibilities to society. In place of these sometimes unrelated studies a three year program in social relations has been introduced here. It proposes discussions of man's significant adaptations presented in a direct

and coordinated manner, demonstrations of the scientific method for orderly and effective thought, and means of promoting improved relationship between the architect and his community. It supplements the study of the non-physical aspects of planning, which in turn forms an essential part of design problems that are concerned with community planning for actual sites.

It is the school's objective to offer sound training in DESIGN, a training acknowledging the unchanging needs of living, the discipline of structural and economic factors, and the value of beauty and nobility. A program of study stressing the importance of good habits of thinking and working as well as feeling for the principles of composition provides not only for the problems of today but for those of the future. The curricula affords opportunity for the study of interior decoration as well as architecture. All parts of the course are so interrelated that the student may feel and recognize an essential unity and direction in all his activities; design programs are carefully considered to achieve throughout the course an effective distribution in types and a logical progression from the simple to the complex. For this a unified faculty is essential, one made up entirely of architects, of varying temperaments and background, and all working toward the same end.

Professional contact is maintained through cooperation with the Pittsburgh Chapter of The American Institute of Architects. Its committee on education assumes the conduct of the course in professional practice, which is sufficiently broad in scope to include talks on ethics, legal procedure, office practice, and the philosophy of architecture. Trips to buildings of varying types both finished and in process of erection are included. At a commencement dinner each year the students of the graduating class have the opportunity of meeting the members of the Chapter, a privilege which is highly appreciated for the significance it holds for them and their future in the profession of architecture.

CATHOLIC UNIVERSITY OF AMERICA

DEPARTMENT OF ARCHITECTURE

FREDERICK V. MURPHY, HEAD

AN ARCHITECT in practice is confronted with programs for building somewhat like the programs that are given students of architecture in the various schools.

Architects respond to these constantly varying programs with whatever skill and understanding they possess, the product of their school training plus practical experience.

The student is freed of discussions as to cost of building, building regulations and other details of actual practice, largely in the hope that essentials of design and structure will be the more greatly stressed thereby and also that other subject matter deemed related to the main subject, architecture, will not be ignored.

Physics, chemistry, economics, language, philosophy, and religion are esteemed as of particular value. Curricula of schools may, however, contain other subjects possibly proven in some instances to have value to the ultimate purposes of the architect.

A perfect sequence of studies is doubtless impossible, likewise the perfect balance of studies and even the persistent idea that the program method is final and always a benefit.

Of course the schools do not directly equip the student for practice. At least, in most cases, for immediate independent practice. After graduation from many, a check-up is suggested; deficiencies are remedied, new understandings are reached and adjustments are made before professional work is undertaken.

Not all who study architecture may practice. Some may elect to teach, some to advise and perhaps a small minority regard it as a valuable cultural background. Schools are eager to purvey the intangible thing called architecture. Some no doubt succeed very well and all perhaps with some satisfaction of their ideals.

The Catholic University, being a pontifical school, represents certain traditions brought to bear upon present day problems and effort. Its architectural school in a small measure carries some of the responsibility of the University itself. Its work is outlined for it and its objectives set in conformity with the Catholic ideals mentioned in the charter and constitution of the University.

As a professional school it is conscious of its situation in Washington, the proximity to certain sources of scholarship and of the value of the other schools of the University in attaining its cultural aims.

It senses its limitations and its ambitions are well

controlled by the philosophical aims and religion so present in its curriculum. Discipline of the mind is its function and this discipline controlled by the force of religious teaching.

It is felt that in this new civilization vast work must be relegated to the architect, work that demands the utmost precision in judgment, as public safety may be involved and the best standards of ethics in business must be known and observed.

Whether architecture be admitted to a fine art or a science of building yielding to aesthetic principles, certain fundamentals are tangible enough and yield to understanding with proper research.

Professional practice may change and definitions of architecture given by Vitruvius and others may not stand but it appears from inspection that the schools are on the *qui vive,* fairly alert to modifications in teaching methods, contents of courses, and their individual and collective responsibilities.

So, the Catholic University senses its share in the general professional educational program in America and individually in its opportunity to foster some things that may be generally beneficial, discipline and belief in religion.

Its architectural school is quite small, hopeful for the future, friendly towards suggestions for improvement from outside sources and definitely interested in the parent of the profession The American Institute of Architects.

UNIVERSITY OF CINCINNATI

SCHOOL OF APPLIED ARTS

E. Pickering, Professor of Architecture

THE University of Cincinnati, through the Department of Architecture, offers its system of cooperative education as a means of combining the practical with the theoretical.

The objective of cooperative training is to give an undergraduate student first-hand experience with construction work and office procedure. This tends to make theory more real and usable and to bridge the gap between school and practice. The student no longer goes out into the world unprepared to meet the problems of the building industry. He has learned how to work with men and materials and how to put practical significance into his solution of classroom problems.

This objective is accomplished by permitting students to alternate between school and job. A student spends seven weeks on a job while his alternate is in the classroom concentrating upon theory. At the end of that time the two exchange places. Thus the work in both the office and school room carries on without interruption. While students are paid current wages for this cooperative work, its primary purpose is not that of earning money. Its chief function is to educate and the jobs are carefully selected and supervised in order that they may be sequential and have a definite educational value. A student, during his five years of academic training, may thus work as a timekeeper on a construction job, as an employee in a wrought-iron establishment, a tile factory, or a planing mill, and as a draftsman in an architect's office. He thus secures a broad picture of the many phases of architecture.

By actually working in the profession the cooperative student finds out whether he has ability. He is disciplined by having to deliver an honest day's work. He gains confidence by earning money in his chosen occupation.

The Department of Coordination maintains working relationships with cooperating firms in Ohio, Indiana, Wisconsin, Illinois, Kentucky, Tennessee, West Virginia, Michigan, Pennsylvania, and New York. Students in architecture are drawn from twenty-five states.

The course in architecture is five years in length, eleven months a year, and leads to the degree of Bachelor of Science in Architecture. During this time, the student receives a cultural and professional training comparable in content and quality to that of other recognized schools, and in addition secures the practical experience of the cooperative jobs. The curriculum is broad in its scope, combining the theories of design, construction, and drawing with those of landscape, city planning, painting, sculpture, and ceramics. Thus the graduate is able to see architecture as it is related to its various allied fields; in its entirety instead of as an isolated and unrelated activity. He has acquired the ability to coordinate an understanding of creative principles, a knowledge of materials secured in school and on the cooperative job, and a perception of past and present social conditions.

CLEVELAND SCHOOL OF ARCHITECTURE

OF WESTERN RESERVE UNIVERSITY

FRANCIS R. BACON, DEAN

METROPOLITAN communities would appear to present superior facilities for the study of architecture and, Cleveland, with Nela Park, Republic Steel, and other industries, offers a great laboratory as an accompaniment to this study, to say nothing of the professional men and craftsmen available for auxiliary instruction. The Cleveland Craftsmen Scholarship, which permits a student from the Cleveland School of Architecture a course in study of methods and materials, gives emphasis to these possibilities under Creative Design.

Lectures in the "theory of design" lead the "elements of architecture" into the "elements of composition"; encourage the student in creative thinking. The programs of the Beaux-Arts Institute of Design, the Rome Collaborative and the local city-planning problems, while comparatively short in duration, give a detached approach to the concepts of design. This culminates in the thesis which is based on a preliminary sketch during the fourth year, with the completion in the last half of the fifth year; this is aimed to prepare the individual for the actual practice of architecture.

Water color, modeling, and life drawing are all complementary parts of a single purpose; to teach students to record their ideas in certain media proper to architecture. The aims of these courses are, briefly, to train the mind to analyze the subject under consideration, to organize its masses, movements, colors, so that each element is given its proper importance in the scheme of the whole, and to train the hand to record properly what the eye sees or the imagination creates.

But technical preparation and material success are not enough. Character and personality are even more important in the development of a professional man. Members of The American Institute of Architects, Cleveland Chapter are liberally represented on the Board of Trustees and in the faculty. This correlation between teaching and the profession itself has had definite benefits both for the School and for the community in a locality comprising one per cent of the nation's population. It has been the policy of the School to promote and intensify this relationship. The Cleveland School of Architecture offers a well-coordinated program of cultural, creative and technical study, with the records indicating that each graduate has not only a socially useful berth but the capacity for enjoying life.

COLUMBIA UNIVERSITY

SCHOOL OF ARCHITECTURE

LEOPOLD ARNAUD, DEAN

ARCHITECTURE takes form according to the needs and ideals of society. Today, we are admittedly in the midst of great social change, which is inevitably apparent in contemporary architecture. A school devoted to the training of architects must combine, through its curriculum, principles of stability with flexibility, so that permanent values will not be lost, while contemporary problems will be understood and given their proper significance. The student must learn to recognize fundamental qualities in human nature and in the material world, so that he will not be restricted or led astray by fads and fashions. Having a knowledge of the past and of the present, he will be prepared to cope with the drastic changes that are still before him and to produce designs that will not only have aesthetic value, but will also conform to the needs of the day.

Architecture being a three-dimensional expression, it is essential that the beginner be taught at once to form conceptions in three dimensions. For this reason, the student begins the study of design by modeling abstract forms in plastiline, analyzing them for balance, rhythm, proportion, and arrangement. He makes many freehand sketches of the models from all angles and then translates the model into the necessary two-dimensional drawings that an architect would submit when presenting a project for execution.

The student continues his study of design through a series of problems, progressing from simple requirements, in the beginning, to programs of considerable complexity. Some problems require specialized investigation, such as the processes of manufacture in the case of factories, methods of teaching in the case of schools, or practices of worship in the case of churches; other problems emphasize decorative design and are intended to stimulate the imagination. The programs are written to parallel actual prob-

lems as closely as possible, and are chosen to include a wide range of subjects, so that the field of architecture may be covered in the most practical and comprehensive manner. The work is criticized, during its development, by the instructors in design and by the instructors in construction, so that theory, aesthetics, and structure are learned as integral parts of the same project. The more advanced problems receive additional criticism at intervals by visiting practitioners. Each student is instructed individually and progresses according to his capacity.

Classes in construction include the study of the theory and practice of building; mechanics of materials; calculation of structural members; and mechanical equipment such as heating, ventilating, plumbing, and electrical appliances. To supplement work in the classroom, students make numerous visits to factories to study the fabrication of materials, and to buildings in course of erection to study the methods of using them. Furthermore, during the summer every effort is made to place the students, preferably in the field, so that they can actually experience the workings of a job. The students will there learn practical application, and also gain familiarity with the building crafts, which are too numerous and too highly specialized to permit study through apprenticeship.

The contemporary aspect of architecture gained through design and construction is broadened by the study of the history and theory of architecture, which subjects develop the student's perception by familiarizing him with the beauty of all periods; they deepen his understanding of social development and increase his knowledge of building by acquainting him with many solutions of age-old problems.

Drawing, both freehand and mechanical, counts as a highly important factor in the curriculum, for in acquiring this art the student learns not only to perceive, interpret and create, but also to understand the qualities of form, and to present his ideas with clarity and appeal. The architect should also have an intimate knowledge of painting and sculpture. Though his crowded schedule does not permit extensive study, a limited course in sculpture is specified, which gives the student the invaluable experience of working directly upon stone, wood, metal, and plaster. He thereby learns, by personal experience, the specific qualities of various materials and the treatments best suited to each, and he greatly develops his power of conception in three-dimensional design.

After having completed all other requirements, the student spends the last four months of his schooling in studying a subject for his thesis and preparing it for presentation and judgment. He must write a program for the project, create a design, and work out the structural drawings, calculations, written descriptions, and financial organization that would be required of him as an architect.

In following this procedure it is our hope to graduate students having a practical training that will qualify them to be capable assistants and collaborators immediately upon their entrance into the professional field; and furthermore, having a training in sensitive perception and clarity of reason that will enable them to reach their full capacities as independent creative architects.

CORNELL UNIVERSITY

COLLEGE OF ARCHITECTURE

GILMORE D. CLARKE, DEAN

THROUGHOUT almost seventy years of service to a large body of students a simple tradition has developed in the College of Architecture at Cornell that in the arts of the past, as in those of the present, may be found fundamental ideals and principles invaluable and essential to the artist of today; that these arts are basic and independent of passing styles or expressions; that they are closely inter-related, and that collaboration among them should be fostered and emphasized.

While it is the aim of the College to lay special emphasis upon professional competence, the fact that the graduates are the better for being educated persons has become an unalterable conviction reflected in the elective courses of study, under professors of other arts and sciences, pursued in the several colleges of the University.

One of the most valuable phases of the curriculum is the opportunity offered for creative work, both independently and collaboratively. The fact that collaborative work between students in the different arts is of increasing importance has led the faculty of the College to stimulate collaboration in design

between students in architecture, landscape architecture, painting, and sculpture.

The interlocking of the courses, in architecture and landscape architecture in particular, places emphasis upon the development of these professions upon a basis of complete understanding one with the other.

Sculptors and painters are encouraged to work with architects and landscape architets, and collaborative problems are given to aid this important phase of instruction.

In our time we are witnessing a trend in architecture away from historic forms. It seems therefore to rest with the sculptor and painter to supply by collaboration inherent elements of decoration so necessary for the complete development of architectural forms.

Courses in regional and city planning are offered to students in architecture and landscape architecture, as well as to qualified students in other colleges of the University, in order that instruction in this increasingly important field of endeavor may be made available coordinately with these closely related professions. In each case the term planning implies physical planning only, but it is recognized that sound physical planning must be based upon related social and economic principles. A degree in planning is not offered at Cornell. It is the judgment of the faculty that those who embark upon a professional career in the planning field should do so with a sound background of training in one of the professions related to planning. Hence one may pursue a phase of planning practice with a background in architecture, landscape architecture, engineering, government, economics, law, or sociology. This college offers fundamental training in planning necessary in consideration of its relation to the professions of architecture and landscape architecture.

