THE HASHEMITE UNIVERSITY
The Presidency

الجامعة الهاشمية
رئاسة الجامعة

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National Architectural Accrediting Board
1735 New York Avenue, NW
Washington, DC 20006
USA

Reference: Program Self-Evaluation Report (PSER) for Visit Two
The Hashemite University,
Faculty of Engineering, Architectural Engineering Department
Bachelor of Architectural Engineering Degree Program

To whom it may concern:

At the January meeting of its Board of Directors, The National Architectural Accreditation Board voted to accept the report from visit one regarding the application for International Certification for the Bachelor of Architecture degree at Hashemite University.

We have attached the required Program Self-Evaluation Report (PSER) for Visit Two as defined in the 2019 Conditions and Procedures for NAAB International Certification for your review and for determination by the NAAB review panel. We understand that the review panel will decide whether to accept the report provisionally or whether request additional information.

We are also furnishing this report materials by e-mail to info@naab.org , including " Program Self-Evaluation Report (PSER) for Visit Two" in the subject line.

Thank you in advance for your consideration of our PSER report. We look forward to hearing from you and the outcome of your initial review and to discussing the next steps in this important process, including Visit Two arrangements, Please advise us if we can be of assistance in providing and clarification of additional materials for your consideration.

Sincerely,

Prof. Fawwaz M. Al-Abed Al-Haq
President,
The Hashemite University,
Jordan

CC: Prof. Ahmad N. A. Bdoor – Dean, Faculty of Engineering
Dr. Ahmad A. Alhusban – Chairman, Department of Architectural Engineering

Program Self-Evaluation Report (PSER)

The Hashemite University
Faculty of Engineering
Department of Architectural Engineering
Zarqa, Jordan

Application for NAAB International Certification
For the degree of:
Bachelor of Architecture (172 Credit Hours)

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Table of Contents

Part One, Section 1. Identity and Self-Assessment

I.1.1 History and Description of the Institution

The Hashemite University (HU) is one of the Jordanian state-run universities. It is named after the Jordanian Royal family -the Hashemites- and was established under Royal Decree dated 19 June 1991. Teaching at the University started on 16 September 1995 with three faculties and 600 students in its first year.

The HU is located in Zarqa's city's vicinity on a site parallel to two international highways. The west gate of the University, which is the main gate, opens to the international highway that links Amman with Mafraq and Irbid and from there to Syria. The south gate opens to the highway that leads to AzZarqa and from there to Iraq and Saudi Arabia. The university's campus's total area is 8519 acres, 15% of which was used for buildings, 25% for planting and agriculture, and 200 Acers have been planted with various vegetation.

The HU is considered among the best universities in Jordan and the region. Over the last 25 years, HU has expanded its academic and research profile to reach nineteenth faculties with more than 230 laboratories in different colleges, all equipped with the latest technological equipment. Each college has its own number of credit hours. Currently, the University consists of 53 departments, 696 faculty members, more than 21000 students, and 30+ master and Ph.D. programs. It also offers an international admission program that allows non-Jordanian students to enroll at the University.

The HU applies the credit hour system. This system provides students with the needed amount of flexibility and freedom to choose the courses that satisfy their preferences and academic, cultural, and social aspirations. It also intensifies students' opportunities from different faculties and institutes to interact and communicate with each other effectively.

The HU adopted a comprehensive environmental management strategy directed towards a green campus and mitigating climate change. The strategy is a multi-faceted spectrum of practices enabled and implemented throughout the campus. This strategy can be summarized as the following spectrum of practices: Renewable energy, energy efficiency, greenery and forestry, water management, pollution mitigation, and capacity building. These practices were realized into the campus's fabric, in all infrastructure projects and real estate expansion, along with all social and academic procedures.

The HU has implemented a 5 MWp photovoltaic (PV) renewable energy project that achieved 100% energy independence for the University. The HU environmental sustainability policy focused on achieving sufficiency and sustainability through energy reduction practices, along with energy-efficient approaches, building techniques, and electromechanical devices. These measures were employed in all of the new building expansion on campus (with more than 70,000m2) of newly added building areas.

A major focus of the university strategy in environmental sustainability was the increase in its green square footage, within the campus ground, between the buildings, and throughout the campus grounds, which expand over more than 8.5 square kilometers. The University, located in a semi-arid region with desert-like conditions, aims to provide its users with green areas planted with shrubs and trees native to the local environment, including pine trees, sumac trees, and date and olive trees.

The university water needs are about 650 m3 daily. The main source of this water is the municipality main. The University has three aquifer wells, as well. These wells have reached a high level of salinity, rendering them useless for the water and irrigation needs due to previous over-pumping and lack of environmental supervisory policies at the time. The University is in the process of constructing a water desalination plant that will cover all the university potable and irrigation water needs, eliminating its dependence on the municipality main (subsequently lessening the demand for water for the Zarqa municipality, a historically drought-prone location).

With its expanded renewable energy projects, producing more than 10 GWh annually, the University decreases CO2 emissions by more than 5,000 tons annually. This is concurrent with a decrease in Jordan's oil requirements by more than 25,000 barrels of oil annually. This is translated to more than US$ 4 million of savings to the annual university budget. The University has started a program to encourage its users to adopt electric and hybrid-electrical cars, with plans to install electricity-charging stations throughout the parking areas. Moreover, HU has moved towards electronic teaching and testing, reducing the amount of paper used for its courses. Paper waste is continuously collected and used at nearby paper recycling plants, and aluminum cans collection bins are distributed throughout the campus. These are sold and used for aluminum recycling plants.

The new Faculty of Pharmaceutical Sciences building is the largest and newest of its kind in the Middle East and has a total area of (21,860) square meters. It is designed according to the world's best architectural specifications. The building consists of four floors that include classrooms in interactive modern multi-use capacity, sophisticated labs, pharmaceutical libraries, interactive theatre, and other educational services.

The HU received the order of Independence of first-class for its achievements in renewable energy and higher education. HU is considered the Sustainability leader in Jordan with its Mega Photovoltaic renewable energy project, green building, and vast green areas on campus. The University believes that the model it has set forth has high replicability due to its economic feasibility and mitigation of environmental effects and effects.

I.1.2 Institution Mission

The institution vision, mission, and values of the Hashemite University are as follows:

I.1.2.1 Vision

HU is oriented toward achieving an academic pioneering position and excellence in university teaching, scientific research at both the national and regional levels, serving society through its educational functions, and participating in the advancement of knowledge.

I.1.2.2. Mission

The Hashemite University as a youthful and prominent higher education institution is committed to actively participate in achieving the goals of the comprehensive national development through preparing loyal men and women who are not only technically competent in their professional fields, but also life-long learners who have a breadth vision, loyalty to their nation, and a sense of civic and moral responsibility and devotion to the fundamental values of human life

I.1.2.3. Values

The values of the Hashemite University guide our internal culture and provide connections to the stakeholders and communities we serve.

We Value:

- Human rights of equity, justice, dignity, diversity, and respect for ourselves, the communities, and the individuals that we serve.
- A culture of appreciation, service, transparency, social responsibility, and integrity, both institutional and individual.
- An environment of professional excellence and quality, innovation, creativity, research, and intellectual curiosity with ethical bounds.

- Institutional and personal roles that simultaneously include leadership, participation, and partnership.
- A sprit of mutual enabling and improvement in all professional activities; and
- An entrepreneurial atmosphere that prizes ethical standards, as well as solution and application.

I.1.2.4 Immediate Priorities

The Hashemite University has also set a series of immediate priorities to shape the institution's near-term future. These include efforts to:

- Enable, prepare and equip all Faculties for quality assessment and academic accreditation;
- Enhance all aspects of students' learning experience with close attention to the use of new technologies, learning resources, and enhancing levels of student/staff contact;
- Sign fruitful agreements with national, regional, and international organizations and universities;
- Fulfill our vision by working to initiate, approve and implement new programs oriented toward economic development and diversification;
- Improve marketing of our assets in service, research, healthcare, and consultation;
- Become more aware of the community and environmental issues and develop joint research programs to seek practical solutions;
- Create and sustain a broad range of continuing professional development programs;
- Enhance the physical environment and facilities of the University, particularly teaching and learning and research facilities in addition to students' services to support our students, faculty, and staff;
- Set up mechanisms to communicate effectively with industrial and business communities, alumni, parents, and other friends to build a base of advocacy for the Hashemite University;
- support research-rich teaching and learning culture and practice and improve research productivity and quality;
- increase and diversify the University's income base, especially from non- Government sources;

and

- Implement best practices in managing people, resources, and systems, ensuring equality of opportunity for all staff.

I.1.2.5 Future Outlooks

- First: Within the area of the national strategy for higher education: To realize the royal vision related to higher education, the University is heading forward in implementing its strategy and plans for the coming five years in order to guarantee the quality of the learning outcomes that ensure its competitive potentials.
- Second: Building on campus a dormitory for girls, Implementing the housing project for the university employees, and Implementing the investment agreement with the Free Zones Corporation on the university land.

I.1.3 Engineering College History

In response to the needs and requirements of the market place in Jordan and the region, the faculty of engineering was established in August 1998, with an enrollment of 300 students and a total teaching staff of 20, and the first batch of engineers was graduated in June 2003. The Faculty of Engineering at the Hashemite University is recognized for its academic excellence at undergraduate programs in its eight academic departments: Civil, Mechanical, Industrial, Electrical, Mechatronics, Biomedical, Computer, and Architectural Engineering. Now, the faculty has 112 faculty members, 20 teaching assistance, 34 staff and technicians, 40 laboratory administrators, and students' enrollment increased to 4800, in addition to the engineering workshop staff composed of 16 engineers and technicians.

Integral to this need is building an infrastructure and facilities that can support professional engineering education and research in important areas of specified applied sciences and technologies in eight different majors to qualify the engineers based on high quality and professional standards. Through teaching, the faculty provides students with an effective and high-quality education at the undergraduate level in eight different departments and encourages an environment that stimulates the learning purposes for a successful career and promotes diversity needed for the local market.

The college research strategy includes encouragement of inter- and multi-disciplinary research addressing the needs of industry, government, and society. Its education strategy includes the continuous improvement of engineering curricula both in content and method and applying the world quality standards ABET in the faculty's seven departments. Faculty of Engineering at the Hashemite University successfully achieved full Board for Engineering and Technology (ABET) accreditation for seventh bachelor engineering programs: Computer Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, and Mechatronics Engineering, Civil Engineering and Bio-Medical Engineering. The Faculty of Engineering at the Hashemite University is working progressively toward obtaining and maintaining the ABET accreditation to continuously improve the faculty in achieving its own vision and mission. This can help satisfy the educational objectives and outcomes, which will improve the quality of the faculty graduates.

The Faculty of Engineering Vision Statement is:

The vision of the College of Engineering at the Hashemite University is to become the leading engineering college in the region for providing high-quality engineering education, applied scientific research, technology transfer, and community services.

The Faculty of Engineering Mission Statement is:

1) To prepare highly qualified graduates for careers in the engineering profession, providing them with a broad stimulating and rigorous engineering education, professional skills, and knowledge will enable them to succeed in their future careers.
2) To prepare graduates to engage in work environments, handling the different local, regional, and global marketplace challenges.
3) To conduct research that leads to recognized scientific contributions in the applied field globally and locally, which supports the comprehensive sustainable national development plans.

I.1.4 Architectural Department History

The Architectural Department was established in 2005. It started with students' reception in the second semester of 2006, with an enrollment of 27 students and a total teaching staff of 3. Currently, the Department has 19 faculty members, 5 Scholarship awardees to get Ph.D., 3 Lab supervisors, 2 Technician, Library supervisor, and students' enrollment increased to 300. The program was revised in 2009 due to the Faculty of Engineering re-organization and local and NAAB International Certification plan. It was also revised in 2009 and 2011 to satisfy the Higher Education Accreditation Commission's requirements at Jordan. In 2011, the program was accredited by the Higher Education Accreditation Commission at Jordan. At the January 2020 meeting of its Board of Directors, The National Architectural Accreditation Board voted to accept the report from visit one regarding the application for International Certification for the Bachelor of Architecture degree at Hashemite University.

The Architectural Department currently offers one full-time study track leading to the degree of Bachelor of Science in Architectural Engineering. Therefore, there are no other options, tracks, or concentrations in the program.

The Architectural Program is delivered through 10 full semesters (5 academic years). The program consists of 172 credit hours and is delivered in class and design studio, during the daytime, and on the Hashemite University (HU), Zarqa, Jordan. The classes and studios are offered 5 days a week (Sunday through Thursday) through traditional face-to-face lectures, design studios, and tutorials. Recently, the University started offering some of the university-requirement courses online.

The academic year consists of two main semesters (14 weeks/semester excluding final exams) in addition to one optional 8-weeks summer semester. Students conduct their practical training (Architectural Engineering Training) for 8 weeks, usually at the end of the 4th academic year, but necessarily, during the summer break. There are currently no dual degrees or international partnerships associated with the architectural program.

The Department aims to provide a specialized program to prepare architects who are familiar with the various schools of architectural design, theories of architecture history, technology applications in design and construction methods, work and how to prepare the engineering plans and project management as the focus is on their definition of the architectural reality in Jordan through the introduction of projects related to the local community and regional as well as hosting local architects to arbitrate their projects in different years of study.

The Architectural Engineering Department established to prepare qualified scientific and professional graduates who would be specialists in the field of architectural engineering and the built environment. This Department, upon its formation, was awarded a Bachelor of Science degree in Architectural Engineering. The program is designed for qualified professionals who are competent in the methods and techniques appropriate for architectural design, restoration, supervision, and project management. Besides taking courses on architectural design, students are trained on applications of the latest scientific approaches in different areas such as architectural rendering and communication, construction techniques, history and theory of architecture, urban design and planning, landscape architecture, physics of architecture, environmental control and cultural heritage protection and restoration. Graduates of this program will be qualified to hold positions in the architectural engineering field as architects, project managers, and supervisors in both the public and private sectors.

The Architectural Engineering Department also grants a postgraduate degree, which is a Master's of Architectural Engineering. The philosophy of education in the architectural engineering department has been based on a number of principles, such as commitment to architectural and design values to create the appropriate environment for creativity and innovation. It has also concentrated on developing students' design skills and the development of communications methods with a special focus on technical sciences and professional training. This is achieved by teaching a range of courses on design, construction, theories of architecture and engineering science, and implementing the curriculum's local environmental, economic, and social characteristics.

The Vision, Mission, Core Values, Program Education Objectives, and Student Outcomes for the architectural program are entirely consistent with the Faculty of Engineering and the Hashemite University's mission statements.

I.1.4.1 Program Vision

At HU, the architectural engineering department seeks to be one of the best architectural departments in the region and gain international recognition as a leader in providing outstanding comprehensive Architectural Engineering Education, Research, and Community Services to enhance life quality by using architectural design. The department encourages creativity, collaboration, collegiality, sustainability, a balance between theory and practice, high ethical standards, and openness in all that we do. The department strives to use design thinking and creative problem solving to address the issues faced by contemporary society.

I.1.4.2 Program Mission

The architectural engineering department at HU aims to educate students for future architectural design practices to meet environmental, social, political, and cultural challenges that face the local, regional, and international contexts for the benefit of society. This student-centered learning program is emphasized through studio-based holistic curricula. It focuses primarily on the knowledge, practices, and technical skills in the fields of architectural design, critical and integrative design thinking, communication and representation skills, construction material and technology, structural systems, computer-aided design, sustainable design, urban design and planning, history and theory, heritage conservation and landscape, and professional practice. The graduates are expected to cope with rapid global changes, react rationally and creatively to contemporary architecture issues, its problems, and challenges.

I.1.4.3 Core Value

In order for the department to be able to pursue the stated vision, it is necessary that the community of staff, students, technician, and administrators that constitute of the architectural engineering department at HU adhere to the following core values:

- Establish an architectural engineering program with clear and measurable objectives that will bring benefits to members, enhance the profession of architecture, and improve the quality of the built environment in Jordan and the region.
- Maintain the highest architectural ethical and professional standards in all our endeavors.
- Work as a team by recognizing the vital role of each member of the academic staff, students, non-academic staff, and those in the university's administrative structure.
- Respect for each other's achievement, including the ideas, views, work, property, and opinions of our peers and students. We recognize that a healthy studio environment is a place that encourages growth and diversity.
- Respect our workspaces and each other's personal property, tools, materials, models, drawings, desk space, personal space, etc.
- Promote respectful, constructive, and productive criticism; while faculty have a responsibility to listen and respond to student's ideas and design processes, students have an equal responsibility to respond to such criticism through the consistent development of their work. We recognize that good design is crafted both physically and intellectually.
- Ensure that an ongoing and pervasive quest for the quality, evolution, and completion of our work. At the same time, faculty should clearly articulate their teaching methods and performance expectations through comprehensive syllabi, and students should be self-driven, committed, and accountable for the work produced. Back up files and print on time!
- Manage our time effectively; while faculty should be mindful of the amount of time required to complete assignments, students should use studio time productively, plan for and anticipate deadlines, and aim to exceed expectations.
- Focus on achieving our educational mission; while faculty should be passionate and dedicated teachers, students should be fully committed to their coursework, recognizing that they bear the responsibility to establish personal goals and work toward achieving them.
- Foster the studio teaching/learning environment as a form of higher education; while faculty should work hard to be the best teachers they can be, students should work hard to be the best learners and doers they can be.
- Help, interact and share information and knowledge by recognizing that HU's architectural department will only grow if we mutually support future generations' intellectual growth. WE are willing to help others through critiques when appropriate and possible.
- Foster, value, and support collaboration by recognizing those novel ideas are often rooted in the complexities of multiple voices, interests, concerns, and abilities.

- Provide a supportive environment for innovation in all aspects of what we do and encourage responsible action; while faculty should be open to new ideas, students should also be willing to venture outside of their comfort zones, think critically, and pursue novelty.
- Maintain a strong culture supportive of inter/multi/trans/disciplinarily.
- Support an environment that is welcoming and encouraging to students, faculty, and staff of all backgrounds and perspectives.
- Foster engagement in the multiple communities that intersect us (local, national, international, and professional).

I.1.4.4 Program Educational Objectives

The Architecture Department at HU is deeply committed to ensuring that every graduate of the program meets the goals and learning objectives that necessary to achieve the highest level of excellence in all of their future endeavors. Graduates of the program should solve architecture-related problems within a greater societal context by doing the following:

1) Practice Architecture profession with confidence, global competitiveness, and superior work ethics and character.
2) Apply professional knowledge, expertise, and technical skills to identify, examine, present, communicate, perform, and produce efficient, creative, and sustainable architectural design concepts and realistic solutions.
3) Demonstrate high proficiency in critical thinking, communication, and solving complex design problems.
4) Pursue life-long learning skills to meet evolving built environment and architectural challenges facing the society.
5) Work effectively in multi-disciplinary teams within the building industry by providing knowledge in built environment-related disciplines relevant to ethical responsibilities and professional obligations in architecture.
6) Be able to pursue advanced study and research at the graduate level.

The HU's architectural engineering program reflects the view that architecture is an intellectual and interdisciplinary discipline, both an art and a profession science. The detailed objectives of the architectural engineering program at HU are to:

1) Develop and foster students' abilities in analytical, critical, creative, and interpretative thinking skills. Our design teaching method focuses on how the students acquire, organize, and apply design knowledge base on the instructor's knowledge, teaching style, personal experience, and ability to build a conceptual understanding of the design knowledge domain. Therefore, our architectural design program has three objectives: to teach new skills, to teach new languages, and to teach students how to think in architectural terms.
2) Develop and foster the students' ability to communicate effectively by using oral, written, and graphical forms and their abilities to analyze and interpret data and provide the necessary results to design buildings.
3) Provide students with knowledge, skills, and proficiency to meet the future profession's growing demands in dealing with the dynamic, fluid, and progressive architecture trend. The curriculum is crafted to enhance and foster students' and instructors' abilities to face global competition and work in different environments.
4) Provide students with adequate knowledge of design principles, communication and representation systems, architectural design, ecological, environmental, and sustainable design, construction material and technology, computer-aided design, urban design, structural systems and behaviors, conservation and rehabilitation, history and theory, landscape architecture, housing and city planning.
5) Draw knowledge from humanities, social and physical science, technology, environmental science, the creative arts, and the liberal arts.

6) Train students and teachers in research techniques as an inherent part of architectural learning.
7) Develop the students' ability to effectively lead the communications with colleagues, clients, and the local community.
8) Prepare students to acquire and develop creative problem solving and lifelong learning skills, including critical thinking and assessment of existing environments and active and experiential learning to develop design concepts and solutions.
9) Prepare students to work effectively in multi-disciplinary teams within the building industry by providing knowledge in built environment-related disciplines relevant to ethical responsibilities and professional obligations in architecture.
10) Prepare students for future architects' professional and technical roles wherein they need to solve architectural design problems in creative ways.
11) Prepare students to apply architectural engineering design' knowledge of the science of contemporary issues, which allows them to appreciate the impact of architectural solutions on humankind in the general and local communities in particular.
12) Develop the program continuously to meet the recent advancement and the diverse market needs of the local, national, and international.

I.1.4.5 Occupations and the Potential Fields/Sectors for the Employment of Graduates

Students who have earned a bachelor degree in architectural engineering from HU may pursue these career options:

1) Architecture designer (Architect)
2) Architectural visualization
3) Architectural drafter/technician
4) Model maker
5) Architectural technologists are specialists in the science of architecture, building design, and construction.
6) Interior designer architect
7) landscape architect
8) Independent practice in architecture and urban development
9) In Construction Field: Site engineer, construction manager, consultant, quantity surveyor
10) University lab supervisor/academic (teaching and research assistant)
11) Surveyor
12) Working for a public authority
13) Architectural journalism

I.1.5 Architecture Program Benefits to the Institution (Activities and Initiatives)

The student-centered pedagogy and the culture of "making" inherent in the Architectural Department provide the HU with a unique and successful example of teaching and student learning through discovery, a process whereby students integrate their internalized experiences with the disciplined study of the subject matter. As a rich example of this pedagogical approach, the program offers the University a hands-on learning model that has contributed to our students' education and has drawn positive attention to the University.

The Architecture Program is fully committed to implementing the HU and Engineering Faculty missions. The program plays a major contributor role to local, national, regional, and even international communities through partnership with other architecture programs in Europe, Middle East, and North Africa (T-MEDA) by developing reference points and redesigned Architectural Engineering Degree Program in consultation with different stakeholders (academics, employers, students, and graduates). Additionally, the program tries to play a role in world affairs and public service function through expanded engagement with local, national, and international communities. This has been achieved through studio-based projects as well as collaboration with community groups and organizations.

The department offers the following services to the HU and Engineering Collage includes: participating in university governance as a representative for the program; helping and supporting all collage departments during the ABET visits; preparing and designing posters for different events at HU; arranging, preparing, and managing all the collage scientific days; organizing annual architectural exhibitions; arranging annual lecture series to educate the public at large; providing outreach and service-learning opportunities for the University community, and building a network of exchanges with other institutions.

The faculty and students in the department regularly participate in design competitions. The program has traditionally entered the student design competition sponsored by the Jordanian Engineering Association (JEA). In spring 2016, under the direction of Dr. Ahmad Alhusban, Nida Albtoon competed in the urban design projects (ARCH 422) designed by students from all Jordanian universities and was advanced to the semifinal stage. Additionally, in the academic 2015/2016 and under the direction of department faculty, our student Ra Ra'fat Al Jada' was the winner of the competition for designing a royal monument (Al Rayah Monument) at the Hashemite Royal Palace Campus. The competition was a part of celebrating the 100-year memorial of the Arab Revolution lead by the Kingdome founders. The student and faculty members participated and prepared construction drawings and supervised the construction work.

In the academic year 2015/2016, under the direction of Dr. Siba Awawdeh, Dima Othman competed in the Queen Alia Competition for Social Responsibility in cooperation with the Jordanian Engineering Association to create greenest ideas for an Environmental Community Center., and she took second place. The competition challenged the undergraduate students to find innovative solutions for Jordan's challenges in energy, water, environment, economics, and climate changes by integrating the building with nature and making predominant connections between the indoor and outdoor environment.

Additionally, during the academic year of 2015/2016, under the direction of Dr. Ahmad Alhusban, Luay Al Hadid competed in the Autodesk University Competition, and he got third place. The completion was a part of the Autodesk University (AU) Conference 2016 held in Dubai, UAE. The conference is held once every two years, sponsored by Autodesk Company. It is oriented towards university students in the Middle East, Turkey, and North Africa regions and aims to promote students' digital architectural drawing skills mainly using Autodesk products as a tool of architectural design and presentation. Loay's project was selected among the best five projects to be displayed and celebrated in one conference session. It was selected because it showed powerful rendering and highly realistic shots, and precise 3d extraction.

Recently, our graduate student Motasem Abu Zer entered the 2017 Fentress Global Challenge (FGC), based in Denver, Colorado. An annual international student design competition generated worldwide interest. The design brief challenged students to envision the "Airport of the Future" by designing speculative projects for a time in which airports will have even more significance as public architecture that must meet a myriad of demands from its customers and its stakeholders by taking into consideration local context, technological trends, and project feasibility and passenger experience. With over 500 students participated from more than 50 countries representing universities on six continents, Mostaem got sixth place in the competition. The competition's jury included Aileen Cho, Senior Editor at Engineering News-Record (ENR); Chester Chipperfield, freelance Creative Director at Boom Supersonic and former Creative Director of Tesla; Curt Fentress, Fentress Architects; David Brody, Founder and Chairman of XTI Aircraft Company; Khalid Naja, Executive Vice President for the Infrastructure & Development Division of Dallas Fort Worth International Airport; Kim Day, CEO of Denver International Airport; Michael McCoy, the first recipient of the Smithsonian's Design Minds National Design Award; and Tom Allett, Editor of Airports International Magazine.

