

## College of Engineering

Department of Architecture and Urban  
Planning (DAUP) B.Arch. Program



كلية الهندسة  
COLLEGE OF ENGINEERING

## Architectural Design Studios at DAUP Guidance Document

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## 1. Preamble

The recent rapid development of Qatar is characterized by fast track urbanization and large-scale work, learning, residential, and mixed-use developments based on sustained attempts to strike a balance between tradition and modernity. The unprecedented growth in the building and urban development industry, already considered the second largest industry in the state of Qatar after the Oil and Gas industries, has created a pressing demand for architects and planners with specialized training to design, plan, and direct the activities of the industry. This need has been further intensified by the rapid pace of development, emerging innovative design ideas, rising demand for large buildings, and the need for new building types/materials, structural systems, and methods/management techniques. These growth indicators at both the architectural and urban scale mandate the presence of academic units and programs that address the practical realities of local and regional development while graduating professionals capable of leading these realities in an efficient and effective manner.

Responding to these demands and challenges, the DAUP offers innovative undergraduate programs for graduating professionals capable of creating and managing the resilient, sustainable built environments of the future. Our program strikes a balance between knowledge content and delivery while implementing hands-on experiential, active, and outcome-based learning approaches.

The Bachelor of Architecture program (B.Arch.) was developed in light of the recommendations of the UNESCO Charter for Architectural Education and the National Architectural Accrediting Board (NAAB) for these current and future needs. It translates current international and regional trends into a balanced and responsive curriculum. The B.Arch. program has received the International Certification (ICert) designation from the National Architectural Accrediting Board for the Bachelor of Architecture (B.Arch.) program. ICert was granted in 2018 for a term of six years.

The content and delivery of our program are linked to continuously evolving higher education in architecture and urban planning around the world. Since architectural design studio occupies a central position of education, representing over 30% of the total professional program in architecture, this document highlights key aspects of design studio instruction in the DAUP, College of Engineering, at Qatar University. It translates our educational mission into a set of parameters and procedures to ensure effective delivery. The document includes necessary information for the conduct of design studios in the DAUP. The goal is to establish a common ground and language for the conduct of design studios where faculty, teaching assistants, and students can refer for general guidance related to teaching and learning, assessment, procedures, and protocols. Furthermore, it also includes a push towards integrating a digital paradigm in the DAUP design studio philosophy without neglecting the existing focus on a process-based design approach. In fact, it will strengthen its recent paradigm shift towards three-dimensional thinking skills in design instructional processes. Furthermore, it will complement and create a hybrid world that combines the advantages of both manual exploration and the power of digital manipulation and connectivity.

As one of the most distinctive branches of education, architecture requires creative capabilities. Since the primary concern of professional architects is to produce three-dimensional form and space to accommodate human-related activities, the teaching process focuses on two concerns: first, the balance between formal, socio-cultural, and environmental aspects and, second, the balance of students' abilities for searching, thinking, and other abstract exploration. As an educational unit offering a professional degree in architecture, the DAUP at Qatar University believes the critical relationship between the design education provided and the skills required for successful practice is the core of its mission. Consequently, we believe that the design studio and the overall philosophy of the curriculum has to achieve correspondence between design education in architecture and the multiple roles architects could play in society (with particular focus on the Middle Eastern context), where the justification for the existence of the architectural profession is providing better environments for contemporary societies.

Despite the considerable differences in the process of educating future architects around the world, there is one remarkable similarity. This is the emphasis given to the design studio as the main forum for creative exploration, interaction, knowledge acquisition, assimilation, and application. The design studio is the kiln where future architects are molded. It is the primary space where budding professionals explore their creative skills that become so prized by the profession. At the DAUP in Qatar University, we believe that the attitudes imbibed in the studio are those that young graduates take with them to the profession.

The architectural design studio occupies the core of education for architects. This is clearly evident in the time devoted to teaching architectural design and importance given to the design studio by both faculty and students. In essence, the design studio is a setting that continuously reinvents the societal role, design techniques, and tools of the architect in a professional industry. The design studio looks at the world around us in the large- and small- scale, uses the expanded arsenal of design tools that are available today, and reevaluates historical precedents with the knowledge and insights of accumulated human knowledge. The world is changing fast around us and Qatar. As a young and fast-developing country, Qatar is eager to absorb newest, most advanced technologies available. It is the task of the DAUP to embed these new technologies into the curriculum of the school in the most meaningful and resilient manner.