The daily intermingling of students in the several professional groups working side by side, often under the same instruction, with professors of each department constantly in touch with the students of the other is of first importance. The students in each branch of the arts are afforded the opportunity to observe the scope and the limitation of their own field in comparison with others in which they are closely associated.

CRANBROOK ACADEMY OF ART

DEPARTMENT OF ARCHITECTURE AND DESIGN

ELIEL SAARINEN, DIRECTOR

At the Cranbrook Academy of Art we do not have a complete architectural school, but only one for post-graduate training. For this reason our approach to educational problems is not exactly the same as it must be in the regular schools of architecture. Yet, we do believe that our mode of approach, insofar as fundamental principles are concerned, should be essential in any architectural education.

Our approach to the educational problems emerges directly from our understanding of architecture as to both its nature and scope of comprehension. As to its nature, architecture is an organic art-form, and not a stylistic one. As to its scope of comprehension, again, it must embrace all that broad form-world which represents man's physical accommodations, beginning with the various objects of the room such as furniture, textiles, and the like and ending with the elaborate organism of the city. Every architect must be familiar with the design principles of any problem within this broad scope of architectural form-world, no matter how much he is going to specialize his activities in actual practice. This is just as true as any doctor must be familiar with all the functions of the human body, no matter whether he in his practice is going to deal only with ears, eyes or some other parts of that body.

According to the above understanding of architecture, the design departments of both the Cranbrook Academy of Art and its Intermediate Art School, are organized into a number of studios and workshops, and an extensive cooperative system is arranged between the various activities so as to offer every student a comprehensive knowledge in the whole design field.

The selection of problems is up to the students themselves with no other restrictions than that each problem must be a living problem with actual location and distinct social background. No generalized and sterile problems are accepted, and no pre-prepared programs are given the students to follow. Each students must prepare his own program, for this preparing of programs is an essential part of our educational method. It offers the student the important opportunity of becoming familiar with

the social conditions and demands of that particular family, institution or community of which his design supposes to be an expression.

As the selected problems are manifold and much varying in character—such as interior and domestic design, institutional design, community planning, and comprehensive town building—there is much chance for mutual discussions, criticism and enlightment among the students. In this manner every student becomes well acquainted with all the various problems being developed at the Academy and has, therefore, a many-sided experience during his stay at Cranbrook. Moreover, he has the opportunity to work with various means, such as wood, ceramics, metal and textiles, which fact brings him close to the fundamentals of design and material treatment.

As the above shows, at the Cranbrook Academy of Art we are entirely free from traditional and conservative educational methods. Nor do we follow some particular methods of so-called progressive art education, whatever this means. Rather, we follow the medieval methods—or the antique ones, if you please—there one learned by doing rather than by talking, and there each leader in the educational process was a creative artist himself and constantly active in the actual execution of his art. In fact, Cranbrook is primarily a working place. There the resident artist-instructors execute their own work and there the resident students execute theirs. Both the instructors and the students learn from one anothers work. This reciprocal influence keeps the masters young and makes the students mature.

UNIVERSITY OF FLORIDA

SCHOOL OF ARCHITECTURE AND ALLIED ARTS

RUDOLPH WEAVER, DIRECTOR

IT is not our intention to train architectural students to become "feeders" for universities in other parts of the country, or to become draftsmen in the large offices in the great cities. Rather, our objective is to prepare them to become general practitioners in the towns and cities of Florida and the South, to open their own offices, to participate fully in the affairs of their city, county, and state, and to live as normal human beings among their neighbors in their chosen communities.

At the University of Florida a two-year program of general education is required of all beginning students. As a part of this program, a student who wishes to study architecture carries on a series of creative "projects" for which there are no required preliminary skills. In the very first project the student studies the requirements of a small building, devises its interior arrangement, gives consideration to the materials, and determines its form—all by means of plastic models. He discusses his building problems with his faculty consultant but solutions are not imposed upon him; he makes his own decisions from the very beginning, which is fundamental. The second project, another small building, is completed in a similar manner, but this time he places his building-model at eye level and makes his first drawing, a freehand expression of the form of his building. In these beginning projects and in the ones which follow, the student does not learn to draw as a preparation for his study of architecture but as a cumulative experience which matures with his other abilities. Thus, from the beginning, he thinks in terms of building rather than in terms of drawing.

When the student completes his lower division work, including nine elementary projects in architecture, he enters the upper division where his studies are purely professional. Here again he has no separate "courses" but a series of seventeen major building projects such as a practicing architect would meet in the average community—residences, schools, business buildings, and the like. Each project includes a work-book, preliminary studies, design models, material schedules, construction details, and structural computations, supplemented on occasion by working drawings and specifications. A student advances from one project to another according to his own skill, ambition, and background, and without regard to university time-units or the progress of other students. To encourage the student to think in a comprehensive manner we assign whole subjects rather than lessons. Moreover, we have dispensed with clock hours, class grades, and semester hours credit as prerequisites to the completion of our work. Understanding and demonstrated proficiency are used as tests for granting a degree, rather than the traditional accumulation of credits. The completion of the work in the lower and the upper divisions normally requires a period of five years.

At the University of Florida we believe that the

objective of preparing the student to create buildings which are logical in arrangement, sound in construction, and appropriate and beautiful in appearance can best be attained through the project method in which all subjects are integrated.

GEORGIA SCHOOL OF TECHNOLOGY

DEPARTMENT OF ARCHITECTURE

HAROLD BUSH-BROWN, HEAD

THE first aim in teaching should be to engender in the pupil confidence in himself and enthusiasm for the work in which he is engaged. This is a primary condition necessary to help prepare the student for life, and for his life's work. In the process of instruction, the enunciation of theory and basic principles, as well as the providing of factual information is implicit. In addition, in arriving at conclusions or in the working out of problems confronting the student, guidance is necessary in the application of theory and the use of facts, but the student's work, as it progresses, should be more and more the result of his own independent thought and action. This is on the theory that discipline needed to obtain results is of value only if it is self-discipline; and that, as far as possible, the student should be able to stand on his own, psychologically speaking.

In architectural education we are dealing with the preparation for a creative profession which, in recent years, has become extremely complex. Experiments in teaching are being tried to keep pace with changing conditions, but in one fundamental assumption architectural education remains unchanged. This is the recognition of the fact that the paramount purpose of the school is to send forth men who will become good designers, and realization that this may best be accomplished by means of the problem method.

We are consequently able to say that design occupies a central position in any well balanced curriculum; and that other courses, in the main, are important to the extent that they contribute to the conduct of design. In this course the student is confronted by problems similar to those he will encounter in later practice. To design successfully means the analysis of the program taking into account all of the many factors—scientific, utilitarian, and aesthetic—which impinge upon the problem to be solved; the weighing of the relative importance to be given each factor; and the enlistment of imagination and judgment in composing all the parts to produce a unified, functional, and satisfying result.

The fact that Design and Construction are listed separately seems to suggest a separation between the two, whereas, in reality, the science of structure and the knowledge of materials form an integral part of design. The student must be brought to the full realization that design is necessarily conditioned by all phases of construction.

As to styles in art the less this enters into the approach to design the better. Consideration of styles has its place in the study of history, where it is possible to examine the reason for the growth of distinguishing forms. Here it becomes apparent to the student that each era produces its own art which is a reflection of the nature and spirit of that era, arrived at, not through conscious effort at creating a style, but because of prevailing circumstances and conditions. Where great architecture exists, it is found to be the outgrowth of the intelligent use of available materials employed with feeling to serve the needs of the people.

It is obvious that the architect, and consequently the student, must not only have the capacity to solve, but also the ability to study and present his solution. Rendering, model-making, draftsmanship, and the contributing courses in freehand, as well as the courses in graphics, serve this purpose, bearing in mind, however, that presentation is a means, not an end in itself.

Finally we come to the human relationships of the practicing architect. Here it is of prime importance that the future practitioner realize the duties and responsibilities he must assume, the service he has the power to render individuals and the community, and the position of trust in which he will be placed.

The Georgia School of Technology draws its student body from many parts of the country. Consequently, while this is a state institution, a broad outlook in the framing of the curriculum in architecture appears to be justified. In the early stages most of the requirements in basic academic courses apply to the architectural students as well as to the engineering students, and there is no separation of

classes. This applies to English, mathematics, science, and economics. In professional subjects the curriculum begins the first year with a single course, the Introduction to Design. This is calculated, among other things, to enable the student to make an intelligent selection of the option to be pursued as among the three options offered beginning with the Sophomore year:

Option No. 1—Architectural Design.
Option No. 2—Architectural Engineering.
Option No. 3—Industrial Design.

Each of these options leads to a B.S. degree at the end of four years. Those selecting Option No. 1, and qualifying to complete their architectural course, continue for a fifth year in order to obtain the degree of Bachelor of Architecture.

The primary aim of the school is to turn out men with disciplined imagination, ready to assume designing leadership in the field of building construction and industry. The training is not complete upon graduation; there is still the period of practical experience in office and in the field, and education continues through life; but if the student leaves college with the possession of a sound method of attack in approaching the problems which will confront him in professional practice, the school will have provided a firm basis for future progress, and there should be reason to hope for the creation of a vital art.

HARVARD UNIVERSITY

GRADUATE SCHOOL OF DESIGN
DEPARTMENT OF ARCHITECTURE
JOSEPH HUDNUT, DEAN

THE philosophy which governs the teaching of architecture in the Graduate School of Design at Harvard is deeply rooted in the culture of New England and is admirably expressed by Ralph Waldo Emerson in his essay on Self-Reliance:

"The soul created the arts wherever they have flourished. It was in his own mind that the artist sought his model. It was an application of his own thought to the thing to be done and the conditions to be observed. And why need we copy the Doric or the Gothic model? Beauty, convenience, grandeur of thought, and quaint expression, are as near to us as to any; and if the American artist will study with hope and love the precise thing to be done by him, considering the climate, the soil, the length of the day, the wants of the people, the habit and form of the government, he will create a house in which all these find themselves fitted, and taste and sentiment will be satisfied also."

UNIVERSITY OF ILLINOIS

DEPARTMENT OF ARCHITECTURE
L. H. PROVINE, HEAD

THE profession of architecture is very complex, involving many phases of mental growth, development, and experience. We believe that the schools and the profession have very close relationships in the training of young men who desire to enter the profession. It is felt that the practicing architect is as much a teacher as is a school of architecture. Each has its separate responsibility, the profession continuing where the academic institution stops.

The curriculum in Architecture at the University of Illinois is a unit; it is based upon the practice of architecture, which demands that the architect be a man who not only dreams the dream, but sees the dream materialize in brick and steel and concrete. While for administrative convenience the curriculum is divided into courses, yet these courses are so unified and correlated that the completed structure is the ultimate aim. There are no compartments or isolated courses; we offer no specialized work or short courses. The time devoted to the study of architecture is spent on the fundamentals of good architecture. After graduation, the young man can combine these fundamentals in any way that the times demand or the new materials dictate, but we are giving the background upon which the graduate can build in the years to come.

Just as the musician must master the scales of music, by constant study and repetition, before he can compose and perform, so the architect must have a background before he can execute. We believe that good design will command good construction, and that the two must go together. We do not teach styles or periods of architecture, but we do insist upon a knowledge of the environmental influences which affected the architecture of the past, in order to properly interpret the present or anticipate the future.

When the young man graduates, he is not yet an architect; he has taken but one step in the path that leads to admission to and success in the profession. After graduation there must be a term of apprenticeship served under a "master", who will continue to guide and inspire the young man in the practical side of the profession.

The work at Illinois is not a course in manual training, nor do we teach drafting as such. Clever drawing or attractive renderings are not architecture. One who can produce good architecture can present it in a way which will emphasize the architecture, and no effort will be made to conceal poor architecture with brilliant presentations.

The Department of Architecture at Illinois recognizes the seriousness of adequate training; the training for the profession of architecture must be carefully planned and well done. With more than a score of states, and a few foreign countries, represented in the enrollment of the Department at Illinois, each year our problem is larger than the boundaries of the state. A graduate from our Department must be able to think as an architect should think, to recognize conditions and trends, and to produce something which will reflect credit upon the age in which he lives.

It is the aim of the work at Illinois to develop thinking men who not only will have a professional knowledge of architecture, but also will be gentlemen of culture, refinement, and imagination, who will become valuable assets to society and who will take their places in the world of events. The faculty are well aware of this responsibility, and are using every means to meet this challenge.

IOWA STATE COLLEGE

OF AGRICULTURE AND MECHANIC ARTS, DEPARTMENT OF ARCHITECTURAL ENGINEERING

ALLEN HOLMES KIMBALL, HEAD

IN its philosophy of architectural education, the Iowa State College has set up a department of architectural engineering for the sole purpose of giving students a thorough training in the fundamentals of architecture and structure design. Its curriculum aims to provide the architectural engineer with a clear understanding of engineering problems encountered in professional practice. This type of training prepares men in the field of general building construction, steel and concrete design, industrial building design, promotion of the distribution of building materials, research in the fields of engineering materials and processes, together with a keen appreciation of good planning and sound construction in order best to serve human needs.

