CANADIAN ARCHITECTURAL CERTIFICATION BOARD

CONSEIL CANADIEN DE CERTIFICATION EN ARCHITECTURE

2024 Visiting Team Report

Master of Architecture Program. M. Arch.

Institution: University of Waterloo

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I. Introduction: The CACB Accreditation

The CACB is a national independent non-profit corporation. The directors are elected from individuals nominated by the Canadian Architectural Licensing Authorities (CALA), the Canadian Council of University Schools of Architecture (CCUSA), and the Canadian Architecture Students Association (CASA). The CACB is a decision-making and policy-generating body. It is the sole organization recognized by the architectural profession in Canada to assess the educational qualifications of architecture graduates (*Certification* Program) and to accredit professional degree programs in architecture that are offered by Canadian universities (*Accreditation* Program).

The CACB's head office is in Ottawa, Ontario. It adheres to the principles of fairness, transparency, clarity, and ethical business practices in all of its activities.

By agreement of the licensing authorities (the councils of nine provincial institutes and associations), the CACB was established in 1976 to assess and certify the academic qualifications of individuals holding a professional degree or diploma in architecture who intended to apply for registration. In 1991, the CACB mandate to certify degree credentials was reaffirmed, and its membership was revised to reflect its additional responsibility for accrediting professional degree programs in Canadian university schools of architecture. L'Ordre des Architectes du Québec joined the CACB in 1991 and the Northwest Territories Association of Architects joined in 2001.

Graduation from a CACB-accredited program is the first of three steps (education, experience, and examination) on the path to licensure.

The CACB only accredits *Programs* that are intended by their institution to be professional degrees in architecture that lead to licensure. Professional accreditation of a *Program* means that it has been evaluated by the CACB and substantially meets the educational standards that comprise, as a whole, an appropriate education for an architect.

The CACB only awards accreditation to professional degree *Programs* in architecture. A CACB-accredited professional *Program* in architecture is defined as the totality of a student's post-secondary education culminating in a designated professional university degree, which may be a bachelor of architecture (B.Arch) or a master of architecture (M.Arch) degree.

The *Program*s include:

- a minimum of five years of post-secondary study culminating in a master of architecture degree, which follows a *pre-professional* bachelor's degree, except in Quebec, where the minimum is four years of professional studies following two years of CEGEP;
- a minimum of six years of post-secondary study culminating in a master of architecture degree, which follows a bachelor's degree in any discipline and includes a minimum of three years of professional studies in architecture; or
- a minimum of five years of post-secondary study culminating in a bachelor of architecture degree.

In keeping with the principal of outcome-based *Accreditation*, the CACB does not restrict the structure of a professional *Program* and/or the distribution of its coursework.

The accreditation process requires a self-assessment by the institution or *Program*, an evaluation of the self-assessment by the CACB, and a site visit and review conducted by a team representing the CACB.
The process begins at the school with the preparation of the Architecture Program Report (*APR*). The *APR* identifies and defines the program and its various contexts, responding to the *CACB Conditions and Procedures for*

Accreditation. The *APR* is expected to be useful to the planning process of the school, as well as documentation for the purposes of accreditation.

Upon acceptance of the *APR* by the CACB Board, an accreditation visit is scheduled. The CACB's decision on accreditation is based upon the capability of the program to satisfy the Conditions and Procedures for Accreditation, including the ability of its graduating students to meet the requirements for learning as defined in the Student Performance Criteria. During the visit, the team reviews student work and evaluates it against these requirements. The team also assesses the effectiveness and degree of support available to the architectural program through meetings with the institution's administrators at various levels, architecture and other faculty, students, alumni, and local practitioners.

At the conclusion of the visit, the Visiting Team makes observations and expresses compliments and concerns about the program and its components. It also offers suggestions for program enrichment and makes recommendations, which, in the judgment of the team, are necessary for the program's improvement and continuing re-accreditation. Following the visit, the team writes the following VTR, which is forwarded with a confidential recommendation to the CACB. The CACB then makes a final decision regarding the term of accreditation.

Terms of Accreditation

Term for Initial Accreditation
*Program*s seeking initial *accreditation* must first be granted candidacy status. The maximum period of candidacy status is six years.

*Program*s that achieve initial *accreditation* at any time during the six-year candidacy will receive an initial three-year term, indicating that all major program components and resources are in place. Some additional program development may be necessary and/or deficiencies may need to be corrected. Additionally, to be eligible for CACB certification, students cannot have graduated from the *Program* more than two years prior to the initial *accreditation*.

Terms for Continuing Accreditation

a) Six-year term: Indicates that deficiencies, if any, are minor and that a process to correct these deficiencies is clearly defined and in place. The *Program* is accredited for the full six-year period.

b) Six-year term with a "focused evaluation" at the end of three years: Indicates that significant deficiencies exist in meeting the requirements of the CACB Conditions and Terms for Accreditation; consideration of these deficiencies will form the basis of a focused evaluation. The *Program* is required to report on its particular deficiencies during the third year.

c) Three-year term: Indicates that major deficiencies are affecting the quality of the *Program*, but the intent to correct these deficiencies is clear and attainable. The *Program* is accredited for a full three-year period. If the *Program* receives two consecutive three-year terms of *accreditation*, then the *Program* must achieve a six-year *accreditation* term at the next *accreditation* visit. If the *Program* fails, it will be placed on a two-year probationary term. If the *Program* fails to achieve a six-year term at its subsequent *accreditation* visit, then its *accreditation* shall be revoked.

d) Two-year probationary term: Indicates that CACB deficiencies are severe enough to seriously question the quality of the *Program* and the intent or capability to correct these deficiencies is not evident. A *Program* on probation must show just cause for the continuation of its *accreditation*, and at its next scheduled review, the *Program* must receive at least a three-year term or *accreditation* will

be revoked. If the two-year probationary term is following the sequence described in "c," the *Program* must receive at least a six-year term or its *accreditation* shall be revoked.

e) Revocation of accreditation: Indicates that insufficient progress was made during a two-year probationary term to warrant a full three-year or six-year *accreditation* term. Notwithstanding, the foregoing *accreditation* of any *Program* can be revoked at any time if there is evidence of substantial and persistent non-compliance with the requirements of the CACB Terms and Conditions for Accreditation.