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## 2. ARCHITECTURAL DESIGN STUDIOS

The long hours spent in the studio should be productive. The one-to-one tutoring approach is extremely valuable and peculiar to architectural education. The project-based-approach of using a project to deliver educational objectives is being adopted by many other disciplines as a state of the art approach in teaching and learning practices. The design studio has many strengths, which form inherited characteristics of a long tradition in architectural education, including:

1. Expert evaluation of the design projects
2. Integration of hybrid, technical, and theory courses in the design studio
3. Exchange of ideas and criticism
4. Interim, mid-term, and final review system
5. Stimulation of collaboration and mutual-support between students
6. Hybrid usage of explorative manual techniques as well as innovative digital technologies

The design studio must be based on a clear architectural position of the coordinator, primary instructor, studio instructors, and teaching assistants. Design studio may be based on a variety of architectural positions ranging from traditional appreciation of the status quo to a progressive forward-looking stance.

Our endeavor at the DAUP is to develop and/or seek new forms of pedagogy by improving the inherited qualities of the architectural design studio in a manner that is amenable to addressing the aesthetic, socio-cultural, techno- economic, and environmental needs of the future.

### 2.1. The Architectural Design Studio: Nature of Design Courses, Instruction, and Project Types

Skills-based and architectural design studios in the “Architecture” program at the DAUP occupies a central position within the curriculum as illustrated in the following structure. The new paradigm shift towards digitizing design studios is taking place by the insertion of more-digitally based design processes.

**Table 1. Weights of Categories of Courses in the Architecture Program.**

Arch Major Courses Weight by block				
	Subject Block	Number of Courses	Credit Hours	Weight %
1	Graphic communication and Design Studios	13	50 CH	31.25
2	History and Theory	5	15 CH	9.375
3	Building Construction, Services & Technology	6	18 CH	11.25
4	Civil Engineering Related courses	6	16 CH	10
5	Major Electives	4	12 CH	7.50
6	Practical Training	2	0 CH	0
<b>Total</b>		<b>36</b>	<b>111 CH</b>	<b>69.375</b>
General Courses Weight by block				
	Subject Block	Number of Courses	Total Credit Hours	Weight %
1	Core Curriculum	11	33 CH	20.625
2	College Requirement	3	7 CH	4.375
3	College Elective	2	6 CH	3.75
4	Major Supporting Elective	1	3 CH	1.875
<b>Total</b>		<b>17</b>	<b>49 CH</b>	<b>30.625</b>

The designed sequence of studios addresses key professional skills and emphasizes specific aspects peculiar to each type of graphic communication and/or design studio as outlined in the following table.

**Table 2. Sequence of Skill based and Architectural Design Studios and Focus Areas.**

Sequence of Skill-Based and Architectural Design Studios	Focus Areas
ARCT 110 Graphic Communication I	Graphics – Manual
ARCT 111 Graphic Communication II	Graphics - CAD
ARCT 210 Perspective, Shade and Shadow	Sciagraphy and Perspective
ARCT 211 Architectural Design Studio I	Programming and Design
ARCT 212 Architectural Design Studio II	Climate/Appropriate Technology
ARCT 310 Architectural Design Studio III	Context and Site Design
ARCT 311 Architectural Design Studio IV	Complexity in Design
ARCT 410 Architectural Design Studio V	Community and leadership
ARCT 411 Architectural Design Studio VI	Sustainability/Pre-comprehensive
ARCT 510 Comprehensive Design Studio	Comprehensive Design
ARCT 511 Senior Project Preparation and Programming	Pre-Design Studies
ARCT 512 Senior Project	Design Development