Many students participated in Tomorrow's Leaders Awards. Building the Future. Tomorrow's Leaders highlights the potential of architectural students currently studying in the region. The awards provide an opportunity for students to display and present their projects to the visitors of Cityscape Global, which takes place from 25–27 September 2019 at the Dubai World Centre. This prize seeks to promote excellence in architectural design education by awarding the best graduating university projects in

architecture and urban design. Two projects had been shortlisted: Al Hidan Gate Project designed by our student Ammar Swwan under the supervision of Arch Ebtisam Khasawneh and Badia Gate Project designed by Nariman Sami under the supervision of Dr. Omaimah Alaqtash. Moreover, our students entered a competition between themselves to design a creative Water, Sanitation, and Hygiene (WASH) Innovation UNICEF Hub at HU.

Recently, the international jury for UIA 2019 World Architecture Day Poster Competition selected the design of our alumni architects Huda Gharandouqa from over 100 submissions from around the world for its "striking design" and flowing moiré: imagery that "grabs one's attention from afar." On World Architecture Day, 7 October 2019, people worldwide will spotlight architecture through events, exhibits, and lectures. The UIA has chosen the theme "Architecture…. housing for all". It will focus on how architects can contribute to the realization of affordable housing for all, the implementation of the New Urban Agenda, and the Sustainable Development Goals (SDGs), specifically Goal 11, "to make cities and human settlements safe, inclusive, resilient, and sustainable."

More recently, Dr. Shatha Abo Khafajeh wins of the Council for British Research in the Levant (CBRL's) 2019 prize for the Best Article submitted to *Contemporary Levant* for her paper entitled: *Prejudice, military intelligence, and neoliberalism: Examining the local within archaeology and heritage practices in Jordan.* This article will be available open access once published later this year (https://cbrl.ac.uk/news/item/name/winner-announced-for-contemporary-levant-s-best-paper-award-for-2019).

The range of our faculty research endeavors is highlighted by the Department's involvement with the community. Faculty research is disseminated through paper presentations at professional conferences and journal articles and has been recognized by regional, national, and international scholars.

Through these activities, the faculty, students, and alumni extend the design inquiry and design thinking process that the students participate in through studio and lecture courses, contribute significantly to the quality of life and the HU's stated educational mission. Additionally, and contribute to the governance of the University through service on committees.

For more information, see https://hu.edu.jo/fac/dept/index.aspx?typ=19&deptid=55090000

I.1.6 Institutional Benefits to the Architecture Program

The HU benefits the Architectural program by providing academic leadership, institutional resources, and faculty development opportunities. We exchange intellectual and social benefits by sharing resources, collaborative research, teaching and service, and HU governance participation. The HU offers an essential array of learning resources, including our Branch Architecture Library, located in the architecture building (3rd floor), the University General Library; Information, communication, and e-learning center, which sponsors advanced computing equipment, servers, software, and the wireless network; Language Center; Health Center; Student Affairs, Office the Foreign Student Affairs; Center for Women's Studies in the Community; Counseling and Community Service Center.

Among the benefits provided to the program by the University are reflected visibility, an academic culture hospitable to and experienced with professional degree programs, experience with studio-based instruction, existing exhibit new spaces, classroom spaces, administrative and faculty offices, and excellent facilities in all new department building. HU's experience in cooperative education is a substantial advantage to architecture students as they seek coop placement. HU's familiarity with accreditation, job placement, and capstone projects is directly helpful to administrators of the architecture program. HU is extremely familiar with studio-based programs' space, personnel, and equipment requirements, and this experience has served us well.

Besides, the Deanship of Scientific Research is another university unit that organizes seminars related to research. Such activities are intended to enhance the teaching and research skills of faculty members. The Deanship encourages faculty members to participate in funded research through regular training sessions and workshops, provide staff for individual consultation and review of proposals, and maintain a general open-door policy to discuss and refine initiatives. It also facilitates access to funding sources at local, regional, and national levels and helps faculty identify grants appropriate to their research interests.

The University encourages and supports professional development through the Center for Academic Development and International Outreach (CADIO), the university unit responsible for organizing, on a regular basis throughout the academic year, various seminars and workshops related to all aspects of interest faculty members. Examples of CADIO workshops and training:

- Scientific workshops for faculty members to develop and improve the educational process in different positions and course/curriculum redesign.
- Training workshops for faculty members with respect to writing proposals for university projects with international bodies to seek support through international communication.

In summary, HU is a rich intellectual and academic environment that provides a vibrant culture for the study of Architecture. In return, the Architectural Department provides one of the most dynamic portals into the University.

I.2.2 Physical Resources

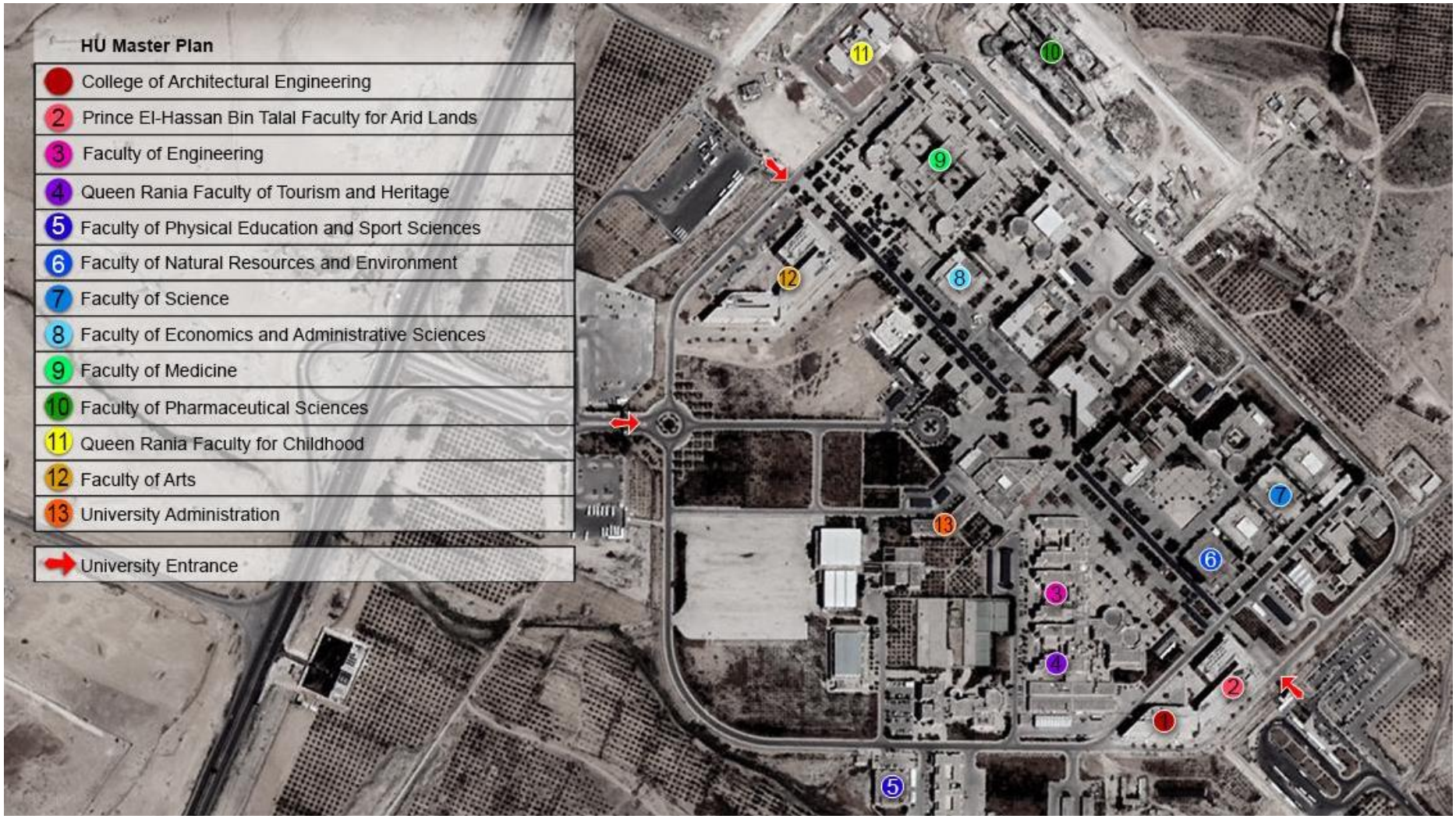
Description of Facilities:

The new building of the Architectural Department is located in front of the main Faculty of Engineering Building as part of the Southern Classrooms Complex (Al Hussein Al Albani Building). The total building project was cost 13,000,000JD/18,600,000$ (thirteen million Jordanian Dinars/eighteen million and six hundred thousand US dollars), and the furniture has cost 1,500,000JD/2,143,000$ (one and half million Jordanian Dinars/two million, one hundred forty-three thousand US Dollar).

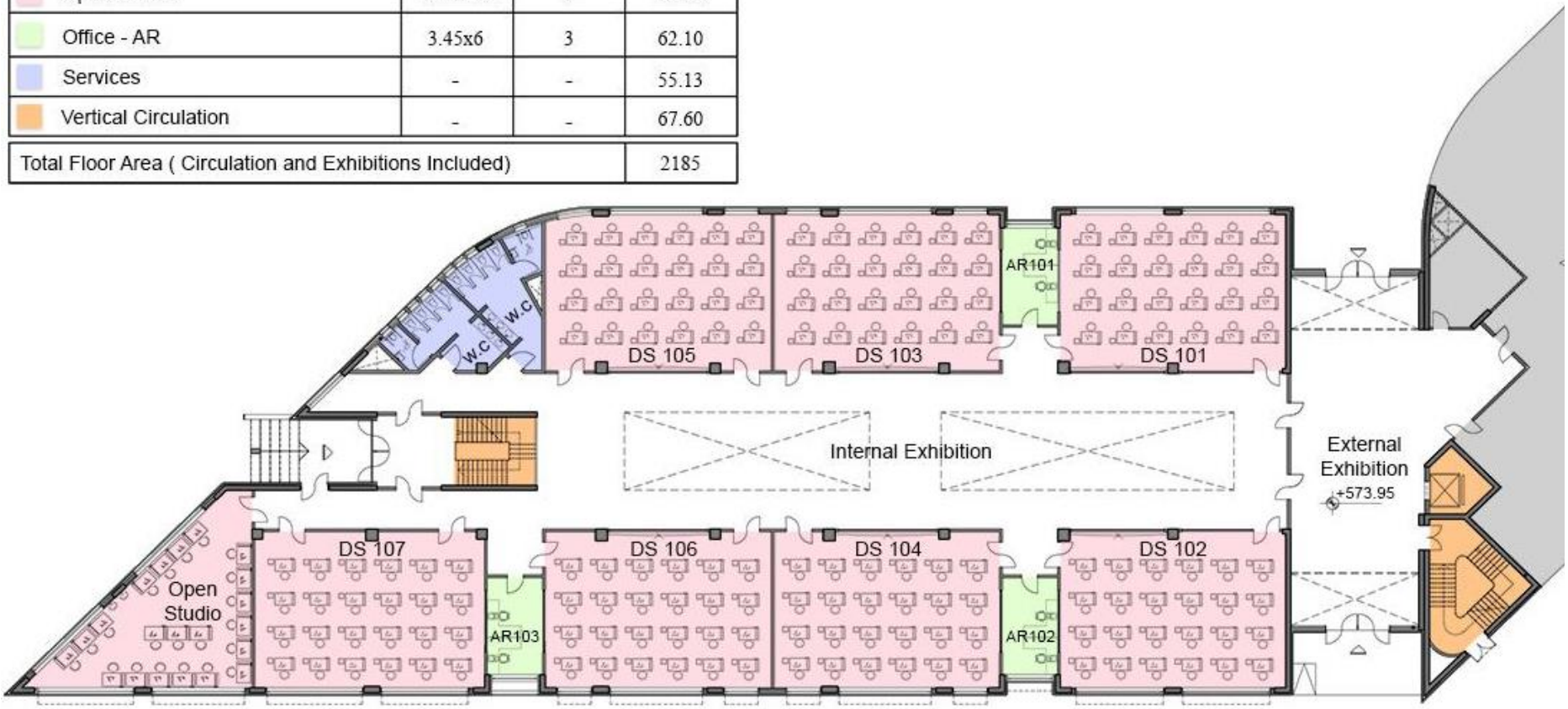
It was constructed during 2016-2018 and was occupied in May 2018. The four-story building houses the Architectural Engineering Department: External and internal exhibitions, design studios, open studio, labs, offices, library, meeting rooms, NAAB display room, Seminar rooms, and various support spaces, as shown in the following master plan and plans.

To see more pictures about NAAB Visit One, Please open the following Link:

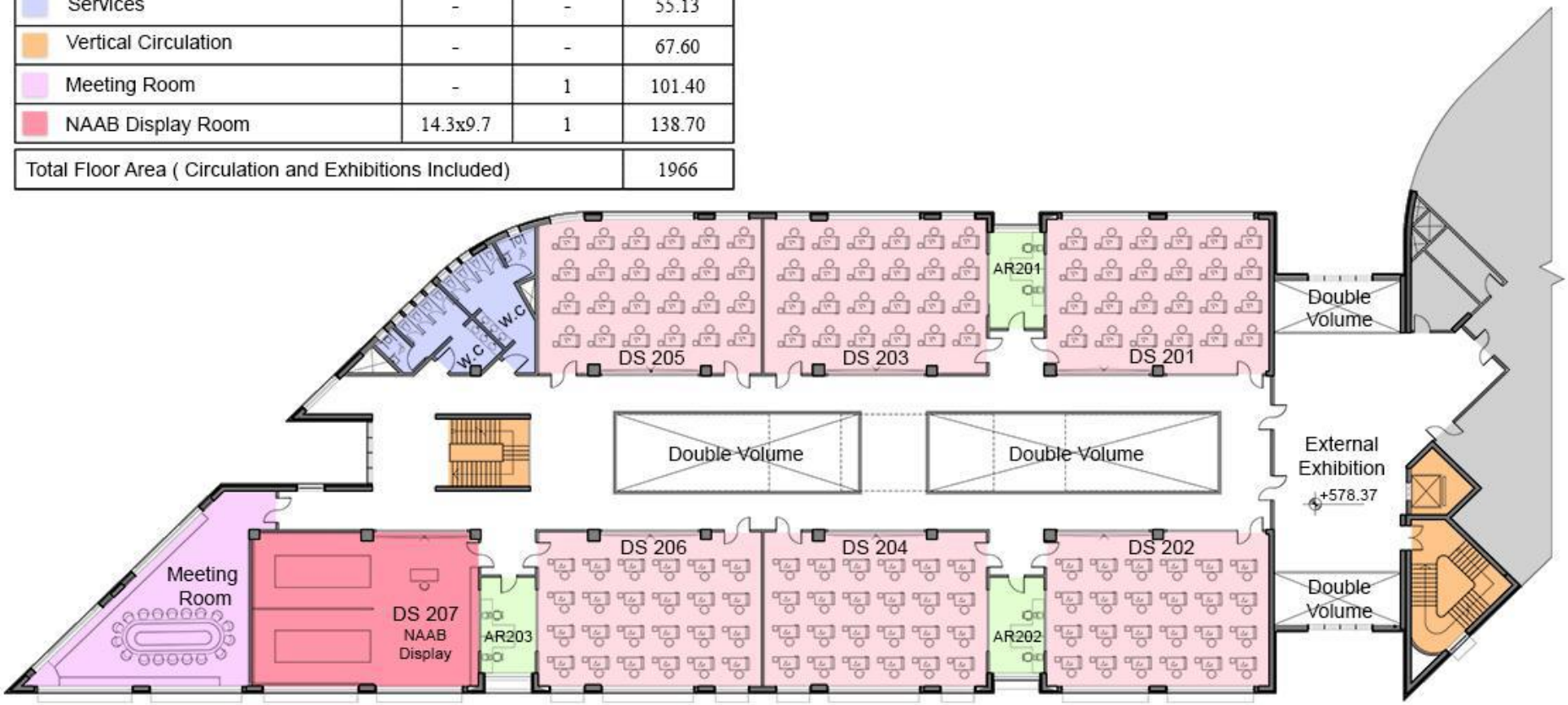
https://hu.edu.jo/gallery_f/Gallery.aspx?id=7
https://hu.edu.jo/gallery_f/Gallery.aspx?id=8
https://hu.edu.jo/gallery_f/Gallery.aspx?id=9
https://hu.edu.jo/gallery_f/Gallery.aspx?id=10


HU Master Plan
College of Architectural Engineering
2 Prince El-Hassan Bin Talal Faculty for Arid Lands
3 Faculty of Engineering
4 Queen Rania Faculty of Tourism and Heritage
5 Faculty of Physical Education and Sport Sciences
6 Faculty of Natural Resources and Environment
7 Faculty of Science
8 Faculty of Economics and Administrative Sciences
9 Faculty of Medicine
10 Faculty of Pharmaceutical Sciences
11 Queen Rania Faculty for Childhood
12 Faculty of Arts
13 University Administration
University Entrance

Ground Floor Plan Spaces	Dim. m	Num.	T.Area m²
Design Studio - DS	14x9.7	7	950.60
Open Studio	≈14x14/2	1	97.20
Office - AR	3.45x6	3	62.10
Services	-	-	55.13
Vertical Circulation	-	-	67.60
Total Floor Area (Circulation and Exhibitions Included)			2185



First Floor Plan Spaces	Dim. m	Num.	T.Area m²
Design Studio - DS	14x9.7	6	814.8
Office - AR	3.45x6	3	62.10
Services	-	-	55.13
Vertical Circulation	-	-	67.60
Meeting Room	-	1	101.40
NAAB Display Room	14.3x9.7	1	138.70
Total Floor Area (Circulation and Exhibitions Included)			1966



Second Floor Plan Spaces	Dim. m	Num.	T.Area m^2
College of Architectural Design	-	-	1989
Theater	11.4x25.9	1	295.26
Architectural Class Rooms	10.3x10.5	3	324.45
Vertical Circulation	-	-	-

Second Floor Plan Spaces	Dim. m	Num.	T.Area m²
Design Studio - DS	14x9.7	3	407.4
Office - AR	3.45x6	3	62.10
Services	-	-	55.13
Vertical Circulation	-	-	67.60
Labs	-	3	318.40
Computer Lab - CAD	9.7x6.95	5	337.00
Total Floor Area (Circulation and Exhibitions Included)			1989

Third Floor Plan Spaces	Dim. m	Num.	T.Area m^2
Library	1	1	256.65
Office - AR	-	41	≈ 720
Services	-	-	68.43
Vertical Circulation	-	-	67.60
Meeting Room	-	2	66.35
Total Floor Area (Circulation and Exhibitions Included)			1966

1) Digital Technology, Audio-Visual Resources, and Laboratories

The new building of Architectural Engineering is provided with fully digital technology and Audio-visual recourses, with wireless access throughout and wide distribution of power and data connections. This includes a grid of connections in floor boxes in computer labs. The classrooms and studio spaces provided with:

- SmartBoard
- Projector
- PC

2) Computer Resources:

The department has **SIX computer LABS**, three Graphic computer labs, a GIS lab, Interactive Pen Displays Lab, and a students' open lab. These labs are equipped with a CAT 6 network throughout the building tied to campus via fiber optic cables.

Each Lab is equipped with the following items:

Hardware	Software
• Smartboard • Projector • 20 PCs (HP EliteDesk, 800 G2, HP 23 LED Monitor)	• Autodesk AutoCAD • Autodesk Revit • 3D MAX • Autodesk Fusion360 • Lumion 8 • Vray 2.032&64 bit (plugin) • Adobe Photoshop &extended adobe illustrator • Design-Builder (for Architects) • GIS software • Microsoft office • Microsoft Word • Microsoft Access • Microsoft Publisher • Microsoft PowerPoint • Microsoft Excel

3) Interactive Pen Displays Lab:

In addition to the above hardware and software, this lab is equipped with (30 PCs) each supported with a Wacom creative display, which is a drawing interactive screen with a pressure-sensitive pen. (Model: Wacom Cintiq 27 QHD) andHP Z 240 Tower workstation.

4) Printing Room:

The printer shop serves the department, faculty, and the university. It contains the following resources:

- HP DESIGN JET T 1100ps Plotter.
- HP DESIGN JET Z6100-60 Inch Plotter.
- LEXMARK C530 DN.
- Laser JET HP 5200.
- HP Printer 2015 N LASER.
- Scanner HP N 9120 as per catalogue.
- Scanner Epson GT 20000.
- Scanner wide teck 48C.

- Copy machine -Toshiba e-studio 352.
- Laptop- Fujitsu Lifebook AH 531.
- Laptop- HP ProBook 450 SI 7.
- Laptop- HP 250 G6 Notebook.
- Brochure Printer, Copier, and Scanner: Maximum Printing Resolution.
- A3 Color Printer

5) 40 Digital Drawing and Graphics Tablets (including drawing pen):

- Active Area: 152 x 95 mm (6.0 x 3.7 in)
- 4 Express Keys.
- Pressure Levels: 2048.
- Wireless Support.
- Resolution: 2540 LPI.
- Reading Speed (pen): 133pps.
- Technology: Patented electromagnetic resonance method.

6) Archiving Room:

Desktop Computer for archiving:

- CPU I7 6800K
- RAM 64 GB DDR5
- Display 24'' (3840*2160) 4K
- GPU NVIDIA GeForce – GTX 1080 TI, 512 GB SSD, 2 TB HDD.
- External drives: My book drives with external power supply 6TB.

7) Fabrication Lab:

This lab's main goal is to enhance students' ability to produce a professional, accurate architectural model. This lab contains:

- Two Laser Cutter machine with the following specifications: laser-cutting machine RJ 1280P model, 130w, tube CW 3000, water chiller with air fan, and air compressor.
- Best Dual Extruder 3D Printer (In Progress)
- CNS Machine (In Progress)
- Saw Cutting Machine Table (In Progress)
- 24-Sheet Cross-Cut Paper (In Progress)
- Hot Wire Foam Cutter Table (In Progress)
- The department will supply the lab with:
- 30 Cutting Mat.
- Cutters, Rotary cutters, Art Knife, Triangular Architect Scales, Stainless Steel Rulers.
- 40-color Alcohol Marker, Artist Round Watercolor paint Brusher Set-12 Pcs, Oil Pastels Set of 48 Assorted Colors, Professional Watercolor Paper Block,

8) Acoustical Lab:

This lab will be supplied with the following:

- Analysis software:
- Acquisition software.
- Signal Analysis.
- Acoustic software.
- Vibration software.

- Another Devices:

9) Lighting Lab:

This lab will be supplied with the following:

- Software Codyrun:
- Calculation and positioning of luminaires.
- Calculation of quantity of light/activity Can be plugged into Autodesk products (Such as Revit and AutoCAD)
- Another Devices:

10) Energy Laboratory

The following machines are available in the energy lab:

- Subsonic Wind Tunnel:
- Thermal Conductivity Apparatus:
- Temperature control demonstration unit:
- TXC/FF. Free and Forced Convection Heat Transfer Module:
- Electronic console

11) Surveying Laboratory:

The following tools are available in the surveying lab:

- Laser Measure
- Range Poles
- Level staff
- Tripod
- Theodolite
- Total station
- Diameter
- GPS

12) Building Materials Laboratory:

The following devices are available in the building materials lab:

- Manual Vicat Apparatus
- Gilmore Apparatus
- Vibrator
- Flow Table

13) Engineering Workshops

The Faculty of Engineering is responsible for running engineering workshops, which include:

- Carpentry Workshop
- Electrical Wiring & Installation Workshop
- Heating & Pipe Fitting workshop
- Metal Cutting Workshop
- Sheet Metal Workshop
- Sand Casting Workshop (foundry)

- Welding Workshop

I.2.2 Financial Resources

The Department of Architecture Engineering is funded through annual budget allocations from the University Financial Affairs Unit. These allocations are determined in response to budget requests made by the Faculty of engineering. The Department of Architecture Engineering budget lines is divided between operations expenses, capital expenses, and scientific research. The tables below represent the budget for the Hashemite University, Engineering College, and the architectural Engineering Department.