Term for Reinstated Accreditation

Should the accreditation of a *Program* lapse or be revoked, the procedures for reinstatement shall be the same as those applicable to initial candidacy. The term of reinstated *accreditation* is the same as the term of initial *accreditation*. If the *Program* is successful in achieving *accreditation* at any time during the six-year candidacy, the *Program* will receive a three-year term of *accreditation*.

II. Summary of Team Findings

1. Team's General Comments

The Team would like to acknowledge how well it was received by all levels of the University of Waterloo. The clarity of the reporting material, and the open and candid conversations, aided the effective review and evaluation of the Program. The team was very impressed with the collegiality and sense of community that was encountered. The Program has a very strong reputation and well-established experiential learning opportunities. The team recognizes the many initiatives undertaken since the previous visit (2017). The team commends the Program for recovering with renewed energy from the challenges presented by the COVID pandemic.

2. Conditions for Accreditation "met" and "not met": a summary

	Met	Not Met
1. Program Self-Assessment	☑	☐
2. Public Information	☑	☐
3. Equity, Diversity, and Inclusion	☑	☐
4. Student Composition, Well-Being, and Enrichment	☑	☐
5. Faculty and Staff Resources	☑	☐
6. Space and Technology Resources	☑	☐
7. Information Resources	☑	☐
8. Financial Resources	☐	☑
9. Administrative Structure	☑	☐
10. Professional Degrees and Curriculum	☑	☐
11.1. Program Performance Criteria (PPC)		
1. Professional development	☑	☐
2. Design education	☑	☐
3. Global perspectives and environmental stewardship	☑	☐
4. Collaboration, leadership, and community engagement	☑	☐
5. Technical knowledge	☑	☐
6 Breadth of education	☐	☑
11.2. Student Performance Criteria		
A. Design		
A1. Design Theories, Precedents, and Methods	☑	☐
A2. Design Skills	☑	☐
A3. Design Tools	☑	☐
A4. Program Analysis	☐	☑
A5. Site Context and Design	☑	☐
A6. Urban Design	☑	☐
A7. Detail Design	☑	☐
A8. Design Documentation	☑	☐
B. Culture, Communications, and Critical Thinking		
B1. Critical Thinking and Communication	☑	☐
B2. Architectural History	☑	☐
B3. Architectural Theory	☑	☐
B4. Cultural Diversity and Global Perspectives	☑	☐
B5. Ecological Systems	☑	☐
C. Technical Knowledge		
C1. Regulatory Systems	☑	☐
C2. Materials	☑	☐
C3. Structural Systems	☑	☐
C4. Envelope Systems	☑	☐
C5. Environmental Systems	☑	☐

D. Comprehensive Design		
D1. Comprehensive Design	☑	☐
E: Profession al Practice		
E1. The Architectural Profession	☑	☐
E2. Ethical and Legal Responsibilities	☑	☐
E3. Modes of Practice	☑	☐
E4. Professional Contracts	☑	☐
E5. Project Management	☑	☐

3. Program's Progress since the previous site visit (from previous VTR)

Conditions Not Met

6.Human Resource Development
Team Comments: This condition has been met previously through the annual reporting process.

9. Financial Resources
Team Comments: This condition remains unmet. See current Causes for Concern and Team Recommendations.

SPC B3: Site Design
Team Comments: This condition has been met previously through the annual reporting process.

SPC B5: Accessibility
Team Comments: This SPC is no longer a stand-alone requirement. It is now found under SPCs C1 and D1, and is met.

SPC B12: Building Economics and Cost Control
Team Comments: This SPC has been met previously through the annual reporting process.

SPC C3: Technical Documentation
Team Comments: This SPC (now SPC A8) is met.

Causes for Concern

1. The realities of a satellite campus and its relationship to the Faculty of Engineering and University are now evident based on twelve years' experience. An audit of services and resources is essential and should be undertaken by the University as part of introduction of the new budget model. For instance, central services such as co-op, information services, student life, and learning commons need to be reconsidered relative to the program in Cambridge. It should include a weekly presence of university personnel delivering core services.
   Team Comments: While there are still challenges associated with the satellite campus (the Cambridge campus), this is no longer a cause for concern. The institution ensures that a range of services are available to students in Cambridge and is working to ensure fair fees for main campus services that architecture students have difficulty accessing. The creation of a new Associate Vice-president (Academic Operations) in 2023 to oversee resources and capital planning for all Waterloo campuses is commendable. In many ways the Program provides a model for how a satellite unit can be embedded in a community.

2. The School should address the culturally Eurocentric nature of the curriculum, but the Team is encouraged by initiatives focused on First Nations and the immigrant refugee population of Rome.
   Team Comments: This concern is partially met. There is now a required course ARCH 243: Indigenous Practices and new content in various theory courses. The core history courses remain largely Eurocentric in their content.

3. It is not clear how the program tailors the general university guidelines for faculty development to suit the architectural discipline. Moreover, attention needs to be given to creating a university-centred (rather than practice-centred) research trajectory for faculty growth.

Team Comments: The Program has made efforts to address this issue since the last accreditation visit. This is evident in the School of Architecture Addendum (approved October 5, 2018 and revised October 13, 2021) from the Faculty of Engineering (see: https://uwaterloo.ca/engineering/faculty-and-staff/school-architecture-addendum). The document clearly spells the guidelines for performance reviews of Program faculty. Nevertheless, the Program will need to ensure that its research achievements and approaches continue to be understood across the university. This concern has been addressed.