### 2.1.1. Nature of Studio Courses

The studio enables the synthetic nature of the professional architectural process to

become continuously reinvented with respect to the societal role and design techniques/tools in a learning environment. The starting point of each design studio is the here and now. The here of the societal reality of living with the digital and social media of today; exploring the now for the professional application of current societal and technological advancements in design education. From the first project, students probe the terms of the brief or form judgments on the propriety or feasibility of making a design intervention in a particular way, thereby exercising the skills typical in state-of-the-art professional practice activities. The same is true when they test possibilities with their peers and tutors in debate, make proposals about how their projects may be made, and when they commit their resources to sketching, drawing, 3D modeling, programming, scripting, prototyping, and presenting their schemes at the reviews. Many of these aspects of professional practice may be explored in an intuitive and experimental way. However, as the scope of projects and the range of themes covered by critics at reviews develop, students will be further exposed to an increasingly explicit pattern of agendas on the design to production process.

### **2.1.2. Courses Descriptions: Theoretical and Practical Contents**

All design studios should adhere to course descriptions stated in the University Catalog. Attention should be given to the theoretical component of the design studio courses. Reading and writing assignments are an essential part of the designer skills and should be treated as integral components of design learning.

The required reading list should be stated in the course outline and made available to students. They should cover subjects such as Theory of Design, Parametric Design Methods, Designing Big Data and Lean Data, Building Typologies, and so forth. Other reading material that indirectly enriches the design philosophy should include works of art, poems, musical scores, stories, novels, philosophical manuscripts, and so forth.

A weekly lecture is required to introduce design theories and methods, discuss reading material, students' research findings, and group activities. Lectures on design principles and methods, presentation techniques, supplementary reading materials, and guest speaker lectures are important activities supporting the learning processes in the design studio. Some of these lectures act as drivers for generating design concepts, ideas, and debating contextual particularities for the design project in question.

There are many announcements that need to be conveyed to all students at the same time to ensure that they receive the same message regarding submission timing and presentation requirements. The use of e-learning facilities such as Blackboard is very effective for communicating with all students. All course information, teaching materials, and announcements should be posted regularly on Blackboard.

### **2.1.3. Tutoring of Individual Students**

Architectural design tutoring is conducted on a one-to-one basis or small groups. Typically, each student requires adequate time (approx. 20-30 minutes) for individual tutoring in every design studio session to discuss and develop design solutions for the problems inherent in the project brief. This requires understanding intentions, concepts, solutions, presentation, and communication.

Design projects evolve through several phases of the design process from inception, concept, schematic to comprehensive development and details. Each design phase and related stages requires formal revision and feedback from all studio teaching team to exchange ideas and develop agreement about each student's proposed design solution. Every 2-3 weeks, depending on the nature of the project, an internal review involving all students and studio instructors is conducted to provide each student with comprehensive feedback about their design solution and share instructors' and students' views/comments about the design project. This is an important aspect since each student is developing their own ideas with the assistance of the design instructors and even their fellow students. Students in harmony with their supervisor(s)



systematically develop ideas and concepts, which evolve to solve problems defined at the pre-design stage. In fact, under the flexible dynamic supervision of the instructor, the students freely boost their creative skills.

#### **2.1.4. Projects: Size, Complexity, and Contents**

The progress of the "Design Problem Complexity and Size" forms the basic guideline for selection of projects in each design studio. The goal is to expose the students to a wide spectrum of design issues during their education. Such exposure could be achieved through designing complete buildings or portions of buildings. The fact that new building types are continuously emerging in addition to traditional building types makes it impossible to cover all of the building types and sizes during the design studios. More crucially, students should learn how to tackle any design problem in a scientific and professional manner.

#### **2.1.5. Themes and Progression of Studios**

"Design Courses: Themes - Focus - Objectives" document identifies the focus of each design studio as well as the basis for students' evaluation. The weighing system is designed so that the emphasis is placed on one theme for each course without ignoring the other complementary themes. The grading of design studio in an educational setting should be different than a real architectural office. The process of design is as important as the product. Students should be aware of this fact and focus their attention on the process of design as well as the final product. The chart should be used as a guide for formulating the design projects' briefs.

## 2.2. Skills and Communication in Architectural Design Studio

Design education is not simply the imparting of knowledge and skills necessary for successful professional practice. It involves the development of values, cultural, and philosophical positions. The focus in the DAUP at Qatar University is developing and implementing an effective studio pedagogy, which integrates the skills required to articulate ideas and develop solutions based on accumulated knowledge.