The Hashemite University Budgets

Revenue/Expense Category	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**
Revenue (Jordanian Dinar JD)						
Self - Revenue	54,051,000	55,558,000	62,326,000	65,105,000	66,,248,000	51,647,000
Government Support	4,444,000	4,444,000	1,000,000	500,000	1,000,000	0.0
Donations and Grants.	15,000	15,000	15,000	15,000	15,000	10,000
Provisions for Retained Liabilities	4,200,000	0.0	0.0	0.0	0.0	0.0
Previous Budget Ddeficit	0.0	0.0	0.0	0.0	0.0	0.0
Grants, Aid and Loans to Finance Buildings and Constructions	11,100,000	6,491,000	6,972,000	1,970,000	0.0	0.0
Revenue Total (JD)	**73,810,000**	**66,508,000**	**70,313,000**	**67,590,000**	**67,263,000**	**51,657,00**
Revenue Total ($)	**105,442,857**	**95,011,429**	**100,447,143**	**96,557,143**	**96,090,000**	**73,795,714**
Expenditures (Jordanian Dinar JD)						
Recurrent Expenditures	47,396,000	47,302,000	47,467,000	48,395,000	48,589,000	39,788,00
Capital Expenditures	6,836,000	5,133,00	8,225,000	7,544,000	11,550,000	6,212,000
Scientific Research and Scholarships	3,878,000	3,582,000	3,949,000	5,961,000	5,274,000	5,657,000
Credit Expenses	4,600,000	4,000,000	3,700,000	3,720,000	1,850,000	0.0
Buildings and Constructions Conditional on Financing	11,100,000	6,491,000	6,972,00	1,970,000	0.0	0.0
Total Expenditures (JD)	**73,810,000**	**66,508,000**	**70,313,000**	**67,590,000**	**67,263,000**	**51,657,000**
Total Expenditures ($)	**105,442,857**	**95,011,429**	**100,477,143**	**96,557,143**	**96,090,000**	**73,795,714**

Engineering College Budgets

Revenue/Expense Category	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**

Revenue (Jordanian Dinar JD)					
Undergraduate Students Tuition / Regular Program	6,999,142	5,500,470	4,878,936	4,682,970	1,064,403
Undergraduate Students Tuition / Parallel Program	1,847,221	2,644,204	273,975	2,703,370	468,423
Undergraduate Students Tuition / International Program	3,963,297	3,265,590	1,724,728	683,619	12,238
Graduate Students Tuition	24,808	17,499	23,825	63,346	18,549
Grants and other Revenues	0.0	0.0	0.0	0.0	0.0
Revenue Total (JD)	**12,884,450**	**11,427,733**	**6,901,464**	**8,133,305**	**1,563,613**
Revenue Total ($)	**18,406,357**	**16,325,332**	**11,502,440**	**11,619,007**	**2,233733**
Expenditures (Jordanian Dinar JD)					
Faculty Salaries	1,817,153	1,653,190	1,735,982	1,737,703	191,602
Administrative Salaries	581,797	554,784	591,100	590,796	387,137
scholarships cost	1,376,344	1,236,173	3,082,373	2,862,986	1,932,274
lab supplies	735,845	830,000	686,390	219,853	65,221
Others	656	477	1941	1961	0.0
Total Expenditures (JD)	**4,541,795**	**4,274,624**	**6,097,786**	**5,423,299**	**2,576,234**
Total Expenditures ($)	**6,488,279**	**6,106606**	**8,711,123**	**7,747,570**	**3,680,334**

Architectural Department Budgets

Revenue/Expense Category	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Revenue (Jordanian Dinar JD)					
Undergraduate Students Tuition / Regular Program	500,311	469,702	458,464	470,978	97,246
Undergraduate Students Tuition / Parallel Program	162,448	179,911	202,930	182,889	23,469
Undergraduate Students Tuition / International Program	327,577	191,935	97,026	44,117	1,474
Graduate Students Tuition	0.0	0.0	27,003	37,781	18,401
Grants and other Revenues	0.0	0.0	0.0	0.0	0.0
Revenue Total (JD)	**540,336**	**841,548**	**785,423**	**735,765**	**140,590**
Revenue Total ($)	**771,909**	**1,202,211**	**1,122,033**	**1,051,093**	**200,843**
Expenditures (Jordanian Dinar JD)					
Faculty Salaries	220,998	272,826	279,083	263,815	188,880
Administrative Salaries	52,704	39,612	55,652	55,498	31,464
scholarships cost	0.0	2,976	48,930	94,096	35,096
lab and other supplies	17,500	18,900	16,750	12,450	8,364
Others	150	75	230	190	0.0
Total Expenditures (JD)	**291,352**	**334,389**	**400,645**	**406,046**	**263,804**

Total Expenditures ($)	**416,217**	**477,699**	**572,350**	**580,070**	**376,862**

Tuition fees in JDs for the Bachelor's degree in Architecture

The additional fees required for the Bachelor's degree are as follows:

Item	Regular Program (JDs)	Parallel Program (JDs)	International Program (JDs)
Admission fees (one time upon acceptance)	80.0	80.0	80.0
Non-refundable insurances (one time upon acceptance)	10.0	55.0	55.0
Placement test fees (one time upon acceptance)	15.0	15.0	15.0
Semester registration fees	30.0	135.0	135.0
Computer usage fee for each semester	10.0	35.0	35.0
Total	80.0 (upon registration) 40.0 (each semester)	320.0 (upon registration) 170.0 (each semester)	320.0 (upon registration) 170.0 (each semester)
Graduation fees	35.0	35.0	35.0

Credit hours fees for the Bachelor's degree in Architecture are as follows:

Minimum Admission Rate (High school average)	Regular Program (JDs)	Parallel Program (JDs)		International Program (JDs)
	Jordanian students with Jordanian high school certificate	Jordanian students with Jordanian high school certificate	Jordanian students who with Non-Jordanian high school certificate	Non-Jordanian students
80%	50.0	90.0	100.0	120.0

Financial aid and Scholarships: There are a variety of financial aids and scholarships provided by both university and external sources. Most scholarships are awarded based on academic merit, and some are also based on financial need. The university works on the principle of equal opportunities and provides fair mechanisms for financial support to students. Applying for the grants and funding opportunities is done according to the donors' specific procedures, which ensure that the grants are given to the students who are most in need and who meet the terms of the grant.

Additionally, the university and the Ministry of Higher Education offer student support loans for those in need and cannot afford to cover the tuition fees at the beginning of the semesters. Loans are typically offered at the beginning of the academic year or the beginning of the semesters, targeting a broad spectrum of students from all faculties and specialties.

Following is a list of donors and financial aid opportunities available for The Hashemite University students:

Fund / Scholarship	Number of university students benefiting from the scholarship	Donor
Royal fund scholarship	2807	External
Special Needs	44	The Hashemite University
University Employees	281	The Hashemite University
Arab Bank	3	External
Ministry of Higher Education / Non-Jordanians	68	Ministry of Higher Education
Arab Cultural Association	2	External
Promising Hands Association	8	External
Military Training Directorate	1	External
Royal Court Grants	140	The Hashemite University
The Jordanian Hashemite Fund for Development	18	Ministry of Higher Education
Student Support Grants (45 credit hours fees)	848	Ministry of Higher Education
Student Support Loans (45 credit hours fees)	2211	Ministry of Higher Education
Princess Mona Fund (Credit hours fees)	16	Ministry of Higher Education
First Ranked Students on the Governorate Levels	74	Ministry of Higher Education
Jordan Phosphate Mines Company	5	External
University Employees (other universities)	9	The Hashemite University
Queen Rania Award Scholarship	7	The Hashemite University
Al-Aman Fund for the Future of Orphans	50	External
Martyrs and Wounded in the Armed Forces	670	The Hashemite University
Royal Air Force Command - Training Directorate	5	External
Elia Nuqul Foundation Association	9	External
Employees of the Ministry of Education	1376	External
Saudi Arabia Consulate	3	External
Poverty Pockets Schools	68	Ministry of Higher Education
Petra Development and Tourism Region Authority	4	External

Embassy of Kuwait	102	External
Royal Medical Services	4	External
Top Ranked Students in the Jordanian High School Certificate	7	Ministry of Higher Education
Prince Hassan Award	1	Ministry of Higher Education
Noor Al Hussein Foundation	7	External
Central Bank of Jordan	1	External
Kuwaiti Scholarship	Number not available	The Hashemite University
Student Employment	Number not available	The Hashemite University
Student Support Fund	Number not available	The Hashemite University

Hashemite University
Financial Affairs Unit

List of donors and financial aid opportunities available for Architecture students at The Hashemite University

Semester: Fall 2020 /2021

Date: 16/1/2020

Fund / Scholarship	Amount JD	Number of University students benefiting from the scholarship	**Number of Architecture students benefiting from the scholarship**	Doner
Royal fund scholarship	1402080	2807	**11**	External
Ministry of Higher Education / Non-Jordanians	39517,50	68	**1**	Ministry of Higher Education
Fund / Scholarship-Student Support Grants (45 credit hours fees)	411195,50	848	**11**	Ministry of Higher Education
Student Support Loans (45 (credit hours fees	933869,00	2211	**22**	Ministry of Higher Education
Employees of the Ministry of Education	865158,00	1376	**54**	Ministry of Education
Sum	3651820,00	7310	**99**	

Instructions for loans provided at the Hashemite University

Loans granted to the students aim to encourage them to continue their studies at the university.

- Quarterly or annual loans are paid for students registered at the Hashemite University to obtain a university degree, as the committee deems appropriate according to the following conditions:

1. The student provides proof of his need for the fund in the match with the criteria set by the committee.
2. The student applicant should not be sponsored by an official entity.
3. The student does not benefit from other scholarships or funds.
4. The student is not an employee or receives a salary from any official entity.
5. The student has enrolled in the university for at least one academic semester.
6. The student has not been issued any disciplinary penalties.

- The applicant student provides a financial guarantor to sign the bills of exchange for the amount borrowed based on the guarantee and the value of the amount borrowed and determined by the committee.

- Repayment of the loan begins six months after graduation, subject to the capability of the graduate. The committee may postpone repayment for a period upon a request from the beneficiary if it is satisfied with the reasons for that.

- The borrowed amount is to be paid in monthly installments, the value of which is determined by the committee.

The following are details about a group of grants and funding opportunities offered by the university.

Student employment: The university offers students working opportunities while enrolled in their study programs as part of its policy to support students to help them cover their study expenses, provided that it does not conflict with the times of lectures. Students who are subject to the conditions are distributed among the various departments in the university according to their needs and in line with students' preferences and interests. Students are employed during the first and second semesters of each academic year and within the following conditions:

1. The student studies at his own expense.
2. The student has enrolled in the university for at least one academic semester.
3. The student has not been issued any disciplinary penalties.
4. The student's cumulative average is not less than 2.00 points.

Student Support Fund: The Fund receives, studies, and follows up requests for refunds of loans for needy students. Requests are applied for during the first and second academic semesters of each academic year at rates ranging from (60% to 90%) and within the following conditions:

1. The student studies at his own expense.
2. The student has enrolled in the university for at least one academic semester.
3. The student has not been issued any disciplinary penalties.
4. The student's cumulative average is not less than 2.00 points.
5. The student provides proof of his need for the fund.

The Jordan Dinar (JD) Initiative: Students are granted financial aid through the JD initiative. This is offered quarterly and within the following conditions:

1. The student is registered for the semester in which he/she applies to benefit from the initiative.
2. The student has not been issued any disciplinary penalties.
3. Submit a certificate of good behavior signed by the Dean of Student Affairs.
4. The student provides proof of his need for financial aid.
5. The student does not benefit from other scholarships or funds or has been financially supported by any party.
6. The student is in his second academic year or above.
7. To benefit from the amounts granted in the same semester in which the student applies for the initiative.
8. Priority is given to students who have not previously benefited from financial support.

I.2.3 Information Resources

The library has started serving students and researchers since the establishment of the Hashemite University in 1995, with a total area (12,000 m 2). In addition to the main building, the university has established a specialized library for the medical facilities located in the medical complex in the university. By the end of 2019, two new specialized libraries are expected to be opened for the Architectural department and the faculty of pharmaceutical science.

The library is centrally located in the university, which makes it a prime location surrounded by all faculties; it operates in an administrative hierarchy that guarantees the high quality of services for both academic and administrative staff, along with researchers and students, besides serving the local community. Around 3000 – 5000 researchers or users use the library daily, with the aim of circulation, reading, studying, and searching. The library opens for users 5 days a week from Sunday to Thursday from 8 AM – 4 PM.

Goals and aspirations of the library:

The Library aspires to be the center of intellectual, cultural, and scientific life in the university Through its strategic plan, looking to acquisition and holding high-quality content, and make them available for users as soon as they are required, enhancing the role of the library in raising the quality and the ranking for the research and graduate students, through enabling all recent and required resources for researchers and students.

Library Holding

The library holds around (183.000) printed books and (36.000) different items, including periodicals, university thesis, reports, and references, in various disciplines of scientific and humanitarian majors. Additionally, the library provides access to more than 300000 online books.

Services: The Hashemite University Library offers the following services:

- Digital Library is effective and easy-to-entry for library users to see the electronic content provided by the library through the deep knowledge portal, from inside and outside the campus of the university,
- Unified search system (Summon) is an advanced search system (a comprehensive search engine, a central search engine) that provides the ability to searching and entrance by the easy procedure to all the sources of electronic information at the digital library,
- Radiofrequency identification system (RFID) that provides an effective means of managing the library's holdings and facilitating their use through easy access, circulate, and return.

- Online Systems & Integrated Library system,
- Ask a librarian through Help Desk & via E-mail,
- Photo Copy Services,
- Mutual circulation services and articles requesting: the university library allows its users to secure the accessibility to the contents of a large collection of libraries partner (Jordanian Government Universities, the British Library) and circulated through the library.
- Online Public Access Library Catalogue for searching,
- Audio-visual services are available to researchers and 20,000 references in various disciplines,
- 3D techniques. This service allows users to print, photograph, and view data in a 3D format,
- The Library of the Family and Childhood: The library of the Hashemite University has distinguished itself from other universities in Jordan and the Middle East by establishing a library for children,
- A number of cultural agreements have been signed between the Hashemite University and a number of foreign embassies in the Hashemite Kingdom of Jordan and some local institutions. Some cultural corners were established in the library, such as: (American Corner, Social Work Corner, Prince Al Hassan Bin Talal Corner),
- Prince Al Hassan Bin Talal Corner: A specialized and well-equipped hall in a worthy manner of His Highness's global, regional and local status as researcher, scientist and thinker, especially in the field of interfaith dialogue and global cultural dialogue,
- The University Library provides a wide range of entertainment facilities, including access to the journals and magazines as well as the means of viewing and watching films of various kinds, in addition to the possibility of using a set of interactive games (Wii),
- Providing Academic privacy sessions.
- Providing Specialized Hall for Master and dissertation defense,
- Providing an Open Budget to Purchase Books and references in different disciplines,
- Library special event support services (i.e., Seminar rooms),
- Wi-Fi Services,
- Local community: The library and within the University's mission in the field of community service providers and facilitate the use of the available information tools and services to obtain the full text of studies and scientific research and use of audiovisual materials and reading materials as well as the use of publications and publications of its own the university.
- Group study rooms and cafeteria (Under Construction),
- Book drop facilities during off times,
- A Specialized Corner That Serves People With Special Needs Is Available In The Hashemite University Library,
- Monthly Activities & training program for new students,
- Document Delivery through British Library,

ICT equipment & SW available at the central library and Medical library:

ICT Facilities	Ground Floor	1st.Floor	2nd. Floor
General use computers	44	4	2
Computers (special needs)	3	-	-
Computers (lab)	-	82	-
Computers(medical library)	-	8	-
Computers (AM)Laptop	9	-	-
OPACs	8	3	-
OPACs (special needs)	2	-	-
Self-checkout Machines	2	-	-
Scanner	4	-	-
BW printer	10	2	-
Receipt printer	2	-	-
Printer (3D)	1	-	-

Label printer	3	-	-
Projector	1	-	-
Video Conference Facility	1	-	-
Barcode reader	5	-	-
UPS	1	-	-
Desktop RFID Acquisition work station	1	-	-
Desktop RFID circulation work station	1	1	-
Security gate single corridor	-	1	-
Security gate double corridor	1	-	-
Semi-Automatic external book droop from outside the library walls	1	-	-
Turnstile tripod	4	-	-
Data show	3	-	-
Photocopy	2	-	-
Smartboard	1	-	-
DVD player	3	-	-
Radio & cassette player	1	-	-
Sound system (speakers)/main	1	-	-
Sound system	3	-	-
Video player	1	-	-
Display screen (monitor)	8	-	-
TV	4	-	-
Microfilm and Microfiche	1	-	-

ICT types of equipment & SW available at the Architectural library:

Item	Qty
RFID Workstation Shielded Added : • Receipt printer (1) • Barcode scanner(1)	1
Security gate single corridor direct mount (RFID gate premium)	1
UPS	1
Computer (Employee)	1
Computer (OPACs)	2
Computer (Online DB)	2
Computer (Special Needs)	1
Printer	1
Scanner	1
Photocopy	1

Software Available

- Adobe Dream Weaver
- Adobe Flash Professional
- Adobe Photoshop
- Adobe After Effects
- Adobe Audition
- Adobe Bridge
- Adobe Character Animator (Preview)
- Adobe Illustrator
- Adobe In Design
- Adobe Premiere Rush
- Adobe reader/write
- AutoCAD
- EndNote
- Microsoft Office
- Microsoft Visio and MS-Project professional
- Real player
- SPSS
- WinZip / Win RAR

- Adobe Media Encoder
- Adobe Premiere Pro
- Plagiarism

Total number of Books and Periodicals in the Hashemite University library

E-Books	300000
Printed books (Copies)	183000
Periodicals	27853
Titles of The Arabic Periodicals	602
Titles of The Foreign Periodicals	1064
Number of Arabic Periodicals Volumes	11660
Number of Foreign Periodicals Volumes	16193

Databases: It is available on the Library page through the portal of the Deep Knowledge Portal (Accessible from the campus or outside of all beneficiaries)
(These rules are always changing because there are trial periods of companies for the Library and Center of Excellence)

First: The databases shared by the library

- Scopus
- Clarivate Analytics (Web of Science)
- IEEE / IEL (individual subscription)
- EBSCO
- Proquest Central
- Proquest SciTech
- Springer
- Taylor & Francis (Medical Collection)
- Emerald (individual subscription)
- Up-to-date:(individual subscription) work on the renewal of the convention
- Dar Almandumah (Human Index, EduSearch, Thesis, AraBase, IslamicInfo, Ecolink) (individual subscription)
- E Library (E-books)
- Ulrich's

Second: More than 300 free electronic databases are available on the Library's website (through the Library of Congress). Databases proposed by the Library Unit for the year 2019-2020:

- Visible Body
- Lippincott's Nursing Procedure
- Lippincott's Nursing Advisor
- Scival
- Science Direct
- Wiley
- RSC
- AMS
- SciFinder

Number of the books related to architecture

Topics (classification)	Dewey Decimal Classification (DDC)	Titles	Copies
Technical drawing	604-604.25	87	124
Buildings	690-698.9	374	540
Civic & landscape Art	710-729.8	753	1012
Total		1214	1676

I.2.5 Administrative Structure and Governance

I.2.5.1 Administrative Structure

The Hashemite University is one of the Jordanian state-run universities governed by the Board of Trustees (appointed by the government) and Ministry of Higher Education in Jordan. The Board of Trustees is the final governing body of the institution. The Board of Trustees is responsible for controlling and directing the affairs, property, and interests of the university and may exercise all powers and authorities conferred upon the University by law. It consists of Board President, 11 members, and the University President. The HU President, Prof. Fawwaz M. Al-Abed Al-Haq, is responsible for the administration of the University, subject to the control of the Board of Trustees. President fosters and promotes education, research, and service as the primary aims of the University. The university is divided into several units, which handle its financial, academic, legal, communications, human resources, student, development, alumni relations, and external affairs. All units are connected either by the President or by four vice presidents and shown in Table (9). The Three Vice Presidents report directly to the University President as they are institution's second-in-command, and they have the chief responsibility for advancing the academic and administrative mission of the university.

The HU faculty and students have the opportunity to participate in the governance at many levels from the institution to individual programs. The University Council includes two faculty representatives and two students. The University Council supports Faculty responsibility and accountability with respect to duties in teaching, research, publications, and University and community service.

I.2.5.2 Student Government

The HU Student Council (HUSC) plays an important role on the campus, as it gives students and student leaders many opportunities to actively affect the direction of the university and promote productive change on campus. Each college has a student council that interacts with each other and with HUSC to solve specific problems within each collage as well as university-wide issues. The Engineering College Student Council has student representation from each department.

I.2.5.3 Engineering College Governance

The academic programs of the Engineering College are organized into eight departments: and the Architectural Department is one of them. The Dean (Prof Ahmad Al Bdoor) is the Chief Academic and Administrative Officer of the College. HU organizational structure facilitates the direct reporting of each Department Chairperson to the Dean. HU organizational structure also fosters regular meetings to collectively pursue opportunities to explore creative sharing of facilities, spaces, faculties, staff, and technology assets. The Dean is responsible for developing and implementing college-wide policies supported by two Vice Dean, two Dean Assistances (one for Students Affairs and the other for Industry Outreach), and Working Committees. The Faculty Council consists of the Dean, Vice Dean, two Dean Assistances, Department Chairs, and one Representative from each department. The Dean's office directs college operations and reports directly to the Vice President for Academic and Administrative Affairs (Prof Khalid AlHyari). This results in a short, effective, and responsive decision-making relationship with the University administration. Within the Collage, the goal is to keep lines of communication short and simple. Within this structure of the Collage, the Architectural Department Chair is the head of that academic unit and chief administrator of the Architectural program. Faculty and staff from each department may participate in Collage governance service through participating in the different Collage Committees, as Shown in Table (10).

Table (9). Deanships, Colleges, Units, and Centers that report to directly to HU President or Vice Presidents

HU President, Prof Fawwaz M. Al-Abed Al-Haq	Vice President, Prof Abidalbasit Alzyoud	Vice President, Prof Khalid Alhyari	Vice President, Prof Hussam AlDeen Khadash	Vice President, Prof Sultan Al Manni
• Deanship of Students Affairs • Admissions and registration Unit • Financial Affairs Unit • Human Resources Unit • Public Relation Unit • Presidency Office • Medical Health Center and Hospitals • Legal Affairs Office • Faculty of Medicine • University Security Department	• Faculty of Education and Sport Science • Faculty of Arts • Community-based Rehabilitation Center • Refugees affairs Studies Center • Queen Rania Faculty for Tourism and Heritage • Queen Rania Faculty for Childhood • Faculty of Strategic government Studies • Center for Women's Studies in the Community	• Faculty of Engineering • Prince Al Hussein Bin Abdullah II Faculty of IT • Faculty of Natural Resources & Environment • Prince Al Hassan Bin Talat Faculty for Arid Lands • Faculty of Science • Faculty of Pharmaceutical Science • Faculty of Applied Health Science • Faculty of Nursing • Language Center • Applied Research Center in Therapeutic Care Management and Patient Services • Creativity and innovative projects Center • Productive Services and Workshops Center	• Faculty for Economics and Administrative Science • Information, Communication, and e-Learning Technology Center • Engineering and Maintenance Department • Public Services Department • Department of Environment and Public Safety • Supplies Department • Health Insurance Department • Central Tenders Office • Big Data and Artificial Intelligence Center	• Faculty of Graduate Study • Deanship of Scientific Research • Deanship of Academic Development and International Outreach • Center for Studies, Consultations, and Community Services • Service-Learning Center • Library Unit

Table (10): Working Committees in the Engineering College (2019-2020)

Committee	Involvement in Collage Governance
The scientific research and accreditation committee	• departments chairs
The graduation projects and practical training committee	• one faculty member elected from each department working committee
The Curriculum development committee	• one faculty member elected from each department working committee or departments chairs
The Strategic Plan committee	• one faculty member elected from each department working committee
The NAAB committee	• All Ph.D. Holders in the Architectural Department
The Laboratories committee	• one faculty member elected from each department working committee
The Social Committee	• one faculty member elected from each department working committee
The Examinations Committee	• one faculty member elected from each department working committee
The Appointment and Promotion Committee	• Collage Council
The class schedule committee	• departments chairs
The graduate follow-up committee	• one faculty member elected from each department working committee
Courses equation committee	• one faculty member elected from each department working committee
The education resources and technologies committee	• one faculty member elected from each department working committee
The advisory committee	• departments chairs
Simplification of academic and administrative procedures committee	• one faculty member elected from each department working committee
Research groups and opportunities committee	• one faculty member elected from each department working committee
Scientific incubator and Leadership committee	• one faculty member elected from each department working committee
Electronic publications committee	• one faculty member elected from each department working committee
Academic programs marketing committees	• one faculty member elected from each department working committee
Projects and international funds committee	• one faculty member elected from each department working committee
Environmental and spatial development of the College committee	• one faculty member elected from each department working committee
Initiatives for the development of academic, administrative and technical work at the university committee	• one faculty member elected from each department working committee

I.2.5.4 Department Governance

Department Chairs are also responsible for supervising their faculties, studios, computer labs, facilities and labs, hiring faculty, scheduling academic offerings, administration of academic and institutional policies, coordination with the registrar, and overseeing aspects of the academic program and student

advisement. The department chair is the faculty member responsible for the daily operation of the program as well as long-term oversight of planning, scheduling, and curriculum development. The department chair reports directly to the dean of the college. The Architecture Department Chair has complete academic autonomy, together with the Department faculty. Major resource decisions are made in consultation with the Dean.

The program chair is primarily responsible for the Architectural Engineering Program, assisted and supported by several working committees. All decisions are taken in the department council. The Dean, the vice-dean, and the Collage Council support and facilitate the execution of these activities through the provision of the necessary resources, as well as through guidance when needed.