4. The undergraduate curriculum remains too dense, too compact and over-articulated. Sometimes, it has six courses per semester, many of them double-weighted. Not-for-credit professional development modules add to what is already a heavy workload and some are not in alignment with the program's needs.
   Team Comments: The Program has made efforts to reduce the workload for students in the BAS program by eliminating and consolidating several courses. The new workload survey mechanism is one attempt to monitor workloads for students. This concern has been addressed.

5. There is inadequate electrical infrastructure and a lack of space to accommodate the technical and functional demands of the teaching and research program of the School.
   Team Comments: This concern has been addressed through various infrastructure upgrades to the facility.

6. While some of the significant financial challenges reported during the previous visit seem to have been addressed successfully, some issues persist, such as the accumulated, longstanding deficit that continues to impact the School's operations. This is the Team's foremost concern, particularly as the new resource allocation model is being implemented. We understand that there are negotiations ongoing and that they are generally positive. The School needs to carefully position itself so the Faculty of Engineering fully acknowledges its particularities, such as its existence as a satellite campus and the necessity of a low faculty to student ratio in design studios. Resolution of any outstanding financial issues and commitment to a stable and reasonable ongoing operating budget for the School under the new University's resource allocation model are seen as essential to maintaining the quality of its present learning and research environment and the future growth of its programs.
   Team Comments: The financial situation of the Program has not improved significantly since the previous visit in 2017. In a volatile financial climate for universities in Ontario, the Program is still operating an annual deficit that is covered by the university. The lower fees charged to architecture students (relative to other programs in the Faculty of Engineering) and the provincial tuition freeze are two factors that affect the situation. This concern is not met.

4. Program Strengths

1. The students in the Program are admitted through a comprehensive admissions process and are of high calibre. The students are highly motivated and engaged in their educational experience. They have developed numerous student-centred initiatives such as the market, MAP (Mentorship for Architecture Peers), student publication (Galt), and various internal support mechanisms. The sense of community and collegiality amongst students is very impressive.

2. The Prorgam benefits from strong leadership. The recently appointed O'Donovan Director Prof. Maya Przybylski clearly has the strong support of all constituents in the Program. She is positively charting a course for the Program in a thoughtful and inclusive way that fosters

collaboration. The Dean Dr. Mary Wells demonstrates an enthusiastic commitment to the particular needs of the Program and is very knowledgeable of its operations. The Program also has excellent and experienced staff.

3. Faculty hires over the last decade indicate a strong commitment to diversity, research innovation, and teaching. The Program is well-positioned moving forward to address its teaching, research, and administrative obligations. Recent faculty have expressed a high degree of satisfaction regarding the supportive environment that the Program and University provide

4. The Program's commitment to indigenization across the program is an emergent and important initiative. Introducing indigeneity into the curriculum and having an elder present are examples of this.

5. The Cambridge facility is very impressive. The Program possesses generous and high-quality spaces for all activities. In recent years the facility has been adjusted with the inclusion of a multi-faith room, an elder's lodge, and a counselor's office. In particular, the library and workshop spaces provide exceptional amenities for students and staff. There are emerging sets of research-oriented spaces that are important for the realization of the Program's vision. The recent reorganization of gallery spaces (Design at Riverside) and a new curatorial vision are a noticeable improvement.

6. The Program is invested in many programs that engage the local community and region. Regardless of the inherent challenges in operating a satellite unit, the Program is a model that the University could build upon.

7. The Architectural Engineering program is a very promising initiative between units in the Faculty of Engineering. This should result in many collaborative teaching and research opportunities.

8. The comprehensive studio and technical courses are a definite strength of the Program's curriculum. In particular, the Technical Report course is exemplary.

9. The well-established Co-op Program remains a distinguishing feature of the Program's program that appeals to a significant number of applicants. It provides students with the opportunity to curate their initial work experiences and to develop a foundation in architectural practice.

10. The Rome Program remains a cornerstone of the Waterloo educational experience for all students. It is frequently referenced by students as part of why they chose to attend Waterloo Architecture.

5. Causes of Concern and Team's recommendations

1. The Program, Faculty and University have taken steps to ameliorate financial concerns. An external audit in 2022 concluded that the repeated deficit "is mostly, though not entirely a result of insufficient budget allocation," and provided six recommendations requiring actions by the Program, Dean, Provost and Province. While the audit process and resulting intentions are encouraging, the implementation of plans to stabilize the Program's financial situation are not yet evident. These concerns are compounded by a recent Provincial announcement that will limit University funding; a new University budget model with unclear impacts; and fee structures that

charge the Program for main campus services that architecture students have difficulty accessing. Financial Resources was a cause for concern in the 2017 Visiting Report.

2. The team found that the Cultural History and Theory stream provides ambitious content, however, it limits elective choices and the breadth of education. There are ten courses currently required in the stream, including a number of double-weighted courses. A reduction and refinement of this stream would allow for more electives, allowing students to participate in a broader knowledge base and to take electives outside the Program. Efforts to integrate non-Western material are underway into history and theory courses, but this initiative remains unfinished.

3. There is little evidence in the presented material that students analyze a building program to develop architecture which responds to user and/or client needs.

4. The team recognizes that the delivery of the professional practice course (ARCH 655) engages knowledgeable lecturers, but is concerned that it is delivered in a very compressed format and the course evaluation process does not adequately examine the content. Further, the professional practice course is not taking advantage of the student's Co-op work term experience..

III. Compliance with the Conditions for Accreditation

1. Program Self-assessment
The program must provide an assessment of the degree to which it is fulfilling its mission and achieving its action plan.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program has developed a comprehensive action plan in conjunction with the Faculty of Engineering (The Epicentre of Technology Talent, 2020-2025). Despite the interruptions caused by the COVID pandemic, the Program is meeting its strategic objectives. The Program employs a standard range of self-assessment methods, including various types of meetings, committees, and surveys. One innovation is the Student Workload Survey that measures the time allocation for courses. However, it does not appear to reduce overall workloads which are similar to other programs. It should be noted that many of the survey methods used do not provide meaningful feedback..