The motto of the College is "Science with Practice". The work in the department is planned so as to give special emphasis to the importance of practice and construction as applications of the scientific and aesthetic subjects covered in the curriculum. The fundamental concept has been the training of men for the future in the profession, as well as the emphasizing of the importance of the broad general education. Facility in freehand drawing, in preparing working drawings, as well as in courses in architectural design and history are required of the students for graduation. These subjects are supplemented by a series of sequential courses in steel and concrete design, testing materials laboratory work, estimating, professional relations, specification writing, heating and ventilation design, electrical applications in buildings, and engineering evaluation studies.

Problems in architectural design are motivated by choice of local sites and requirements which give the student the opportunity to attack the same in a manner similar to that of the professional architect. Correlated with the design program are carefully prepared construction studies which give the student a clear concept of how a building is planned and then how it is assembled. Such a procedure leads to a keen appreciation of working drawings. Such a method has proven that Iowa State graduates are able to "find" themselves in professional offices and thus bridge the gap between "pure theory" and practice in a comparatively short period of time.

For the student who has shown special aptitude in architectural design, the curriculum offers an opportunity for advanced study leading to a Master of Science Degree.

The professional activities of the graduates give one a clear picture of the accomplishments of the department.

The intimate association of instructors and students has led to the development of a fine spirit, supplemented by the sympathetic help of the mem-

bers of the Iowa Chapter of The American Institute of Architects. There is reason to believe that in a department built up on the assumption of having equal emphasis upon design and construction, its graduates will continue to function in a splendid manner and to improve the architecture of the Commonwealth of Iowa.

KANSAS STATE COLLEGE

DEPARTMENT OF ARCHITECTURE

PAUL WEIGEL, HEAD

AT Kansas State College we try to create a cheerful, stimulating environment for the student; to help him in the development of his powers of imagination and analysis, and to encourage him in a desire for independent research. In such an environment, we believe a student will keep alive a flexibility of mind, and learn instinctively *how* to think, rather than *what* to think.
needs; become acquainted with materials, old and new, and with their uses; develop a sense of structure; and eagerly acquire a ready facility to express his thoughts graphically.

He will develop an appreciation of form, be sensative to the interrelationship of *all* the arts, and so develop greater spontaneity in his design, reflecting more truly the contemporary conditions for which the design was conceived.

Realizing that life and art are always in a state of flux and change, he will be aware of contemporary thought in matters relating to the arts, evaluating the merits of the new, yet respecting the great contributions of the past.

He will be aware of the best traditions of the profession and become informed of his future responsibilities and obligations to that profession and to society.

Even before he enters the College, he is made fully conscious of the fact that upon graduation he will not be delivered to an anxiously waiting world as a qualified and experienced practitioner, but rather, that during his four swift years at Kansas State, he is merely building a substantial foundation upon which to begin the erection of his professional career. In the office of a master, he will later gain the experience necessary to fit him for leadership in the profession.

To realize these objectives, adequate physical equipment, library, and other research facilities are essential, but of greater importance is the need for sympathetic and stimulating personalities on the teaching staff. These conditions we try to provide at Kansas State College.

UNIVERSITY OF KANSAS

DEPARTMENT OF ARCHITECTURE

JOSEPH M. KELLOGG, HEAD

THE objectives of this school can only be defined in general terms. We aim to provide a well-rounded, preliminary, training in architectural study and practice as related to present-day life; to foster self-reliance and initiative on the part of our students; to indicate a method of thinking rather than to impart an accumulation of facts.

We are a part of a state institution and we feel it a duty to adjust our objectives and our training to conditions in our own state and part of the country, and to the facilities which our state can provide. We do not aim to produce clever designers for large offices. We prefer to graduate young men and women who will have varied interests and capabilities, who will either be prepared, after a few years of experience in offices or on the job, to direct their own practice, or who will take important positions in other fields more or less related to architecture. Our curriculum, our faculty and our equipment is affected by and adjusted to meet these aims. We attempt to provide the place, the opportunity and the inspiration to a limited number of students to educate themselves along varied but interrelated lines.

Since our student enrollment and faculty are comparatively small in numbers and the space we work in somewhat restricted, no conscious effort at correlation of different parts of the curriculum is necessary. It all seems to be one whole. The same faculty members teach different subjects and are constantly in and out of the drafting rooms for criticism or supervision of various phases of the work, as the students are constantly in and out of the offices for consultation and advice. Every student, with his own individual problems, is well known to all the faculty. His work is adjusted to his own needs and desires as far as is possible within

ERRATUM

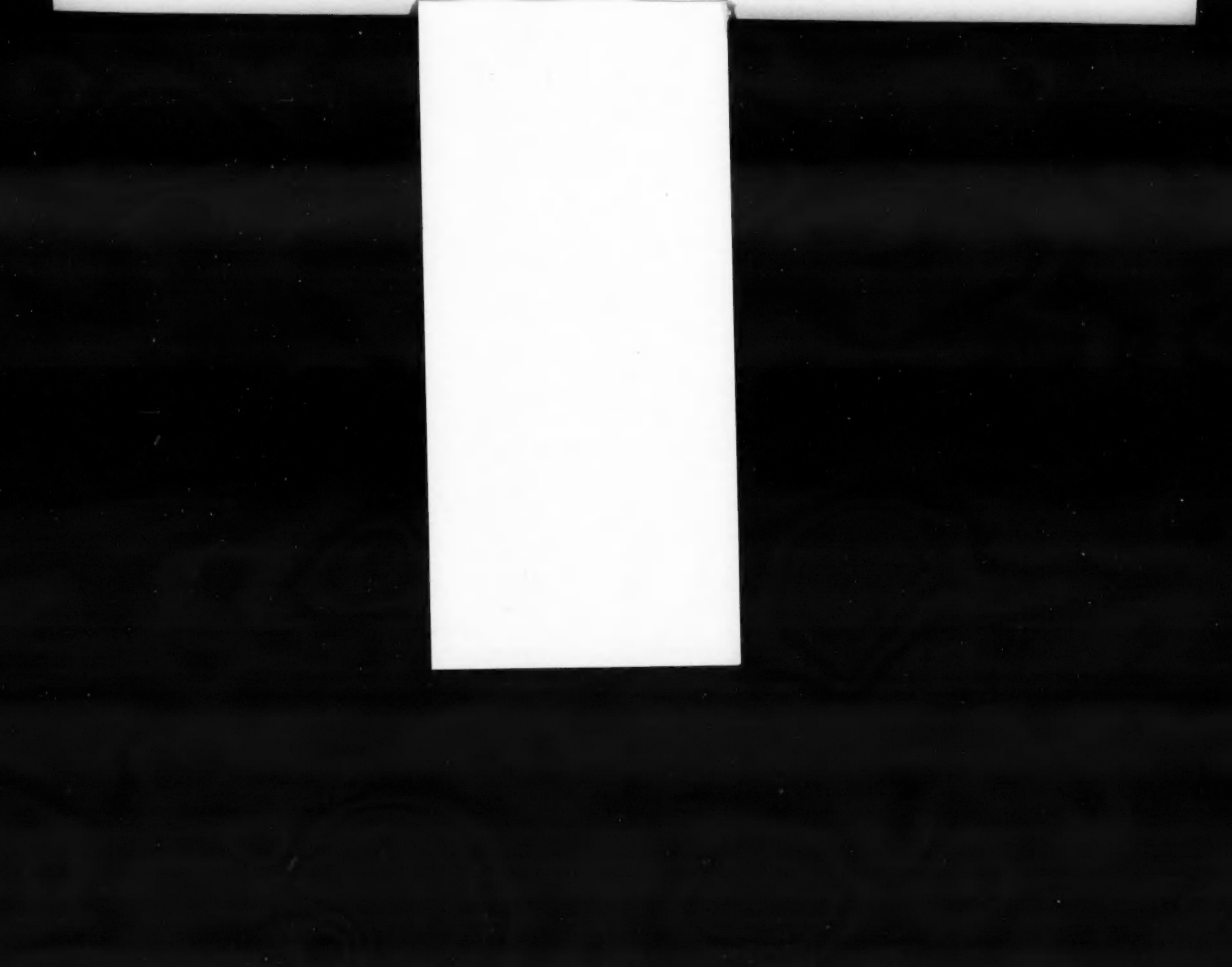
This copy of the February, 1941, number of THE OCTAGON—page 18—is corrected as follows:

Under the statement concerning the teaching of architecture at Kansas State College by Professor Paul Weigel, at the beginning of the second paragraph thereof, insert text reading as follows:

"He will learn to face realities; develop a consciousness of contemporary social and economic . . ."

The corrected paragraph will then read in full as follows:

"He will learn to face realities; develop a consciousness of contemporary social and economic needs; become acquainted with materials, old and new, and with their uses; develop a sense of structure; and eagerly acquire a ready facility to express his thoughts graphically."



the accepted frame of the educational program of the institution as a whole.

We try to avoid any strict adherence to any particular method of approach in our teaching. We recognize that the present is a time of transition, and too definite and dogmatic ideas are unwise. The individual student is given considerable liberty even in the choice of subjects for study and ways of studying these subjects. We encourage both good draftsmanship and the practical approach, as shown by working drawings of buildable projects, and also the pictorial presentation in color of imaginative ideas.

Under such conditions, and without a definite "system" to follow, competitive methods are not desirable or advisable. As far as possible we eliminate the idea of grades and comparative ratings.

For ten years or more this school has been using various methods of design study, striving to make it an organic growth more consistent with the expanding nature of the individual student. Instead of problems dealing with a part or detail, each project attempts to establish for the student a total setting, thus encouraging the student's mind to deal with many phases of the total problem, much as a practicing architect must, and to assist him to correlate the many aspects into a simplified expression. If desired, further study may be given to particular parts of this same problem at different times and by different students. Clay studies, drawings, models, outline specifications, written and oral presentation are all used as desired. As the student progresses more and more detailed information is expected. Thus a gain in depth of quality follows the student in his progressive steps, and an ever-increasing interest is provided which seeks to penetrate more completely the field of architecture.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SCHOOL OF ARCHITECTURE

WALTER R. MACCORNACK, DEAN

WE are told that we are living in a changing world and must readjust our thoughts and actions to a new order. The changing world we are hearing about is that which a small group of dictators would promote by force and propaganda having for its ultimate objective the denial of freedom to think, act, and live as individuals. This changing world has destroyed millions of lives, reduced other millions to poverty and misery, endangered art and science in a large section of the earth, and even in the western hemisphere the insidious propaganda of these destroyers of civilization is being felt.

In the field of architecture we are told that we are living in a new age, that new materials require a new architecture, and that form follows function. In spite of this, our world is the one we have known since the foundation of the country, the type of people and the way of living are not materially changed. The land, the waters, and the natural resources of the country remain the same and the attempt to develop our arts and sciences on any other basis than by the slow process of natural growth is unsound. Beware of the propaganda of those who seek to make radical changes on a basis which is international in character and tends toward a pattern of living which pours all mankind into a mold and destroys the right of man to live and act and think as an individual.

Throughout all the ages our building materials have been those which nature has created and throughout the development of architecture in America form has always followed function because the buildings constructed by the architects and engineeds in this country are better adapted for their intended use and occupancy than similar structures anywhere in the civilized world.

In the educational field we take ourselves too seriously and forget that, in taking students out of the stream of life for a period of three or four years, we are not entitled to the full credit for their future success. We have failed to analyze fully the curricula of our technical schools and to insist upon a coordination of the work in the high schools and colleges to prevent maladjustments which are bringing many poorly trained students to the technical institutions whose job is to train leaders, as well as technicians. We too often fail to recognize some of the great problems facing the profession and our attention must be directed to those economic and social questions which are still unanswered. In the excitement of the battle over style, we must not forget that we are not teaching any architectural style but teaching the students to think of the fundamentals of sound architecture which are: the

usefulness of the building, the soundness of the construction, and the beauty of the executed work. When we have trained our students to approach problems on the broadest possible basis, then we shall not lack for leaders in the profession of architecture.

UNIVERSITY OF MICHIGAN

COLLEGE OF ARCHITECTURE AND DESIGN

WELLS BENNETT, DEAN

ARCHITECTURAL education is generally admitted to be a twofold process comprising training in an architectural school and office experience with seasoned practitioners. The process would be sufficiently complicated if these two phases were the whole process. Today, however, the professional architect must be not only a technician but a broadly educated man. Adequate training, therefore, must include a background of general culture, particularly in the social sciences.

Ours is a professional school in a state university. To qualify for practice in this state the young architect, after a specified period of education and experience, must pass the examinations of the State Registration Board. These, as in many other states, emphasize both construction and design. Considering the problems presented by changing concepts as to architecture, and the realistic legal requirements of the active profession, the school defines architecture as a living art rather rigorously disciplined by conditions of current practice.

To meet the situation our curriculum has two aspects. The principal emphasis is on technical training, although an appreciable portion of the undergraduate period is given to general education. For these combined studies the five year period is all too short.

In technical training there is first the learning of techniques, the tools of expression. These comprise mathematics, physics, and chemistry, all forms of drawing, the making of models, abstract design, color, and rendering. The ability to visualize and to state graphically is indispensable to design and must be acquired early in the training period.

The history of architecture follows the freshman study of general history. It sets the foundations for and is parallel with early consideration of design. The careful review of man's age-long expression of civilization through architecture and the allied arts stimulates and disciplines the student mind. The young designer becomes both more modest and more intelligently creative if he knows his history.

Technological developments related to building have become extremely complex. Our construction courses and those on mechanical equipment are therefore developed with considerable emphasis. It is not enough that construction be mentioned primarily as implementing design. Construction is a vital factor in design. Office experience is a requirement for graduation.