### 2.2.1. Skills: Thinking and Communication

There are many skills that students should learn from the design studio process including the ability to think and solve architectural design problems. At the same time, students' ability to communicate their design ideas and critical thinking process is essential for their future practice as architects. Both verbal and written communication skills are essential in this regard.

### 2.2.2. Language of Communication

The language of communication in the design studio is English. It is obligatory that all instructions, conversations, presentations, discussions, and any other activity are conducted in English. There should not be any tendency to simplify studio instructions and translate them into Arabic. Students are responsible for all text and graphics that appear in their projects.

### 2.2.3. Manual and CAD Skills

Manual-analog as well as machine-digital skills are developed during the first design courses and continue to develop throughout the sequence of studios. There should be a proportional balance between manual and computer design to production skills. The use of computer and digital platforms is encouraged during early design courses as a tool. Students must learn how to work creatively with current digital software, tools, and instruments. Students should learn how to write and present their assignments using computer programs from day one in the department. Students must deliver a written description of their projects along with the visual presentation. They should learn how to use digital tools to aid their analogue thinking skills.

### 2.2.4. Textbooks and Reading Assignments

It is important to select appropriate textbooks or develop appropriate compilations of readings for the design studios and cover the readings during the semester. Other material can be supplemented in the form of handouts. Texts are an integral part of the design studio content. One textbook or an equally comprehensive compilation of interrelated readings is required for each design studio. Readings must be directly related to the nature and focus area of the design studio theme. Reading, observing, and analysis assignments are important for complementing skills with the knowledge necessary to pursue design tasks and activities.

## 2.3. Key Features in Design Studio Teaching and Learning

Teaching and learning in design studio settings have a number of features that should be considered in relation to the studio theme, nature of design project, and the issues addressed in the project.

Whenever possible, an emphasis is placed on experiential learning mechanisms where students are exposed to primary source information and the studied realities.

### 2.3.1. Integration of Complementary Courses

The design studio is the spinal cord of the architectural program. All knowledge gained by the student in other courses should be used in the design studio. There are many ways to achieve this goal: 1) use a co-teaching approach that allows more than one faculty member to teach the same studio focusing on different aspects; 2) parallel courses that cover aspects of the design studio project; and, 3) experimental design studios that allow the introduction of new ways of teaching such as the paperless design studio, firm design studio, design-build studio, research-based design studio, design to production processes, robotic building, interactive architecture, art and architecture, and much more.

### 2.3.2. Field Trips and Guest Speakers

Field trips and visits to completed or under construction projects are fruitful experiences for design students and should form an integrated part of the design studio. Also, visits to workplaces of practicing architects and architectural firms should be encouraged. Guest speakers should be invited to attend studio sessions and critique

the students' in-progress work. Guest critics from the profession should be invited to the jury sessions based on the judgment of the design studio instructor.

### **2.3.3. Relationship with Professional Practice**

Barriers that have existed between the architectural profession and its counterpart schools are being quietly broken. The Firm Studio approach is an intriguing model to follow. The Firm Design Studio integrates theory and practice, students and professionals, and schools and practices. Students will have an opportunity to work with clients and professionals from large architectural firms. Students will learn to understand professional design practice and the way firms tackle projects. In turn, participating professionals will benefit from the input of new ideas generated by students. Renewed interest in their projects and the chance to teach will make this opportunity worthwhile for the participating architects. It is highly recommended that a professional architect is hired as a part-time instructor for the design studio.

### **2.3.4. Community Outreach**

Design Studio focusing on real-life needs and situations must be encouraged. Several projects were designed for community institutions, whether public or private in nature. This will develop the students' understanding of the architectural design and development process within a realistic context. It will also help students to apply design theory in a site/environment with particular constraints and its reaction to real-life conditions. This trend should be encouraged and the surrounding community should benefit from the resources and capabilities in the DAUP. Design projects should have a goal and purpose to advance human society.