Faculty members in the Architectural Department are highly empowered and heavily involved in the guidance of the program, as well as in the definition and the execution of the assessment and evaluation processes that pertain in particular to the program's educational objectives and student outcomes through several committees created for this purpose. Table (11) summarizes these committees and their roles and responsibilities in the program. Most of these committees fall under the umbrella of a parent committee at the Faculty of Engineering level. Departmental working committees work coherently and coordinated with college committees to achieve their various roles and responsibilities. For example, the "curriculum development committee" studies any proposed development to the curriculum and makes its recommendations to the engineering faculty council. Proposals to develop the curriculum are discussed by the department council so that all faculty members participate in decision-making.

Table (11). Working Committees in the Architectural Department (2019-2020)

Committee	Members	Role and Responsibility
The scientific research and accreditation committee	• Prof Dr. Shaher Rababeh • Dr. Ahmad Alhusban • Dr. Shatha Abo Khafajah • Dr. Yamen Al Betawi • Dr. Siba Awawdeh • Dr. Omaimah AlQatash	• Enhance cooperation between faculty members • Support development of scientific research • Provide advice for scientific research
The graduation projects and practical training committee	• Prof Dr. Shaher Rababeh • Dr. Ahmad Alhusban • Dr. Yamen Al Betawi • Dr. Siba Awawdeh	• Coordinate graduation project activities • Organize demo/presentation logistics for graduation projects • Gather and organize information relates to practical training and graduation projects
The Curriculum development committee	• Prof Dr. Shaher Rababeh • Dr. Ahmad Alhusban • Dr. Shatha Abo Khafajah • Dr. Yamen Al Betawi • Dr. Siba Awawdeh • Dr. Omaimah AlQatash	• Develop and improve Architectural curriculum • Study suggestions by Architectural faculty members. • Coordinate with Curriculum committee at the college level
The Strategic Plan committee	• Dr. Shatha Abo Khafajah • Dr. Ahmad Alhusban • Dr. Yamen Al Betawi	• Develop strategic plans for the Architectural Department.

The NAAB committee	• Prof Dr. Shaher Rababeh • Dr. Ahmad Alhusban (Genera Coordinator) • Dr. Shatha Abo Khafajah • Dr. Yamen Al Betawi • Dr. Siba Awawdeh • Dr. Omaimah AlQatash	• Identify and assign NAAB-related tasks • Communicate with the advisory board and alumni. • Ensure NAAB documentation is appropriate, complete and on time • Organize and conduct NAAB reviews • Coordinate developing Architectural plans
The Laboratories committee	• Arch Fadeal Tammoni • Arch Sherin Athameh • Arch Hanin Othman	• Write labs design studios budget • Setup labs and design studio maintenance • Request new types of equipment
The Social Committee	• Arch Fadeal Tammoni • Arch Sherin Athameh • Mrs. Nuha AlHussari	• Follow up on social issues related to faculty members. • Organizing social activities.
The Examinations Committee	• Dr. Yamen Al Betawi • Dr. Siba Awawdeh • Dr. Omaimah AlQatash	• Organize examinations • Allocate exam monitors
The Appointment and Promotion Committee	• Prof Dr. Shaher Rababeh • Dr. Ahmad Alhusban • Dr. Shatha Abo Khafajeh	• Review applications • Setup interview and collect feedback • Write up summaries/conclusions relates to promotions/appointment.
The class schedule committee	• Dr. Ahmad Alhusban • Dr. Yamen Al Betawi • Dr. Siba Awawdeh	• Collect feedback from faculty and students on desired courses to be offered. • Setup semester schedule
The graduate follow-up committee	• Dr. Siba Awawdeh • Dr. Omaimah AlQatash • Arch Rabab Muhsen	• Motivate students to be active alumni • Collect feedback/surveys from graduates
Courses equation committee	• Dr. Ahmad Alhusban • Dr. Shatha Abo Khafajah • Dr. Yamen Al Betawi	• Study course equivalent applications • Provide feedback to the registrar
The education resources and technologies committee	• Dr. Yamen Al Betawi • Dr. Siba Awawdeh • Dr. Omaimah AlQatash	• Oversee educational and technology resources • Recommend improvement/upgrade on technology resources
The advisory committee	• Dr. Ahmad Alhusban	• Organize student advisory • Allocate advisory resources
Simplification of academic and administrative procedures committee	• Dr. Yamen Al Betawi	• Examine bottle-necks in department operations • Recommend simplified process/applications • Encourage online processing
Research groups and opportunities committee	• Dr. Yamen Al Betawi	• Enhance and encourage research groups • Identify research opportunities
Scientific incubator	• Dr. Omaimah AlQatash	• Study opportunities for scientific incubators

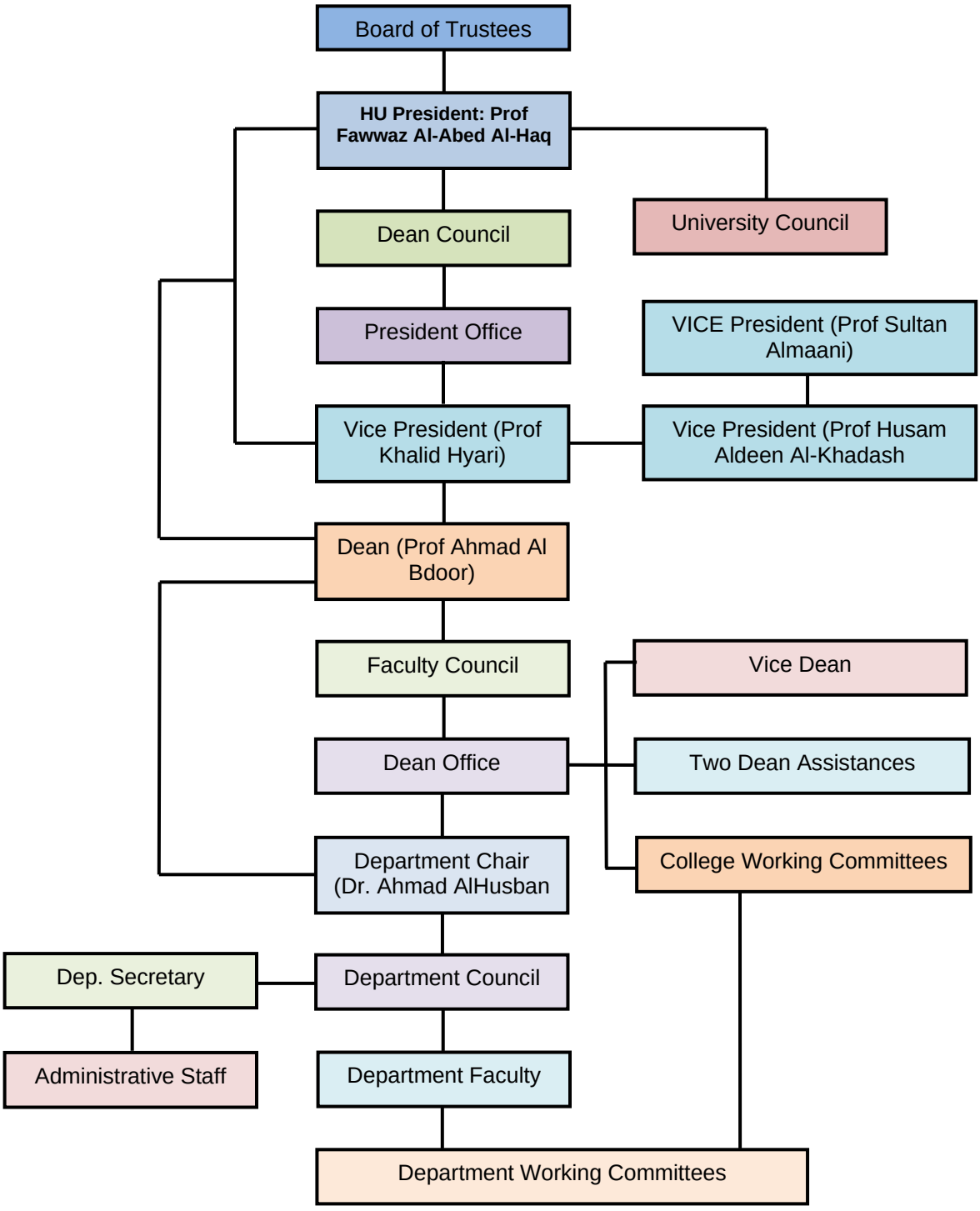
and Leadership committee		
Electronic publications committee	• Dr. Ahmad Alhusban	• Manage Architectural web-site
Academic programs marketing committees	• Dr. Shatha Abo Khafajah • Dr. Yamen Al Betawi	• Market our program to industry and private sectors
Projects and international funds committee	• Dr. Siba Awadeh	• Improve the quality of department projects • Facilitate applying for international funds
Environmental and spatial development of the College committee	• Ahmad AlHusban	• Improve space utilization of college and department rooms/hallways.
Initiatives for the development of academic, administrative and technical work at the university committee	• Dr. Shatha Abo Khafajah	• Support and follow up on initiatives for the development of academic, administrative and technical work at the university committee

All faculty members are involved in the NAAB accreditation activities and are responsible for the following:

- Providing syllabi of the courses they are teaching
- Providing their updated CV
- Performing a direct assessment of their courses
- Evaluating the results of indirect assessments of their courses
- Proposing action plans to improve students' performance in their courses
- Providing the course portfolios of their courses
- Participating in advising students

The Department Council consists of all faculty members. They meet regularly and discuss the issues regarding curricular matters, appointments, promotions, proposals, and recommendations from Department Committees. The regular Department Council meetings provide opportunities for questions, comments, and inputs; the faculty committees further organize involvement.
All important decisions and conclusions drawn by the committees listed in Table (11) are submitted to the Department Council for final discussions and approval. The recommendations from the Department Council have to be verified and approved by the dean, dean's council, and the president. The entire search procedure must be carefully documented and submitted to the HU Precedence office for approval (see Criteria and Procedures in Faculty Appointments section as an example). Figure (3) shows the HU organizational chart illustrates of the Department, College, and University.

Figure (3): the HU organizational chart illustrates of the Department, College, and University.



Part One, Section 3 – Program Characteristics

I.3.1 Statistical Reports

Number of faculty members of the University and Engineering Faculty as per the academic year 2019/2020.

Academic Rank	Engineering Faculty		The Hashemite University		Architectural Department	
	Male	Female	Male	Female	Male	Female
Professor	12	0	110	16	1	0
Associate Professor	33	4	165	43	0	2
Assistant Professor	40	8	215	52	2	2
Teacher	3	5	16	31	0	1
Teacher Assistant	5	17	29	61	1	10
Lecturer	0	0	0	0	0	0
Research Assistant	0	0	1	0	0	0
Total	93 (73%)	34 (27 %)	536 (72%)	203 (28%)	4 (20%)	15 (80%)

Note: Race and ethnicity are unknown

Number of the academic staff and students

Year	Academic Staff	Students	Student/Faculty
2011	541	19465	36
2012	573	23629	41
2013	584	25963	45
2014	607	28532	47
2015	649	28672	44
2016	664	26351	39
2017	682	25396	37
2018	685	23367	33
2019	697	21241	30
2020	739	21369	29

Note: Race and ethnicity are unknown

Number of Administrative staff of University and Engineering Faculty as per the academic year 2018/2019

Administrative staff	Engineering Faculty		The Hashemite University	
	Male	Female	Male	Female
Total Administrative staff	37(46%)	44 (54%)	577 (63%)	338 (37%)

Note: Race and ethnicity are unknown

Number of the Scholarships awardees in University, Engineering Faculty, and architectural Department as per the academic year 2018/2019

Scholarships awardees	The Hashemite University		Engineering Faculty		Architectural Department	
	Male	Female	Male	Female	Male	Female
1/1/2013 – 31/12/2013	15	5	1	1	0	0
1/1/2014 – 31/12/2014	11	8	3	3	0	0
1/1/2015 – 31/12/2015	16	6	7	1	0	0
1/1/2016 – 31/12/2016	27	12	14	3	1	0

1/1/2017 – 31/12/2017	23	8	6	3	0	0
1/1/2018 – 31/12/2018	18	15	2	1	0	1
1/1/2019 – 11/9/2019	6	8	0	0	0	0
	15	13	1	2	0	3
Total	131 (64%)	75 (36%)	34 (71%)	14 (29%)	1 (20%)	4(80%)
	206 (100%)		48 (100%)		5 (100%)	

Note: Race and ethnicity are unknown

Number of Faculty by Rank: the matrix below indicates the faculty of the Architectural Engineering Department by specialization and academic rank. This includes faculty on deputation or on study leave, (All the faculty members are full time).

Professor	1
Associate Professor	2
Assistant Professor	4
Lecturer	12
Total Faculty Members	19
Scholarship to get Ph.D.	5
Lab Supervisor	3
Nominated to Pd.D.	6
Technician	3

Name	Gender	Specialization	Academic Rank	
Shaher Rababeh	M	Architectural Construction Techniques	Professor	
Rama Al Rabady	F	Architectural Historical Restoration	Associate Professor	
Shatha Abu Khafajah	F	Cultural Heritage Management	Associate Professor	
Ahmad AlHusban	M	Architectural Design	Assistant Professor	Chair of architectural dep.
Yamen AlBetawi	M	Urban design and planning	Assistant Professor	
Siba Awawdeh	F	Sustainable Architecture	Assistant Professor	
Umaimah Al Aqtash	F	Building Construction	Assistant Professor	
Fadeal Al Rahman Tamoni	F			
Fadael AlTammoni	F	Architectural Design	Lecturer	
Ebtisam Khasawneh	F	Urban Design	Lecturer	
Lina Shaqra	F	Sustainable Design	Lecturer	
Rabab Muhsen	F	Architectural Design	Lecturer	
Tahani Alkeelani	F	Urban Planning	Lecturer	
Haneen Khamaisah	F	Urban Design	Lecturer	
Ruba Odeh	F	Structural Engineering	Lecturer	
Rama Al Majali	F	Architectural Design		
Dania Al Harasis	F	CAD		
Qusai Al Khaldi	M	Environmental Design		
Sara Abo Gharbiah	F	Sustainable Design		
Majd Al Beek	F	CAD		

Yahia Qutaishat	M	Traditional Architectural Identity and Sustainability	Scholarship awardees to get Ph.D.	
Halla Ghumaim	F	Landscape Architecture	Scholarship awardees to get Ph.D.	
Muna AlSukkar	F	Architecture and Built Environment	She was nominated for a Scholarship to get Ph.D.	
Mohammad Albaddar	M	Architectural Design	He was nominated for Scholarship to get Ph.D.	
Bayan AlFaouri	F	Local and Contemporary Architecture	She was nominated for a Scholarship to get Ph.D.	
Haneen Otham	F	Teacher Assistant	Lab Supervisor	
Shireen Athamnah	F	Teacher Assistant	Lab Supervisor	
Shireen Al Jabari	F	Teacher Assistant	Lab Supervisor	

Students Characteristics:

Academic year	Entering Students Male	Entering Students Female	Total Entering Students	Total Current Student Students
2006-2007	7 (26%)	20 (74%)	27	500 Graduated
2007-2008	5 (14%)	32 (86%)	37	
2008-2009	17 (38%)	28 (62%)	45	
2009-2010	8 (13%)	53 (87%)	61	
2010-2011	11 (24%)	43 (76%)	54	
2011-2012	32 (31%)	72 (79%)	104	
2012-2013	20 (23%)	67 (77%)	87	
2013-2014	15 (17%)	73 (83%)	88	
2014-2015	21 (25%)	64 (75%)	85	299 Total current Students (24% Male, 76% Female)
2015-2016	16 (25%)	48 (75%)	64	
2016-2017	11 (26%)	31 (74%)	42	
2017-2018	9 (20%)	37 (80%)	46	
2018-2019	12 (20%)	47 (80%)	59	
2019-2020	13 (21%)	49 (79%)	62	
Total	**197 (23%)**	**644 (77%)**	**861 (100%)**	

The number of students and faculty members of the Architectural Program by Gender and Nationality for the academic year 2019/2020.

Category	Jordanian Nationality	Non-Jordanian Nationality	Total
Male Students	68 (23%)	3 (1%)	71 (24%)
Female Students	220 (73%)	8 (3%)	228 (76%)
Male Staff	8 (31%)	0	8 (31%)
Female Staff	18 (69%)	0	18 (69%)

The number of non-Jordanian students of the Architectural Program by Nationality for the academic year 2019/2020.

Nationality	Male	Female	Total

Palestine	2 (18%)	6 (55%)	8 (73%)
Egypt	1 (9%)	1 (9%)	2 (18%
Sudan	0 (0%)	1 (9%)	1 (9%)
Total	3 (27%)	8 (73%)	11 (100%)

Part Two, Section 1 – Educational Outcomes and Curriculum

II.1.1 Student Performance Criteria (SPC)

The International Certification degree program must demonstrate that each graduate possesses the knowledge and skills defined by the Student Performance Criteria set out below. The knowledge and skills defined here represent those required to prepare graduates for the path to internship, examination, and licensure and to engage in related fields. The program must provide student work as evidence that its graduates have satisfied each criterion.

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.

II.1.1 Student Performance Criteria (SPC): The NAAB establishes Student Performance Criteria to help substantially equivalent degree programs prepare students for the profession while encouraging educational practices suited to the individual degree program. The SPC is organized into realms to more easily understand the relationships between each criterion.

Realm A: Critical Thinking and Representation

Graduates from substantially equivalent degree programs must be able to build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates must also be able to use a diverse range of skills to think about and convey architectural ideas, including writing, investigating, speaking, drawing, and modelling.

- Being broadly educated
- Valuing lifelong inquisitiveness
- Communicating graphically in a range of media
- Recognizing the assessment of the evidence
- Comprehending people, place, and context
- Recognizing the disparate needs of the client, community, and society

The accredited degree program must demonstrate that each graduate possesses the following:

A.1 Professional Communication Skills: *Ability* to write and speak effectively and use appropriate representational media for both, within the profession and with the public.

A.2 Design Thinking Skills: *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.

A.3 Investigative Skills: *Ability* to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.

A.4 Architectural Design Skills: *Ability* to effectively use basic formal, organizational, and environmental principles and the capacity of each to inform two- and three-dimensional design.

A.5 Ordering Systems: *Ability* to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

A.6 Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

A.7 History and Global Culture: *Understanding* of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.

A.8 Cultural Diversity and Social Equity: *Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.

Realm B: Integrated Building Practices, Technical Skills, and Knowledge:

Graduates from a substantially equivalent degree program must be able to comprehend the technical aspects of design, systems, and materials and be able to apply that comprehension to architectural solutions. In addition, the impact of such decisions on the environment must be well considered.

- Student learning aspirations for this realm include
- Creating building designs with well-integrated systems.
- Comprehending constructability.
- Integrating the principles of environmental stewardship.
- Conveying technical information accurately

The substantially equivalent degree program must demonstrate that each graduate possesses skills in the following areas

B.1 Pre-Design: *Ability* to prepare a comprehensive program for an architecture project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

B.2 Site Design: *Ability* to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

B.3. Codes and Regulations: Ability to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of local life-safety and accessibility standards.

B.4 Technical Documentation: *Ability* to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

B.5 Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.6 Environmental Systems: *Ability* to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

B.7 Building Envelope Systems and Assemblies: *Understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.8 Building Materials and Assemblies: *Understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

B.9 Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

B.10 Financial Considerations: *Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

Realm C: Integrated Architectural Solutions.

Graduates from a substantially equivalent degree program must be able to demonstrate that they have the ability to synthesize a wide range of variables into an integrated design solution.

Student learning aspirations for this realm include

- Comprehending the importance of research pursuits to inform the design process.
- Evaluating options and reconciling the implications of design decisions across systems and scales.
- Synthesizing variables from diverse and complex systems into an integrated architectural solution.
- Responding to environmental stewardship goals across multiple systems for an integrated solution.
- Knowing societal and professional responsibilities

C.1 Research: *Understanding* of the theoretical and applied research methodologies and practices used during the design process.

C.2 Integrated Evaluations and Decision-Making Design Process: *Ability* to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

C.3 Integrative Design: *Ability* to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

Realm D: Professional Practice.

Graduates from substantially equivalent degree program must understand business principles for the practice of architecture, including management, advocacy, and the need to act legally, ethically, and critically for the good of the client, society, and the public.

Student learning aspirations for this realm include

- Comprehending the business of architecture and construction.
- Discerning the valuable roles and key players in related disciplines.
- Understanding a professional code of ethics, as well as legal and professional responsibilities.

The substantially equivalent degree program must demonstrate that each graduate possesses skills in the following areas:

D.1 Stakeholder Roles in Architecture: *Understanding* of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.

D.2 Project Management: *Understanding* of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and recommending project delivery methods.

D.3 Business Practices: *Understanding* of the basic principles of a firm's business practices, including financial management and business planning, marketing, organization, and entrepreneurship.

D.4 Legal Responsibilities: *Understanding* of the architect's responsibility to the public and the client as determined by local regulations and legal considerations involving the practice of architecture and professional service contracts.

D.5 Professional Conduct: *Understanding* of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of local rules of conduct and ethical practice.

II.1.1 NAAB Student Performance Criteria (SPC) Matrix

The Hashemite University, Architectural Engineering Department Bachelor of Architectural Engineering SPCs A: Ability or U: Understanding	REALM A: Critical Thinking and Representation								REALM B: Integrated Building Practices, Technical Skills, and Knowledge										Integrated Architectural Solution			Professional Practice				
	Professional Communication Skill	Design Thinking Skills	Investigative Skills	Architectural Design Skills	Ordering Systems	Use of Precedents	Historical and Global Culture	Culture Diversity and Social Equity	Pre-Design	Site Design	Codes and Regulations	Technical Documentation	Structural Systems	Environmental Systems	Building Envelope Systems and Assemblies	Building Materials and Assemblies	Building Service Systems	Financial Considerations	Research	Integrated Evaluation and Decision-Making	Integrative Design	Stakeholder Roles in Architecture	Project Management	Business Practices	Legal Responsibilities	Professional Conduct
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	C1	C2	C3	D1	D2	D3	D4	D5
COURSE NAME																										
ARCH 101: Architectural Drawing	X			X																						
ARCH 121: Basic Design (1)	X				X																					
ARCH 111: Free Hand Drawing	X	X																								
ARCH 102: Computer Applications In Architectural Design (1)	X			X																						
Arch 122: Basic Design (2)		X			X																					
Arch 112: Architectural Communications and presentation (1)	X			X																						
ENGI 203: Ethics and Communication Skills	X											X														
ARCH 221: Architectural Design (1)			X							X																
Arch 213: Architectural Communications and presentation (2)	X	X																								
ARCH 241: History and Theory of Architecture (1)							X	X																		
ARCH 232: Building Materials			X													X										
CIVL 214: Engineering Mechanics													X													
ARCH 201: Computer Applications In Architectural Design (2)	X			X																						
ARCH 222: Architectural Design (2)						X				X																
ARCH 341: History and Theory of Architecture (2)							X	X																		
ARCH 335: Building Construction Systems													X		X											
CIVL 313: Structural Analysis for Architectural Students													X			X										
CIVL 369: Surveying and Building Documentation			X									X														
ARCH 321: Architectural design (3)									X					X												
ARCH 345: Theory and Methods of Architectural Design						X		X																		
ARCH 342: Islamic Architecture					X			X																		
ENGB 101: Engineering Workshop																X	X									
ARCH 336: Building Finishing															X	X										
CIVL 324: Concrete and Steel Structure for Arch. Students													X			X										
ARCH 322: Architectural Design (4)														X	X											
ARCH 563: Landscape Design						X								X												
ARCH 343: Theory of Modern Architecture						X		X																		
ARCH 423: Working Drawing											X	X														
ARCH 421: Architectural Design (5)																				X	X					
ARCH 471: Lighting and Acoustics														X			X									
MECH 450: Electro-Mechanical Systems for Arch. Students																X	X									
ARCH 422: Architectural Design (6)					X					X																
ARCH 456: Conservation of Architectural Heritage							X	X																		
ARCH 463: Urban Design and Planning							X				X															
ARCH 465: Housing								X														X				
ARCH 451: Specification and contracts																							X		X	
ARCH 542: Graduation Project (1)									X										X							
ARCH 452: Quantity Surveying																		X								X
ARCH 521: Graduation Project (2)																				X	X					
ARCH 551: Professional Practice																								X		X
ARCH 470: Practical Training																							X	X		
ARCH 423: Ancient Building Technologies (Elective)													X			X										
ARCH 444: Local Contemporary Architecture (Elective)		X					X																			
ARCH 472: Desert Hapitation (Elective)										X					X											
ARCH 473: Building and Energy (Elective)														X	X											
ARCH 523: Special Topics in Architecture (Elective)																										
ARCH 541: Human Behavior in Architecture (Elective)								X														X				
ARCH 562: Architecture and Identity (Elective)							X	X																		
ARCH 571: Green Architecture (Elective)														X						X						

Part Two, Section 2 – Curricular Framework

II.2.1 National Authorization and Institutional Quality Assurance

Accreditation & Quality Assurance Commission for Higher Education Institutions (AQACHEI)
The Commission was established in 2007 according to the Law No. (20) by the name of Higher Education Accreditation Commission (*HEAC*) (Under the umbrella of the minister of Higher Education and Scientific Research). In 2009, the Law was modified such that the HEAC was fully independent. (Under the umbrella of Prime Ministry). In 2016, the Commission was expanded to include the "Quality Assurance" in its mission (AQACHEI).