Design in its inclusive sense is the major interest in architecture for the student and for the practitioner. In design today we endeavor to synthesize construction and use with an expression of appropriate character and in the end result we hope for some degree of beauty. We endeavor to design by direct approach rather than through the formulae of academic architecture. We hope that each trained and capable designer may in some degree come to express himself effectively. We hope also that he will be able to contribute a little to the gradual progress of architecture and the architectural profession. The forces of our time are outside the control of the individual or of any group, but the architect can hope to contribute by giving them direction. The architectural school endeavors to prepare the coming practitioner for his opportunity and his task.

UNIVERSITY OF MINNESOTA

SCHOOL OF ARCHITECTURE

ROY CHILDS JONES, HEAD

THE University of Minnesota's School of Architecture, even for American schools, is still young. It has just completed its first quarter century of existence.

I do not need to stress the fact that these twenty-five years have been marked by major changes in our outlook on architectural practice and training. For Minnesota they have brought new points of view, new methods, a gradual clarification of objectives to both faculty and students.

If my colleagues and I must stand or fall by the few words which this occasion allows us, I believe our teaching credo would run something like this:

We believe that the architect's primary task is to inject "commodity, firmness and delight" (I use the quaint words of Sir Henry Wotten) into human habitations and environment.

We are impressed with the fact that up to now, in this country, despite seventy-five years of organized architectural training, the architect has only just begun to scratch the surface of the field that is properly his. However good architecture may be in spots, the general pattern of American building remains poorly planned, badly built, and riotously ugly.

We believe that the architect's most effective equipment for the work he has to do is *real skill in design*. Not design that depends on a cleverly manipulated decorative machinery of stylistic motifs. But rather design based on a freely functioning imagination, strengthened by continual exercise, controlled by scientific knowledge, and mellowed by social sense.

We believe the school's part in training for this kind of design is best fulfilled, not by stressing the monumental, the decorative and the pictorial, but rather by stressing the simple everyday building problems of the individual and the community. Parenthetically, we've learned in the last ten years that the present day student gets a much bigger kick out of a four-room school or a ski-factory, than a former generation got out of a tomb for a military hero, or the summer palace of an emperor.

We have learned that a school cannot be compartmented into design courses, construction courses, drawing courses, and so on, each jealously tended by pontifical faculty specialists. Instead, design must be redefined to include the whole of architecture. Design is really design only when the full circle of spacial, structural and graphic elements is complete. An architectural faculty is not a real faculty until every member, whatever his particular specialty, becomes in a very literal sense one of the design critics.

And lastly—we cling firmly at Minnesota to a confidence in the present day student. Despite his ofttimes annoying evangelical obsessions about modernism with a capital M, we find him extraordinarily eager, responsive and stimulating. He is on his way to a different and, we believe, a better architectural world. He deserves all the help and encouragement his professional seniors can give him.

UNIVERSITY OF NEBRASKA

DEPARTMENT OF ARCHITECTURE

LINUS BURR SMITH, CHAIRMAN

THE University of Nebraska at Lincoln is the cultural center of a great empire, described as the upper Missouri Valley. Although the university is supported by state funds, its influence spreads fanwise from eastern Nebraska to the upper reaches of the tributaries of the great valley. This region is not wealthy in the ordinary sense, the population is not concentrated and its needs are best described by the abused word "Regional" because of its way of life, climate, limited resources, and desires. Cultural leaders such as architects have not been attracted to this great area because of its limited ability to lavishly compensate the professional man for his services, which previously he has given so gladly to the great metropolitan centers. It is to train architects and builders, mainly for this region, and to assist in the fulfillment of the cultural aspirations of this area that this school exists. In the prairie states we have small practices in which one man performs many services, specialized local construction, and pioneering in civic enterprises. The small domestic structure, urban and rural, small-town civic groups, small churches are our chief concern.

Nebraska offers a five-year course, having due regard for the liberal aspects of education as well the purely technical training. The cultural requirements for future civic leaders as well as the necessary technical proficiency are needed. We hold that one, who is to provide a people with the physical aspects of its civilizations, must be sufficiently elevated in mind to understand the needs and aspirations of that people. So the graduate must be a responsible civic leader to carry a definite cultural program into his community for its betterment and to aid his practice.

A realization of our local problem has influenced the curriculum. Courses in the liberal arts are strongly emphasized. Often the graduate makes his own practice. This has led us to an unusually thorough training in working drawings, details, specifications, and professional practice.

We attempt to make available sound inexpensive architectural training, and extremely talented stu-

dents are encouraged to continue work in eastern universities.

Another aspect of university architecture is in public education. Lecturers and classes are provided, exhibitions held, or demonstrations given every week of the school year whenever and wherever the public wishes to know about architecture or the allied arts. School boards and public servants are assisted in selecting proper architectural service from private practice. Every architect of the state knows that he may turn to the university for assistance and that our library is at his service. Citizens know that they may find unbiased information here on materials and practices of building.

UNIVERSITY OF NOTRE DAME

DEPARTMENT OF ARCHITECTURE

FRANCIS W. KERVICK, HEAD

THE Department of Architecture was established to train students to become architects and all effort has been made toward that end. Since it is believed here that the profession of architecture should be based upon a sound foundation of liberal arts, the five-year course includes English literature, mathematics, modern language, economics, history and philosophy. These subjects come mainly during the first three years of the program.

Concurrently with these are taught the elements of architecture and descriptive geometry, with constant attention to the quality of drawing. Throughout the five years there is taught freehand drawing in various media, including watercolor.

The architectural subjects are naturally grouped as history, construction and design. In history there is a study of the historical development of building, with considerable attention to painting and sculpture and the decorative arts. The various crafts are studied and full size drawings are made for furniture, stained glass and other subjects.

In design the Beaux Arts programs are used in the work and the results of the students' efforts are sent to New York for judgment. Students are advanced from grade to grade as their local and New York awards indicate their progress. In the last term of the fifth year a problem is selected by each student for a definite site. This problem is studied by them with criticism by members of the faculty in design and construction; working drawings and details of important portions of the building are made and a cardboard model is constructed.

Throughout there is the study of construction, beginning with a consideration of building materials and their use in architecture; steel and concrete are studied and solutions of problems are made graphically and analytically for which the courses in mathematics of the earlier years serve as a foundation. Mechanical equipment, including air conditioning and electrical installations, are studied to give a working knowledge of newer developments in the field and there are lectures by visiting experts to supplement the classroom work.

The importance of relating design and construction to produce structures is stressed. Buildings of the same character as the project upon which the students are working are visited and they are taught always to regard each building as one to be actually built rather than as a design on paper.

The policy of the Department is conservative but sympathy is felt for the newer trends in architectural education and there is every desire to adopt such practices as appear suited for local conditions. It is realized that the time, even five years, is short enough to adequately prepare students for the many phases of architecture. Therefore, subjects that may be of interest to the mature architect and practitioner must be acquired subsequent to the school course.

OHIO STATE UNIVERSITY

DEPARTMENT OF ARCHITECTURE

CHARLES ST. JOHN CHUBB, CHAIRMAN

PHILOSOPHY is a word too extravagant to characterize the following statement concerning the teaching of architecture at The Ohio State University. When the average high school graduate enrolls "to take architecture" he does so with a quite vague idea of what an architect is or does. His first need is a foundation for the professional structure he would build and the curriculum—not he—determines the materials of that foundation. Many of these materials come from outside our own architectural quarry and there is no "or equal" clause in the specifications of the mathematics, mechanics, chemistry, or physics to differentiate the architects'

foundation from that of other students in the Engineering College. Two full years are given to the study of History of Architecture with no particular stress on its application to the new and different problems of the present, but rather for its cultural value and for the inspirational value of its answers to the problems of the past. The relationship of design to materials and to structural method may be excellently taught through history. Freehand drawing and graphics are essentials of this foundation as is design in its manifold aspects of plan, section, structure, and materials, and the elevations these create.

The design study progresses from the elements of architecture, through problems involving simple plans to those of greater complexity. Care is exercised in assigning the student to different instructors in design as he progresses and he receives collateral criticism in structure and in landscape architecture at his request. We seek to avoid the dogmatism of a single mind in the instruction.

The fourth and fifth years comprise the superstructure. By then the student knows something of what an architect is and does, and both he and we have discovered his aptitudes. Two options are offered, catalogued as the design and construction options merely to indicate where the educational stress is placed. Elective studies are here introduced in the belief that the more mature student can better relate them to architecture. Sociology, economics, business, literature, and fine arts are the fields in which these elective studies are usually taken.

Design is, of course, the backbone of instruction in architecture, but we try not to lose sight of the fact that designers are numerically a small part of the profession of architecture. The structural mind has never been given the credit it deserves. Both are necessary and each must have a trained appreciation of the problems of the other acquired through his education.

Collaborative problems with students in landscape architecture are given in this period. The courses in professional practice are conducted in cooperation with the office of the University Architect, through which campus buildings under construction become the laboratory of building processes.

We seek to educate the student for his future professional self and not for the architect who employs him on graduation. We beg, however, the aid of the practitioner in those matters of practical experience not to be attained in college. Ability to pass the State Board Examinations is not an educational aim. The worthy will pass them. Having the best interest of the student in mind, we do not offer graduate study: rather do we encourage the superior student to continue elsewhere under other minds.

In conclusion may I offer some purly personal observations. I do not believe in teaching the shiboleths or fashion slogans of modernism any more than I do those of yesterday. I do not believe that axial planning and symmetry can suddenly become wicked and that ornament should vanish by educational decree. I do not believe in making a fetish of cantilever construction for its own sake; that the many problems of transitions in design are solved by ignoring them or that the newness of a material should be the criterion of its selection.

Never was there greater need to search beyond our intellectual selves as teachers into that which is of the spirit, for it is there that we will find the stuff that made the architecture of yesterday human and beautiful.

OKLAHOMA AGRICULTURAL & MECHANICAL COLLEGE

SCHOOL OF ARCHITECTURE AND APPLIED ARTS

PHILIP A. WILBER, HEAD

THERE seems to have been in some quarters a belief that the whole system of teaching architecture should be revised because of the evolution of a new style of design. Always alert for improvements in teaching processes and sympathetic to new methods and materials of construction, we are none the less convinced that architecture is still the art of building sound buildings which may be pleasing to the eye and so planned as to better serve their intended function.

It would seem to follow then that we should attempt to furnish the students who come to us with the fundamental information upon which their ability to build such buildings may be developed. Our curriculum and methods of presenting the subject matter of which it treats is designed to furnish such basic information in five academic years. Considering the "raw material" and the

variety of fields for employment of the "finished product", this presents the most difficult "design problem" teachers of architecture ever attempt to solve.

In the teaching of architectural design, we have failed to find a procedure better than the program system as fostered by the Beaux Arts Institute of Design. We believe that for the normal student the program as offered, supplemented by occasional local problems, gives a variety of subject matter, provides comparison with the work of others, and fosters a competitive spirit which is entirely healthy. Architecture has undergone tremendous changes in the last twenty-five years, but these are primarily changes in style. The program system being a simulation of the client's statement of requirements to his architect, in no way hampers progress or change in style. New materials, new methods of construction, and an evolving style provide us a new vocabulary, but the function of this vocabulary in design is in expression, as was the function of each previous vocabulary. The fundamental method of studying it need not be materially different. The engineer still needs a sound knowledge of mathematics though his problems have changed. The painter still requires ability to draw though his paintings differ from Corot's, and the architect still requires ability to draw, to reason, to plan, to fill his place in the civilization in which he lives.

We attempt also to use the program method of teaching in the structural and allied courses. It has been our experience that a student starting out in reinforced concrete, for example, works much more intelligently and enthusiastically if he is permitted to apply the theory advanced in such courses as he gets it to a complete building, than is the case where a series of isolated or unrelated problems are assigned him throughout the course. Having our own structural staff, an opportunity is offered not only to apply the program method of teaching the structural courses but also to correlate the various problems arising in the preparation of complete drawings, estimates, and specifications for a given building problem. Much of this correlation of subject matter is accomplished through a special design problem given at the beginning of the third year. This problem is used thereafter in the assignment of problems in structural courses, mechanical equipment, working drawings, estimating and specifications. We believe this procedure to be a valuable experience for our students.

We recognize the fact that experience in our craft must be for the most part gained by the student himself and that there are few short cuts. We believe, however, that he will make greater progress in this stage of his development if he is of some immediate value to his first employer and that it is not too much for the employer to expect, that he be able to draw neatly and accurately, both freehand and with instruments and that he know something of the architect's problem in "getting out a set of plans and specifications".

We recognize too, that many of our students and graduates will not become practicing architects but we believe that the curriculum as offered provides a more complete "general education" than many collegiate curricula generally thought to be less specialized in character.

UNIVERSITY OF OKLAHOMA

SCHOOL OF ARCHITECTURE

JOE E. SMAY, DIRECTOR

AUTHORITY tells us that the building industry is second in the world only to agriculture. We are likewise informed that the general public has little conception of the complexities of the building profession. Schools of architecture have an opportunity of training men for the profession of building and to aid in the appreciation of good building by the public.

Primarily, the task of this institution is to train its men in stimulation of thought processes, to build usefully, beautifully, soundly, economically. The student of today is the Builder of tomorrow.

School training is not intended to shield the student from the difficulties of the actual practice. Rather, it intends to help him meet and understand them. We here have no hesitancy in subjecting our students to competition. If we are to prepare them for a profession in which competition today is especially keen, there is no justifiable reason to shield them from it in college.

A first problem in redirections for a freshman class is one of adjustment to an often rigid secondary school training. There he was generally taught to work in line. He thinks in line, not in planes, solids or spaces.

A building defines space in structural terms. The fabric defining those spaces must be constructed soundly, agreeing with the forces of gravity and climate. The student must be led to think in terms of space definition, expressed in sound materials. He must become familiar with those materials, their characteristics, limitations and advantages, that he may be able to work understandingly through function to form.