2. Public Information
The Program must provide clear, complete, and accurate information to the public and include the following text in its official Program information.

"In Canada, the Canadian Architectural Certification Board (CACB) is the sole agency authorized by the Canadian Architectural Licensing Authorities (CALA) to accredit Canadian professional degree programs in architecture for the purposes of architectural licensure."

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program's undergraduate and graduate degrees are well described online and supporting information regarding course outlines is shown. Information with respect to accreditation and the role of the CACB is provided. There is evidence that information regarding the CACB is communicated to faculty and students.

3. Equity, Diversity, and Inclusion
The Program must conform to provincial and institutional policies that augment and clarify the provisions of the Charter of Rights and Freedoms as they apply to social equity. Policies in place that are specific to the school or professional Program should be clearly stated, as well as the means by which the policies are communicated to current and prospective faculty, students, and staff.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The University of Waterloo has a comprehensive range of policies, and procedures to ensure a learning and working environment that is equitable, diverse, inclusive, and accessible. In 2020 the Program established a Racial Equity and Environmental Justice (REEJ) Task Force; this group produced a comprehensive plan in 2 volumes that raised many issues regarding the environment in the school and the curriculum. Issues were raised on equity, diversity, the Eurocentric nature of the curriculum, the perceived lack of commitment to sustainable design, etc. For complex reasons this initiative has been largely dormant since May 2022. EDIA developments since the previous visit in 2017 include on-site counselling for students, an elder-in-residence, and a new multi-faith space.

4. Student Composition, Well-Being, and Enrichment

The Program must demonstrate that it provides support and encouragement for students to achieve their full potential during their school years and later in the profession, as well as an interpersonal milieu that embraces cultural differences. The Program must demonstrate that it benefits from and contributes to its institutional values.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The BAS program attracts a large number of applicants. A rigourous admissions process is employed which results in a diverse student group. A large percentage of BAS students come from Ontario, with a small cohort of international students. The majority of students are women. A number of BAS graduates (approx. 35%) opt not to pursue the MArch program offered by the Program. The MArch program also attracts a strong number of applicants, with a higher percentage of international students. The Program overall maintains high retention rates for students in the two degree programs.

The University of Waterloo provides standard policies for health and safety in working and learning environments. The Program also provides counseling services on -site once a week. Medical services are mainly from the local hospital and local clinics. The fact that the Program is a satellite campus that operates at some distance from the main University of Waterloo campus means that students do not benefit from many campus opportunities. To a large extent this is offset by the many programs run by the Program and by the sense of community it fosters.

The Program offers a strong range of field trips, and it maintains the well-known Rome program for 4th year students. The Program has an impressive range of student run organizations which deliver an important set of services and opportunities to students. The Program provides a comprehensive range of guest lecturers, critics, and exhibitions. There are numerous teaching and research assistantships available to students. The relative lack of elective course requirements in the curriculum, especially outside the Program, must be noted (see Causes for Concern and Team Recommendations)..

5. Faculty and Staff Resources

The Program must demonstrate that it provides adequate human resources for a professional degree program in architecture, including a sufficient complement of appropriately qualified faculty, administrative, and support staff, and an administrative head that devotes no less than fifty percent of his or her time to program administration.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program has appropriate and well-structured committees and development opportunities for faculty. Since the last accreditation visit, the Program has instituted several effective measures, including: 1) a School of Architecture addendum with the Faculty of Engineering which defines the criteria for faculty performance evaluations implemented in 2018; 2) a new position of Associate Director Research to support faculty and graduate student research; 3) a new Advancement Manager to liaise with the Engineering Advancement team on behalf of the architecture program; and 4) a third Academic Services Coordinator to assist with recruitment, admissions, awards and events.

The Director maintains a 50% reduced teaching load. The student-faculty ratio in studio teaching has occasionally been higher than the recommended 15:1 ratio for some sections, but overall the ratio is well maintained. The staff are synergistic and provide excellent services. There are a significant number of new staff members since the last visit, however, they are working together creatively to build sustainable systems for institutional knowledge.

Teaching loads are well-distributed across the full-time and adjunct faculty groups. The Program has a well-articulated research agenda, as spelled out in the action plan. For the most part, faculty members are actively engaged in research and creative activities suited to their rank. Faculty members are progressing through the ranks as expected and are generally current in their teaching practices.

6. Space and Technology Resources

The Program must provide physical resources that are appropriate for a professional degree program in architecture, including design studio space for the exclusive use of each full-time student, lecture and seminar spaces that accommodate a variety of learning modalities, office space for the exclusive use of each full-time faculty member, and related instructional support space. The Program must demonstrate that all students, faculty, and staff have convenient, equitable access to appropriate visual, digital, and fabrication resources that support professional education in architecture.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The former Silk Mill building, occupied by the Program since 2004, continues to be an excellent environment in which to study architecture. Studio spaces, offices, workshops, library, and research spaces are generous and well-maintained. The physical resources have improved since the last visit. The causes for concern noted in the 2017 VTR were successfully resolved, through the following measures: 1) a portion of the gallery space was converted into research lab in addition to the existing Maker Lab; 2) electrical systems were upgraded throughout; 3) improvements done to studio furnishing; 4) addition of counselling office, elder's lodge, and multi-faith space. Adding technology to support hybrid delivery in two classrooms was also carried out. The students are all given safety and tool use instruction. There are two technical support staff.

The Design + Fabrication Labs (DFL) encompass five specialized areas, each equipped with machinery, power tools, and hand tools for processing materials. DFL resources are comprised of five different areas with a specific focus and the admin support office: 1) Analog Lab; 2) Digital Lab, with Laser Cutting, 3D Printing, CNC Machining; 3) Maker Lab, students run; 4) Design + Build Lab, on outside terrace; 5) Ceramics Lab.