AQACHEI aims to advance quality and equity in higher education in Jordan, whether in assessment, ranking, or conducting valid, reliable, and unbiased testing services. It also strives to improve the status of higher education in the Kingdom; assuring its quality, motivating higher education institutions to open up to and interact with universities, scientific research institutions, and international accreditation and quality control commissions; and developing higher education by employing internationally comparable standards. AQACHEI will contribute to quality assurance of Jordanian higher education institutions in providing consultations, expertise, and technical support in areas of qualitative assessment of learning outcomes, testing and measurement, evaluation tools, software and techniques, and professional training of faculty and employees through conducting specialized workshops and seminars.

As per AQACHI, the minimum requirements to obtain a bachelor's degree in Architectural Engineering are (165) credit hours as follows:

a. Compulsory fundamental theoretical fields

Knowledge field	Min Credit Hours (CRD)
History and theories of architecture: History of Architecture, Modern Architecture, Contemporary Architecture, Islamic Architecture The following knowledge is not compulsory but important and may be calculated within the minimum hours of the field: (Environmental Human Behavior, Philosophy and Criticism of Architecture, Theories and Methods of Design, Analysis, and Programming in Architecture, local Architecture, and Regional Architecture).	15
Building Technology: Building Materials & Building Construction	6
Engineering Systems: Principles of Construction and Mechanics of Construction, Structural systems, Mechanical Systems, Environmental Control (Architecture and Energy). The following knowledge is not compulsory but important and may be counted within the minimum CRD of the field hours: (Survey & Lighting and Acoustics).	12
Urban Science: Urban Planning, Urban Design, Site Coordination. The following knowledge is not compulsory but important and may be counted within the minimum CRD of the field hours: Housing, Heritage Conservation, and Management of Resources)	9

- Some courses may be offered from outside the specialization department and calculated within the support fields)
- A single course may contain parts from more than one subject area or main knowledge content. The number of credit hours for each part is estimated based on the course description.
- Any knowledge field other than those specified above may be added as the Department deems appropriate.
- Cognitive areas of study plans are considered based on course descriptions.

- Integration of relevant architectural codes in the teaching of prescribed materials.

b. Supporting fields

Knowledge field	Min Credit Hours (CRD)
Basic Sciences: General Mathematics and Physics (Maybe part of college requirements)	6
Fundamentals of Project Management and Practice: Professional Practice, Contracts, and Specifications, Quantity Severing. The following knowledge is not compulsory but important and may be counted within the minimum CRD of the field hours: (Project Management. Technical Report Writing) (Maybe offered by the specialization department).	6

c. Practical Courses

Knowledge field	Min Credit Hours (CRD)
Design: Design Principles, Architectural Design, Working Drawings Architectural Detail). The following Studios are not compulsory but are important and may be counted within the minimum CRD of the field hours: Landscape Design, Interior Design, Urban Design, Urban Planning.	40
Architectural Communication and presentation: Architectural Drawing Free Hand Drawing, Perspective, Shade and Shadows, Computer Graphics.	12

d. Practical Training:

- Credit hours for training may be calculated up to a maximum of (6) hours.
- The duration of the practical training shall be (8) weeks (minimum) continuous in one of the accredited bodies after the student has successfully completed at least 90 credit hours. The student shall be under the supervision of the department, whether training inside or outside Jordan. The department follows up the training to ensure that it achieves its objectives for the purpose of linking the training accreditation with a number of controls, standards and outputs including attendance, the student's benefit, the student's report and the report of the training authority. Accordingly, it is assumed that there are the following in the college or department:
  - Documented and clear instructions adhere to the above.
  - Clear criteria for the accreditation of training institutions
  - Clear criteria for accrediting student training (e.g., attendance, assignment quality, training report, and academic supervisor follow-up).

e. Graduation Project:

- A minimum of 120 credit hours must be successfully completed before enrolling in the graduation project.
- Graduation Project consists of two parts: theoretical and practical.
- The number of approved practical hours should not be less than (4) hours.
- Calculates the number of hours of the practical part of the graduation project from the proportion of the applied part to the requirements of compulsory specialization.

f. Laboratories, workshops, and Studios:

Laboratories: At least one computer laboratory should be provided with the necessary software.
Design Studios: At least five studios must be provided.
Workshops: Provide at least one Model making lab, so that they are equipped with the necessary tools for the work of architectural models, with a technical supervisor.

II.2.2 Professional Degrees and Curriculum

II.2.2.1 Overview

The diversity of courses offerings in the department of architectural engineering at the Hashemite University represents a concern for architectural engineering design that ranges in scale from the individual building to the urban design landscape. Students are also encouraged to take courses in other departments in the university. Studies and research in architecture and urbanism are supported throughout the curriculum by course work and design studio.

Lectures and design studio courses provide the foundation of our program. Students are required to complete core courses in the design studio, which provide students with the opportunity to gain practical experience in designing. Architectural courses would require a mix of research and design. Design work is crucial to our program so that students can apply the skills and concepts they learned in their theoretical courses to create drawings and models of their design.

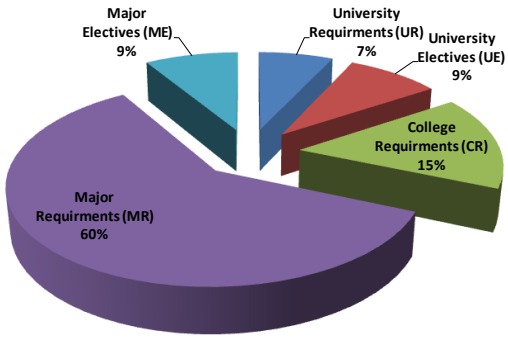
The architectural engineering department at the Hashemite University does not seek to impose any single design philosophy and/or method, but rather encourages the development and discernment of individual approaches to design for each student

II.2.2.2 The curriculum emphasizes

- the development of the critical, analytical, interpretive and creative abilities that are essential to engaging and effectively addressing the diverse bodies of knowledge that define architecture's realm and its practices
- the use of design thinking as a highly effective means for dealing with complex situations, and will ask students to respond to design issues and situations that are often in conflict through analysis, interpretation, reason, argumentation, and proof with both precision and accuracy
- the ability to analyze, interpret, organize, arrange and manipulate various bodies of knowledge
- understanding and being able to apply appropriate methodologies

II.2.2.3 Program Components: 172 minimum credits to graduate

Course Type	CRD	Courses No.
University Requirements (UR)	12	4
University Electives (UE)	15	5
College Requirements (CR)	27	12
Major Requirements (MR)	103	35
Major Electives (ME)	15	5
Total Credit (CRD)	172	61



II.2.2.4 Areas of study: The curriculum is organized around eight areas of study:

1) General Courses (7 CRD):

- ARCH 101: Architectural Drawing (3)
- ARCH 102: Computer Applications in Architectural Design I (2)
- ARCH 201: Computer Applications in Architectural Design II (2)

2) Architectural Drawings and Communication Courses (5 CRD):

- ARCH 111: Free Hand Drawing (2)
- ARCH 112: Architectural Communication and Presentation I (2)
- ARCH 213: Architectural Communication and Presentation II (1)

3) Architectural Design Courses (39 CRD):

- ARCH 121: Basic Design I (3)
- ARCH 122: Basic Design II (3)
- ARCH 221: Architectural Design I (4)
- ARCH 222: Architectural Design II (4)
- ARCH 321: Architectural Design III (4)
- ARCH 322: Architectural Design IV (4)
- ARCH 421: Architectural Design V (5)
- ARCH 422: Architectural Design VI (5)
- ARCH 542: Graduation Project I (2)
- ARCH 521: Graduation Project II (5)

4) Architectural and Building Construction Courses (24 CRD):

- ARCH 232: Building Materials (3)
- ARCH 335: Building Construction Systems (3)
- ARCH 336: Building Finishing (3)
- ARCH 423: Working Drawing (3)
- CIVL 214: Engineering Mechanics (3)
- CIVL 313: Structural Analysis (3)
- CIVL 324: Concrete and Steel Structure (3)
- CIVL 369: Surveying and Building Documentation (3)

5) History and Theory of Architecture Courses (13 CRD):

- ARCH 241: History and Theory of Architecture I (3)
- ARCH 341: History and Theory of Architecture II (3)
- ARCH 342: Islamic Architecture (3)
- ARCH 343: Theory of Modern Architecture (3)
- ARCH 345: Theory and Methods of Architectural Design (1)

6) Legislations, Specifications, and Professional Practice Courses (9 CRD):

- ARCH 451 Specification and Contracts (2)
- ARCH 452: Quantity Surveying (2)
- ARCH 551: Professional Practice (2)
- ARCH 450: Practical Training (3)

7) Urban Studies (9 CRD):

- ARCH 463: Urban Design and Planning (3)
- ARCH 464: Housing (2)
- ARCH 563: Landscape Design (2)
- ARCH 465: Conservation of Architectural Heritage (2)

8) Engineering Systems (6 CRD):

- ARCH 471: Lighting and Acoustics (3)
- ARCH 450: Electro-mechanical Systems (3)

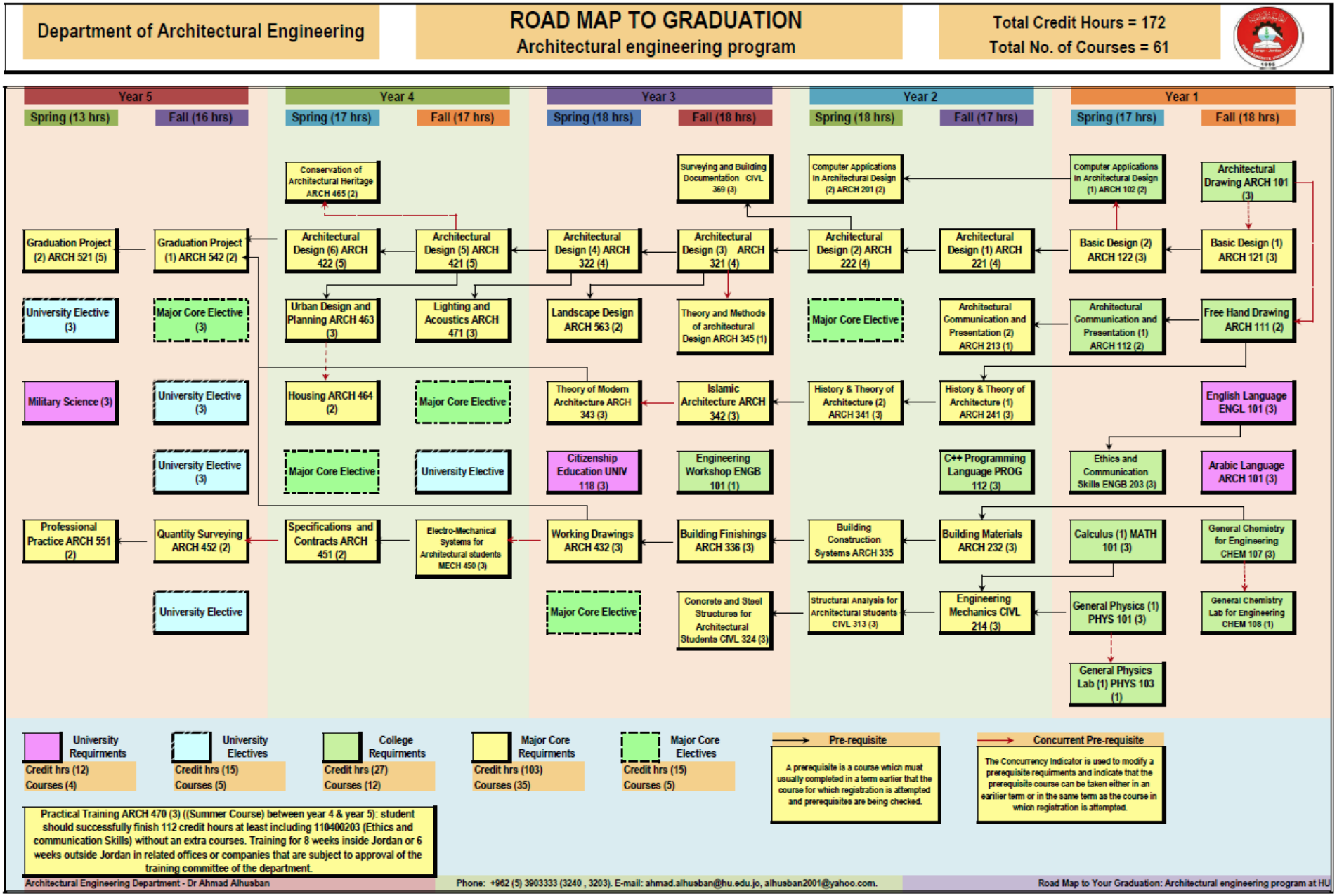
Major elective courses: are mixed between design and cultural studies (15 CRD).

Basic sciences courses (18 CRD)

- PHYS 101: General Physics I (3)
- PHYS 103: General Physics Lab (1)
- MATH 101: Calculus 101 (3)
- CHEM 101: Basics of General Chemistry (3)
- CHEM 108: Basics of General Chemistry Lab (1)
- PROG 112: C++ Programming Language (3)
- ENGI 101: Engineering Workshops (1)

General Studies (University Requirements and Electives) (12 CRD+ 15 CRD)

A range of the arts and sciences that constitute a liberal education, grounding the students in a diverse set of modes of thinking that prepare them for upper division studies in the disciplinary part of the program.


Department of Architectural Engineering
ROAD MAP TO GRADUATION
Architectural engineering program
Total Credit Hours = 172
Total No. of Courses = 61
Year 5
Spring (13 hrs)
Fall (16 hrs)
Year 4
Spring (17 hrs)
Fall (17 hrs)
Year 3
Spring (18 hrs)
Fall (18 hrs)
Year 2
Spring (18 hrs)
Fall (17 hrs)
Year 1
Spring (17 hrs)
Fall (18 hrs)
Conservation of Architectural Heritage ARCH 465 (2)
Surveying and Building Documentation CIVL 369 (3)
Computer Applications in Architectural Design (2) ARCH 201 (2)
Computer Applications in Architectural Design (1) ARCH 102 (2)
Architectural Drawing ARCH 101 (3)
Graduation Project (2) ARCH 521 (5)
Graduation Project (1) ARCH 542 (2)
Architectural Design (6) ARCH 422 (5)
Architectural Design (5) ARCH 421 (5)
Architectural Design (4) ARCH 322 (4)
Architectural Design (3) ARCH 321 (4)
Architectural Design (2) ARCH 222 (4)
Architectural Design (1) ARCH 221 (4)
Basic Design (2) ARCH 122 (3)
Basic Design (1) ARCH 121 (3)
University Elective (3)
Major Core Elective (3)
Urban Design and Planning ARCH 463 (3)
Lighting and Acoustics ARCH 471 (3)
Landscape Design ARCH 563 (2)
Theory and Methods of architectural Design ARCH 345 (1)
Major Core Elective
Architectural Communication and Presentation (2) ARCH 213 (1)
Architectural Communication and Presentation (1) ARCH 112 (2)
Free Hand Drawing ARCH 111 (2)
Military Science (3)
University Elective (3)
Housing ARCH 464 (2)
Major Core Elective
Theory of Modern Architecture ARCH 343 (3)
Islamic Architecture ARCH 342 (3)
History & Theory of Architecture (2) ARCH 341 (3)
History & Theory of Architecture (1) ARCH 241 (3)
English Language ENGL 101 (3)
University Elective (3)
Major Core Elective
University Elective
Citizenship Education UNIV 118 (3)
Engineering Workshop ENGB 101 (1)
C++ Programming Language PROG 112 (3)
Ethics and Communication Skills ENGB 203 (3)
Arabic Language ARCH 101 (3)
Professional Practice ARCH 551 (2)
Quantity Surveying ARCH 452 (2)
Specifications and Contracts ARCH 451 (2)
Electro-Mechanical Systems for Architectural students MECH 450 (3)
Working Drawings ARCH 432 (3)
Building Finishings ARCH 336 (3)
Building Construction Systems ARCH 335
Building Materials ARCH 232 (3)
Calculus (1) MATH 101 (3)
General Chemistry for Engineering CHEM 107 (3)
University Elective
Major Core Elective
Concrete and Steel Structures for Architectural Students CIVL 324 (3)
Structural Analysis for Architectural Students CIVL 313 (3)
Engineering Mechanics CIVL 214 (3)
General Physics (1) PHYS 101 (3)
General Chemistry Lab for Engineering CHEM 108 (1)
General Physics Lab (1) PHYS 103 (1)
University Requirments
Credit hrs (12)
Courses (4)
University Electives
Credit hrs (15)
Courses (5)
College Requirments
Credit hrs (27)
Courses (12)
Major Core Requirments
Credit hrs (103)
Courses (35)
Major Core Electives
Credit hrs (15)
Courses (5)
Pre-requisite
A prerequisite is a course which must usually completed in a term earlier that the course for which registration is attempted and prerequisites are being checked.
Concurrent Pre-requisite
The Concurrency Indicator is used to modify a prerequisite requirments and indicate that the prerequisite course can be taken either in an earlier term or in the same term as the course in which registration is attempted.
Practical Training ARCH 470 (3) ((Summer Course) between year 4 & year 5): student should successfully finish 112 credit hours at least including 110400203 (Ethics and communication Skills) without an extra courses. Training for 8 weeks inside Jordan or 6 weeks outside Jordan in related offices or companies that are subject to approval of the training committee of the department.
Architectural Engineering Department - Dr Ahmad Alhusban
Phone: +962 (5) 3903333 (3240 , 3203). E-mail: ahmad.alhusban@hu.edu.jo, alhusban2001@yahoo.com.
Road Map to Your Graduation: Architectural engineering program at HU

II.2.2.5 Study Plan

Semester 1 – Fall							Semester 2 - Spring						
Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite	Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC					CRD	LEC	PRAC		
ARCH 101	Architectural Drawing	3	1	6	CR	- - - - - - -	ARCH 102	Computer Applications In Architectural Design (1)	2	0	6	CR	ARCH 122*
ARCH 121	Basic Design (1)	3	1	6	MR	ARCH 101*	ARCH 122	Basic Design (2)	3	1	6	MR	ARCH 121
ARCH 111	Free Hand Drawing	2	0	6	CR	ARCH 101*	ARCH 112	Architectural Communication and Presentation (1)	2	0	6	CR	ARCH 111
ENGL 101	English Language	3	3	0	UR	111405099 Or 2120099	PHYS 101	General Physics (1)	3	3	0	CR	- - - - - - -
ARAB 101	Arabic Language	3	3	0	UR	111405098 Or 2110099	PHYS 103	General Physics Laboratory (1)	1	0	3	CR	PHYS 101*
CHEM 107	Basics of General Chemistry	3	3	0	CR	- - - - - - -	MATH 101	Calculus (1)	3	3	0	CR	- - - - - - -
CHEM108	Basics of General Chemistry Laboratory	1	0	3	CR	CHEM 107*	ENGB 203	Ethics and Communicational skills	3	3	0	CR	ENGL 101
Total		18	11	21			Total		17	10	21		
Semester 3 – Fall							**Semester 4 - Spring**						
Course No.	**Course Name**	**Course Weekly Hours**			**Course Type**	**Prerequisite**	**Course No.**	**Course Name**	**Course Weekly Hours**				
		CRD	**LEC**	**RRAC**					**CRD**	**LEC**	**RRAC**		
ARCH 221	Architectural Design (1)	4	1	9	MR	ARCH 122	ARCH 201	Computer Applications In Architectural Design (2)	2	0	6	MR	ARCH 102
ARCH 213	Architectural Communication & Presentation (2)	1	0	3	MR	ARCH 112	ARCH 222	Architectural Design (2)	4	1	9	MR	ARCH 221
ARCH 241	History & Theory of Architecture (1)	3	3	0	MR	ARCH 111	ARCH 341	History & Theory of Architecture (2)	3	3	0	MR	ARCH 241
ARCH 232	Building Material	3	2	3	MR	CHEM 107	ARCH 335	Building Construction Systems	3	2	3	MR	ARCH 232
PROG 112	C++ Programming Language	3	3	0	CR	110108099 or 1011100)	CIVL 313	Structural Analysis for Architectural Students	3	3	0	MR	CIVIL 214
CIVIL 214	Engineering Mechanics	3	3	0	MR	PHYS 101 & MATH 101		Major Core Elective	3	3	0	ME	
Total		17	12	15			Total		18	12	18		
Semester 5 – Fall							Semester 6 - Spring						
Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite	Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC					CRD	LEC	RRAC		
ARCH 321	Architectural Design (3)	4	1	9	MR	ARCH 222	ARCH 322	Architectural Design (4)	4	1	9	MR	ARCH 321
ARCH 342	Islamic Architecture	3	3	0	MR	ARCH 341	ARCH 563	Landscape Design	2	1	3	MR	ARCH 321
ARCH 345	Theory & Methods of Architectural Design	1	1	0	MR	ARCH 321*	ARCH 343	Theory of Modern Architecture	3	3	0	MR	ARCH 342*

CIVL 369	Surveying and Building Documentation	3	1	6	MR	ARCH 222	UNIV 118	Citizenship Education	3	3	0	UR	- - - - - - - -
ARCH 336	Building Finishing	3	2	3	MR	ARCH 335	ARCH 423	Working Drawings	3	0	6	MR	ARCH 336
ENGI 101	Engineering Workshop	1	0.5	2	CR	- - - - - - - -		Major Core Elective	3	3	0	ME	
CIVIL 324	Concrete and Steel Structures for Architectural students	3	3	0	MR	CIVL 313							
Total		18	11.5	20			Total		18	11	18		

Semester 7- Fall

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 421	Architectural Design (5)	5	1	12	MR	ARCH 322
ARCH 471	Lighting & Acoustics	3	2	3	MR	ARCH 322
MECH 450	Electro-Mechanical Systems for Architectural students	3	3	0	MR	ARCH 423*
	Major Core Elective	3	3	0	ME	
	University Elective	3	3	0	UE	
Total		17	12	15		

Semester 8 -Spring

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 422	Architectural Design (6)	5	1	12	MR	ARCH 421
ARCH 463	Urban Planning & Design	3	3	0	MR	ARCH 421
ARCH 464	Housing	2	2	0	MR	ARCH 463*
ARCH 451	Specifications & Contracts	2	2	0	MR	MECH 450
ARCH 465	Conservation of Architectural Heritage	2	2	0	MR	ARCH 421*
	Major Core Elective	3	3	0	ME	
Total		17	13	12		

Semester 9 – Fall

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 542	Graduation Project (1)	2	1	3	MR	ARCH 422 & ARCH 423 & ARCH 343 & finish 120 CRD
ARCH 452	Quantity Surveying	2	2	0	MR	ARCH 451*
	Major Core Elective	3	3	0	ME	
	University Elective	3	3	0	UE	
	University Elective	3	3	0	UE	
	Military Science	3	3	0	UR	
Total		16	15	3		

Semester 10 - Spring

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 521	Graduation Project (2)	5	1	12	MR	ARCH 542
ARCH 551	Professional Practice	2	2	0	MR	ARCH 452
	University Elective	3	3	0	UE	
	University Elective	3	3	0	UE	
Total		13	9	12		

*: or Concurrent

Training Requirement

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 450	Practical Training	3			MR	ENGB 203 & finish 120 CRD

Major Elective Courses (15 CRD).