### **2.3.5. DAUP Seminars and Guest Lecture Series**

The DAUP organizes a series of technical seminars and lecture series. Speakers are faculty members, invited international/regional architects, and/or guest academics. At least four seminars are organized each academic semester and students are required to attend these seminars to complement their knowledge gained through the studio experience and other lecture-based courses. Studio faculty may require students to write short essays about their learning experience in these seminars to express their views on the lessons learned.

### **2.3.6. Use of Design Studio Learning Resources**

Learning Resources are extremely valuable. They should be handled in an orderly manner under the supervision of responsible persons. These include all audio-visual equipment, electronic and electrical devices, books and digital materials, and drafting/coloring materials. The Architectural Learning Resource Center diligently supports such activities.

## **2.4. The Jury Review**

The jury system has existed since the Renaissance and remains the pre-eminent, most utilized manner of assessing architecture students in design studios. The idea of the jury arises from the wicked nature of architectural problems and the need for a collaborative approach to assessing and asserting the quality of architecture design. The jury system has been introduced to the region by expatriate and foreign-trained scholars in the Middle East.

The jury should not be viewed in any way, either by students or teaching faculty, as a forum for an adversarial relationship. Rather it should be viewed as a forum for exhibiting measured professional judgment in giving feedback to students about their design work. Jurors are expected to be respectful, fair, and considerate in commenting on students' work, while the students are expected to be open-minded in receiving feedback that is critical from Jurors. Jurors are obliged not to disclose students' grades in open juries. Students are obliged to listen quietly during jury sessions of their peers and required to stay throughout the period of the jury so they can benefit from the comments and exchanges that take place. Jurors should be able to evaluate design achievement holistically; not only the project drawings. Architectural design is both a product and a process. Both aspects need to be evaluated in design education.

The jury is the educational setting where students learn how to communicate their design ideas and defend their views in a professional and eloquent manner. They also practice the use of language in communicating their design ideas and projects. These are skills required for their professional practice after graduation. It is a setting similar to what they can expect to confront in their daily professional practice experience with clients.

### 2.4.1. Design Criticism

Criticism is an essential part of design education. The primary role of criticism in a design studio is supplying objective evaluation of the students' design concepts and their development. Students may be exposed to several systems of value held by the faculty and various studio critics. Based on these alternative value systems and their own background, students will build a system of values of their own and habitually critique their own work in an objective manner. This development of self-critique is an important goal of the design studio. Constructive criticism is also a teaching method. Its principal subject matter is design methods, including 1) activities of defining and understanding design problems, 2) proposing and testing various solutions, and 3) carrying the best solution to a final goal. Studio instructors present to the students a method or variety of methods for executing these activities. The critic often takes on the role that is normally filled by the client. In this role, the critic is a sounding board for the students' ideas. The critic brings questions and demands similar to those of a client. The critic reacts to the students' proposed designs as the 'second party' in the dialogue critical to the design process. Finally, the critic evaluates the student performance. This evaluation is not only concerned with the end-product of any particular design project but also the student's interests, work habits, attitudes, patience, communicative ability (verbal and graphic), rate and quality of development, and promise as a future professional.

### 2.4.2. Types of Jury

There are two types of jury sessions:

- **Interim jury**, which is conducted on weekly or biweekly basis to discuss the students' progress in a public forum and generate feedback from instructors and other students; and,
- **Final jury**, which is conducted at the end of the design project to evaluate the entirety of the students' work (process and product). Because most design courses do not have "final examinations," the jury is considered the final examination for design studios. The attendance of the jurors is as important as that of students. It is a long and exhausting process of reviewing dozens of projects in a relatively short period of time. Considerations during the jury session include but are not limited to:
  - Asking questions in jury sessions is different than reviewing projects during studio hours.
  - Questions should be brief, clear, and short to allow the student to speak as much as possible.
  - Fatal design mistakes should be pointed out and the good aspects of the design should be stressed.
  - The jury should not be turned into a "monologue" wasting the time and energy of other jury members and defying the purpose of the jury. The design instructor should budget the time as the coordinator of the jury. Despite its hectic and time-consuming process, jury reviews should be an essential and respectable part of the design studio experience.
  - The verbal presentation of the project, ability to defend one's ideas and communication skills gained during the jury session are important educational objectives.
  - The evaluation conducted during the final jury is made according to the educational objectives of the design studio and course level.
  - The evaluation should be based on criteria set by the studio instructor, according to the nature of the project.
  - The evaluation should be conducted by experienced persons from the department or the profession, who can judge the student's development and the design project at the same

time.

