



Date: November 14, 2019

Memorandum to the National Architectural Accrediting Board

From: Cornelius “Kin” DuBois, FAIA
Michael J. Buono, FAIA

Subject: Visit One for NAAB International Certification
Jordan University of Science and Technology, Irbid, Jordan
Bachelor of Science in Architecture (169 credit hours)

On July 22, 2019, the Jordan University of Science and Technology submitted an application in support of its intention to seek NAAB International Certification for its Bachelor of Science in Architecture degree. The application was filed under the terms of the 2019 *Procedures for NAAB International Certification*.

Kin DuBois and Michael Buono conducted visit one on November 4-5, 2019. The purpose of visit one is threefold:

- To review the *Conditions and Procedures for NAAB International Certification* with program administrators, faculty, staff, and students.
- To confirm the program’s commitment to achieving the IC designation.
- To review the physical, financial, human, and information resources committed to the program.

Upon completion of the visit, the review team is required to submit a memorandum to the NAAB Board of Directors addressing the following four areas:

1. A review of the resources committed to the program.
2. Commitment of the institution to the plan for achieving NAAB International Certification.
3. Assessment of the program’s readiness for visit two (candidacy).
4. Recommendation to the NAAB board on whether and when to schedule visit two, as well as whether a program representative should complete any specific training or other activity.

Note of Explanation:

1. **A note on the formatting of this report:** Where we have quoted directly from the Institutional Overview provided by Jordan University of Science and Technology, text has been italicized and indented. There are some other passages adapted and amended text into the team narrative, in which case this text is not italicized or otherwise identified.
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1. Overview of Program

The Jordan University of Science and Technology (JUST) was established in 1986 as an autonomous national institute of higher education “with the main objective of producing outstanding professionals in specializations that match the needs of Jordan and the Region.” The Institutional Overview (IO) submitted to the NAAB by JUST states:

JUST is considered today as one of the region’s leading universities in teaching and research. The number of students has increased significantly since the university’s establishment. Today JUST has more than 800 full-time faculty members, with 20,000 undergraduate and 1800 graduate students, in contrast to 2,300 students in the 1986/1987 academic year. JUST comprises more than 5,000 international students of 60 nationalities, rendering it the most cultural-diverse university in Jordan.

The large campus is located on the outskirts and to the east of the city of Irbid, 70 km north of the capital city of Amman. The Faculty of Architecture and Design is one of 12 faculties at the university, which comprises 55 departments offering 42 undergraduate programs and 95 postgraduate programs.

The vision and mission of the university are as follows:

Vision

A pioneer international university in class-quality education; knowledge-making and dissemination; and society leadership and development.

Mission

To provide high quality educational and professional services. To be an essential partner in advancing and propagating knowledge and leading societies to progress and prosperity. To build technological environments that are provocative for creativity, excellence, and innovation. To foster national and international connections and partnerships to prepare specialist education graduates equipped with knowledge and professional skills, to be society leaders who are able to keep learning, believing in diversity and accepting the other, and to effectively contribute to sustainable development.

Following is one of the strategic goals identified by the university:

- *Achieve national and international accreditation in all programs and academic fields.*

College of Architecture and Design

Established in 2008, the College of Architecture and Design began with two departments, architecture and design, and city planning and design. A program was added in 2012 to award a bachelor’s degree in design and visual communication. The current Department of Architecture and Design is essentially a continuation of the Department of Architectural Engineering that was



first established at Yarmouk University in 1979 as a department of the College of Engineering. This college was relocated to a permanent position in JUST in 1987, including the Department of Architecture. In 2008, the decision was made to establish the College of Architecture and Design as an independent faculty. The three-degree programs each have a chair, and the chairs report to the dean of the college. The dean's office also includes a vice dean and assistant dean.

The mission and vision of the Department of Architecture are as follows:

Vision

To be an outstanding center for architecture education and research, that aims at satisfying the national and global market demands by a comprehensive preparation of highly qualified creative resilient professional architects equipped with morals, ethics, knowledge, skills and capabilities.

Mission

- *Preparing highly qualified professional architects with high capacity to conduct all possible tasks in architecture and can serve as agents of national and global economic growth and innovation.*
- *Bridging connections and creating alliances with the industry and activation of social responsibility*
- *Provide an ideal educational environment that provokes creativity and innovation.*
- *Training highly qualified researchers in the various architectural domains.*

The total number of faculty currently is 28, including one full professor, four associate professors, seven assistant professors, one instructor, nine lecturers, and six teaching assistants. Of the total, 10 are male and 18 are female.

Student statistics indicate that 66.8% of students graduate in five years, and an additional 33.1% graduated in 5.5 to seven years.