The Architecture Computing and Media (ACM) group offers comprehensive digital media and computing support for students, faculty, and staff. This includes access to computing facilities, digital imaging, video, and audio production, and loan of equipment. ACM manages a photo studio, scanning facilities, printing facilities, and a computer lab. A dedicated computing lab next to the ACM space, and wireless computing is available throughout the building. The following labs and facilities are operated by ACM: 1) Photo Studio; 2) Scanning Facilities; 3) Printing Facilities; 4) Computer Lab, with 20 computers running various software; 5) Charge-free equipment loans..

7. Information Resources

The Program must provide ample, diverse, and up-to-date resources for faculty, staff, and students to support research and skills acquisition. The Program must demonstrate that all students, faculty, and staff have convenient, equitable access to literature and information resources that support professional education in architecture and access to librarians, visual resource, and information technology professionals who provide services, teach, and develop skills related to each of these resources.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Musagetes Architecture Library is part of the University of Waterloo Library system and is located within the School of Architecture building. The co-location enables ready access for students to the collection as well as staff with specialized resource knowledge and program understanding. The Library is connected to and derives advantages from being a part of the university library system particularly with respect to services and resource acquisition. The Library supports book stacks, a Rare Book Room as well as a variety of meeting and study spaces to support program and independent study.

The Musagetes Architecture Library provides a collection with print (books, rare books, periodicals, rare periodicals, theses), drawings and audio-visual resources to develop and maintain research collections (print and online) and provide optimal support for research, teaching, and learning in the Program. The collection consists of over 50,100 volumes. Since the last accreditation visit the UW Library system entered into a collections print sharing initiative with other Ontario university libraries providing students with access to 23 million print resources. Expenditures for books and serials fluctuated from 2016 to 2023 with a general trend to decreasing budgets for acquisitions from a high point of $52,845.16 in 2020 to $36,496.23 in 2023.

The Library staff of 3.5 core positions has undergone some modifications; the liaison librarian for architecture is on long term disability leave and an interim liaison librarian is in place and on site from three to five days a week. With this modification the Library has an appropriate staffing model.

A library statistics report is included in the APR, outlining collection size, acquisitions by year from 2017 through 2023 as well as budget expenditures for the same period. Acquisitions rose consistently from 2017 to 2019 with a high of 1023; thereafter acquisitions fluctuated with an average of approximately 690 resources acquired.

The Musagetes Library develops a yearly review of accomplishments and goals to confirm alignment with the University of Waterloo Library system UW Library's 2020-25 Strategic Plan. Library achievements include; provision of Elder Room | Lodge and Musagetes collection review, and modified library hours and services are being reviewed.

The Library receives annual funding from the University of Waterloo Library system to purchase new publications and periodical renewals. It was noted that acquisitions were light during the COVID pandemic and that there are no funding challenges to acquiring desired or needed material. The Library is reaching the end of its 15 year projected collection cycle with associated collection review and maintenance required. With the abundance of student personal computers and available applications there is a noticeable lack of requirements for library supplied onsite technology. Staff technology needs are well served.

8. Financial Resources

Programs must have access to sufficient institutional support and financial resources.

Visiting Team Assessment: **Met** ☐ **Not Met** ☑

The Program, Faculty and University have taken steps to ameliorate financial concerns. An external audit in 2022 concluded that the repeated deficit "is mostly, though not entirely a result of insufficient budget allocation," and provided six recommendations requiring actions by the Program, Dean, Provost and Province. While the audit process and resulting intentions are encouraging, the implementation of plans to stabilize the Program's financial situation are not yet evident. These concerns are compounded by a recent Provincial announcement that will limit University funding; a new University budget model with unclear impacts; and fee structures that charge the program for main campus services that architecture students have difficulty accessing.

9. Administrative Structure (Academic Unit & Institution)

The Program must be part of an institution accredited for higher education by the authority having jurisdiction in its province. The Program must have a degree of autonomy that is comparable to that afforded to the other relevant professional programs in the institution and sufficient to ensure conformance with the requirements of the CACB Conditions and Terms for Accreditation.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program's administrative structure is clear and comparable to other units in the institution. The Program operates with autonomy over its academic, financial and administrative matters, as one of eight units within the Faculty of Engineering. The Dean of Engineering and the new Vice President of Operations regularly meet with the Program Director. The Director is supported by three Associate Directors, who comprise an effective administrative team.

10. Professional Degrees and Curriculum

The CACB only awards accreditation to professional degree Programs in architecture.
A CACB-accredited professional Program in architecture is defined as the totality of a student's post-secondary education culminating in a designated professional university degree, which may be a bachelor of architecture (B. Arch) or a master of architecture (M. Arch) degree.

The Programs include:

- *a minimum of five years of post-secondary study culminating in a master of architecture degree, which follows a pre-professional bachelor's degree, except in Quebec, where the minimum is four years of professional studies following two years of CEGEP;*
- *a minimum of six years of post-secondary study culminating in a master of architecture degree, which follows a bachelor's degree in any discipline and includes a minimum of three years of professional studies in architecture; or*
- *a minimum of five years of post-secondary study culminating in a bachelor of architecture degree.*

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program provides a 13-14 semester BAS pre-professional degree, which includes 5-6 Co-op work terms. The Co-op work terms are highly valued by students, although the pedagogical role of the Co-op program is not well explained in the report. In the previous VTR the density of the BAS curriculum was singled out as a cause of concern. Efforts have been made to reduce the number of courses in the BAS stream to improve the workloads. Nevertheless, it is recommended that the number of courses in the Cultural History and Theory stream be reduced, in order to free up space for elective courses (see Causes for Concern and Team Recommendations) and to broaden the educational experience for students. Overall, the curricula in the various degree options are well-considered, despite the lack of electives.