### 2.4.3. Jury Format

In order to be able to finish the jury within a reasonable period of time and effort for students and jury members, there are many formats used in different universities for performing a design jury; 1) students present their project to all jury members and receive feedback/comments (15-20 minutes per student); 2) students are divided into two or more groups and each group is reviewed by a different group of jurors; 3) students stand by their projects and jury members go around asking them questions to evaluate their work; and 4) the jury is conducted without the attendance of the students for the purpose of evaluating the students' work only. The course instructor should decide beforehand which of these methods is going to be applied. The jury should follow the following procedure:

- The course instructor should invite at least two design instructors to participate as official jurors who grade students' projects.
- All department faculty members and guests are welcome to attend but grades are given by the invited design instructors who should attend all presentations.
- The grades should follow the format of the attached grading sheet.

## 2.5. Assessing Students Performance

The criteria to be used in grading will be explained in the project brief. Students should understand the nature of the project, what is expected, and how to address the issues of each assignment before spending time on the project. All projects must be turned in complete and on time.

### 2.5.1. Letter Grades and What They Denote / Marking Scale

**A** means **outstanding** work. The work shows innovation and a significant depth of understanding about the project requirements. The project has been fully developed and well communicated graphically. Generally, there has been an unusual or unique concept employed, which enhances the solution. The full potential of the problem has been demonstrated beyond expectation.

**B** means **good** work. Project solutions have exceeded all requirements of the project statement and show an above average depth of understanding. The project demonstrates an above average clarity of idea, execution, and presentation.

**C** means **average** work. The project solution adequately satisfies the project statement but generally lacks some depth of understanding and/or development. The overall project, lacking innovation and craft, is only adequate.

**D** means **poor** work. The problem solution is extremely weak and lacks depth, understanding, and innovation. Craft is weak and inappropriate to the class expectations.

**F** means **unacceptable** work. The project does not resolve the problem statement. The work shows a lack of understanding and demonstrates skill inappropriate to the class level.

To pass, the students must demonstrate competency in the semester's main topics and issues.

### 2.5.2. Content and Skills to be Assessed

It is expected that all students will have an understanding of the aims and objectives of the course and develop strategies for the interpretation of project briefs. The following content and skills assessment guidelines are suggested as a mechanism for describing how students will be assessed. These guidelines should be reflected in the course assessment feedback sheet.

**Context and theory:** How well has the student observed the brief, i.e. the aims and objectives of the project, research, analysis of precedence, theme of project, identification, documentation, and analysis of project aims, broad research, and translation of ideas?

**Technology:** Structural, construction, and environmental control systems.

**Representation technique:** Media, scale, and documentation of the project. Well executed, clearly annotated, appropriate representation for scale, drawings, material, and innovative representation techniques, etc.

**Communication:** Communication of intent, logic, and precise information.

### 2.5.3. Weighting of work

Each submission will be assessed using the following considerations:

**Criterion-based** according to the fulfillment of the project criteria;

**Norm-based** on expectations of proficiency in documentation, interpretation, and presentation;

**Comparison** with other students' peer assessment and review;

**Self-reference professional experience** with students at similar levels in comparable programs, both regionally and internationally; and,

**Personal view** based on the tutor and/or studio coordinators professional feedback to the student work.



Qatar University employs the following numerical grading system guide:

**2.6. Grade Min. % Max.%**

A 90 100 | B+ 85 90 | B 80 85 | C+ 75 80 | C 70 75 | D+ 65 70 | D 60 65 | F 0 60

**2.6.1. Student Performance**

As suggested by the NAAB Accreditation Conditions, criteria for student performance are stated in terms of levels of understanding and ability that students should achieve during their studies. The NAAB system should be only used invisibly in the background to assess the performance of the tutors, not of the students. See NAAB Matrix for detailed objectives for each design course as developed by the department NAAB committee.