Course No.	Course Name	Course Weekly Hours			Course Type	Prerequisite
		CRD	LEC	RRAC		
ARCH 566	GIS	3	1	6	ME	ARCH 369 or ARCH 365
ARCH 424	Interior Design	3	1	6	ME	ARCH 321
ARCH 423	Ancient Building Technologies	3	3	-	ME	ARCH 241
ARCH 444	Local Contemporary Architecture	3	3	-	ME	ARCH 343
ARCH 472	Desert Habitation	3	3	-	ME	ARCH 463
ARCH 473	Building and Energy	3	3	-	ME	ARCH 471 or Concurrent
ARCH 523	Special Topics in Architecture	3	3	-	ME	ARCH 542 or Concurrent
ARCH 524	Methodologies of Architectural Design	3	3	-	ME	ARCH 422 or Concurrent
ARCH 541	Human Behavior in Architecture	3	3	-	ME	ARCH 422 or Concurrent
ARCH 561	Restoration and Rehabilitation of Historic Buildings	3	3	-	ME	ARCH 465 or Concurrent
ARCH 562	Architecture & Identity	3	3	-	ME	ARCH 465 or Concurrent
ARCH 571	Green Architecture	3	3	-	ME	ARCH 422 or Concurrent

*: Concurrent

I.2.2.6 Faculty/Course Matrix

		Course Name	LEC	PRAC	Shaher Rababeh	Shattha Abo Khatalah	Rama Al Rabady	Ahmad AlHusban	Yamen AlBetwi	Siba Awawdeh	Umaimah AlAqtash	Fadael Al Tammoni	Ebtisam Khaswaneh	Lina Shaqra	Rabab Muhsen	Tahani AlKeelani	Haneen Khamaisah	Rama Almajali	Dania Al Harasis	Qusai Alkhaldi	Sara abo Ghrabiah	Majd AlBeek	Ruba Odeh
Year 1	Fall Semester	ARCH 101: Architectural Drawing	1	6								X			X	X			X				
		ARCH 121: Basic Design (1)	1	6								X	X				X					X	
		ARCH 111: Free Hand Drawing	0	6								X		X		X							
		ENGL 101: English Language	3	0																			
		ARAB 101: Arabic Language	3	0																			
		CHEM 107: General Chemistry for Engineering	3	0																			
		CHEM 108: General Chemistry Lab	0	3																			
	Spring Semester	ARCH 102: Computer Applications In Architectural Design (1)	0	6								X		X			X					X	
		Arch 122: Basic Design (2)	1	6								X	X				X		X			X	
		Arch 112: Architectural Communication and presentation (1)	0	6								X		X			X					X	
		ENGI 203: Ethics and Communication Skills	3	0																			
		MATH 101: Calculus (1)	3	0																			
		PHYS 101: General Physics (1)	3	0																			
Year 2	Fall Semester	ARCH 221: Architectural Design (1)	1	9					X	X							X						
		Arch 213: Architecture Communication and presentation (2)	0	3										X			X					X	
		ARCH 241: History and Theory of Architecture (1)	3	0	X										X								
		PROG 112: C++ Programming Language	3	0																			
		ARCH 232: Building Materials	2	3	X											X							
		CIVL 214: Engineering Mechanics	3	0																			X
	Spring Semester	ARCH 201: Computer Applications In Architectural Design (2)	0	6										X	X		X	X					
		ARCH 222: Architectural Design (2)	1	9					X	X							X			X			
		ARCH 341: History and Theory of Architecture (2)	3	0	X		X									X							
		ARCH 335: Building Construction Systems	2	3								X			X					X			
		CIVL 313: Structural Analysis for Architectural Students	3	0																			X
		ARCH ---: Major Core Elective 1	3	0																			
Year 3	Fall Semester	CIVL 369: Surveying and Building Documentation	1	6																			X
		ARCH 321: Architectural design (3)	1	9		X	X				X									X			
		ARCH 345: Theory and Methods of Architectural Design	1	0				X															
		ARCH 342: Islamic Architecture	3	0		X	X																
		ENGB 101: Engineering Workshop	.5	2																			
		ARCH 336: Building Finishing	2	3						X					X					X	X		
		CIVL 324: Concrete and Steel Structure for Architectural Students	3	0																			X
	Spring Semester	ARCH 322: Architectural Design (4)	1	9		X	X				X										X		
		ARCH 563: Landscape Design	1	3		X									X		X				X		
		ARCH 343: Theory of Modern Architecture	3	0		X	X																
		UNIV 118: Citizenship Education	3	0																			
		ARCH 423: Working Drawing	0	6					X		X				X					X	X		
		ARCH ---: Major Core Elective 2	3	0																			
Year 4	Fall Semester	ARCH 421: Architectural Design (5)	1	12				X					X					X						
		ARCH 471: Lighting and Acoustics	2	3											X		X						
		MECH 450: Electro-Mechanical Systems for Architectural Students	3	0																			
		ARCH ---: Major Core Elective 3	3	0																			
		UE ---: University Elective 1	3	0																			
	Spring Semester	ARCH 422: Architectural Design (6)	1	12				X					X	X			X						
		ARCH 456: Conservation of Architectural Heritage	2	0		X	X																
		ARCH 463: Urban Design and Planning	3	0					X							X							
		ARCH 465: Housing	2	0					X				X			X							
		ARCH 451: Specification and contracts	2	0				X													X		
		ARCH ---: Major Core Elective 4	3	0																			
Year 5	Fall Semester	ARCH 542: Graduation Project (1)	1	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		ARCH 452: Quantity Surveying	2	0				X			X										X		
		ARCH ---: Major Core Elective 5	3	0																			
		UE ---: University Elective 2	3	0																			
		UE ---: University Elective 3	3	0																			
		UE ---: University Elective 4	3	0																			
	Spring Semester	ARCH 521: Graduation Project (2)	1	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		ARCH 551: Professional Practice	2	0				X			X										X		
		UR ---: Military Science	3	0																			
		UE ---: University Elective 5	3	0																			
		Total No. of Courses = 61																					

Part Two, Section 3 – Evaluation of Preparatory Education

II.3.1 Student Admissions

The Faculty of Engineering's commitment to non-traditional students, and its unique diversity, is a result of crafting multiple admission and registration methods. Students can apply for the Faculty of Engineering and all of its offered disciplines at the Hashemite University by choosing one of the following registration methods: parallel, regular, and international. Students admitted as "regular," "parallel," or "international" study on the Architectural program.

Regular Program: The admission in the regular program is through The Unified Admission Coordination Unit, which was established and is affiliated with the Higher Education Council in Jordan and coordinates the process of admission of students to the official Jordanian universities, in accordance with the principles laid down by the Council. The main tasks of this unit are developing the standardized admission process, including computerizing the online application process, simplifying and facilitating procedures and processes for students and their parents to reach the highest possible level of satisfaction in the most difficult periods of their scientific life.

Students who are admitted within the regular program are of Jordanian Nationality and are accepted on the basis of competition for the year they have finished their final high school. Specifically, students are accepted according to their GPA in the general secondary school certificate (Unified admission). In which any GPA of less than 80% in the scientific stream is not accepted for admission in any engineering program. For the past academic year, the minimum required GPA for admission in the Architectural program was 85.4%, and the min GPA for this academic year 2020/2021 was 96.4. The Tuition fees for the regular program is 50 JD/Credit Hour (75$/Credit Hour).

Parallel Program: Students accepted on the basis of the Parallel Program are only those Jordanian students who have been excluded from admission through competition (not based on Unified Admission Coordination Unit). The same academic programs, staff, lectures, exams, training opportunities, assessments, rules and regulations, which are applied in the Regular Program, are also applicable in the Parallel Program except for the tuition fees and GPA requirement. For the past academic year, the minimum GPA for admission in the Architectural program was between 85.4% and above 80%. The Tuition fees for the parallel program is 100 JD/Credit Hour (140 $/Credit Hour).

International Program: This program is only made available and applicable to those students who have non-Jordanian nationalities (international students). The international students are admitted to HU on the basis of the International Program, aiming to provide non-Jordanian students with top quality degrees from a highly reputed university. The same academic programs, staff, lectures, exams, training opportunities, assessments, rules and regulations, which are applied in the Regular Program, are also applicable in the International Program except for the tuition fees and the GPA, where minimum admitted GPA after high school certification equivalent has certain special requirements. For example, for the past academic semester, the minimum required GPA for admission in the Architectural program was 95.8%. The Tuition fees for the international program is 120JD/Credit Hour (150 $/Credit Hour).

II.3.2 Transfer Students and Transfer Courses

Transfer students and transfer credit applications are submitted to the admission and registration unit at the Hashemite University (HU). These applications are, in turn, forwarded to the Dean of the faculty to which the student is applying for a transfer, to assess the number of the credit hours transfer based on the study plan of the transfer program.

1) In general, for a student to transfer to a bachelor's program (including Architectural Program and all other engineering programs) at HU, the following conditions should be satisfied:
   - There must be available within the program of study to which the student wants to transfer.

- The transferring student must have passed 30 credit hours (counting towards their GPA) prior to transfer to HU.
- The grand total of the general secondary Jordanian certificate must be accepted with respect to the transfer program.
- Official transcript and course descriptions of work done at all institutions previously attended.
- The cumulative grade point average from the previous institutions must meet at least the minimum academic retention level set by HU for each classification.
- If a student is successfully admitted to a bachelor's program at HU, through a comparison of course descriptions provided by transcript or college catalogs, a determination is made regarding the appropriate courses to which transfer credit is applicable. All previous courses must have received a grade of C- (or 60%) or better to be accepted for transfer credit. It is important to mention that such courses will not be counted toward the student final achieved GPA at the Hashemite University.
- Prerequisites must have been met for all substitution courses.
- All previous college work is evaluated by the registrar to determine its relationship to the requirements of The Architectural Programs.
- Transfer coursework must be at the same year level and must be degree applicable by the issuing institution.
- All courses that are being transferred to replace courses those contribute to the fulfillment of NAAB SPCs will be carefully evaluated according to course descriptions and syllabi from the HU Architectural Program quality and appropriateness and evidence of work that meets NAAB criteria for the designated SPC(s) in levels of achievement & understanding. These materials are then reviewed by the faculty teaching the required course in the HU Architectural Program to ensure parity.
- If a question arises about the appropriateness of coursework for transfer, the dean of the academic unit in which the program is housed is the final authority.
- International students coming from outside of Jordan, or Jordanian students studying at a private university may be admitted to the international program at HU to transfer.
- Students must not have been expelled from the transfer University for disciplinary or educational reasons.

2) Students allowed into the bridging program should satisfy the previous conditions as listed above with possible additional requirements as announced by the Jordanian Council of Higher Education, in addition to providing the following documents:
   - Copies of their College Degree and the transcripts certified by the Ministry of Higher Education and Scientific Research.
   - An equivalence certificate of non-Jordanian College degrees issued by the Ministry of Higher Education and Scientific Research in Jordan.
   - A certified course description for the courses enlisted in the transcript that can be considered to obtain advanced standing.

3) Students who want to study courses at other universities must do the following:
   - Fill in a course transfer form and submit it to the program chair.
   - The chair consults the faculty who teaches the course.
   - The faculty reviews the syllabus of the transfer course in light of the program course syllabus and checks the equivalency of the syllabus and credits.
   - The chair approves the equivalency and signs the transfer form.
   - The student should then get the approval of the vice dean.
   - The student submits the form to the university registrar office and gets an official acceptance letter to study the course at the specified university.
   - After studying the course, the student should get an official completion letter and the transcript from the registrar office of the university where the transfer course was completed.
   - Finally, the student should submit the official completion letter to the HU registrar office.
   - The student can study only 15 Credit Hours in other universities.
   - The student can study only one design course at another university.
   - In the case of a student transferring from any HU department to the Architectural Department (i.e., internal transfer), the student can transfer successfully completed HU courses along with

the grades as long as they are part of the Architectural curriculum.

II.3.3 Evaluating Student Progress

The Architectural curriculum was designed to make sure that students' progress through the professional curriculum only after adequate education in the liberal arts and introductory architecture courses. This format is also intended to meet the Department's level of standards and NAAB's performance criteria. All HU University curricula are required to meet CORE requirements, and student progress in these courses is monitored by the Admission and Registration Unit as well as the Architectural Department. The prerequisite requirements for certain specialized courses such as design studios, structures, architectural history, and others, further ensures appropriate progress through the curriculum and ensures the development of competencies required by the program's educational intent and level standards. Students are encouraged to complete eight weeks of practical training before entering into the fifth and final year. This offers the student a certain level of professional maturity, which brings about a higher level of appreciation for, and insight about the issues presented in the professional practice courses and the final year studios. For required architecture (ARCH) courses, curriculum-wide standards were developed to provide overall guidance for the curriculum and individual courses. However, and more importantly, they were designed so that the students are taught the various concepts and principles of architecture and the design process in a gradually building process. An attempt is made to introduce as many concepts and principles of architecture as early as possible. The knowledge gained at the fundamental level is then developed through a reiterative process to - understanding and - ability levels. The course syllabi, descriptions, and sequencing are structured to reflect that philosophy, and the students are given assignments to test their levels of knowledge.

Part Two, Section 4 – Public Information

II.4.1Statement on NAAB International Certification Degrees

II.4.2 Access to NAAB Conditions and Procedures for International Certification

II.4.3 Access to Career Development Information

II.4.4 Public Access to Program Self-Evaluation Reports and Visiting Team Reports

II.4.5 Admissions and Advising

Personal advising: The deanship of students' affairs at HU offers workshops and counseling services meeting a wide variety of student needs including crisis intervention, medical and psychiatric referral, career counseling, study skills counseling, time management, concentration, and memory improvement, exam preparation and test-taking, and managing test anxiety.

Advising and Career Guidance

The Architecture program, its administrators, faculty, and staff, are committed to student success. All parties work diligently toward meaningful student support from the first visit to campus as a prospective
student through a matriculated student's graduation.

Enrollment Advising: Upon admission and prior to the start of classes, all admitted students are offered orientation sessions. Incoming undergraduate students and their families participate in the university's general freshman orientation program and then continue with special orientation sessions in the Architecture program. Here they are introduced to and work with a dedicated professional academic advisor.

Students are introduced to the curriculum during this session, sign up for first-semester classes, and are introduced to their role and responsibilities as advisees. Parents also have an advising session, meeting with program chairs during this period, where questions, from long range to short term, from supplies to curriculum, from campus to study abroad are addressed.

The Architectural Program considers early attention to advising matters as critical to a student's future success, both as it relates to the specificity of a program's demands and to a student's independence and self -reliance. Therefore, the Architectural Department has established an Academic Advising Committee (AAC), which is primarily responsible for overseeing the department's academic advising process at the beginning of each academic year. The AAC is composed of all department faculty members. The AAC allocates a group of students to each faculty member. Each student sees their advisor before registration and whenever he/she needs any advice on matters related to his/her student life. Additionally, The Architectural Program chairs, Dr. Ahmad AlHusban, are also available as advisors when needed.

Functions of the Academic Advisor: Academic advisors provide educational counseling for students. The academic advisor's primary responsibility is to evaluate the student's study plan to ensure it will satisfy the college and university requirements while it meets each student's specific needs. To be effective, the advisor must recognize that each student has different abilities, interests, aspirations, needs, experiences, and problems so that the advisor approach in dealing with students can be different from one student to another.

To fulfill this requirement, general advising duties can be stated as follows:

- Advice and help students in early registration and registration formalities.
- Provide guidance in dropping and adding courses and in improving academic performance.
- Ensure that the student understands academic regulations and follow their academic program in sequential order.
- Follow-up on the students' academic progress, especially those who are not in good academic standing. The advisor will seek to meet these academically weak students (whose GPA <2 out of 4) and recommends the proper course of action they should take to improve their GPA.
- Develop and provide a trusting and respectful environment that allows students to define, develop, and achieve their realistic goals.
- Assist students in gaining learning, communication, decision making, and leadership skills.
- Make students aware of how one's own academic experiences connect to one's life.
- Motivate students' sense of responsibility towards their educational plans and achievements.
- Understand and effectively communicate to students the department policies and procedures, graduation requirements, and educational requirements.
- Guide the students to effectively pursue and benefit from the university and faculty of engineering education and entertainment resources.

Guidelines for Advisees: The student is highly encouraged to meet with the academic advisor every semester prior to or during the registration week. The goal of this meeting is to review the student academic requirements. The student can also take an appointment to meet individually with the academic advisor to discuss the program of study, career plans, or any academic problems encountered by the student.

Counseling services: HU believes in the importance of student counseling and guidance to achieve the utmost adaptation and integration of students into campus life. Proper guidance and counseling lead to a healthy, mature, emotionally balanced personality leading to the best academic achievement. Many issues and concerns are addressed at HU. Those issues include communication/assertiveness skills, eating disorders or eating concerns, physical/emotional abuse, coping with stress, depression thoughts, coping with loss-grief, conflict resolution, post-trauma debriefing, anxiety/panic/phobias, and homesickness/loneliness.

The following counseling services are provided to all HU students through the unit of student care and services at the deanship of student affairs.

- Help new students engage in the HU community, adjust to university student life, and overcome any obstacles.
- Provide guidance and support for students socially, psychologically, and academically.
- Addressing various student problems and issues by solving them and reducing their impact.
- Provide specialized assistance for students with learning and/or physical disabilities to engage in the HU community and overcome any obstacle that might arise throughout their time at HU.
- Provide personal and group therapy for students.
- Perform training and personal development seminars for students to ensure positive attitudes and strength of character.
- Provide counseling brochures and booklets for students.
- Organize preventative workshops, lectures, seminars, and training for students to raise their awareness, resilience and mitigate any possible hardship.

II.4.6 Student Financial Information

Tuition fees in JDs for the Bachelor's degree in Architecture

The additional fees required for the Bachelor's degree are as follows:

Item	Regular Program (JDs)	Parallel Program (JDs)	International Program (JDs)
Admission fees (one time upon acceptance)	80.0	80.0	80.0
Non-refundable insurances (one time upon acceptance)	10.0	55.0	55.0
Placement test fees (one time upon acceptance)	15.0	15.0	15.0
Semester registration fees	30.0	135.0	135.0
Computer usage fee for each semester	10.0	35.0	35.0
Total	80.0 (upon registration) 40.0 (each semester)	320.0 (upon registration) 170.0 (each semester)	320.0 (upon registration) 170.0 (each semester)
Graduation fees	35.0	35.0	35.0

Credit hours fees for the Bachelor's degree in Architecture are as follows:

Minimum Admission Rate (High school average)	Regular Program (JDs)	Parallel Program (JDs)		International Program (JDs)
	Jordanian students with Jordanian high school certificate	Jordanian students with Jordanian high school certificate	Jordanian students who with Non-Jordanian high school certificate	Non-Jordanian students
80%	50.0	90.0	100.0	120.0

Financial aid and Scholarships: There are a variety of financial aids and scholarships provided by both university and external sources. Most scholarships are awarded based on academic merit, and some are also based on financial need. The university works on the principle of equal opportunities and provides fair mechanisms for financial support to students. Applying for the grants and funding

opportunities is done according to the donors' specific procedures, which ensure that the grants are given to the students who are most in need and who meet the terms of the grant.
Additionally, the university and the Ministry of Higher Education offer student support loans for those in need and cannot afford to cover the tuition fees at the beginning of the semesters. Loans are typically offered at the beginning of the academic year or the beginning of the semesters, targeting a broad spectrum of students from all faculties and specialties.

Following is a list of donors and financial aid opportunities available for The Hashemite University students:

Fund / Scholarship	Number of university students benefiting from the scholarship	Donor
Royal fund scholarship	2807	External
Special Needs	44	The Hashemite University
University Employees	281	The Hashemite University
Arab Bank	3	External
Ministry of Higher Education / Non-Jordanians	68	Ministry of Higher Education
Arab Cultural Association	2	External
Promising Hands Association	8	External
Military Training Directorate	1	External
Royal Court Grants	140	The Hashemite University
The Jordanian Hashemite Fund for Development	18	Ministry of Higher Education
Student Support Grants (45 credit hours fees)	848	Ministry of Higher Education
Student Support Loans (45 credit hours fees)	2211	Ministry of Higher Education
Princess Mona Fund (Credit hours fees)	16	Ministry of Higher Education
First Ranked Students on the Governorate Levels	74	Ministry of Higher Education
Jordan Phosphate Mines Company	5	External
University Employees (other universities)	9	The Hashemite University
Queen Rania Award Scholarship	7	The Hashemite University
Al-Aman Fund for the Future of Orphans	50	External
Martyrs and Wounded in the Armed Forces	670	The Hashemite University
Royal Air Force Command - Training Directorate	5	External
Elia Nuqul Foundation Association	9	External
Employees of the Ministry of Education	1376	External
Saudi Arabia Consulate	3	External
Poverty Pockets Schools	68	Ministry of Higher Education

Petra Development and Tourism Region Authority	4	External
Embassy of Kuwait	102	External
Royal Medical Services	4	External
Top Ranked Students in the Jordanian High School Certificate	7	Ministry of Higher Education
Prince Hassan Award	1	Ministry of Higher Education
Noor Al Hussein Foundation	7	External
Central Bank of Jordan	1	External
Kuwaiti Scholarship	Number not available	The Hashemite University
Student Employment	Number not available	The Hashemite University
Student Support Fund	Number not available	The Hashemite University

Instructions for loans provided at the Hashemite University

Loans granted to the students aim to encourage them to continue their studies at the university.

- Quarterly or annual loans are paid for students registered at the Hashemite University to obtain a university degree, as the committee deems appropriate according to the following conditions:

1. The student provides proof of his need for the fund in the match with the criteria set by the committee.
2. The student applicant should not be sponsored by an official entity.
3. The student does not benefit from other scholarships or funds.
4. The student is not an employee or receives a salary from any official entity.
5. The student has enrolled in the university for at least one academic semester.
6. The student has not been issued any disciplinary penalties.

- The applicant student provides a financial guarantor to sign the bills of exchange for the amount borrowed based on the guarantee and the value of the amount borrowed and determined by the committee.

- Repayment of the loan begins six months after graduation, subject to the capability of the graduate. The committee may postpone repayment for a period upon a request from the beneficiary if it is satisfied with the reasons for that.

- The borrowed amount is to be paid in monthly installments, the value of which is determined by the committee.

The following are details about a group of grants and funding opportunities offered by the university.

Student employment: The university offers students working opportunities while enrolled in their study programs as part of its policy to support students to help them cover their study expenses, provided that it does not conflict with the times of lectures. Students who are subject to the conditions are distributed among the university's various departments according to their needs and in line with students' preferences and interests. Students are employed during the first and second semesters of each academic year and within the following conditions:

1. The student studies at his own expense.
2. The student has enrolled in the university for at least one academic semester.
3. The student has not been issued any disciplinary penalties.
4. The student's cumulative average is not less than 2.00 points.

Student Support Fund: The Fund receives, studies, and follows up requests for refunds of loans for needy students. Requests are applied for during the first and second academic semesters of each academic year at rates ranging from (60% to 90%) and within the following conditions:

1. The student studies at his own expense.
2. The student has enrolled in the university for at least one academic semester.
3. The student has not been issued any disciplinary penalties.
4. The student's cumulative average is not less than 2.00 points.
5. The student provides proof of his need for the fund.

The Jordan Dinar (JD) Initiative: Students are granted financial aid through the JD initiative. This is offered quarterly and within the following conditions:

1. The student is registered for the semester in which he/she applies to benefit from the initiative.
2. The student has not been issued any disciplinary penalties.
3. Submit a certificate of good behavior signed by the Dean of Student Affairs.
4. The student provides proof of his need for financial aid.
5. The student does not benefit from other scholarships or funds or has been financially supported by any party.
6. The student is in his second academic year or above.
7. To benefit from the amounts granted in the same semester in which the student applies for the initiative.
8. Priority is given to students who have not previously benefited from financial support.

Supplemental Information

FACULTY RÉSUMÉS

Name: Shaher Moh'd Rababeh

Courses Taught: (Two academic years prior to current visit):

- ARCH 241: History and Theory of Architecture 1
- ARCH 341: History and Theory of Architecture 2
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

B. Arch.,	Yarmouk University, Jordan, 1987.
Ms. Arch.,	University of Oxford, UK, 2002.
Ph.D.,	University of Oxford, UK, 2005.

Teaching Experience:

- Teaching Assistant — University of Jordan, Jordan, 1995- 1996.
  Assistant Professor — Queen Rania Institute of Tourism and Heritage, The Hashemite University, Jordan, 2005-2006.
- Associate Professor — Architectural Department, The Hashemite University, Jordan, 2006-present.

Professional Experience:

- Architect, Director of Al-Madineh Engineering Office (Owner), Irbid, Jordan, 1987 – 2000.
- Building arbitrator in the Government Courts of Jordan, 1992-2000.
- Chairman of Architectural Department, Engineering Faculty, the Hashemite University, Jordan, 2006-2011.
- Head of Department of Engineering Projects. The Hashemite University, Jordan, 2006-2011.
- Vice Dean, Faculty of Engineering. The Hashemite University, Jordan, 2011-2012.
- Dean, Faculty of Engineering. The Hashemite University, Jordan, 2012- 2016
- Vice President, the Hashemite University, Jordan, 2016-2020.

Published Book:

Rababeh, S. HOW PETRA WAS BUILT: An Analysis of the Construction Techniques of the Nabataean Freestanding Buildings and Rock-cut Monuments in Petra, Jordan. 2005 (Oxford) ISBN: 1-84171-898-x.

Selected Publications and Recent Research:

Rababeh, S., and Al Rabady, R. 2016. Stone Architecture: Stone Dressing in Petra, Jordan. In: Further Studies in the History of Construction: The Proceedings of the Third Annual Conference of the Construction History Society. Cambridge: Queens' College Cambridge, 8-10 April 2016.

Rababeh, S. 2011"The Temples of Zeus and Artemis and Their Relation to the Urban Context of Gerasa", ARAM 23, 177-189, doi 102143/ARAM.23.0.2959656.

Abu Khafajeh, S. and Rababeh, S 2012. "The Silence of Meanings in Conventional Approaches to Cultural Heritage in Jordan: The Exclusion of Contexts and the Marginalisation of the Intangible," in Safeguarding Intangible Cultural Heritage Pp. 71-83.

Rababeh, S. 2010 "Construction Techniques of the Great Temple: How the Great Temple was built." In the Great Temple, Vol. III.

Rababeh, S.; Al Rabady, R.; Abu-Khafajah, S.2014. "Colonnaded Streets within the Roman Cityscape: A 'Spatial' Perspective," in the Journal of Architecture and Urbanism. Vol. 38 (4): 293-305.

Professional Memberships:

Jordanian Engineering Association 1987-present

Name: Shatha Abu-Khafajah

- Courses Taught: (Two academic years prior to current visit):
- ARCH 342: Islamic Architecture
- ARCH 465: Conservation of Architectural Heritage
- ARCH 321: Architectural Design 3
- ARCH 322: Architectural Design 4
- ARCH 563: Landscape Design
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., University of Jordan, Jordan, 1997
- M.A. University of Jordan, Jordan, 2000
- Ph.D., Newcastle University, UK, 2007

Teaching Experience:

- Lecturer Hashemite University, Jordan, 2000-2003
- Assistant Professor The Hashemite University, Jordan, 2007-2015
- Associate Professor The Hashemite University, Jordan, 2015-Present

Professional Experience:

- Architect and designer, Zabalawi and Makawi office, Amman, Jordan, 1997-1999.
- Architect and conservator, University of Jordan, Yajuz Excavation team, Jordan, seasons of 1998-2000
- Library Assistant at the American Center of Oriental Research, Jordan, 1999-2000
- Heritage Consultant in Turath Architecture Company, Wadi Musa development Project, 2013
- Heritage and Conservation Consultant in Edge Architecture Company, Jerash, 2019
- Chairman of Architectural Department, Engineering Faculty, the Hashemite University, Jordan, 2016-2017

Selected Publications and Recent Research:

Badran, A., Abu-Khafajah, S., Elliott, S. (2020) Community Heritage in the Arab World: Value and Practices. London: Springer.