Curriculum: The curriculum of the Bachelor of Science in Architecture program was amended in 2007 and consists of a total of 169 credit hours, distributed as follows: 20% liberal studies, 60% required architecture courses satisfying the performance criteria, and 20% electives. The program is covered in ten semesters over five years.

Accreditation: The university engages in a three-year cycle for national accreditation and a similar cycle for international accreditation. JUST has a goal to achieve international accreditation/certification for each of its professional programs. Eight engineering programs are accredited by ABET, leaving the architecture degree as the focus for the future.

Students: There are currently 362 architecture students plus 240 in visual communication, 67 in the second master's degree programs, and 5 in urban design. Student resources include a technical writing course and substantial online access through the library to a broad range of information resources, both of which were mentioned at the team's student-only meeting. Although the JUST campus is several miles outside of Irbid, students engage with the community via initiatives such as



a design project in the center of the city. The program has also established a Building Technology collaboration and conference with Civil Engineering.

2. Review of Resources Committed to the Program

a. Physical Resources

Studios and Lecture Rooms: The department has 14 studios for design and other courses; the majority of the studios are located in the College of Architecture, with an additional two studios located in the Complex of Halls, a newly constructed building on campus. There are two lecture rooms, with capacities of 48 and 92, respectively. Additional facilities are available when extra space is required. All lecture rooms are equipped with a projector and drop-down screen and a desktop computer wired to high-speed internet.

Computer Labs: Four computer labs are also available for teaching CAD and other computer courses, three of which are equipped for PCs and one as a Mac lab. The labs are equipped with a projector and drop-down screen, smart boards, and a fixed desktop computer. Software provided includes AutoCAD, 3DS Max, Adobe Photoshop, SketchUp, Google Earth, Microsoft Office, and Movie Maker. The Mac lab also offers Maya.

Offices: The department provides offices for staff and faculty, and there are also administrative offices in the Deanship Wing.

Support Facilities: The department has several labs, including a thermo fluid lab and heat transfer, instrumentation lab, material strength lab, renewable energy lab, building material and construction lab, and solar energy lab. The program also includes a models workshop.

Students use the JUST library, which is approximately 12,500 square meters and can accommodate around 2,500 seated library users at a time. The library is centrally located on the campus.

The Department of Architecture and Design occupies facilities within the Engineering Building complex. The complex was designed in 1985 by the office of Japanese architect Kenzo Tange. It comprises a series of large, square courtyards defined by four-story buildings of a consistent architectural vocabulary but which house facilities for the faculty, administration, and more than 7,000 students in this portion of the campus. During class break and other times, the courtyards become active gathering places for students.

Architecture students are engaged in the display of posters in the corridors of the program and in customizing graphics on student lockers. The corridors serving the studio spaces were also used for displays of student work during our visit.

The visiting team found that the facilities provide adequate support for the program for the pursuit of International Certification.

b. Financial Resources

The annual budget for the university derives mainly from its own resources (tuition and fees, faculty consultations, workshops, and other projects). As reinforced in the team's meeting with the vice president, JUST receives no finding from the state. The budget is distributed among the various faculties and units according to preset criteria. The distribution is approved by the deans' board. The amount allocated to the College of Architecture is then distributed to the three departments based on "justified actual needs." A small portion of the department budget may come at times from endowments from the private sector and from local organizations and companies sponsoring specific events.

Each department's needs are determined by the departmental budget committee appointed by the chair. The committee receives preliminary requests from faculty members and department staff for equipment, supplies, software, and services. The department council meets at the end of October to discuss and prioritize the requests, and a final list of needs is agreed upon. Following approval by the chair, the list is sent to the dean's office for approval and further submittal to the university by mid-November.

The department considers the current annual budget to be adequate. For the fiscal year 2018-2019, the total allocated budget for the college was JD 110,000 (Jordan dinar) or \$154,000, the largest portion of which was allocated to the needs of the Department of Architecture.

Other activities are funded separately from the departmental budget. Funds for support of scientific research are provided from the Deanship of Scientific Research. Support to attend conferences is provided directly by the university.

The evidence and narrative presented during the visit support the description of financial resources in the Institutional Overview. The team therefore found that financial resources were adequate to support the program.

c. Human Resources

The Department of Architecture (DA) has sufficient human resources to support student learning and achievement. Full-time teaching faculty number 28. Twelve of the full-time faculty hold PhDs and ten hold master's degrees. Of those with the PhD degree, one holds the rank of professor, four are associate professors, and seven are assistant professors. Of the ten full-time faculty with master's degrees, one holds the rank of instructor and nine are lecturers. There are also six teaching assistants who hold BSc degrees. Support labs are run by additional staff. The computer labs are supervised by additional staff, but they do not teach and they run the operation and maintenance work.