**The criteria encompass two levels of accomplishment:**

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

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

**2.6.2. Cumulative Development**

Throughout each semester, new design principles, concepts, skills and techniques will be introduced. Students are expected to understand the new material and apply it not only in the current exercise but also in subsequent studio work. Such cumulative development fosters a deepening in the students' understanding of design through the practice of repetition and reflection.

**2.6.3. Notebook and Portfolio**

Students are expected to keep their course syllabus and project statements in a digital PDF format including 3D models. For each design studio project, a dedicated Wiki page will be established, which contains all information about the tutors, project brief, and the students work. The Wiki page offers the possibility to give direct feedback, both by students and staff. This is separate from the sketchbook that each student will be encouraged to maintain. A portfolio will be required in which all work should be kept in chronological order. Students are required to maintain portfolio documenting all academic and design studio work. These portfolios are evaluated at the time that students apply to professional degree programs. They are also used to measure individual progress.

**2.6.4. Outcome Assessment**

There are many ways to assess the outcome of the design studio education. The outcome means focusing on the students' acquired knowledge and skills. Assessment means a standardized method of evaluation of the program efficiency. One way to assess the outcome of design studios includes:

- i. Qualifying exam as part of the graduation project, which should be passed before the student's graduation;
- ii. Evaluation of student's portfolio of work and projects; or,
- iii. Preparation of a written report or paper.

**2.7. Key Operational Procedures, Responsibilities, and Documentation**

Minimal-required procedures and operational aspects have to be considered. These range from procedures within the studio to documentation and retention of student projects in addition to key responsibilities of faculty members, teaching assistants, and students.

**2.7.1. Students/Assistant Ratio in Design Studios**

The ratio between students and faculty should not exceed the 15 to 1 ratio. This ratio will provide the optimum individual review time for students' work. The one-to-one student/staff relationship is essential in Design Studio teaching.

**2.7.2. Design Studio Procedures**

The class should be divided equally among assistants into groups of students. Assistants conduct daily reviews and progress assessment concurrently with the instructor(s) during each class in consultation with the course instructor. The instructor is responsible for setting the course parameters, contents, and projects. The instructor is also responsible for the theoretical part of the course based on the prescribed textbook(s) or any other references he/she might suggest on a reading list for students as well as overseeing the students' progress occasionally and offering them some overall guidance. The instructor is responsible for the

students' final grading and overall evaluation of their progress during the course. Studio activity during class hours should be directly related to assigned projects. Students should not expect the teaching staff to respond to work until there is a substantial amount of worthy material to which they can respond. Team teaching means that instructors will share project introductions and critiques generally but it does not mean that students will hear the same advice or comments from each instructor during the course of a project. It will be up to the students to think critically and creatively; to formulate, develop, and defend his/her own ideas during a project. The work and outcomes are the student's responsibility. Design studio must offer students the possibility to build their own individual and group design environment, which evolves over time. In principle, each student should have their own personal workspace from

the first year to end-of-school on a yearly assigned basis. In turn, students are required to maintain their working spaces in studios and classrooms as healthy and comfortable environments to work.

### 2.7.3. Responsibilities of Faculty Members and TA's

The design studio is the responsibility of the faculty member, who should decide the project type, size, and educational objectives. Students should be divided equally among instructor(s) and teaching assistants, who will be jointly responsible for tutoring the students towards the educational objectives of the studio as defined by the faculty member. Instructor(s) and TAs should document the progress of students and write a profile about each student at the end of the semester. Faculty supervision of TAs and review of their work benefits the professional development of the TAs and ensures consistent instruction for students. The faculty member is responsible for the theoretical part of the studio, time schedule, and evaluation of design studio progress. The teaching assistant should administer the students' submissions and progress. The faculty member should administer the juries and presentations. Grading is the responsibility of the faculty member. Evaluation of students' progress made by teaching assistants is very important in developing the final grade of the student. However, final responsibility towards the University is the faculty member's alone.