Abu-Khafajah, S. (2017) Engaging Heritage, Engaging Communities: An Interview. In Onciul, Bryony; Stefano, Michelle, L. and Hawke, Stephanie (eds.) Engaging Heritage, Engaging Communities. 113-118. Boydell and Brewer: London

Abu-Khafajah, S., Al Rabady, R., Rababeh, S., Al Tamony, F. (2015). Hands-On Heritage! Establishing Soft Authority over Heritage through Architectural Experiment: A Case Study from Jordan. Public Archaeology 14 (3), 191-213.

Abu-Khafajah, S., Al Rabady, R., Rababeh, S., (2015) Urban heritage 'space' under neoliberal development: A tale of a Jordanian Plaza. International Journal of Heritage Studies 21(5), 441-459.

Abu-Khafajah, S.; Al Rabady, R. (2013) The 'Jordanian' Roman Complex: Reinventing Urban Landscape to Accommodate Globalization. Near Eastern Archaeology 76 (3):186-192.

Professional Memberships:

Jordanian Engineering Association 1997-present

Name: Rama Ibrahim Al Rabady

Courses Taught: (Two academic years prior to current visit):

- ARCH 321: Architectural Design 3
- ARCH 343: Theory of Modern Architecture
- ARCH 456: Conservation of Architectural Heritage
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 1994
- Ms. Arch., University of Jordan, Jordan, 2002
- Ph.D., Texas A&M University, College Station, TX, USA, 2006

Teaching Experience:

- Assistant Professor Sultan University, Saudi Arabia, 2010- 2011.
- Assistant Professor The Hashemite University, Jordan, 2007-2011.
- Associate Professor The Hashemite University, Jordan, 2014-present.

Professional Experience:

- Architect, designer, Irbid, Jordan, 1994-1997.
- Architect: designer, Amman, Jordan, 1997-2003.
- Chairman of Architectural Department, Engineering Faculty, the Hashemite University, Jordan, 2011-2015

Selected Publications and Recent Research:

Rababeh, S., and Al Rabady, R. 2016. Stone Architecture: Stone Dressing in Petra, Jordan. In: Further Studies in the History of Construction: The Proceedings of the Third Annual Conference of the Construction History Society. Cambridge: Queens' College Cambridge, 8-10 April 2016.

Al Rabady, R. Abu Khafajah, S. 2015. 'Send in the Clown': Re-inventing Jordan's Downtowns in Space and Time, Case of Amman. Urban Design International, Vol. 20:1-11.

Abu-Khafajah, S.; Al Rabady, R.; Rababeh, S. 2015. "Urban heritage 'space' Under Neoliberal Development: a Tale of a Jordanian Plaza," in International Journal of Heritage Studies, Vol. 21 (5), pages 441-459.

Al Rabady, R.; Rababeh, S.; Abu-Khafajah, S. 2014. "Urban Heritage Governance within the Context of Emerging Decentralization Discourses in Jordan," in HabitatInternational, Vol. 42: 253-263.

Rababeh, S.; Al Rabady, R.; Abu-Khafajah, S.2014. "Colonnaded Streets within the Roman Cityscape: A 'Spatial' Perspective," in the Journal of Architecture and Urbanism. Vol. 38 (4): 293-305.

Professional Memberships:

Jordanian Engineering Association 1994-present

Name: Ahmad AlHusban

Courses Taught: (Two academic years prior to current visit):

- ARCH 345: Theory and Methods of Architectural Design
- ARCH 423: Working Drawing
- ARCH 421: Architectural Design 5
- ARCH 422: Architectural Design 6
- ARCH 451: Specification and Contracts
- ARCH 542: Graduation Project (1)
- ARCH 542: Quantity Surveying
- ARCH 521: Graduation Project (2)
- ARCH 551: Professional Practice

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 1994
- Ms. Arch., Jordan University of Science and Technology, Jordan, 2007
- Ph.D., Washington State University, USA, 2012

Teaching Experience:

- Lecturer Al al Bayt University, Jordan, 2003-2009.
- Assistant Professor The Hashemite University, Jordan, 2012-present

Professional Experience:

- Architect, designer, and consultant, Engineer Mohammed Awidat Office, Mafraq, Jordan, 1994-1995.
- Architect: designer and consultant, EMCO Engineering Consultants, RAK, UAE, 1995-1998.
- Outside Plant Engineer Senior Supervisor/Project Manager, Lucent Technologies Inc. (UAE Branch), UAE (Lead Engineer, OSP manager), 1998-2003
- Design and supervision of Al Al-Bayt University Eastern Gate, 2007-2009
- Assistant Dean for Industrial Outreach and training, Engineering Faculty, the Hashemite University, Jordan, 2015-2016
- Assistant Dean for Allied Engineering Sciences, Engineering Faculty, the Hashemite University, Jordan, 2016-2017
- Chairman of Architectural Department, Engineering Faculty, the Hashemite University, Jordan, 2017-present

Selected Publications and Recent Research:

Abell, J., Alhusban, A., Alhusban, S., & Lurasi, S. (2013). Habitat, housing social connectivity to promote social well-being. Design & Nature and Ecodynamics, 8(4), 356-371. DOI: 10.2495/DNE-V8-N4-356-371.

Al Husban, S. A., Al Husban, A. A., & Al Betawi, Y. (2018). The impact of the cultural beliefs on forming and designing spatial organizations, space hierarchy, and privacy of detached houses and apartments in Jordan. Space and Culture, (), -. https://doi.org/10.1177/1206331218791934.

Al Husban, A. A., Al Husban, S. A., & Al Betawi, Y. (2016). Implementing the Competences-Based Students-Center Learning Approach in Architectural Design Education Based on the T MEDA Pilot Architectural Program that Implemented at the Hashemite University, Jordan. Tuning Journal for Higher Education, 4(1), 43-98. DOI: http://dx.doi.org/10.18543/tjhe-4(1)-2016pp43-98.

Al Husban, A. A., Al Husban, S. A., & Al Betawi, Y. (2019). The degree of the Hashemite university students' desires, needs, and satisfaction with their campus urban design. Journal of Place Management and Development, https://doi.org/10.1108/JPMD-08-2018-0062

Professional Memberships:

Jordanian Engineering Association 1994-present

Name: Yamen Al-Betawi

Courses Taught: (Two academic years prior to current visit):

- ARCH 221: Architecture Design 1
- ARCH 222: Architecture Design 2
- ARCH 321: Architectural Design 3
- ARCH 322: Architectural Design 4
- ARCH 343: Theories of Modern Architecture
- ARCH 423: Working Drawings
- ARCH 463: Urban Planning & Design
- ARCH 465: Housing
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 2001
- Ms. Arch., Jordan University of Science and Technology, Jordan, 2004
- Ph.D., Cardiff University, UK, 2013

Teaching Experience:

- Teaching Assistant Jordan University of Science & Technology, Jordan, 2003.
- Part-time Lecturer Jordan University of Science & Technology, Jordan, 2005.
- Assistant Professor The Hashemite University, Jordan, 2013-present

Professional Experience:

- Chief of the Technical Committee for the Hashemite University Employees' Housing project. The Hashemite University, Zarqa, Jordan, 2019
- Architect & Urban Planner. Amman Institute for Urban Development, Amman, Jordan, 2009
- Architect. Bitar Consultants Architects, Engineers, and Project Managers, Amman, Jordan, 2004-2009.
- Short Term Consultant. Transport & Urban Development Department - The World Bank, Amman, Jordan, 2004.
- Architect. Jadarah Consultant Engineers, Irbid, Jordan, 2002-2004

Selected Publications and Recent Research:

Hikmat H. Ali, Yamen N. Al-Betawi & Hadeel S. Al-Qudah. (2019). Effects of urban form on social sustainability - A case study of Irbid, Jordan. International Journal of Urban Sustainable Development, https://www.tandfonline.com/doi/full/10.1080/19463138.2019.1590367

Al Husban, A. A., Al Husban, S. A., & Al-Betawi, Y. (2019). The degree of the Hashemite university students' desires, needs, and satisfaction with their campus urban design. Journal of Place Management and Development, https://doi.org/10.1108/JPMD-08-2018-0062

Al Husban, S. A., Al Husban, A. A., & Al-Betawi, Y. (2018). The impact of the cultural beliefs on forming and designing spatial organizations, space hierarchy, and privacy of detached houses and apartments in Jordan. Space and Culture, (), -. https://doi.org/10.1177/1206331218791934.

Al Husban, A. A., Al Husban, S. A., & Al-Betawi, Y. (2016). Implementing the Competences-Based Students-Center Learning Approach in Architectural Design Education Based on the T MEDA Pilot Architectural Program that Implemented at the Hashemite University, Jordan. Tuning Journal for Higher Education, 4(1), 43-98. DOI: http://dx.doi.org/10.18543/tjhe-4(1)-2016pp43-98.

Hikmat Ali, Fuad Malkawi & Yamen Al-Betawi**.** (2009). Quality of life in cities: Setting up criteria for Amman-Jordan. Social Indicators Research, 93 (2): 407-432.

Professional Memberships:

Jordanian Engineering Association 2001-present

Name: Umaima Al Aqtash

Courses Taught: (Two academic years prior to current visit):

- ARCH 321: Architectural Design 3
- ARCH 322: Architectural Design 4
- ARCH 336: Building Finishing
- ARCH 423: Working Drawing
- ARCH 542: Graduation Project (1)
- ARCH452: Quantity Surveying
- ARCH 521: Graduation Project (2)
- ARCH 551: Professional Practice

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 2000
- Ms. CE., New Mexico State University, USA, 2008
- Ph.D., New Mexico State University, USA, 2014

Teaching Experience:

- Assistant Professor The Hashemite University, Jordan, 2015-present

Professional Experience:

- Engineer in Training, Irbid Municipality, Jordan, 2000–2001
- Architectural Designer, Palm Real Estate Company, Amman, Jordan, 2002–2005.

Selected Publications and Recent Research:

- Al Aqtash, U., Bandini, P., and Cooper, S. L. (2017). A numerical approach to model the effect of moisture in adobe masonry walls subjected to in-plane loading. *International Journal of Architectural Heritage*, 11(6), 805-815. DOI: 10.1080/15583058.2017.1298010

Al Aqtash, U., Bandini, P., and Cooper, S. (2017). Effect of moisture on the out-of-plane lateral strength of residential adobe masonry walls. Proc., *Earth USA 2017, 9th Inter. Conf. on Architecture and Construction with Earthen Materials*, Santa Fe, New Mexico, September 29-October 1.

Al Aqtash, U., and Bandini, P. (2015). Prediction of unsaturated shear strength of an adobe soil from the soil-water characteristic curve. *Construction and Building Materials*, 98, 892–899. DOI: 10.1016/j.conbuildmat.2015.07

Wosick, E., Gebremariam, T., Weldon, B., Bandini, P., and Al-Aqtash, U. (2014). Strength characteristics of typical adobe material in the southwestern United States, *9th International Masonry Conference*, Guimarães, Portugal, July 7-9.

Al Aqtash, U., and Bandini, P. Prediction of Unsaturated Shear Strength of an Adobe Soil from the Soil-Water Characteristic Curve. Geo-Poster Student Competition, 2014 Geo-Congress, Atlanta, GA. Poster presentation.

Professional Memberships:

Jordanian Engineering Association 2000-present
American Society of Civil Engineers (ASCE) and the Geo-Institute of ASCE

Name: “Fadael Al-Rahman” Mahmoud Al-Tammoni

Courses Taught: (Two academic years prior to current visit):

- ARCH 121: Basic Design 1
- ARCH 111: Free Hand Drawing
- ARCH 102: Computer Applications In Architectural Design 1
- ARCH 122: Basic Design 2
- ARCH 112: Architectural Communication and Presentation 1
- ARCH 332: Building Materials
- ARCH 336: Building Finishing
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 1997
- Ms. Arch. Jordan University of Science and Technology, Jordan, 2001

Teaching Experience:

Lecturer	Sep 2003 – Jan2007, Jordan University of Science and Technology / Department at Architecture. & Al-al-Bayt University,
Lecturer	Institute of Architecture and Islamic Arts. Feb 2007- present, Hashemite University / Faculty of Engineering / Department of Architectural Engineering.

Professional Experience:

Summer 1996: **June – Sep 1996**, designer at Omar Shatat Architect Office.

Selected Publications and Recent Research:

Hands-On Heritage! Establishing Soft Authority over Heritage through Architectural Experiment: A Case Study from Jordan, Shatha Abu-Khafajah, Rama Al Rabady, Shaher Rababeh & Fadael Al-Rahman Al-Tammoni .Public Archaeology, 14:3,191-213, DOI: 10.1080/14655187.2016.1191924.ISSN:1465-5187 (print) 1753-5530(online) Journal Homepage: http://www.tandfonline.com/loi/ypua20To link to this article: http://dx.doi.org/10.1080/14655187.2016.1191924

Professional Memberships:

Jordanian Engineering Association 1997-present

Name: Lina Shqra

Courses Taught: (Two academic years prior to current visit):

- ARCH 111: Free Hand Drawing
- ARCH 112: Architectural Communication and Presentation (1)
- ARCH 112: Architectural Communication and Presentation (2)
- ARCH 421: Architectural Design (5)
- ARCH 422: Architectural Design (6)
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., Jordan University of Science and Technology, Jordan, 2012
- Ms. Arch., Jordan University of Science and Technology, Jordan, 2016

Teaching Experience:

- Lecturer The Hashemite University, Jordan, 2017-present

Professional Experience:

- Architectural Designer, Historical Gate, and Traditional Market Located in a Heritage Village, UAE – Al Fujairah, Under the Supervision of Prof. Dr. Natheer Abu Obeid (German Jordanian University), 2012-2013
- Architectural Designer, Engineer Ahmad Khanfar Office AK, Zarqa, Jordan, 2012
- Architectural Designer, International Gathering for Engineering Consultancies GEC, Amman, Jordan, 2012-2013.
- Architectural Designer, Bitar Consultants, Architects, Engineers and Project Managers, Amman, Jordan, 2013-2014
- Research Assistant, Supervised by Dr. Ahmed Freewan (Jordan University of Science and Technology), European Union SRTD-II Program, Sustainable Technologies in Buildings, 2015-2016.

Selected Publications and Recent Research:

Freewan, A., Shqra, L. (2018). Analysis of energy and daylight performance of adjustable shading devices in the region with hot summer and cold winter. Advances in Energy Research, 5(4), 289-304. DOI: http://doi.org/10.12989/eri.2017.5.4.289

Professional Memberships:

Jordanian Engineering Association 2012-present

Name: Rabab Muhsen

Courses Taught: (Two academic years prior to current visit):

- ARCH 102: Computer Applications in Architectural Design (1)
- ARCH 241: History and Theory of Architecture (1)
- ARCH 335: Building Construction Systems
- ARCH 421: Architectural Design 5
- ARCH 422: Architectural Design 6
- ARCH 423: Working Drawing
- ARCH 563: Landscape
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., University of Jordan, Jordan, 2003
- Ms. Arch., University of Jordan, Jordan, 2010

Teaching Experience:

- Part-Time Lecturer University of Jordan, Jordan, 2010-2012
- Assistant Lecturer The Hashemite University, Jordan, 2013-present

Professional Experience:

- Supervision Engineer at Municipality of Great Amman, Amman, Jordan, 2003-2004.
- Architect, designer, and consultant, Abbadi & Anani Consulting Engineers, Amman, Jordan, 2004-2010.
- Architect, designer, Senior Supervisor/Project Manager, Abbadi & Anani Consulting Engineers, Amman, Jordan, 2010-2012.
- Design and supervision of Kings" Academy, Extension Buildings, 2009-2010.
- Architect, designer, Senior Supervisor/Project Manager, Partner and Founder, Ahmed Ghannam Consulting Engineers, Amman, Jordan, 2012-2013.
- Assistant Lecturer of Architectural Department, Engineering Faculty, the Hashemite University, Jordan, 2013-present.

Professional Memberships:

Jordanian Engineering Association 2003-present

Name: Haneen AlKhamaiseh

Courses Taught: (Two academic years prior to current visit):

- ARCH 101: Architectural Drawing
- ARCH 102: Computer Applications In Architectural Design 1
- ARCH 112: Architectural Communication and Presentation 1
- ARCH 122: Basic Design 2
- ARCH 201: Computer Applications In Architectural Design 2
- ARCH471: Lighting and Acoustics
- ARCH 563: Landscape Design

Educational Credentials:

- B. Arch., University of Jordan, Jordan, 2010
- Ms. Arch., University of Jordan, Jordan, 2015

Teaching Experience:

- Lecturer The Hashemite University, Jordan, 2015 -present

Professional Experience:

- Architect, lab supervisor, Hashemite University, Al- Zarqa`a, Jordan, 2010-2015.

Professional Memberships:

Jordanian Engineering Association 2010-present

Name: Sara Abu Gharbieh

Courses Taught: (Two academic years prior to current visit):

- ARCH 232: Building Materials
- ARCH 423: Working Drawings
- ARCH 421: Architectural Design 5
- ARCH 451: Specification and Contracts
- ARCH 542: Graduation Project (1)
- ARCH 452: Quantity Surveying
- ARCH 521: Graduation Project (2)
- ARCH 551: Professional Practice
- At GJU: Urban Design Studio
- At GJU: Fundamentals of Design (1)

Educational Credentials:

- BSc. Arch. Engineering, The University of Jordan, Jordan, 1997
- MSc. Arch., Spatial Planning, German-Jordanian University, Jordan, 2019

Teaching Experience:

- Lecturer The Hashemite University, Jordan, 2019-present
- Teaching Assistant German-Jordanian University, Jordan, 2017-2019

Professional Experience:

- Architect, design and supervision, Hebron Municipality, Palestine, 1997-1998.
- Architect: designer, Sigma Consulting Engineers, Jordan, 1998-1999.
- Design & Estimation Engineer, Area Manager for Egypt & Bahrain, Ali Group Middle East's Regional Office, Jordan, 1999-2003.
- Architect: designer, Group for Design & Architectural Research (GDAR), Arch. Tawfeeq Abu Hantash and Arch. Mohammad Khalid, Jordan, 2005-2007.
- Senior design architect, Consolidated Consultants (CC), Architect Jafar Tukan, Jordan, 2007-2009.

Selected Publications and Recent Research:

Abu Gharbieh, S., Al-Tal, R. & Al-Hashimi, E. Analyzing the Spatial Distribution of Private Universities in Jordan Using a Gravity Model. Amman as a Case Study. (under process).

Abu Gharbieh, S., & Abdeljaleel, R. Investigating the Resilience of Amman Neighboorhoods' Services during Covid-19 Pandemic. (under process).

Professional Memberships:

- Jordanian Engineers Association 1997-present
- U.S. Green Building Council (USGBC) 2008-present
- Urban planning committee, architectural committee at Jordanian Engineers Association 2018-present

Name: Majd AlBaik

Courses Taught: (One academic years prior to current visit):

- ARCH 101: Architectural Drawing
- ARCH 111: Free Hand Drawing
- ARCH 112: Architectural Communication and Presentation (1)
- ARCH 213: Architectural Communication and Presentation (1)
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., University of Jordan, Jordan, 2014
- Ms. Arch., University of Jordan, Jordan, 2018

Teaching Experienced:

- Teacher Assistant Applied Science University, Jordan, 2014-2019.
- Lecturer The Hashemite University, Jordan, 2019-present

Professional Experience:

- Architect, Trainee, Bitar Consultants, Amman, Jordan, May, 2013-Agust, 2013.

Professional Memberships:

Jordanian Engineering Association 2014-present

Name: Quasi Al-Khaldi

Courses Taught: (Two academic years prior to current visit):

- ARCH 336: Building Finishing
- ARCH 423: Working Drawing
- ARCH 335: Building Construction Systems
- ARCH 221: Architectural Design 1
- ARCH 222: Architectural Design 2
- ARCH 542: Graduation Project 1
- ARCH 521: Graduation Project 2

Educational Credentials:

- B. Arch., Al-Albayt University, Jordan, 2014
- Ms. Arch., University of Alberta, Canada, 2018

Teaching Experience:

- Teacher Assistant University of Alberta, Canada, 2015-2018.
- Assistant Tutor The Hashemite University, Jordan, 2019-present

Professional Experience:

- Architect, designer, Azmi Shawaqfa office, Al-Mafraq, Jordan, 2013-2014.
- Architect: designer and consultant, Al-AQOAL GROUP- Al-Mafraq, Jordan, 2014-2015.
- Research assistant, University of Alberta, Edmonton, Canada, 2015-2018
- Landscape Coordinator, Royal Construction Group Ltd, Edmonton, Alberta, Canada 2018-2019
- Assistant Tutor, Department of Architectural Engineering, Faculty of Engineering, the Hashemite University, Jordan, 2019-Present

Selected Publications and Recent Research:

Professional Memberships:

Jordanian Engineering Association 2014-present

Name: Dania H. Al-Harasis

Courses Taught: (Two academic years prior to current visit):

- ARCH 101: Architectural Drawing
- ARCH 121: Basic Design (1)
- ARCH 111: Free Hand Drawing
- ARCH 102: Computer Appliccations In Architectural Design (1)
- ARCH 122: Basic Design (2)
- ARCH 213: Architectural Communications and presentation (2)
- ARCH 542: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., University of Jordan, Jordan, 2017
- Ms. Arch., University of Jordan, Jordan, 2019

Teaching Experience:

- Teacher Assistant University of Jordan, Jordan, 2018-2019.
- Full time Lecturer The Hashemite University, Jordan, 2019-Present

Professional Experience:

- Trainee Architect, Panorama Consultants Engineering. Co. IL, Amman, Jordan, 2016.
- Trainee Architect, Farah Architects, Amman, Jordan, 2019.

Selected Publications and Recent Research:

Al-Harasis, D., Abu Omar, Z. & Amireh, O. (2019). Function Follows Phototropism: Understanding lights as a component of urban infrastructure. 7th Annual International Conference on Architecture and Civil Engineering (ACE 2019), 326-330. DOI: 10.5176/2301-394X_ACE19.541.

Amireh, O., Al-Harasis, D., & Abu Omar, Z. (2019). Nomads' Quality of Life; Sustainability, in the Built Environment. 7th Annual International Conference on Architecture and Civil Engineering (ACE 2019), 319-325. DOI: 10.5176/2301-394X_ACE19.351 .

Professional Memberships:

Jordanian Engineering Association 2017-Present

Name: Ruba Odeh

Courses Taught: (Two academic years prior to current visit):

- CIVIL 214: Engineering Mechanics
- CIVIL313: Structural Analysis for Architecture Students
- CIVIL 324: Concrete and Steel Structure for Arch. Students
- CIVIL 369: Surveying and Building Documentation

Educational Credentials:

- B. Civil Engineering — Jordan University of Science and Technology, Jordan, 2005
- Ms. Civil Engineering — Jordan University of Science and Technology, Jordan, 2011

Teaching Experience:

- Part-time Lecturer — Jordan University of Science and Technology, Jordan, 2011-2012.
- Assistant Tutor — The Hashemite University, Jordan, 2012-present

Professional Experience:

- Site Engineer, Salem & Ahmed Shatrat Company for Contracting, Amman, Jordan, 2006-2007.
- Site Engineer, Engineer Burhan Nur establishment for contracting, Amman, Jordan, 2007-2008.

Selected Publications and Recent Research:

Haddad, R., Odeh, R., Ammawi, H., & Ababneh, A. (2013). Thermal Performance of self-compacting concrete: destructive and nondestructive evaluation, 40(12), 1205-1214. Canadian journal of civil Engineering, https://doi.org/10.1139/cjce-2013-0037

Name: Tahani Alkailani

Courses Taught: (Two academic years prior to current visit):

- ARCH 336: Building Finishing
- ARCH 463: Urban Design and Planning
- ARCH 465: Housing
- ARCH 101: Architectural Drawing
- ARCH 341: History and Theory of Architecture(2)
- ARCH 335: Building Construction Systems
- ARCH 542: Graduation Project (1)
- ARCH 563: Landscape Design
- ARCH 232: Building Materials
- ARCH 521: Graduation Project (2)

Educational Credentials:

- BA. Arch., The University of Jordan, Jordan, 1994
- Ms. Arch., Jordan University of Science and Technology, Jordan, 2014

Teaching Experience:

- Teacher Assistant Jordan University of Science and Technology (JUST) 2012 – 2013

Professional Experience:

- Architect, designer: Saud Al Tamimi Office,1995-1996
- Architect, designer: Arab Gathering Office \ Engineers Consultants,1996-1997
- Architect, designer: Engineering Dome Office,1997-1998
- Architect, designer, and consultant: Madaba Engineering Office,1998-2012
- Architect, designer, and consultant: Al-Hakim Engineering Center,2013-2014

Selected Publications and Recent Research:

Construction and demolition waste management assessment in Amman / JUST catalog/ Accession Number: JUST.6195132-2014

Professional Memberships:

Jordanian Engineering Association 1994-present

Name: Shereen AL Yousef

Courses Taught: (Two academic years prior to current visit):

- ARCH 421: Architectural Design 5
- ARCH 422: Architectural Design 6
- ARCH 452: Graduation Project (1)
- ARCH 521: Graduation Project (2)
- ARCH 101: Architectural Drawing
- ARCH 121: Basic Design 1
- ARCH 122: Basic Design 2

Educational Credentials:

- B. Arch., Al Al-Bayt University, Jordan, 2006

Teaching Experience:

- Lab Supervisor The Hashemite University, Jordan, 2007-present

Professional Experience:

Lab Supervisor and teaching assistant, The Hashemite University, Jordan, 2007-present

Selected Publications and Recent Research:

Professional Memberships:

Jordanian Engineering Association 2006-present

Name: Hanin Othman

Courses Taught: Lab Supervisor in different courses, especially Architecture Design Studio

- ARCH 423: Working Drawing
- ARCH 419: Architectural Design 3
- ARCH 420: Architectural Design 4
- ARCH 452: Graduation Project (1)
- ARCH 521: Graduation Project (2)

Educational Credentials:

- B. Arch., The Hashemite University, Jordan, 2013.