Most graduates of the BAS program opt to move on to the one-year (minimum 3 terms, normally 4-5 terms) MArch degree option, although about 35% opt not to. The program also has a two-year (minimum 5 terms) for students with approved pre-professional degrees from other institutions. There is also an option for students with approved pre-professional degrees from other institutions (and the comprehensive studio) to pursue a minimum 3-term option. It is noted that MArch students can choose to undertake either a design-oriented thesis (typically 3-4 terms) or a written research-oriented thesis (typically 4-5 terms), the two options are equivalent.

11. Performance Criteria

The Program must demonstrate satisfactory performance in relation to program performance criteria (PPC), and student performance criteria (SPC) as detailed below. The CACB does not specify the structure and content of educational programs nor the forms of evidence used to satisfy the criteria. Programs are therefore encouraged to develop unique learning and teaching strategies, methods, and materials to satisfy these criteria.

For PPCs, evidence of performance may take many diverse forms not limited to course work and its outcomes. The Program must describe and demonstrate that it creates an environment in which these criteria are satisfied.

For SPCs, evidence of performance must include student work and the pedagogical objectives and assignments of any given course. With respect to fulfilling the criteria, the Program must demonstrate that all of its graduates have achieved, at minimum, a satisfactory level of accomplishment.

The roster of six PPCs and twenty-four SPCs is intended to foster an integrated approach to learning. Their order is not intended to imply a weight assigned to each.

11.1 Program Performance Criteria

The Program must provide its students with a well-thought-out curriculum with educational opportunities that include general studies, professional studies, and elective studies.
Each of the PPCs must be addressed in a clear narrative statement and with reference to any relevant supporting documentation.

PPC 1. Professional Development

The Program must demonstrate its approach to engaging with the profession and exposing students to a breadth of professional opportunities and career paths, including the transition to internship and licensure.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Students in the Program are given a strong introduction to the profession through the Co-op program (5-6 work terms) and ARCH 655: Architectural Professional Practice. The well-established Co-op program allows students to curate their initial professional experience. Students are exposed to a range of professional experiences during work terms. There are opportunities to expand the range of work term offerings to embrace social agencies, etc. The lack of reporting on the work term experience is an area that the Program could consider enhancing. ARCH 655 provides a good range of lectures, but it occurs in a very compressed form (see Causes for Concern and Team Recommendations) and employs weak evaluative methods. There are opportunities to gain more educational benefit from the Co-op program. Nevertheless, students are well-prepared to transition into practice.

PPC 2. Design Education

The Program must demonstrate how it situates and values education and training in design at the core of the curriculum, including the ways in which the design curriculum weaves together the social, technical, and professional streams of the curriculum.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program offers a well-considered series of required and option studios in the BAS program, culminating in the Rome study abroad term and the Comprehensive studio in fourth year. Students going on to the MArch program undertake a thesis; the necessity for a lengthy

thesis in a professional MArch degree program remains somewhat unclear. Students in the first three BAS studios prepare for the first work term; this influences the structure of introductory design studios. Overall, the Program demonstrates a relatively pragmatic approach to design teaching, which prepares students well for the transition to professional practice. Technical courses are well-integrated. There remain opportunities for stronger synergies between the Co-op work terms and the design studio stream in the BAS program

PPC 3. Global Perspectives and Environmental Stewardship
The Program must demonstrate how it embraces the diverse contexts that define contemporary architecture, including local, global, and environmental interests.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Despite most BAS students coming from Ontario, they represent a diverse group. Exposure to a range of architectural contexts is experienced through the Cambridge Campus location, Co-op work terms, and the Rome study abroad program. In Cambridge students work with local organizations and learn about the local context in studio and related courses. Work terms, which students select, gives them the opportunity to experience diverse contexts and approaches to practice. The Rome program allows students to engage with a major cultural centre. Efforts have been made to introduce non-Western content into theory courses, however, the history courses remain largely Eurocentric in content. The recent addition of a required course indigenous practices (ARCH 243) is important. Overall, the Program embraces local, global, and environmental factors.

PPC 4. Collaboration, Leadership, and Community Engagement
The Program must demonstrate how it supports and fosters effective individual and team dynamics, a spirit of collaboration and inclusion, community engagement, and diverse approaches to leadership.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The high calibre of the students, provides a strong basis for developing skills in collaboration, leadership, and community engagement. The students learn to effectively collaborate through their coursework, Co-op work terms, and student organizations. The students in the Program have developed an impressive array of student-led initiatives. This also provides students with important opportunities to develop leadership skills, and to understand differing approaches to leadership. The engagement with the local community is a vital strength of the Program. The team was impressed with courses that examine local histories and environments (including ARCH 243: Indigenous Practices), and the number of studio exercises that engaged with local organizations.

PPC 5. Technical Knowledge
The Program must describe how it engages fundamental and emerging technical aspects of building construction.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Overall, the technical courses and the Comprehensive studio are a strength of the Program's curriculum. Enthusiastic teachers deliver well-considered courses in building science,

structures, and the like. The Comprehensive studio is well-considered and works closely with the Technical Report course (ARCH 473). This is complemented with the Co-op program, which exposes students to professional working environments. There are opportunities to strengthen the role of the Co-op work terms in the curriculum, and to reconsider the reporting deliverables.

PPC 6. Breadth of Education
The Program must demonstrate how it provides an opportunity for students to participate in general studies and elective studies in the pursuit of a broad understanding of human knowledge and a deeper study of topics within the discipline of architecture.

Visiting Team Assessment: **Met** ☐ **Not Met** ☑
It is recognized that the Cultural History and Theory courses provide breadth of education (there are thirteen 0.5 courses required in the stream), along with the Co-op work terms and the Rome program that also expose students to alternative educational experiences. However, the Program only requires five electives, only one of which is an open elective (this limits the ability of students to gain breadth of learning and to deepen their knowledge in specific areas of architecture). The curriculum does not meet the requirements of this PPC, which intends that students experience learning outside of architecture.
As noted in Causes for Concern and Team Recommendations, the team recommends a re-examination of the courses in the Cultural History and Theory stream to allow for more elective courses. Logistically there are issues with students having access to non-architecture electives given the satellite location of the Program, however, there are new modes of delivery and opportunities to take courses at other institutions that should be explored.