### 2.7.4. Documentation and Retention of Projects

Retention of students' work by the faculty is necessary for departmental displays, accreditation purposes, instructor's teaching portfolio, and other needs of the department and university. The department will make an effort to provide access to retained work if required for students' portfolio or job interviews. All projects should be documented using a systematic and reliable method. The documentation of the projects is essential for NAAB accreditation. Hard copies of samples of best, average, and just pass examples should be stored at a safe location as required for NAAB TR. All projects should be stored in a digital format. 3D analog models [or 3D printed] must be exhibited and a selection of them retained. Every semester, all digitally stored files should be copied on the DAUP cloud-shared folders for permanent storage. The department should update its internet site to display the best examples of students' work and update regularly. The digital storage must be made accessible for those interested using proper registration and login procedures. Models are very difficult to keep in good condition for a long time. They require space and storage facilities beyond the capacity of any department. Models should be photographed and a few samples should be displayed in the department.

### 2.7.5. Academic Honesty

Professional conduct and respect for authenticity are expected from the students during the course and in their writings to avoid plagiarism. Plagiarism of texts, drawing, creative work and other related work may be checked using the relevant software. In general, students are expected to reference and attribute authorship of all graphical sources used in studios. Instructors and jurors should provide an adequate learning environment and enhance students' soft skills in academic honesty and ethical attributes in the architectural education and profession.

## 2.8. Studio Protocol and Etiquette

### 2.8.1. Class Attendance

Attendance of design studio is a must, according to university regulations. Students should not receive credit for attending the course. They should also participate in the discussions and present their work progress every time they attend the studio. Students should not be allowed to attend the studio if they arrive 15 minutes later than the beginning time of the studio without prior permission of the instructor. If a student fails to attend three sessions of the design studio, they receive the first warning from the instructor. If the student fails to attend an additional three or more studio sessions, they receive a final warning from the faculty member. If the student fails to attend one more class after that, the student warrants action from the instructor of the course. Students are responsible for any announcements and submission dates during the design

studio that they did not attend. Studio classes usually meet three times a week for three hours each session. Students are expected to be in class on time, present during the entire period, possess the required equipment and supplies, and working on their design projects. Class time will be used for design, drawing, model-building, discussions, lectures, criticisms, reviews, and other related activities. Daily attendance will be taken. Students are required to attend class regularly throughout the semester. Attendance is required throughout the assigned studio time unless there is a serious need for an excused absence. If such a need occurs, the student should inform the instructor(s) before missing class. For medical excuses, the student is responsible for following the University procedures. Students are responsible for obtaining any learning material missed during an unexcused absence.

### 2.8.2. Studio Etiquette

All mobile phones or any other communication device should be turned off during the studio hours. Listening to audio devices during class time is not allowed, simply in consideration of everyone else working in the studio. Outside of class time, it is only allowed with headsets. Smoking is strictly prohibited in the studio and all interior spaces. Design studios offer opportunities to learn professional work habits through the practice of scheduling, time management, and keeping of orderly records and the workspace. Adherence to the ethic that one should leave the environment in better condition than he or she found it is expected. You are passing through these studios for a short time and need to keep them in good shape for those who will follow you. Studios also provide a context for the development of self-critique and interchange of ideas among peers. Students should be reminded by faculty members about this etiquette at the beginning of the semester.

### 2.8.3. Ownership of Work

All design studio work submitted for credit becomes the property of the DAUP. This material is required for accreditation and review procedures. Students may obtain a copy for their portfolio production. Only the Department can decide to release some of this material to students. In case of competition submissions and designs addressing the specific project in a community, credit should be given to the students while clearly mentioning the DAUP, College of Engineering, Qatar University, and the instructor(s). By definition, the intellectual property rights of all student work are owned by Qatar University.

### 2.8.4. Suggested Academic Policies

The following academic policies, beyond the requirements of the University, are suggested as applicable to all students in the DAUP: Students receiving a grade of "D" or below in two consecutive semesters of the Design:

- Studio sequence must not proceed to the following design studio before improving their grade in the latest design course where a grade "D" was obtained. These students should be advised to change their major.
- Any student receiving an "I" in a design studio must complete all work necessary to receive a grade prior to the first day of the next studio in the student's prescribed sequence in order to be eligible to enroll in that studio.