Teaching Experience:

- Teaching Assistant The Hashemite University, Jordan, 2014 – 2019

Professional Experience:

- Architect, designer, Ruba Housah For Engineering Co, Amman, Jordan, 2013.

Professional Memberships:

Jordanian Engineering Association 2013 -present

Faculty credentials matrices (see p. 8); see the sample matrix in Appendix 3 of these Conditions.

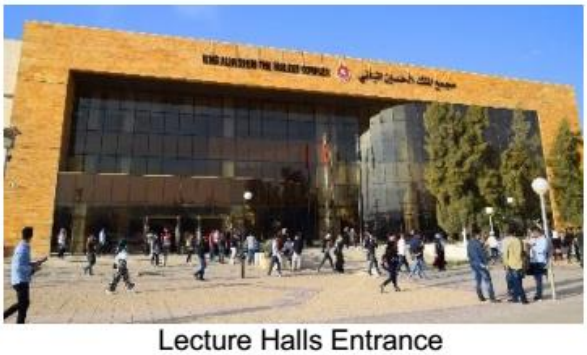
Plans or Images of Physical Resources Assigned to the Program

HU Campus and Architecture Department

HU Gate

Architecture Department

Architectural Department Main Court



Lecture Halls Entrance

Student Center (ZINC

Students Community

Solar Farm

Students Community

Students Community

Architecture Department Facilities

Main theatre

Architectural library


Main hall activity


Main hall activity


Student Center (ZINC)

Student Center (ZINC)

Double volume between design Studios

Main Entrance Lobby


Design Studios

5 Computers Labs.

Interactive Pen Display Lab.


Open Studio


Lecture Halls

Carpentry Workshop

Plumbing Workshop

Smithy Workshop

Turning Workshop

Survey Lab.

Construction Lab.

Administration and Staff Facilities

Chairman Office

Professor Office

Lecturer Office

Meeting Room 2

Meeting Room 1

Department Offices

Lab Supervisor Offices

Secretary Office

Faculty Waiting and Rest Area

HU Prizes

The Order of Independence of First Class (Grand Cordon) 2016

El Hassan bin Talal Award for Scientific Excellence 2015/2018

Emirates Energy Award EEA (GOLD) 2017

Appendix: Course Descriptions

The following is a detailed description of the courses offered to students of the first year for the architectural engineering department at HU.

ENGL 101 – ENGLISH LANGUAGE

1. Course Name: English Language
2. Course Number: ENGL 101
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: Admission

5. Course Description: The English Language Course is an integrated skill development program (reading, writing, speaking, and structure) for the first-year students, presenting a systematically structured linguistic material tailored and presented through the scope of English for Special Purposes (ESP) approach.
This course develops further knowledge of the grammar and of essential vocabulary in order to lead the students to a pre-intermediate level of proficiency. Emphasis is placed on developing listening, speaking, reading, and writing skills through an integrated approach. It aims at exposing students to a wide variety of reading passages, providing them with adequate practice in scanning to find information from texts, guessing meaning from context, and critical thinking. It also provides students with opportunities to practice more challenging language skills before advancing to the next level of English proficiency
Understand the main ideas of a variety of written and spoken texts. Participate effectively in a short conversation using appropriate language. Produce a range of text types in the form of a logical and cohesive paragraph. Demonstrate control of a range of grammatical structures with minor inconsistencies. Select appropriate vocabulary to talk about feelings, opinions, and experiences. Recognize, understand and use a number of phrasal verbs and collocations

6. Course Goals & Objectives:

- Expose students to a variety of challenging and interesting text-types in Reading and structural activities
- Expose students to the most up-to-date English as used on a daily basis.
- Enable students to approach different texts through different strategies and at various levels (parts of speech; sentence parts; positions of adjectives, Adverbs; paragraphs; essays, etc.)

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Asset of vocabulary.
- Analyze the systems of language in use.
- Use English fluently.
- Sit for the test, which is an entrance requirement for admission at universities in the States
- Test which has become a requirement for graduate education in Jordan.

8. Course Evaluation:

First Exam	30%
Second Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

11. Faculty Assigned:

CHEM 107 - BASICS OF GENERAL CHEMISTRY

1. Course Name: Basics of General Chemistry
2. Course Number: CHEM 107
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: Admission

5. Course Description: This course is intended to illustrate the basic principles of modern chemistry. It includes the following topics: the mole concept and chemical calculations, gases and gas laws, states of matter and intermolecular forces, properties of solutions, thermochemistry and chemical thermodynamics, chemical equilibrium in gaseous systems, acid-base equilibrium in aqueous solutions, electrochemistry, and principles of organic chemistry.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Calculate amounts within a chemical reaction,
- Determine physical properties of gases and amount calculations of reactions involving gases,
- Verify types of attraction forces between molecules and explain physical properties relying on these forces,
- Predict the reaction direction of reversible reactions and calculate amounts at equilibrium,
- Identify acids and bases and their properties in aqueous solutions and calculate or determine their strength,
- Calculate heat and energy within a chemical reaction and determine thermodynamic elements that make the reaction favorable, and
- Identify redox reactions involving a transfer of electrons and calculate the potential of the electrical current produced in these reactions at standard and non-standard conditions.

8. Course Evaluation:

1st Exam	30%
2nd Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

Chang, Raymond, Chemistry, 11th Edition, McGraw Hill, 2013.

11. Faculty Assigned: Department of chemistry

CHEM 108 - BASICS OF GENERAL CHEMISTRY LAB

1. Course Name: Basics of General Chemistry Lab
2. Course Number: CHEM 108
3. Course Hours: Credit Hours 1, Contact Hours (1+3)
4. Course Prerequisites: CHEM 107 or concurrent

5. Course Description: This course is a continuation of the general chemistry course. Students will be introduced to principles of chemistry with an emphasis on applications in engineering fields

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Use common and specialized laboratory equipment properly, safely, and efficiently,
- Demonstrate the skills necessary to solve chemical problems, paying careful attention to achieving adequate and appropriate accuracy and precision,
- Solve a variety of problems dealing with the chemical properties of substances, and
- Write in scientific format reports of the theory, experimental method, and results of an analysis.

8. Course Evaluation:

Mid Exam	20%
Reports	20%
Quizzes	10%
Evaluation	10%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources
Principle of practical general chemistry (manual).

11. Faculty Assigned: Department of chemistry

General Notes: Safety glasses must be worn in the laboratory at all times when any chemical procedures are underway. Students must dress in a lab coat at all times. Closed-toed shoes must be worn. Open-toed shoes, "flip-flops," and sandals are prohibited!

PHYS 101 - GENERAL PHYSICS (1)

1. Course Name: General Physics (1)
2. Course Number: PHYS 101
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: Admission

5. Course Description: This course deals with vectors and scalars, kinematics and dynamics of motion of particles, work, and energy, conservation of energy, momentum, impulse, conservation of linear momentum, kinematics, and dynamics of rotational motion.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Distinguish between vectors and scalars and how to deal with vectors correctly,
- Apply Newton's laws for systems in rectilinear motion,
- Aware of the conservation theorems and their importance in solving physical problems, and
- Apply Newton's laws for systems in a circular motion and in rotational motion.

8. Course Evaluation:

First Exam	30%
Second Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

Halliday, David; Resnick, Robert; and Walker, Jearl, *Fundamentals of Physics*, 5th Edition, John Wiley and Sons, 1995.

Sears, F., Zemansky, M., and Young, H., *University Physics,* 7th Edition, Addison Wesley Publishing Company, 1987.

11. Faculty Assigned: Department of Physics

PHYS 103 - GENERAL PHYSICS LAB

1. Course Name: General Physics Lab
2. Course Number: PHYS 103
3. Course Hours: Credit Hours 1, Contact Hours (1+3)
4. Course Prerequisites: PHYS 101 or concurrent

5. Course Description: In this lab, students have an opportunity to see the principles that are studied in the lecture illustrated by simple experiments. They learn simple experimental techniques to observe and collect data. Besides, they use simple methods to analyze and interpret data and learn how to estimate errors quantitatively.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Conduct basic experimental skills by practicing sitting up the experiment, caring about the instruments, and precisely following the procedure to find results with minimum experimental error,
- Estimate experimental errors in measured and derived quantities,
- Do some physical approximations and modelling, by applying physical laws to real problems, and connecting mathematical predictions with experimental results, and
- Show basic communication skills by working in groups on a laboratory experiment.

8. Course Evaluation:

Reports and quizzes	30%
Mid Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

Saleh, N., and Bulos, B., *Physics 103 manual*, 2nd edition, Jordan University, 1983.
Serway, A. R., and Jewett, W. J, *Physics for Scientists and Engineers with Modern Physics*, 9th edition, Thomson.
Halliday, D, Resnick, R, and Walker, J., *Fundamentals of Physics*, 5th edition, John Wiley and Sons.

11. Faculty Assigned: Department of Physics

MATH 101 – CALCULUS (1)

1. Course Name: Calculus (1)
2. Course Number: MATH 101
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: Admission

5. Course Description: Topics include functions (exponential and logarithmic) and limits, continuity of a trigonometric, exponential and inverse function, the derivative of the function, application of derivative (increasing, decreasing, and concavity), integral and application of derivative.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Recognize linear, quadratic, power, polynomial, algebraic, rational, trigonometric, exponential, hyperbolic and logarithmic functions and sketch their graphs
- Calculate the limit of a function at a point numerically and algebraically using appropriate techniques including l'Hospital's rule.
- Find derivatives of products, quotients, composite functions, trigonometric, exponential, hyperbolic, logarithmic and inverse trigonometric functions.
- Use derivatives to find intervals on which the given function is increasing or decreasing, maxima and minima, critical points, intervals of concavity, and inflection points.
- Evaluate integrals by substitution.
- Find the area between two curves and compute volumes of revolution.

8. Course Evaluation:

First Exam	30%
Second Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

Thomas and Finney, *Calculus*, publishing Addison-Wesley Company, 1996.
Sowkowiski, W., *Calculus with Analytic Geometry*, Weber and Sehmidl, 1979.
Harper, Leithold, *Calculus with Analytic Geometry*, Row publishers, 1986.

11. Faculty Assigned: Department of Basic Sciences

PROG 112 – C++ PROGRAMMING LANGUAGE

1. Course Name: C++ Programming Language
2. Course Number: PROG 112
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: Admission

5. Course Description: This course covers the main concepts and principles of Computer Fundamentals and Components, Computer Operation, Elements of Programming, Structured Programming Methods, C++ programming language, Variable Declaration, Assignment, Input/ Output, Control Structures, Functions, Arrays (1-D, 2-D, and character), and pointers.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Edit, compile and execute a simple program,
- Write a program using the C++ arithmetic operators, input/output methods and appropriate manipulators for formatting,
- Write a program using appropriate selection statements such as if, if-else and switch,
- Write a program using appropriate looping statements such as while, for and do-while,
- Write a program using functions with parameters passed by value and by reference,
- Use both one dimensional and multi-dimensional for numeric and character arrays,
- Use pointers and strings in the program,

8. Course Evaluation:

First Exam	30%
Second Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources

Deitel & Deitel, C++ How to program, 4th Edition.
C++ programming : From Problem Analysis to Program Design,
Malik, D S., C++ programming Course Technology, Fourth Edition, Boston, MA : c2009.

11. Faculty Assigned: Department of Basic Sciences

ENGI 203 – ETHICS AND COMMUNICATION SKILLS

1. Course Name: Ethics and Communication Skills
2. Course Number: ENGI 203
3. Course Hours: Credit Hours 3, Contact Hours (3+0)
4. Course Prerequisites: ENGL 101

5. Course Description: This course aims to introduce engineering ethics in theory and practice using a multi-disciplinary approach. The students are exposed to ethical issues that engineers sometimes face in professional practice, to help students think more clearly and deeply about such issues, and to explore resources, strategies, and options for coping with such conflicts. The course will make use of case studies of ethical issues drawn from different fields of engineering. Oral and written communication skills will also be discussed by introducing levels and styles of technical writing. Common errors in usage, documentation, and citation of engineering documents will be addressed.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Function on multidisciplinary teams
- Design and conduct experiments, as well as to analyze and interpret data,
- Understand professional and ethical responsibility
- Communicate effectively
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Understand the nature of professional responsibility and be able to identify the ethical elements in decisions,
- Communicate effectively in oral and written format, and
- Develop an ability to function on multidisciplinary teams**.**

8. Course Evaluation:

First Exam	30%
Second Exam	30%
Final Exam	40%
Total	100%

9. NAAB Student Performance Criteria:
A1. Professional Communication Skills
A4. Technical Documentation

10. Textbooks & Reference Materials/Learning Resources
Alred, M. G., Brusaw, C, and Oliu, W., The Handbook of Technical Writin, St. Martin's Press, 7th edition.
Martin and Roland, Ethics in Engineering, Fourth Edition, Mc Graw Hall.

11. Faculty Assigned: Department of Basic Sciences

ENGI 101 – ENGINEERING WORKSHOP

1. Course Name: Engineering Workshop
2. Course Number: ENG 101
3. Course Hours: Credit Hours 1, Contact Hours (0.5+3)
4. Course Prerequisites: Admission

5. Course Description: This course is designed to provide engineering students with fundamentals of engineering materials and their properties, manufacturing processes, and industrial safety. It also exposes the student to practical training in different workshops in order to gain basic skills.

6. Course Goals & Objectives:

- Apply knowledge of mathematics, science, and engineering,
- Function on multidisciplinary teams,
- Design and conduct experiments, as well as to analyze and interpret data,
- Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- Identify, formulate, and solve engineering problems,
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context, and
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

7. Course Learning Outcomes: At the end of the course, students should be able to:

- Understand the basic safety instructions which should be followed in the engineering workshops,
- Realize the basic measuring devices and tools and learn how to use them,
- Understand the engineering materials basic structure and the formation of grains and grain boundaries, and
- Understand the stress-strain behavior of metals and the principle of mechanical properties related to it.

8. Course Evaluation:

Lab Work	50%
Mid Exam	15%
Final Exam	35%
Total	100%

9. NAAB Student Performance Criteria: Collage Requirement Course (CR): Not Applicable.

10. Textbooks & Reference Materials/Learning Resources
Earle, J. H., Engineering Design Graphics, with AutoCAD, Addison Wesley, 2000.

11. Faculty Assigned: Department of Basic Sciences

Appendixes

Appendix A: Tuning Middle East and North Africa (T-MEDA)

The Architectural Engineering Department at the Hashemite University is a member of the Tuning Middle East and North Africa (T-MEDA) project number 43948-TEMPUS-1-2013-1—ES-TEMPUS-JPCR that had been funded and supported from European Commission under the Tempus program.

Professorial architectural professors, educators, and experts from Middle East, North Africa, and Europe had developed reference points and redesigned Architectural Engineering Degree Program in consultation with different stakeholders (academics, employers, students, and graduates). This program is compatible, comparable, competitive, and transparent with higher education in Europe and other regions. It offers a concrete methodology as a universal tool for modernizing curricula to implement the competency-based approach and learning outcomes at the level of higher architectural institutions.

The Architectural Department at the HU has successfully implemented the T-MEDA pilot program with the aim to develop, monitor, improve, and enhance the architectural education program since the academic year 2015-2016. The implementation process is designed to advance and assure the quality of professional education. A contribution to a full implementation process supporting capacity building: continuous staff development and research into curriculum development, teaching, learning, and assessment (scholarship of teaching and learning). One way of ensuring continuous development and improvement of university-level educational programs is to periodically undertake evaluation procedures in order to pinpoint areas of strength and weakness. Such procedures open the way for well-planned improvement strategies of educational programs. This fact is one reason why accreditation became a crucial and useful development tool for higher education institutions.

Program learning outcomes

The Architectural engineering department at HU implements the students-center learning approach. The objectives of the Bachelor Program in Architectural Engineering at HU are to integrate knowledge-based and skill-based pedagogies in a balanced manner to graduate responsive architects. Therefore, the objectives of the Bachelor of Architectural engineering program are translated into a number of learning outcomes and competences based on the T-MEDA program. These outcomes are directly related to the profession of architecture, the way in which it is practiced, and the knowledge components necessary for such a practice. Competence, according to Tuning, is a broad concept that represents a dynamic combination of knowledge and understanding at different levels, skills and abilities, attitudes, and values. Two types of competencies that every graduate of an architecture program should attain are developed by T-MEDA. The generic list of competences, which are competencies that should be obtained by every university graduate, and the second, was called the specific list of competencies. These are competencies related to the particular field of study. Students are expected to acquire all these competencies in order to achieve acceptable proficiency in their field of study.

T–MEDA Generic Competencies

Ability to:

1. Manage time effectively.
2. Communicate orally and in writing with different audiences.
3. Maintain continuous education.
4. Have critical thinking, analysis, and synthesis.
5. Identify and resolve problems.
6. Make logical decisions.
7. Work in an interdisciplinary team.
8. Lead effectively.

9. Work autonomously.
10. Maintain the quality of work.
11. Act ethically with social responsibility.
12. Apply knowledge in practical situations.
13. Communicate in a second language.
14. Be innovative and creative.
15. Be flexible and adapt to different situations.
16. Empower others.
17. Search for information from various sources.

Commitment to:

18. The protection and preservation of the environment.
19. Human rights.
20. Health and safety procedures.
21. The preservation of cultural heritage and values.

Having:

22. Organizational skills.
23. Sense of dedication.
24. Respect for diversity and multiculturalism.
25. Skills in the use of information and communication technologies.

Being:

26. Initiative.
27. Self-motivated.
28. Assertive.

T-MEDA Subject Specific Competencies in Architecture

1. Appreciation of the social and cultural role of Architecture.
2. Ability to design buildings and/or urban development projects that blend with the surrounding environment and fully satisfy local human, social and cultural requirements at different levels and complexity.
3. Skill in formulating creative and innovative ideas and transforming them into architectural creations and urban planning.
4. Knowledge of history and theory of Architecture and related human sciences and engineering.
5. Awareness of current architectural ideas and practices at local and global levels.
6. Understanding of the ethical issues involved in architectural design and practice.
7. Awareness that investigation and research are essential components of architectural creations.
8. Awareness of the continuous changes in architectural ideas and practices.
9. Ability to think, perceive, and conceive spaces three-dimensionally in different scales.
10. Skill in reconciling all the factors involved in architectural design and urban development.
11. Mastery of the media and tools used for communicating verbally, in writing, and/or volumetrically architectural and urban development ideas and designs.
12. Ability to evaluate, enhance, and preserve architectural and urban local heritage and recognize the importance of its relationship with current architectural developments.
13. Ability to work within or lead constructively interdisciplinary teams.
14. Knowledge of aesthetics and arts, and understanding their role as key factors in the quality of architectural thinking and design.
15. Capacity to design projects assuring environmental, social, cultural, and economic sustainability.
16. Ability to conceive and integrate structural, construction, environmental, and installation systems to architectural designs.

17. Ability to design buildings to accommodate individuals with varying physical abilities.
18. Knowledge and ability to apply the legal framework, safety regulations, and technical codes controlling activities of the profession.
19. Capacity to produce comprehensive construction documents.
20. Capacity for planning, programming, budgeting, and managing architectural projects.
21. Awareness of methods of execution practiced in architectural projects.
22. Ability to develop site plans and landscape designs.
23. Understanding the importance of, and the ability to incorporate new and renewable energy sources in building design.
24. Understanding of the basic principles and appropriate application of construction materials including local ones.
25. Awareness of the importance of client's role in the design process.
26. Ability to analyze and incorporate relevant precedents into architectural design projects.

T-MEDA Architectural Meta-Profile

Architectural meta-profile is formed through a process of combining the generic and specific competences to form a new set that represents all the competencies needed to produce a well-qualified graduate in architectural engineering. The meta-profile is based on the basic lists of competencies. It is categorized under main headings that formulate the main areas or orientations needed for the profession.
Architectural Meta Profile compromising the following five main pillars: Designability, Theoretical background and socio-cultural value, Construction and technical abilities, Professional practice and work ethics, and Personal characteristics.

Design Abilities:

1. Ability to design buildings, sites, and/or urban development projects in a sustainable manner (socially, culturally, economically, environmentally).
2. Ability to think, perceive, and conceive spaces three-dimensionally and communicate verbally in writing, graphically, and/or volumetrically.
3. Skill in formulating creative and innovative ideas and transforming them into architectural creations and urban planning.
4. Ability to design buildings to accommodate individuals with varying physical abilities.
5. Ability to analyze and incorporate relevant precedents into architectural design projects.

Construction and Technological Abilities:

- Ability to conceive and integrate structural, construction, renewable energy systems, and environmental and installation systems to architectural designs.
- Capacity to produce comprehensive construction documents.
- Awareness of methods of execution practiced in architectural projects.
- Understanding of the basic principles and appropriate application of construction materials, including local ones.

Theoretical Background and Socio-cultural Values:

- Appreciation of the social and cultural role of Architecture.
- Knowledge of history and theory of Architecture and related human sciences and engineering.
- Awareness of current architectural ideas and practices at local and global levels.
- Ability to conduct investigation and research in the process of architectural innovation.
- Have critical thinking, analysis, and synthesis.
- Ability to evaluate, enhance, and preserve architectural and urban local heritage and recognize the importance of its relation with current architectural developments.
- Knowledge of aesthetics and arts, and understanding their role as key factors in the quality of architectural thinking and design.

Professional Practice and Work Ethics:

1. Act ethically pertaining issues related to architectural design and practice.
2. Knowledge and ability to apply the legal framework, safety regulations, and technical codes controlling activities of the profession.
3. Capacity for planning, programming, budgeting, and managing architectural projects.
4. Maintain the quality of work.
5. The protection and preservation of the environment.
6. Respect for diversity and multiculturalism.
7. Maintain continuous education.
8. Ability to work within or lead constructively interdisciplinary teams.
9. Communicate in a second language.
10. Demonstrate organizational skills.
11. Possess a high level of interpersonal skills.

Appendix B: Timeline for Achieving NAAB International Certification
(for inclusion in the Institutional Overview for SE visit one)

This sample timeline shows a very compressed, aggressive schedule for achieving NAAB International Certification. There is a three- or four-month (and sometimes more) lag time between the end of each visit and the Board of Directors' action on the next step. Each program should determine its own timeline based on its resources and readiness, and keeping in mind the time limits on scheduling visits prescribed in the SE Procedures.

The architectural program at HU determines this timeline based on its resources and readiness.

Dates	Events	Fees
May 2019	Submit application and Institutional Overview for a visit one (eligibility) to NAAB. Determination of eligibility by NAAB. The Institutional Overview must be received by the NAAB 120 days before visit 1.	
18 July 2019	Visit One—Eligibility: The application documents were reviewed and accepted. Additionally, a team of two NAAB representatives conducted a two-day visit to the program (Prof Cornelius "Kin" DuBois and Prof Michael Buono). The purpose of the visit was to review the NAAB Conditions and Procedures, confirm the commitment of the program to the SE process, and see the physical arrangements for the program and for any visiting team. The Visit One was conducted at the beginning of November 2019.	Visit fee ($8400) plus all expenses for the NAAB team (2 people).
March/April 2020	NAAB Board of Directors approved for visit two.	
August 2020	Assuming board approval of advancement to visit two, the Program Self-Evaluation Report for a visit two must be received by the NAAB 120 days before the visit.	
Nov 2020	Visit Two—Candidacy: Four-day visit by a team of two (one educator, one practitioner).	Visit fee ($8400) plus all expenses for the NAAB team (2 people).
Spring 2021	The decision by NAAB Board of Directors on advancement to visit three.	
June/July 2021	Program Self-Evaluation Report for a visit 3 due to the NAAB office.	
Oct/Nov 2021	Visit Three—NAAB International Certification: Four-day visit by a team of four people	Visit fee ($8400) plus all expenses for NAAB team (4 people)
Dec. 2021/Jan. 2022	NAAB processes report	
Spring 2022	Board of Directors reviews the Visiting Team Report from visit 3 and votes on whether to grant International Certification to the program. International Certification terms begin on January 1 of the year in which visit three occurred. The terms are for six years.	Annual SE fee ($5300) until the next visit cycle to renew SE