Through a process of objectively dealing with present day technologies in terms of those excellent materials—wood, brick, stone—methods of working, habits of thinking, standards of performance are established. Through examination of the special nature and substance of materials as used today and in the historic past, the student can come to express clearly structural form, form in structure. In the clarity of his understanding, the required means of structural calculation assume their relative and important place in the ordered whole.

We feel it essential to consider the problems confronting builders of past epochs. To ignore lessons learned by experience is unwise. Methods of factual copyism are equalled by chosen ignorance of past accomplishments.

A school should not limit ability. It should guide it. If we succeed in training even a few good architects and builders, who will say that we have failed. General training is a main objective, training to meet the world of the future, as a builder, preferably, as a man, as an American citizen in everyday life. Specialization should come after graduation, either in advanced study or practice. Above all let our students learn what it is always to work constructively. Just how that may be accomplished, I confess we are still in doubt, but we console ourselves with the thought that many educators much older in experience than we still question the correct procedure. We encourage ambition and ability.

A difficult problem, though it may be beyond the capacity of the student, often contributes more to his knowledge than a simple one easily solved. Design students are advanced according to their ability in the solution of an assigned number of problems. Here, we are trying, by fitting the task to the man, to make him fit for more difficult tasks to follow in current professional practice.

Architecture imposes many restrictions on the designer. Careful interweaving of its elements, structural, mechanical, aesthetic, is essential. Coordination of these parts into unified pattern is here given consideration. Architects must think, must correlate, must integrate. If the architects of today are supplanted by another profession tomorrow, it will be because they have ignored world changes. The University of Oklahoma has one of the youngest architectural schools in existence. We have no traditions to limit our efforts.

UNIVERSITY OF OREGON

SCHOOL OF ARCHITECTURE AND ALLIED ARTS

ELLIS F. LAWRENCE, DEAN

THIS School is conceived as "A happy home where students are helped to educate themselves," to quote from Saarinen—where students of architecture and allied arts can work together to a common end, the followers of each art aided by those of the other arts.

It trains painters, sculptors, designers, ceramists, weavers, teachers, as well as architects, constructors, landscapers and interior decorators.

Departmental rivalries and isolation are discouraged. The staff functions as a unit. Points of view from so many fields help the student to find himself, and the staff to widen interests and perspective.

The basic subject is design. Collaboration of the arts, like individual growth, depends on freedom from domination. The School dares to provide "a minimum of restraint" and seeks the "maximum" sense of personal responsibility.

Since the problem is the individual, relations between teacher and student must be intimate and exaggerated ego and inferiority complex must not be fostered. The School, therefore, has long since eliminated competitive problems, honors, honoraries, prizes and judgments. It attacks the grade getting motive. Much of its work is on a no-grade basis.

Each upper division student has his own program. Students make their own decisions, execute their own work. After completion, projects undergo thorough analysis in which all students may participate. Architecture as good construction highly mechanized, dependent on sound business and ethical standards, is carefully considered, but architecture as the art and service is continually stressed.

History is used as a laboratory to discover architectural verities, develop taste and an appreciation of the extent architecture reflects the civilization it serves.

The training of architects, not mere draftsmen, does not imply that the School is free from the responsibility of giving breadth of view and culture, and stimulating the quest for truth.

The best education is self-education. Knowledge is secondary in importance to thought process. Self-education can be most successful only when it is motivated by a vital interest, carried on in an environment of freedom, tolerance, good will—and alive with production, research and discovery. As such a motivation, architecture is unsurpassed, for it is a folk ART, a science, and a service.

W. R. B. Willcox, head of the architectural department, has written:

"Education is a process of bringing forth the finer qualities; of perfecting skill, extending knowledge, quickening imagination, developing powers of observation, analysis and judgment.

"Flavored with a skepticism promotive of honest inquiry and clear insight into the circumstances of life, and of tolerant convictions, education depends upon the exercise of self-discipline, and a willing acceptance of personal responsibility.

"It is a process which unfolds, endlessly, in proportion to personal desire and initiative, but without these, ceases."

Oregon endeavors to furnish opportunity to students to become thinking, creative artists with a sense of obligation to society and a respect for their own talents; sound in technical skill, and determined to put beauty into structure according to their own understanding of what that quality is.

PENNSYLVANIA STATE COLLEGE

DEPARTMENT OF ARCHITECTURE

B. KENNETH JOHNSTONE, HEAD

The policy of the Department of Architecture of the Pennsylvania State College differs slightly from the policies of many institutions in the metropolitan centers for two reasons. First, in both curricula a degree of Bachelor of Science is granted after the satisfactory completion of four years of work. Secondly, a recent survey showed that by far the largest part of our students come from the smaller communities of the State, and only twelve percent of the total number of graduates have moved to larger communities after graduation. When this was realized, the direction that our efforts must follow, became obvious. If our graduates were to return to communities where specialists were not available and the possibilities were great that many would soon have their own offices, they must return with a broad, well-balanced practical foundation. To design the courses with this in mind has been a difficult problem.

We are striving to balance the work given in architectural design and structural design, while at the same time correlating both with a more than usual amount of work in building equipment, supervision, contracts, specifications, and estimating. In structural design we include a thorough course in welding, and at present we are preparing work to be offered in soil mechanics. I mention these only to show more clearly by example what goal we are driving toward. The problem of correlating all of the professional courses has been a simple matter since all of these courses are taught by the faculty of our own Department.

We are sympathetic with the fact that Architecture is at once a fine art as well as a science, but we feel too that, although emphasis must be placed upon architectural design, all men can not be designers. The great designer is born and will rise to prominence, but we can train the "Master Builder."

UNIVERSITY OF PENNSYLVANIA

SCHOOL OF FINE ARTS

DEPARTMENT OF ARCHITECTURE

GEORGE S. KOYL, DEAN

THE School of Fine Arts of the University of Pennsylvania provides those courses of study in the Department of Architecture which are deemed essential as basic preparation for the practice of this profession. The practice of architecture prescribes that, besides having a cultural education, the architect shall have among several capacities including those of master of construction and business executive, the training of the art sense; and the fundamental discipline for such training is Design.

Believing that the student should have positive guidance towards discrimination in matters of composition, rhythm and proportion; and that an effective vehicle for that guidance is to be found in a careful analysis of the classical traditions, the study of the structural and aesthetic expressions of these form an important part of the course of the Elements of Architecture in the first year, and their study is continued in Elementary Design in problems appropriate to such study. At the end of the second year the student is given the opportunity to take an examination to test his sensitivity to architectural form and expression, which he must pass before advancing to Intermediate Design.

Most of the programs in that year are for buildings of moderate size. The student has acquired some degree of skill as a draftsman and a background of experience. His study of history has given him, at least by the end of the year, a critical appreciation of architecture from ancient to contemporary. His thought processes have developed to the point where he can design structurally. He attempts a variety of solutions and is able to comprehend criticism of his concepts from their functional, structural and aesthetic angles.

The Design programs of the fifth year are a challenge to the student's imagination, powers of conception and of expression. They are for the most part the five or six week Class "A" problems of the Beaux-Arts Institute of Design, typical of work with which architects hope to have the opportunity of dealing over a period many times longer in extent, in their more mature years of practice. This study is valuable even though there may be some validity in the criticism of "superficiality" but we rely on several years of office experience after graduation to give the student a real initiation into more exhaustive study into the many problems of architectural practice.

While design develops logical thinking, courses in freehand drawing, modelling and water color increase the student's skill of expression; and more important they sharpen powers of perception through exercise in observation and interpretation of line, form and color. The study of architectural or sculptural forms in the studio or museum develop a sensitiveness to aesthetic qualities of designed or natural form which have cultural as well as technical values for the architect. This discipline is carried on throughout the course.

The scientific phases of architecture are emphasized throughout the professional program beginning with the study of simple structure in the first and of the mechanics of materials in the second year. The graphical analysis of stresses, the nature of building material and approved methods of construction with attention to new types; architectural engineering involving computations in steel and reinforced concrete types of construction follow each other logically and are integrated with Design through the Construction Clinics held after the submission of each problem in design, at which time a visiting structural engineer or member of the construction staff analyzes each problem before the class. A course in specification writing is given in the final year. The ethical, legal and business phases of practice including general considerations of contracts, principles of accounting, zoning ordinances, building codes and financial set-ups are surveyed in the course in Professional Practice in which the Handbook of Practice of The American Institute of Architects and its Manual of Accounting for Architects are among the books used for reference.

Collaboration is a valuable experience in the School of Fine Arts. A group of advanced students, equal in number to the painters and sculptors available at our coordinated institution, the Pennsylvania Academy of the Fine Arts, undertake the collaborative problem of the association of the Alumni of the American Academy in Rome for a five week period each year, under the criticism of the faculties of the two institutions. Also, advanced students who have acquired the required number of values in design, may elect the Construction Thesis throughout the second term, in which the student develops contract drawings and specifications, including structural and mechanical equipment for a building which he has designed either during or preceding this period. His work is followed carefully by members of our Design and Construction Staffs and by the Faculty in Engineering, and checked for accuracy and relative completeness. Because of the necessarily large amount of faculty supervision required the number of students permitted to take such theses must be limited.

Sight has not been lost at Pennsylvania of the fact that breadth of cultural background and liberal

education are important factors in the successful practice of architecture nor of the widening scope of professional opportunities. Our five year program recognizes this fact but the number of purely cultural courses is somewhat limited by the technical program. For a number of years the School of Fine Arts and the College of Arts and Science have had a seven year combined course which permits a wider program of courses in the humanities, social and applied sciences. A graduate year leading to the degree of Master of Architecture provides the opportunity of combining with advanced study in design, research into the problem of city and regional planning and housing; or of history of the fine arts if the student has preference for a teaching career. All specialization is confined to this graduate year.

We attempt to give a fundamental training in all aspects of the profession so that our students will be qualified after the minimum number of years of experience in offices of practicing architects to pass their examinations of State or National Council of Architectural Registration Boards, and to enter confidently, as opportunity affords, into the practice of their responsible calling.

PRINCETON UNIVERSITY

SCHOOL OF ARCHITECTURE

SHERLEY W. MORGAN, DIRECTOR

THE Princeton School of Architecture was founded on assumptions that an architect does not create through intuition but through conscious art, and that his creative powers are best cultivated by humane and scientific studies and by an accurate understanding of previous architectural creations—used as a stimulant and not as a refuge.

The curriculum of the School, is, therefore, based on the belief that an architect should have a well-rounded education in liberal studies, that he should approach his profession primarily as an art, that he should understand and appreciate the other arts in their relation to architecture, and that he should master the science of building construction as a part of his understanding of architectural design, rather than as an end in itself.

Our objective is to turn out professionally trained future architects who are at the same time educated men, with all the advantages, both intellectual and extracurricular, that accrue from a college education. We require either an A.B. degree for admission, or a six-year combined course in which the upper-class years of the A.B. program cover the ground of the first two years of professional study. As compared to an equally long training exclusively in a professional school, or to two years undergraduate work followed by four years of professional study, we believe that our program has two definite advantages.

In the first place, our students feel themselves part of the University rather than of one of its specialized units. They engage in all undergraduate activities and have the advantage of the contact and experience thus gained. The presence of advanced men in the same drafting room with the beginners acts as a constant stimulus, while the outside interests of the younger men keep the whole School in general touch with the University of which it is an integral part.

In the second place our set-up provides a means of weeding-out the less capable students without the necessity of "flunking" them. During Freshmen and Sophomore years a beginner has a chance to try courses in drawing, graphics and the history of architecture. Unless he does well in them (not just passing work, but above average standing) he cannot elect Architecture as his department of concentration for his upperclass years. When this program has been completed, he is not admitted to intensively professional studies as a graduate student, unless he has shown an evidence of real ability in creative work.

Our courses are correlated, both as to subject-matter and to criticism, and we emphasize continuously the fact that the student is studying architecture—*not* the several subjects into which it is divided for convenience of school organization. The general and comprehensive examinations are most important means of emphasizing this integration in the eyes of the students. In these the subject is *architecture,* and the knowledge, skill, training and stimulus acquired in any course are likely to be required in order to answer questions on any part of the examinations.

Thus we hope to make the student realize that the

field of architecture is one which extends to all forms of space organization; planning, building design, and industrial art. He chooses the subject for his final thesis (on which the professional degree is based) according to which aspect of this broader field has most interested him.

RENSSELAER POLYTECHNIC INSTITUTE

DEPARTMENT OF ARCHITECTURE

RALPH G. GULLEY, HEAD

WE aim to provide a basic training for the development of an effective professional capacity for service and leadership in the field of architectural practice.

The degree of success with which we accomplish this aim is largely dependent upon: (1) How clearly we visualize the present and potential function of architecture in its relationship to a changing social order. (2) How well we gear our curriculum to meet this relationship. (3) How ably we conduct ourselves as a teaching unit.

In attempting to discharge our responsibilities as a school, we try not to lose sight of the following: That the public will think of the profession of architecture as the profession thinks of itself—that the profession is privileged to be as indispensable as it wishes to equip itself to be—that the profession, thus far, has not taken full advantage of its potentialities for either service or leadership.

Primarily, architecture is building—ranging from the simplest shelter to the most complex group of structures.

Building is concerned with the organization of space for human needs—in whatever combination of the physical, intellectual, or emotional aspects of Man these needs may require. Inherent in this process of organization are three age-old, fundamental, and familiar considerations: utility, structure, and appearance. These considerations, involving the science of planning, the science of structure, and the art of expression, constitute the very heart of architecture.