The department also hires practitioners to teach various courses, studio or support courses, to bring practical skills and knowledge to the students. In addition to Jordanians and other faculty from the region, faculty, the diverse faculty and staff include Korean, German, and American professionals. Eighteen of the faculty are female.

The administration of the College of Architecture and Design consists of the dean, two vice deans, an assistant dean, and the chairs of architecture, city planning and design (who also is one of the vice deans), and design and visual communication. The city planning and design department has four faculty, and the design and visual communication department has seven faculty. There is a very good working relationship between the three programs, with faculty from these programs teaching in the architecture program. Media and design communication courses are a part of the architecture program during the first two years of the program, and urbanism courses are incorporated in the latter three years. The College of Architecture is also working to establish a program in Building Technology.

The DA is in the process of hiring an additional ten PhDs over five years. Since the establishment of the department, it has been a practice to sponsor and support promising students to attend PhD programs, mainly in the United States and United Kingdom, with the expectation and obligation they will return to JUST and join the faculty as tenure-track assistant professors. Currently there are two candidates in the program, and two have been approved to begin their studies in January.

The teaching load is based on academic rank: professor: 9 credits/semester; associate and assistant professor: 12 credits/semester; instructor and lecturer: 15 credits/semester. Academic staff who hold administrative positions will have the following deductions in their loads: dean: 6 credits; other positions: 3 credits.

The teaching faculty to student ratio is 1:20. Within the next two years, because of planned additional hiring, the anticipated faculty to student ratio will be 1:15. Full-time faculty also serve as advisors for the architecture students. Additional staff who have bachelor's or master's of architecture degrees support the students by overseeing the six support labs as well as the four computer labs.

The university has a clear set of policies for faculty appointment, development, promotion, and tenure overseen by the Office of Academic Development and International Outreach. Faculty can utilize up to fifteen days annually to be away from campus for professional development. Longer periods of development through sabbaticals and leave of absences are also permitted. Funding is available for travel and conference participation. In addition to good teaching, publishing in both national and international journals is a significant factor in promotion among the professorial ranks.

The IO provides a description of the university's and the department's policies relative to social equity and social responsibility.

The team found that the human resources were adequate to support the program.

d. Information Resources

The main library at JUST is a relatively new building built in 2012. It is centrally located along the academic spine serving both sides of the campus with the medical facilities on one side and architecture/engineering on the other. It is within close walking distance of the architecture facilities.

JUST Library is about 12,500 square meters, an area that hosts around 2500 seated library users simultaneously. The central location of the library in the heart of the campus makes it highly accessible to all students including architecture students. The strategic plan of JUST library includes the vision of being always distinguished in terms of resources and services and of being a leading core source of cultural and scientific knowledge and thought at the national and regional levels. Therefore, the library avails access to a tremendous collection of printed and electronic materials in all branches of knowledge. Library collections include 195,000 printed books and 50,000 volumes of back issues of scientific journals that cover all fields of knowledge. Moreover, the library has active access to around 433,000 eBooks, and has access to 86 databases including about 103,000 electronic journals in full text. All databases and library materials are available to students and faculty members at the university for free.

The library utilizes the Radio Frequency Identification (RFID) system, which is a circulation/return self-service enabling users to borrow and return library materials automatically and independently. The library also uses a Digital Library Assistant (DLA) tool to arrange and reshelv materials and to search for missing books.

A Document Delivery System (DDS) service allows the electronic department staff to respond within 24 hours by email to a researcher's request for paper copies of published research articles. Library patrons are also able to borrow library material via the Inter-Library Loan (ILL) service from Jordanian public university libraries.

A professional staff provides services to users. The library has a substantial annual budget of \$700, 000 available to update the collection of e-books/e-journals in full text. There are no limitations to obtain and purchase new materials, and all acquisitions come out of the library budget.

The team found that the information resources at JUST were adequate to support the program.

3. Commitment of the Institution to the Plan for Achieving International Certification

The commitment and dedication of JUST to achieve International Certification was evident at every level of the institution with which the visiting team engaged. Although the president was not available during our visit, we met twice with the vice president, Professor Wa'il Tyfour, and learned how the College of Architecture and Design and the B.Sc. of Architecture fit into the perspective and long-range goals of the institution. This was reinforced in a meeting with the dean of academic development and quality assurance center.



The architectural program has a longstanding relationship with the Faculty of Engineering at Just. While the engineering degree programs have achieved ABET accreditation, the university has now focused its energies and attention on the NAAB process and toward the goal of some form of international accreditation or certification for every professional degree program.