11.2. Student Performance Criteria

A. Design

A1. Design Theories, Precedents, and Methods
The student must demonstrate an ability to articulate a design process grounded in theory and practice, an understanding of design principles and methods, and the critical analysis of architectural precedents.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The Program's design studios provide students with a strong grounding in the realities of practice (including code and technical issues), beginning in first year. Various design theories are presented by instructors through the years of studio courses. Students learn to manage a design process through methods such as: site analysis, parti development, formal exercises, iteration, and precedent studies. The analysis of precedent studies is a common exercise in several studio courses (see ARCH 192, ARCH 193, and ARCH 292). The report provides evidence of how students engage in the Comprehensive design (ARCH 493 and ARCH 691) process grounded in theory and practice. Additionally, the report highlights specialized studios and options where students explore various design theories and methodologies, emphasizing the development of analytical skills and understanding of design principles across different levels of study.

A2. Design Skills

The student must demonstrate an ability to apply design theories, methods, and precedents to the conception, configuration, and design of buildings, spaces, building elements, and tectonic components.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Students demonstrate an ability to apply design methods and precedents to the conception and design development of buildings, and related spaces and elements. Studio work is generally quite conventional in its approach, with some evidence of theoretical experimentation in option studios. Students have a good grounding in the technical aspects of design. The Comprehensive studios (ARCH 493 and ARCH 691) are well-organized courses that also employ the excellent Technical Report courses (ARCH 473 and ARCH 671). Overall, the Program produces students with good design skills.

A3. Design Tools

The student must demonstrate an ability to use the broad range of design tools available to the architectural discipline, including a range of techniques for two-dimensional and three-dimensional representation, computational design, modeling, simulation, and fabrication.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Students are provided with a very good basis in manual and digital drawing (and modeling methods) in the first-year courses. There is a strong synergy between the studio courses (ARCH 192 and ARCH 193) and the visual/digital media courses (ARCH 110 and ARCH 113). Foundational courses ARCH 110 and ARCH 113 introduce students to various graphic communication and digital representation techniques, while studio courses emphasize the practical application of these skills in design projects. ARCH 212 provides students with a solid grounding in parametric design and digital fabrication. Electives and option studios offer further opportunities for students to specialize in various design tools and methods, including computational design, digital fabrication, energy modeling, and more. Overall, there is strong evidence throughout the Program that students have very good abilities with design tools and representational methods. It should be noted that there was often a discrepancy in the comprehensiveness of studio work between high and low pass students.

A4. Program Analysis

The student must demonstrate an ability to analyze and respond to a complex program for an architectural project that accounts for client and user needs, appropriate precedents, space and equipment requirements, the relevant laws, and site selection and design assessment criteria.

Visiting Team Assessment: **Met** ☐ **Not Met** ☑

There is no evidence that students analyze architectural programs in the studio stream. In some cases students are presented with programs (eg. ARCH 193), and in other cases they develop a program (eg. ARCH 292).. Students do work with relatively complex programs throughout the curriculum, and buildings are generally well-organized. Students work with clients in the comprehensive studio (ARCH 493 and ARCH 691). There is evidence throughout the studios that students work with precedents. They also have an understanding of space and equipment standards (furnishings), have good knowledge of relevant laws, and

address site selection criteria. Selected course offerings provide real-world scenarios where students respond to detailed programs developed by 'clients.'

A5. Site Context and Design
The student must demonstrate an ability to analyze and respond to local site characteristics, including urban, non-urban, and regulatory contexts; topography; ecological systems; climate; and building orientation in the development of an architectural design project.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The site context and design requirements are not covered completely in any specific course, they appear mostly as introductory assignments in various design studios. Beyond studio courses, there is evidence of site context and design in ARCH 225 and ARCH 243. The teaching of site context and design could be more rigorous, nevertheless, the criteria is met.

A6. Urban Design
The student must demonstrate an ability to analyze and respond to the larger urban context where architecture is situated; its developmental patterning and spatial morphologies; the infrastructural, environmental, and ecological systems; to understand the regulatory instruments that govern this context; the broader implications of architectural design decisions on the evolution of cities; and the impact of urbanism on design.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The Program demonstrates that it covers urban design in extensive detail, evidence is found throughout the curriculum of this. Various design studios focus on urban design (including ARCH 392 and ARCH 492). The course ARCH 327 provides students with fundamental knowledge in urban design. The Rome program provides students with the opportunity to learn about design in a historic urban environment.

A7. Detail Design
The student must demonstrate an ability to assess, as an integral part of design, the appropriate combinations of materials, components, and assemblies in the development of detailed architectural elements through drawing, modeling, and/or full-scale prototypes.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The content across various courses provides students with a comprehensive understanding of building envelope and detail design in the Canadian context. Assignments include research, teamwork, drawing and direct question and answer criteria through quizzes and final exams. In ARCH 364 and ARCH 473 (ARCH 673 in the MArch program) there is an increasing complexity of assignments which build to a comprehensive understanding of building enclosure assemblies. The Technical Report (ARCH 473 and ARCH 671) provides the opportunity for understanding of integration of building systems (ASME) into the architecture program and design as well as site analysis overview.

A8. Design Documentation
The student must demonstrate an ability to document and present the outcome of a design project using the broad range of architectural media, including documentation for the purposes of construction, drawings, and specifications.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Design documentation is met across courses which utilize a variety of presentation media and technical documentation methods to describe the course work. In particular, the Comprehensive studio course ARCH 493 (and ARCH 691) demonstrates relevant communication and documentation efforts. Further, ARCH 364 and other courses early in the curriculum which contribute to the production of reports provide opportunities to demonstrate design documentation skills.