It is about this "heart" that our curriculum at Rensselaer is organized. The focal center is the Design Laboratory where, throughout the entire period of training, the student is subjected to essential mental disciplines, through application to architectural problems of his powers of analysis and research, integration and decision, creative imagination and individual expression. The desired goal is independence of thought and action, as required in a variety of exercises dealing with typical demands for building.

Complementing this process, and presented concurrently, are those technical and cultural subjects which we deem essential, not only in adequately equipping the student with the knowledge and techniques of his specialized field, but also with a sufficiently comprehensive grasp of the major social and economic aspects of contemporary society to enable him to apply intelligently and constructively his specialized capacities.

We believe the closest possible collaboration to be desirable between the necessary divisions of our teaching, and our Design Laboratory is so conducted that opportunity is offered for collaborative instruction, particularly between design, construction, history, and freehand drawing.

We believe, also, that acquaintance should be encouraged with the conditions encountered in practice. In this connection, inspection trips are undertaken to buildings, both completed and in various stages of completion—also to plants engaged in the production of building materials; a well-equipped sample room of building materials is maintained in the department; practicing architects are invited to speak on the problems of practice; and a minimum of eight weeks of experience in an architectural office is required during the summer following the third year.

The requirement for a graduation thesis offers an opportunity for the fullest application of the undergraduate student's capacities. This thesis includes a thorough investigation of the subject, personal consultation with authorities involved, a program, the solution, presentation drawings, typical working drawings and details, outline specifications, structural and mechanical calculations, a model, a written explanation and analysis, and oral presentation before a faculty committee.

It is our hope that this basic training will provide useful apprentices for those of the profession in practice, and that, with the necessary experience, our graduates can competently meet the requirements of independent practice.

ST. JOHN'S COLLEGE

SCHOOL OF ARCHITECTURE

GILBERT L. WINKELMANN, PROFESSOR IN CHARGE

THE courses offered in the School of Architecture, St. John's University, an institution conducted by Benedictines at Collegeville, Minnesota, are intended to give the student the necessary training for registration as architect.

The first and second years are devoted to background courses, to develop independence and flexibility, to instil ideals and the appreciation of the beautiful, and to foster and increase self-expression in architecture.

Courses in the liberal arts are stressed in these beginning years—English, modern languages, perhaps even Latin, mathematics courses up to and including individual courses in differential and integral calculus, physics, possibly chemistry, medieval and modern history, economics, and sociology. Over and above these we offer two credits per semester in Techniques: Mediums of Presentation, Nature Study and Composition.

In the third and fourth years the student completes his cultural courses and lays the foundations of architecture in his technical courses. His cultural courses are enhanced with twelve credits in philosophy. The student chooses a major field of concentration from one of the departments in liberal arts.

Although the student must accumulate at least forty credits in architecture in four years, he earns a mere minor in architecture. At the end of the fourth year, if his credits and honor points warrant it, he is given a Bachelor of Arts degree. Why the mere minor? First the student must realize that the ideal architect should be a cultured man, secondly that he cannot foist himself upon a practicing architect as having completed an architectural course.

The remaining two years are spent entirely in the School of Architecture in design and construction. At the conclusion of the course, after the student has demonstrated his complete grasp of architecture, he is given the degree of Bachelor of Architecture.

While the courses are specifically designed for the practice of general architecture, an exceptional opportunity is given to those desirous of specializing in church architecture and the crafts pertaining to church decoration. As the focal point of the liturgical movement in the United States, the atmosphere and the ideals of the School of Architecture at St. John's are such as to inspire the student with the finest traditions of the Church as expressed in art and architecture.

In conclusion it may not be inopportune to add that in the near future St. John's may found an Institute of Liturgical Arts with three departments: Architecture, Art, and Music.

UNIVERSITY OF SOUTHERN CALIFORNIA

COLLEGE OF ARCHITECTURE

ARTHUR C. WEATHERHEAD, DEAN

IN ITS philsophy of architectural education, the University of Southern California would doubtless be considered one of the mid-ground schools. We have believed as a whole that the point of view and the processes of a decade ago need to be revised in order to meet contemporary and probable future requirements of practice. Yet, we have hesitated to discard any element until a substitute was at hand which seemed to offer promise of progress. The success of such a movement must, of course, rest with the staff members and we have purposely attempted to build up a rather balanced group. One or two instructors are radically progressive, while a couple of them are as conservative as the circumstances will allow. Although this does not always make for complete serenity within the school, it provides the students with a balance of influence, out of which they form their own individual philosophies. We believe that the friendly arguments among the faculty members is healthy and challenging. The objective is to provide a varied, but well integrated, progressive experience for the students throughout the five years of the curriculum, of the six years if the graduate year is included.

The design courses are for the most part very realistic, with programs based upon vital local situations and usually with actual sites which the students visit. Los Angeles and its environs afford an ample and varied supply of such material. In most of the projects we are now providing either one or two weeks of preliminary investigation, both in the library and in the field. There is always a one week preliminary sketch with criticism and a judg-

ment before the final study period is attempted. Our thought is to stress good, practical planning and at the same time to develop a sense of structure. As is the case in many schools, the construction courses have been strengthened and the engineering instructor is now available for collaboration with the design staff in all problems where he can be of assistance. The economic phases of architecture are also emphasized from time to time throughout the curriculum. Incidentally, we prefer to have the students take English and public speaking rather than the foreign languages if both cannot be included. In all of these tendencies toward realism in our program we hold that the important objective is the fostering from the beginning of right habits of approach to the problems of contemporary architecture. It has seemed to us that if we can start the students in the right manner, there will be more chance of their later developing into the kind of architects the profession needs today.

The freshmen begin with small practical problems that they can understand, and we work largely through models during the early years with very little rendering so that the students visualize what they are doing. During the last years we carry most of our projects to the working drawing stage where we are attempting to develop good accurate drawing and some sense of refinement in modern details. The history of architecture courses provide a logical background for this emphasis and we allocate them late in the curriculum so that the students may sense their real importance.

We provide courses in the social sciences, housing, and city planning, and occasional projects of this nature are included in the design schedule. In a current project a group of students re-designed downtown Hollywood, which is now being strangled with the traffic and the parking situation, and they presented the results to the Hollywood Chamber of Commerce at a banquet. This experience, we believe, points the way towards the role which these future architects should assume in their communities.

The University of Southern California has closely combined architecture with professional courses in painting, sculpture, industrial design, and the modern crafts. There are no formal collaborative problems, but most of the architects find time to work naturally and intimately in all of these allied fields. A large portion of every student art exhibition is the work of these architecture students. The effect of this healthy contact is clearly discernible in the character of our advanced design problems and the manner in which they are presented.

The College at Southern California is admittedly still experimenting, but we are rather confident of a measure of success in these revisions which we have undertaken.

SYRACUSE UNIVERSITY

COLLEGE OF FINE ARTS

DEPARTMENT OF ARCHITECTURE

L. C. DILLENBACK, DIRECTOR

There is nothing spectacular about the school at Syracuse, nor anything exotic about its teachers. They are practical men, sane thinkers and experienced guides along the path to capability in the everyday world of architecture.

These men have built and are conducting their courses with the subject of Design as principal focus. All other subjects (with the possible exception of those dealing with the business side of practice, which occur in the last two years only) are arranged to look toward Design as their ultimate point of application. Conversely, the problems in Design are laid out progressively to require at the proper time the application of the knowledge and skill gained in lecture and laboratory. The student grows in power and versatility of attack upon his design problems as he goes along, until in the fifth year he is mature enough to carry through a substantial project from the writing of the program (based on a real site and the needs of a well-informed though otherwise hypothetical client whom he interviews) through all phases of design, preparation of working drawings and specifications, schedules of materials and cost estimates, just as it might be done in an office. In fact, he does several such projects which afford an admirable transition between school and employment in practice.

As in most schools, the subjects other than Design covered in the five years divide themselves naturally into four categories: (1) those that have to do with the development of background and understanding, such as history, sociology, theory and philosophy of architecture, economics, etc.;

(2) those that deal with techniques of expression such as freehand drawing, modeling, architectural graphics, etc.; (3) engineering studies relating to construction, materials, equipment, etc.; and (4) business subjects covering office administration, specifications and contracts, superintendence, real estate, money and banking, etc. All but the last group are represented at Syracuse from the very first semester onward so that the student's training proceeds simultaneously along all these essential fronts. And as noted before, all are closely tied in with the work in Design. The construction teacher, for example, gives criticisms right in the drafting room during design periods in addition to his regular classroom work. The closely associated landscape course also makes possible timely drafting room criticsm in this specialty.

If close association with the arts allied to architecture is an advantage, and I believe it is, Syracuse benefits greatly also from its contiguity with the excellent courses in painting, industrial design, interior decoration, and so on which are offered by the Department of Art. Students thrown into frequent contact with young workers in these fields cannot help developing greater breadth and understanding of points of view held by those with whom they may later collaborate. As a matter of fact, training in collaboration is included in the regular work in Design, during which occasional problems are given requiring the students to work with landscape architects, painters, and sculptors.

Contact is maintained with the realities of practice in several ways. A cooperating committee of established practitioners keeps in close touch with the faculty and lends advice and assistance when needed. Summer work in offices is required at the end of the third and fourth years and is encouraged at other times. A field trip of a week's duration is made by the fifth-year students, who are taken to New York or some other large center where they may see important new buildings and question leading architects and designers about their problems. The unusual emphasis on working drawings and other practical phases of architecture also keeps the student's mind close to the everyday actualities which must be met when he gets out of school.

This school is not trying to propagate any "isms" nor does it lack healthy curiosity concerning the search for new and significant form that characterizes the world of today. It believes that the job of an architect is architecture—*all* architecture, not just one particular sort. Realizing that its students are drawn mostly from upper New York State and will very likely practice there eventually, it cultivates a strong respect for tradition, without, however, closing its eyes to the ever-increasing interest in contemporary design thought.

Students are being taught history, not to encourage blind copying of material that has come down to us from the past but to give them perspective to see why and how the builders of past ages arrived at the forms that marked each period. The ability to perceive causes in relation to effects is important to a serious designer. It is my strong belief that unless this ability is acquired no man can gather together the causes of today or tomorrow and discover the forms in which they should be logically and appropriately manifested. The young men at Syracuse are not being led up a blind alley.

UNIVERSITY OF TEXAS

DEPARTMENT OF ARCHITECTURE

WALTER T. ROLFE, CHAIRMAN

SITUATED in that vast region where the European exponents of several great architectural cultures met in conflict for the control of the great Southwest, Texas enjoys a unique architectural inheritance.

Naturally in this environment, with its magnificent light and color, mere educational methods become relatively unimportant. Courses of study lose themselves in the larger objective of training an architect. The task of our school then is to create an adequate architecture to house our people, an architecture of refinement and sensitivity, created through the minds of those we graduate.

Therefore, our philosophy of education is one that develops minds to do this creative task. Students must be inspired, if possible, to develop their minds to their fullest capacity in order better to prepare for a life of value in the architectural profession. Most important we feel is the trained ability to meet new and challenging situations with an adequate talent to solve these contemporary problems.

In such an environment and because of our tradition, the Beaux Arts system seems remote and often superficial. We prepare programs in broad outline which the students then complete under guidance. They enjoy this procedure because it is creative and stimulating and because they have an opportunity to bring something to their work that is distinctly their own.

We believe in showing the student as practically as possible how to do those things that good architects do, particularly as to drawing, creative design and construction, delineation, writing, human relations and other pertinent matters. The practicality of the situation requires that a certain amount of actual office conditions be simulated. By these tools and through an intelligent use of materials, site conditions and social requirements we proceed to solve our problems. We localize problems as much as possible in order to bring to students the impact of conditions as they are met in the society into which they will soon be projected, no matter in what part of the world they may find themselves.

This university education must be complemented by generous periods of practical experience in good offices before any graduate can truthfully say, "Now I am an architect." We hope to train young architects who can think with distinction and who can leave behind them a visible evidence of their creative skill in the fine art that truly reflects the essential culture of a people. This we believe is a modernity that includes refinement, good taste, sensitivity and a rationalism that is progressive, intelligent, yet basically permanent.

VIRGINIA POLYTECHNIC INSTITUTE

DEPARTMENT OF ARCHITECTURAL ENGINEERING

C. H. COWGILL, PROFESSOR IN CHARGE

THE Department of Architectural Engineering at the Virginia Polytechnic Institute gives technical education leading to the practice of architecture to a small group of students. Other groups of students are prepared to enter other branches of the building industry such as structural engineering and contracting.

From the outset this school has endeavored to give to those of its students who are preparing to enter the practice of architecture a true conception of architectural practice, avoiding overemphasis upon either the aesthetic or the practical; recognizing that the practicing architect must take the responsibility for the construction and equipment as well as the aesthetic design of buildings; and that the business side of architectural practice including fundamental business principles, accounts, and promotion may also be a part of his responsibility. Furthermore, the architect is looked upon as a man of broad knowledge, sound character, and true culture rather than as a technician.

While architectural design is recognized as the major field of study, the study of structural design is closely coordinated with it. The relationship between theory of construction and structural design is continually brought out, resulting in increased interest on the part of the students in structural theory. The importance of an understanding of structural theory as a basis of architectural judgment is emphasized. Methods of estimating with particular emphasis upon comparative costs of alternate methods of construction are also given attention.

In architectural design, no attempt is made to bias the students in favor of any particular style of architecture or any narrow concept of functionalism. At the outset the students are given simple problems in composition which call for little or no familiarity with architectural elements. Following this, the study of elements of architecture is taken up, continuing the study of composition, but with special emphasis upon refinement. From this stage on, problems in design, involving planning are given, progressing from the simple to the complex and including study of the principal types of modern buildings.