This singular focus extends throughout the administration and faculty with whom we met and who facilitated our visit, looking ahead in preparation for a potential visit two. As would be expected, the structuring of the curriculum in anticipation of meeting the NAAB requirements, including the Student Performance Criteria, has required planning over several years before our visit.

The commitment of the administration and faculty was also echoed strongly in the students with whom we met at a student-only meeting. Students were aware of the NAAB Substantial Equivalency (soon to be International Certification) process and had many questions that indicated that they had an understanding of the process and their role in it.

As evidence of community support, the program has formed a Design Consultation Board. The board is made up of representative graduates and professionals, including architects who lead firms in Irbid and Amman, as well as those in related endeavors (such as management of a museum and engagement with sustainable resource planning in Jordan). At the team's meeting with the board, the members spoke highly of the program and were excited about serving in this volunteer role.

In summary, the team found that a strong commitment to the Plan for Achieving International Certification was reflected at all levels at JUST.

4. Readiness of the Program to Complete Visit Two (Candidacy)

Preparation efforts in advance of our current visit one and in anticipation of a visit two were demonstrated by the range of material found in the office of the full professor charged with coordinating the efforts to achieve NAAB International Certification. This material included a set of course notebooks, an initial (and apparently complete) mock-up of an SPC matrix, and graphic tabulations on a wall display indicating the progression of the curriculum from the beginning of the program through completion of the final year. The program began preparations for pursuit of accreditation in 2008, considering several options and then selecting the NAAB process.

It is clear that the efforts to look ahead and prepare for a visit two are shared by members of a dedicated team including the senior leadership (dean, vice deans, program chair, and others).

Preparation for visit two in the fall of 2020 will include the writing and documentation to complete a comprehensive Program Self-Evaluation Report that complies with the requirements of the 2019 *Procedures for NAAB International Certification*. The program also will, no doubt, need to focus considerable effort on collecting, identifying, and categorizing student work (both high and minimum pass) ahead of the visit.



Finally (and this is true for all architecture degree programs everywhere), the program is well advised not to underestimate the time and effort, well before the visit, required to prepare a team room that will serve the purposes of providing clearly defined evidence to the next visiting team. In addition to drawings and models (and digital display, at the option of the program) the course notebooks must include student work appropriate to show student achievement (quizzes, exams, essays) relative to the SPC associated with a particular course.

The timeline included on page 45 of the JUST Institutional Overview indicates, contingent upon a positive decision by the NAAB Board of Directors in the spring of 2020, the submission of a Program Self-Evaluation for visit two in July/August of 2020 and the visit two 120-days later, in October/November 2020. The team concludes that a November visit would be more desirable, affording an extra month for the program to prepare and falling at a better time during the fall semester in which to observe studios.

Accordingly, the visiting team finds that the Architecture Department at the College of Architecture & Design at JUST is prepared to move ahead with preparations for a NAAB visit two.

5. Team Recommendation

The visiting team recommends to the directors of the National Architectural Accreditation Board that the Bachelor of Science of Architecture degree offered by the Department of Architecture at the Jordan University of Science and Technology (JUST) be approved to proceed immediately for a visit two of the NAAB International Certification program. Assuming that the program is prepared to submit the Program Self-Evaluation Report by mid-July 2020, a visit could be planned no less than 120 days following, in November 2020. This would also seem to be an appropriate time period in terms of the stage of the work of students in studios in the fall semester.

The department head of Architecture, Anwar Ibrahim, has expressed a desire to attend any NAAB training available regarding International Certification and team room preparation before visit two. The university will provide all the necessary financial support for these endeavors. The team supports this request.

Acknowledgments

The visiting team would like to express its appreciation to the administration, faculty, staff, and students who met with us during our visit, and for the welcome and hospitality we received. Our thanks extend in particular to Professor Sa'eb A. Khresat, president of the JUST (who, although we were not able to meet with him, set the stage for our visit); Professor Wa'il Tyfour, vice president; and Dr. Hikmat H. Ali, dean of the College of Architecture and Design. We would like to give particular thanks and recognition to the chair of the program, Dr. Anwar F. Ibrahim, for the time, care, and effort he devoted to our visit well as to the dean's team of Vice Dean Dr.



Ahmed Freewan, Vice Dean Dr. Anne Gharaibeh, and Assistant Dean Architect Asmah M. Batiah.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Kin DuBois', is positioned above the name. The signature is fluid and cursive, with a large initial 'K' and 'D'.

Cornelius "Kin" DuBois, FAIA, chair

A handwritten signature in blue ink, appearing to read 'Michael J. Buono', is positioned above the name. The signature is more formal and blocky than the one above, with a large initial 'M' and 'B'.

Michael J. Buono, FAIA