The theory of architecture is presented in a series of lectures and illustrated throughout the later years of the curriculum by open critiques on student design problems. The students are familiarized with all of the recognized principles and with some which are not generally accepted. The positions of extremists in all camps are explained. The only doctrine which the students are urged to accept is that beauty, utility and soundness are the prime requisites of architecture.

Other courses which are coordinated with and support the study of architectural design are free-

hand drawing and the history of architecture.

Paralleling the study of elements of architecture, the relationship between form and light is studied by means of carefully shaded drawings from the antique. Later, water color sketching is used as a means for the study of color and all media and subjects are used to develop skill and for study of composition.

Virginia Polytechnic Institute is fortunate in having the backing of the profession, so that the students' education is followed by worthwhile experience under guidance. It is hoped that its graduates have the character, knowledge and skill to develop into reputable architects and to be useful employes while they are gaining experience.

UNIVERSITY OF WASHINGTON

SCHOOL OF ARCHITECTURE

HARLAN THOMAS, DIRECTOR

THE atmosphere of change which our profession feels around it in this day puts a greater responsibility upon the schools of architecture than ever before since such schools existed. The men who are to be the architects of the future will most certainly have new problems with which to contend —even beyond those which we now envision. But the fundamental conceptions which best prepare a student for his future in the profession have not changed. We have always stressed, and are still stressing, work in design, as exemplified by proportion, scale, plan relation, circulation, and structural principles. It is our belief that these principles are the same no matter what conditions prevail or what materials are to be used.

At the University of Washington we try to teach these fundamentals, also attempting to give a thorough grounding in structural engineering, the history of architectural development, courses to develop facility in freehand drawing and working drawings, an understanding of the growth and use of ornament, courses in related engineering data, and in the properties and uses of materials. In addition to this technical training, work in English composition, mathematics, and the French language is required.

With these necessary specialized courses, we attempt always to keep in sight the value to a professional man of a broad general education. Toward that end, students are encouraged to elect such subjects as philosophy, literature, psychology, economics, and additional foreign languages.

Fourteen years ago we began offering a five-year curriculum leading to the professional degree of Bachelor of Architecture. With some alterations in courses, this curriculum is still offered. This coming school year an additional curriculum will be added. This, also five years in length, will lead to the degree of Bachelor of Architecture in City Planning. This is an attempt to meet the growing demand of communities everywhere for architects especially trained in large-scale planning problems.

The plan of instruction in design used at Washington is the competitive method, wherein a program is issued, an esquisse prepared, the problem completed within a specified time, and judged by the entire faculty as a jury. Recent experiments have been made in eliminating the esquisse and in other changes of method, but these experiments are still incomplete and it is too early to voice any conclusions concerning them. The training of our past graduates has proved to be adequate in preparing them to successfully pass the four-day Washington State Examination for the licensing of architects, which is usually taken following a year or two of practical experience, as well as school training.

Behind every other thought of our faculty regarding instruction in architecture, is the basic belief that the personal and individual contact between an able student and his instructor is the most successful teaching of all. The all-important "spark" that is generated between the minds of an experienced man of ability and insight and a beginner with latent capacities, holds the key of inspiration to professional training, in our opinion. Toward this end, we so arrange our courses that each student receives the maximum amount of personal instruction and criticism from every member of the faculty during his five years in school.

Fortunately, our school is in a city which is also the headquarters of the Washington State Chapter of The American Institute of Architects, giving our students the opportunity of contacts with practicing architects of The Institute while they are yet in school. We believe the customary practice of holding a joint meeting of the School and the Chapter near the end of each school year is beneficial to

both groups. Many students are Junior Associates of the Chapter and most of our alumni, numbering nearly two hundred, are members of The Institute.

How successfully we are accomplishing the mission of a professional school—to prepare a man in mind, soul and body for his responsibility to his contemporaries and to posterity—can only be judged from the work of men who have graduated in years past, when their work may be evaluated with others of their time.

WASHINGTON UNIVERSITY

DEPARTMENT OF ARCHITECTURE

LAWRENCE HILL, CHAIRMAN

DURING the opening years of the present century when the majority of our schools of architecture were established, we still enjoyed a pastoral belief in the essential rightness of the universe and the stability of existing institutions.

The wreck of established ideals following the World War set us problems in readjustment which the schools of architecture have met with liberality and intelligence.

We are now, however, confronted with a second upheaval, more devastating than the first and one whose probable consequences on educational aims and procedures are incalculable. With the prospect of an era of militarization, high taxes, and unpredictable consequences in social thought and organization, our future opens vistas of confusion in which the responsibility of the schools will be more sorely tried than ever.

In periods of uncertainty, two things are necessary: first, flexibility in thought and means to permit new adaptation to new conditions; second, stability in fundamental ideas and a salutary scepticism of untried and dubious educational procedures.

Broadly stated, it is the aim of Washington University to train young men for the practice of architecture in the midwestern field and to conform as fully as possible with the requirements and limitations of this environment.

More specifically, we adhere to the following principles: The fundamental necessity of a liberal training in academic subjects, in language, mathematics, history, economics, and general science.

A course in Design which in the progressive difficulty of its problems shall develop astuteness in the analysis of plan, intelligence in the use of materials, restraint in external expression, sound knowledge of contemporary practice in construction, and discriminating appreciation of the perennial validity of good proportion, scale, rhythm, contrast and spatial relation in conformity with the materials employed.

Consistent effort to correlate more and more closely the work in delineation, research, construction and presentation with a view to economy of time and striking home to the student the inalienable relation between eloquent and accurate draftsmanship and good design.

Periodic self-examination on the part of the staff by frequent consultation regarding the progress of the work and mutual understanding of the aims to be accomplished.

Collaboration with the St. Louis Chapter, American Institute of Architects to establish contacts between architects and students during their period of study and to assure as far as may be consistent with our educational procedure the immediate competence of our graduates as members of an office staff.

The encouragement of independent practice by all members of the teaching body connected with the courses in Design and Construction.

In brief, we seek to inculcate in our students: knowledge and understanding of the past, remembering always that it is past; alert interest in the present, with insistent emphasis on existing conditions as the material of useful existence and effective execution; open-mindedness regarding the future, restrained by a wholesome reluctance to accept novelties until their worth is demonstrated. "We're from Missouri," we want to know what we're doing and why!

YALE UNIVERSITY

SCHOOL OF FINE ARTS

DEPARTMENT OF ARCHITECTURE

EVERETT B. MEEKS, DEAN

PROFESSIONAL instruction in architecture at Yale is given under the auspices of the University School of the Fine Arts which also offers

coordinated parallel instruction in drama, painting and sculpture.

The aim of the Department of Architecture is to provide a general training in preparation for professional practice. It is believed that an American school of design should be characterized by the application of the principles of architectural composition to functional demands, the historical styles to be studied primarily for their exemplification of architectural values. The utilitarian considerations, such as functionalism of plan and of structure, the logical use of materials old and new, simplicity and economy, should be emphasized as basic to the architect's problem. This becomes the foundation for an expression appropriate to our contemporary American life, always however with due consideration for aesthetic values.

Such training may best be carried out largely by analysis and solution of the problems which usually confront the architect in his professional work. At the same time community housing and group and town planning should be studied through research and by problems in design. At Yale, by collaboration with students of the Departments of Painting, Sculpture, and Drama, emphasis is also placed on the interrelation of these arts with architecture.

Instruction and practice in freehand drawing, modeling, and rendering constitute a basic preparation for architectural expression. Courses which contribute to the understanding of the historical, social, and scientific factors involved in good building are also required in a well rounded out curriculum. The courses in Design should be continuous, promotion depending on performance, not time, and culminate in the thesis for the degree, and irrespective of previous credit or promotion all students should be required to complete a full Design schedule each year. Courses of a more general nature are most advantageous for election by qualified students who have covered the required technical subjects and wish to take further work in allied subjects, provided that their program for any year, including these subjects, does not become overloaded. In all of this consideration must be given to the requirements of the various architectural registration boards so that the student upon completing his course and the necessary period of office practice is prepared to take the registration examinations.

For students already holding the bachelor's degree in Architecture organized graduate study is available at Yale leading to the master's degree. The aims of this graduate work in architecture are to supplement previous professional training; to deepen the student's understanding of the social, scientific, economic, and aesthetic factors involved in contemporary practice; and to train him to fill the larger role of a coordinator in the contemporary social development. To this end graduate students work well together as a group and facilities should be offered to maintain continuous contact with actual offices. Special study can be undertaken and more time can be given to research than is possible in practice.

Contact with society, in which the student is preparing to play his part, and with research, and discovery can be maintained by frequent meetings with authorities invited from other schools in the University and from elsewhere, particularly in the following fields: public health, labor, government, construction, materials, practice, lighting, etc. Seminars should also be held on the aesthetic and philosophical aspects of architecture. More than fifty such meeting were conducted at Yale during 1939-40 by visiting experts.

It is felt that the study of architecture carried on side by side with that in the other creative arts derives particular stimulus by comparison as to aims and methods as well as by organized collaborative work on certain special programs designed to bring out the intimate relation that architecture bears, or should bear, in the greater field of creative aesthetic endeavor in general.

UNIVERSITY OF MANITOBA

DEPARTMENT OF ARCHITECTURE AND FINE ARTS

MILTON G. OSBORNE, HEAD

IT IS obviously the duty of a professional school to provide the training its graduates will need to best serve the needs of the community. That seems to me to be the first requisite. That means a thorough knowledge of local conditions, the requirements of the climate, the limitations imposed by available building materials, the social conditions defining the needs of the community, and to some extent, at least, the traditional background of the

people themselves. All of these conditions affect the content of a course in architecture. In Manitoba, and in Winnipeg particularly, we have the additional problem of a shifting and undependable subsoil that adds construction difficulties not encountered in other places.

A severe winter climate with its attendant heating problems imposes its own limitations in design. However, our design programs are not all written with local conditions in mind. The type and location of buildings to be designed are varied in an attempt to give the student as wide a knowledge of the requirements of various localities as possible. But we do strive to familiarize our students with the problems facing an architect working in a climate with a temperature change of one hundred and fifty degrees. The open plan, large window areas, north exposures, unprotected terraces must be limited and their relative advantages and disadvantages understood. Construction can never be a minor consideration when temperature control is so important an item in design.

The lack of a good local clay, the abundance of good limestone, the cheapness of good timber are all important to a community where distances are great and carrying charges have so great an effect on the cost of building. The universal use of concrete in modern building must be met by a recognition of its advantages and limitations in our climate.

In our school design problems, we attempt to anticipate the needs of the community by studying the possibilities for the development of local sites and relating our programs to local conditions. It is possible in this way to interest the public in civic improvements and to raise the general standard of public taste. Our schemes are neither exotic or fantastic for architectural students should not be criticised for ideas that are impractical and wasteful. By this I do not mean that full scope is not given for the development of the student's imagination, but the art of building is a practical art that must recognize practical requirements.

An architectural school should have a part to play in the fostering of the best architectural traditions of the community, providing the tradition is of a high order and a logical answer to the needs of the community. This does not mean the slavish copying of any style or period but there are certain types that best suit certain localities and if that type can be discovered it might well be the duty of the school to assist in its development. The people of Manitoba have a background of English and French tradition. While the rambling plan and half-timber, towers and casement windows are not perfectly suited to our climatic conditions, there is the possibility that through proper guidance this tradition will enrich and grace the austerity of the modern style.

The five-year course at Manitoba is terminated by a thesis problem that is in effect the coordination of the design, construction, heating, and foundation theory of the entire course. This combined with written specifications is, we feel, the best possible preparation for the actual practice of the profession. Our offices are small, making it necessary for a draftsman to be able to do work of a general nature from presentation drawings to structural details, and the detail of the thesis problem enables a graduate to fit into the routine of office experience with a minmum of adjustment.

There is an annual competition sponsored by the Royal Architectural Institute of Canada, in which all of the architectural schools in Canada usually take part. Scattered as we are across the breadth of the continent, the students are given an opportunity thus to compare their solutions with those of other schools. The competitions have undoubtedly contributed to a better understanding between the schools and while they have in no sense lessened their individuality, they have and will help to develop a common approach to the solution of our architectural problems that may eventually lead to a national style.

The Seventy-third Convention

OFFICIAL NOTICE TO MEMBERS

THE September, 1940, number of THE OCTAGON (page 8) contained the first general announcement concerning the Seventy-third Convention of The Institute, to be held in the Yosemite Valley, California, May 17, 18, and 19, with a concluding dinner session in Los Angeles on the evening of May 21, 1941.

The first official notice to members concerning the convention was contained in the January number of THE OCTAGON and included:

(1) Notice to all members of the profession.
(2) The itinerary of the convention-tour.
(3) Complete information concerning convention-tour tickets, railroad and hotel rates.
(4) A reservation blank returnable to The Secretary of The Institute.
(5) Notice of the number of delegates.
(6) Procedure for electing member delegates.

The program, and other information will appear in the April or May number of THE OCTAGON.

The attention of members, chapter officers and state association member officers is called to the notice in the *January number* of THE OCTAGON with respect to the procedure for the election of member delegates (page 11), and to the table showing the number of delegates entitled to be elected by the members of each chapter and each state association member—as of January 1, 1941.

It should be borne in mind that the number of member delegates that finally may be accredited to the convention and the total number of their votes that may be cast thereat *may* vary from the number fixed in the January notice above mentioned, if, on April 16, 1941, the number of members in good standing in a chapter is more or less than the number set forth in the January notice.

The number of state delegates is determined by the number of voting members in each state association member as of January 1, 1941.

GOOD STANDING OF DELEGATES

Every member elected to serve as a delegate must be in good standing in The Institute.

Under the definition of good standing, chapter XVI, article 1, section 2, paragraph (d) of the By-laws of The Institute, a corporate member is not in good standing in The Institute or in any of its chapters or state association members if he is in default to The Institute *or* any of its chapters *or* is under suspension.

OFFICES AND DIRECTORSHIPS BECOMING VACANT

The offices and directorships to be filled by election at the seventy-third convention are as follows:

Offices (One-Year Terms):

President, Vice-President, Secretary, and Treasurer.

Regional Directorships (Three-Year Terms):

Candidates for regional directorships shall be selected from the members of the regional districts where the vacancies are about to occur. Retiring regional directors are not eligible for immediate re-election, unless serving an unexpired term.

The three regional directors to be elected at the 1941 convention for three-year terms will represent the three districts named below:

Great Lakes District.

States: Indiana, Kentucky, Michigan, Ohio.
Chapters: Cincinnati, Cleveland, Columbus, Dayton, Detroit, Eastern Ohio, Grand Rapids, Indiana, Kentucky, Toledo.

Middle Atlantic District.

States: Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, West Virginia.
Chapters: Baltimore, Central Pennsylvania, Delaware, New Jersey, Northwestern Pennsylvania, Philadelphia, Pittsburgh, Scranton-Wilkes-Barre, Washington, D. C., W. Virginia.

Western Mountain District.

States: Alaska, Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington, Wyoming.
Chapters: Colorado, Montana, Oregon, Spokane, Utah, Washington State.

State Association Directorship (Two-Year Term):

Representing the state association members of The Institute on The Board of Directors.

Procedure for Nominating Officers

Nominations of officers may be made by petition of corporate members, or by member delegates or qualified state delegates from the floor of the convention or meeting, or by a nominating committee in the event a nomination is not made from the floor.

Nominations by Petition:

Nominating petitions for officers must be in writing and filed with The Secretary on or before April 6, 1941, forty days prior to the opening day of the convention (May 17, 1941). Not more than one corporate member shall be nominated in any petition, and the petition shall contain only his name, the office to which he is nominated, the signatures of the nominators, and the name of the chapter to which each is assigned.

Each such petition must contain the signatures of five or more corporate members, and a petition or petitions containing the signatures of not less than fifteen corporate members, comprising not less than five corporate members of one chapter, not less than five corporate members of a second chapter, and not less than five corporate members of a third chapter must be filed with The Secretary before the candidate named by the said corporate members is nominated.

Nominations by petition will be reported in The Octagon and presented to the convention by The Secretary.

Procedure for Nominating Regional Directors

Nominations by Letter Ballot:

The chapters within each district may jointly agree on a nominee, through their representatives meeting at a regional council if there is a council established in the district, or otherwise, or they may separately select one or more nominees. In any of these events the name of each nominee shall be sent to The Secretary, at The Octagon, on or before April 6, 1941.

Upon receipt of the names of such nominees, The Secretary will submit each name so given him from a district to the corporate members of the district who are in good standing, on a letter ballot, which the corporate member who wishes to vote must return to The Secretary within the time stated on the ballot.

The voter also may write in on the ballot and vote for the name of any corporate member in good standing whose name does not appear on the ballot and who is an assigned member of a chapter within the district.

The corporate member receiving the greatest number of votes, as determined by The Secretary from said letter ballots, shall be a nominee for regional director of the district, and he will be nominated for such directorship on the floor of the convention by The Secretary, for voting by the convention.

Nominations from Floor of Convention:

Any accredited member delegate from the regional district which the nominee will represent if elected may propose the name of a corporate member for the directorship, and if the said member is eligible to hold the office and his nomination is seconded by two or more accredited member delegates from the said regional district, then he will be nominated for regional director for that district.

Nominations by Nominating Committee:

In the event a nomination for any regional directorship is not made from the floor, then a nomination therefor will be made by a nominating committee from the floor of the convention at the time set for making such nominations.

Procedure for Nominating State Association Director

The nomination of a state association director shall be made by a state delegate from the floor of the convention.

The nominee for the state association directorship must be selected at the national conference of state association members to be held in Yosemite Valley, California, on May 16, 1941, immediately preceding the convention of The Institute. The nominee so selected will be nominated from the floor of The Institute convention by a qualified state delegate, for election by the convention.

Conference of State Association Members

Notice is given that the national conference of the state association members of The Institute will be held in Yosemite Valley, at the convention headquarters, at 8:30 P.M. on Friday, May 16.

Scholarships

University of Pennsylvania—School of Fine Arts.

Graduate Fellowships in Architecture 1941-1942

Nominations for the Theophilus Parsons Chandler Fellowships in Architecture (two one thousand dollar fellowships will be awarded) will be made by the Faculty of the Department of Architecture from among candidates qualified for graduate study. Applicants are required to submit records and examples of work in design, freehand, and water color.

The Joseph V. Horn Fellowship in Architecture (a one thousand dollar fellowship), will be awarded by competition which will be conducted from May 17 to May 27. Local supervisors may be authorized to issue the program and receive the problems at the appointed hours.

These fellowships are established to provide advanced study for students or graduates of approved Architectural Schools who have shown special promise in their undergraduate years or office experience after leaving college.

Applications must be made to the Chairman of the Committee on Prizes and Scholarships, School of Fine Arts, University of Pennsylvania, Philadelphia, Pennsylvania, not later than March 15.

The Princeton Prize in Architecture, 1941-1942

The purpose of this Prize is to enable a student of unusual promise to undertake advanced study in Architecture, complete his professional training and take advantage of the opportunities offered by the School of Architecture, the Department of Art and Archaeology and the Graduate School of Princeton.

The winner of the Princeton Prize is exempt from tuition fees, and will receive a stipend of $500 to enable him to complete a year of residence at Princeton. He will be entitled to all the privileges of a Fellow of the University, including residence in the Graduate College buildings.

The Prize will be awarded as the result of a competition in design to be held from April 14 to 25, 1941. Applications must be filed not later than March 31, 1941. For information address the Secretary of the School of Architecture, Princeton University, Princeton, N. J.

Rotch Travelling Scholarship.

The Rotch Travelling Scholarship will be offered this year for an indeterminate period of not more than eight months of travel and study in Mexico and the United States of America. The amount of the prize is $1,000.

The examination of candidates will be held early in April, but candidates are requested to register themselves before March 22, and to fill out application blanks which will be sent on request. For registration and further information, apply to: William Emerson, 107 Mass. Ave., Boston, Mass.

Members Elected, Effective February 7, 1941

Chapter and Name	*Chapter and Name*	*Chapter and Name*	*Chapter and Name*
ALABAMA George Palmer Turner	DETROIT Lee Black	NORTHERN CALIFORNIA *Frank V. Mayo	WASHINGTON STATE Theodore Byrnette Carroll Perry Bertil Johanson Charles Vernon Rueger Francis M. Smith, Jr.
ARIZONA Arthur Thomas Brown James Macmillan	FLORIDA CENTRAL Floyd Duane Fullerton	PHILADELPHIA Lewis P. MacKenzie	WASHINGTON, D. C. Merrel Abraham Coe
BOSTON Frederic Leslie Ford	GRAND RAPIDS Paul Edward Flanagan A. Alan Stewart	SOUTH TEXAS Thos. K. Fitz Patrick	WEST VIRGINIA Clarence C. Palmer
CHICAGO Frederick W. Lang	NEW YORK *Adolph H. Knappe	TENNESSEE Alfred Harvey Abernethy	

*Readmitted.

Department of Technical Services—Notes

By THEODORE IRVING COE, *Technical Secretary*

National Bureau of Standards Research on Building Materials and Structures.

To the list of those reports mentioned in previous numbers of THE OCTAGON, the following reports have been added and may be obtained from the Government Printing Office, Washington, D. C., at the prices indicated:

BMS60—Strength, Absorption, and Resistance to Laboratory Freezing and Thawing of Building Bricks Produced in the United States. Price 15 cents.

BMS61—Structural Properties of Two Nonreinforced Monolithic Concrete Wall Constructions. 10c.

BMS62—Structural Properties of a Precast Joint Concrete Floor Construction Sponsored by the Portland Cement Association. 10c.

BMS63—Moisture Condensation in Building Walls. 10c.

BMS65—Methods of Estimating Loads in Plumbing Systems. 10c.

BMS66—Plumbing Manual Report of Subcommittee on Plumbing Central Housing Committee on Research, Design, and Construction. 20c.

BMS69—Stability of Fiber Sheathing Boards as Determined by Accelerated Aging. 10c.

With the Chapters

NEWS NOTES FROM CHAPTER SECRETARIES

Central Pennsylvania.

The Annual Meeting of the Chapter was held January 13, with the best attendance in the history of the Chapter—with 20 members, 3 honorary associates, and the guest speaker present.

The guest speaker, Mr. John Y. Scott, Attorney of Harrisburg and author of the recently Amended Architects Registration Act, delivered a very interesting discourse in regard to various phases of the Act, with special reference being made to a test case now in the courts.

As a result of the report of the Committee on Education and Registration, calling attention to the fact that there is a rather definite move on the part of certain individuals in the State to have the present Amended Architects Registration Act revised, the secretary was instructed to advise all Pennsylvania chapters as well as other kindred architectural organizations to carefully watch all legislation presented at the present session of Legislature, now in session, which in any way might prove detrimental to the registered architects.

A letter was read from Joe E. Smay, Chairman of the Committee on Membership congratulating the Chapter on a 26% increase in membership during the preceeding year. All officers and members of the Executive Committee were re-elected for the ensuing year.

JOSEPH L. STEELE, *Secretary*

Georgia.

The Chapter was host at a dinner held at the Piedmont Driving Club, February 14, in honor of Rudolph Weaver, Regional Director, and other architects who came to Atlanta to take part in a judgment of student problems held at the Department of Architecture, Georgia School of Technology.

About 25 members of the Chapter attended the meeting, George Bond, President, presiding. Harold Bush-Brown, Head of the Department of Architecture, Georgia Tech and secretary of the Chapter explained the B. A. I. D. judgment to take place the following day and introduced the out of town members of the jury who were present. William J. Sayward, former Regional Director introduced Rudolph Weaver, present Regional Director, who gave a talk on the reasons why The Institute deserved the support of the profession here and throughout the South.

HAROLD BUSH-BROWN, *Secretary*

New York.

Ninety-two Chapter members present at a recent meeting heard Quentin Reynolds speak of his recent experiences in London during air raids. Mr. Reynolds, world famous correspondent for *Collier's*, author and narrator of the unforgettable films "London Can Take It" and "Christmas Under Fire,"

and author of the recent book "The Wounded Don't Cry," expressed his relief in the realization that New York is not as asleep as London was before the war.

"If London had realized the necessity for preparedness to insure the safety and comfort of the population in a war-stricken city," said Mr. Reynolds, "a considerable proportion of the 30,000 deaths from London air raids might have been prevented."

The one piece of business brought before the meeting was the election of an Honorary Associate. The Executive Committee nominated the Hon. Fiorello H. LaGuardia for this honor. The motion was then put before the meeting and Mayor LaGuardia was unanimously elected.

Mr. Frost, in announcing that a Civilian Protection Committee of the New York Chapter had been formed to cooperate with the Mayor's Defense Board, emphasized the importance of differentiating between Civilian Defense and Civilian Protection. Defense is the concern of the Army and Navy, whereas protection has to do with measures for the safety and care of the population during any periods of danger.

FREDERICK J. WOODBRIDGE, *Secretary*

Pittsburgh.

The 51st Annual Meeting of the Chapter was held at Pittsburgh Architectural Club on January 21. Cocktails preceded a dinner and a gala turnout of 32 members were present.

President Stotz reviewed the past year's activities and it was realized the Chapter had had a very busy year. One among many accomplishments was election of 7 new Institute Members and 6 new Associate Members during 1940.

The following officers were elected for 1941: President, Charles M. Stotz; vice president, Lamont Button; secretary, Allan H. Neal; treasurer, Stewart L. Brown; director 1940-43, Stanley Roush; director 1941-44, Robert W. Schmertz.

The following were elected as delegates to the 73rd convention of The Institute to be held in California: Stotz, Neal, Wolfe, Button, Brown and Marlier.

Best wishes of the Chapter were extended to our erstwhile vice-president, Rody Patterson, who has been called to duty with U. S. Naval Reserve and will leave for Porto Rico early in February.

ALLAN H. NEAL, *Secretary*

Utah.

The Utah Chapter has been attempting to prevent a proposed amendment to our licensing law from being passed in its original form.

This amendment has been introduced through the sponsorship of the Utah Lumber Association and as originally drafted called for permitting unlicensed persons to design any type of building outside of corporate limits of any city, and any building inside of corporate limits, irrespective of use, up to 3000 sq. feet of ground area, and up to 24 feet in height, from the foundation top to the top of the rafter plate.

The amendment as passed by the Senate and sent to the House for its consideration has been reduced to the following form: To permit anyone to design any type of building used only for farm purposes and permitting the design, by anyone, inside of the corporate limits of any city, of one and two family dwellings only, up to 2000 square feet of ground area with a limit in cost of $10,000.

Our chapter, through the direction of our special committee composed of Lewis T. Cannon, Miles E. Miller and Lowell Parrish, is now attempting to have the amendment tabled or reduced still further.

PAUL K. EVANS, *Secretary*

Necrology

As reported to The Institute from December 31 to March 1.

Members

A. M. Edelman
Clark Wright Eveans
Carl F. Grieshaber
James M. Hamilton
Howard May
Worthington Palmer
Edward A. Renwick
Arthur H. Smith
Wm. Lee Stoddart
Walter Webber