B. Culture, Communications, and Critical Thinking

B1. Critical Thinking and Communication
The student must demonstrate an ability to raise clear and precise questions; record, assess, and comparatively evaluate information; synthesize research findings and test potential alternative outcomes against relevant criteria and standards; reach well-supported conclusions related to a specific project or assignment; and write, speak, and use visual media effectively to appropriately communicate on subject matter related to the architectural discipline within the profession and with the general public.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

There is evidence throughout the curriculum that students have strong communication abilities and are solid critical thinkers. This is also evident in the studio stream (including ARCH 193 and ARCH 393) and in the final thesis (which follows a conventional Master's thesis format) that students regularly undertake research, including recording, analyzing, and synthesizing. Student presentations are generally of high quality. The Cultural History and Theory courses (including ARCH 120, ARCH 342/642, and ARCH 442/642) provide a foundation for critical thinking, research, and writing. However, there is no evidence that a substantial term paper is required anywhere in the BAS curriculum. Some students have expressed concern that they don't feel prepared to undertake a full written Master's thesis.

B2. Architectural History
The student must have an understanding of the history of architecture and urban design in regard to cultural, political, ecological, and technological factors that have influenced their development.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The suite of three courses presented for this SPC do not provide a systematic approach to architectural history. A review of additional courses shows that architectural history taught in a variety of courses, including ARCH 449 (Modern Italian Architecture). ARCH 120 and ARCH 142 provide a good basis for studying history in that they introduce relevant vocabulary, principles, and representational methods. ARCH 246 and ARCH 248 focus mainly on broad intellectual contexts and include "great" books (mainly literature and philosophy). ARCH 342 is effectively a theory class that focuses on contemporary topics. Readings tend to have

heavy emphasis in the courses, however, assignments tend to lack substance and often do not address knowledge of the course content. Generally, there is a strong emphasis of the Western tradition in the history courses, with a particular emphasis on material prior to 1600. There is a lack of attention to architectural history after 1914, apart from ARCH 449. An overall review of the Cultural History and Theory stream is in order, to bring it up to date, to make it less Eurocentric (this was suggested in the REEJ plan and in the previous VTR), and to allow for more elective options.

B3. Architectural Theory

The student must have an understanding of conceptual and theoretical frameworks and how they have shaped architecture and urban design.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The Program offers a range of courses that address theory, although there is less emphasis on architectural theory, as opposed to general theoretical topics. The primary theory course is ARCH 442 (ARCH 640), which provides a good grounding in contemporary issues. The course ARCH 342 (ARCH 642) is also primarily a theory course and is well-considered. ARCH 327 presents urban design theory, although the class has a strong practice focus. The thesis research related courses (ARCH 692 and ARCH 693) also have theory requirements. Generally, students are provided with a good grounding in architectural theory..

B4. Cultural Diversity and Global Perspectives

The student must have an understanding of the diverse needs, values, behavioural norms, and social/spatial patterns that characterize different global cultures and individuals and the implications of diversity on the societal roles and responsibilities of architects.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

Students in the Program are introduced to cultural diversity and global perspectives in a variety of ways. Courses such as ARCH 246 and ARCH 248 briefly introduce students to Non-Western cultures. The introduction of non-Western material has been addressed in the architectural theory courses (such as ARCH 342 and ARCH 442) but not in the architectural history courses. The course ARCH 243 provides some background on local indigenous cultures. The integration of indigenous history and practices into the curriculum demonstrates a commitment to addressing diverse cultural perspectives and values, however, this could be further developed. Design studio ARCH 292 addresses contemporary housing and introduces students to the needs of diverse populations in the southern Ontario context. The Co-op work terms and the Rome program also expose students to cultural diversity.

B5. Ecological Systems

The student must have an understanding of the broader ecologies that inform the design of buildings and their systems and of the interactions among these ecologies and design decisions.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

An understanding of ecological systems is addressed primarily in ARCH 225, which provides a strong introduction to landscape architecture; the course has an innovative outline. It is

worth noting that it is beneficial to the Program to have a faculty member trained in landscape architecture. ARCH 225 is augmented in studio courses ARCH 292 and ARCH 293 which have a good emphasis on ecological studies. ARCH 243 also provides students with an introduction to land-based Indigenous practices. Other courses also touch on the subject.

C. Technical Knowledge

C1. Regulatory Systems

The student must have an understanding of the applicable building codes, regulations, and standards for a given building and site, including universal design standards and the principles that inform the design and selection of life-safety systems.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The primary professional practice course (ARCH 655) covers an architects' responsibilities under codes, regulations, and design standards. Understanding is demonstrated in the quizzes for these courses. Universal design is well introduced with the wheelchair empathy project in ARCH 172. While the ARCH 655 course covers a lot of material in nine days, the student work demonstrates the topics were adequately covered. See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

C2. Materials

The student must have an understanding of the basic principles used in the appropriate selection and application of architectural materials as it relates to fundamental performance, aesthetics, durability, energy, resources, and environmental impact.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The technical courses ARCH 173, ARCH 276, ARCH 362 (and ARCH 662) provide a background in materials, understanding is demonstrated in the student work for these courses. Additional understanding is shown in the in the Technical Report course (ARCH 473 and ARCH 671)..

C3. Structural Systems

The student must have an understanding of the principles of structural behavior in withstanding gravitational, seismic, and lateral forces, including the selection and application of appropriate structural systems.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The technical course ARCH 364 (and ARCH 671) provide a strong background in the science of building envelope assemblies. The student work for these courses demonstrates understanding, as does work done for Technical Report course (ARCH 473 and ARCH 671).

C4. Envelope Systems

The student must have an understanding of the basic principles used in the design of building envelope systems and associated assemblies relative to fundamental performance, aesthetics, durability, energy, material resources, and environmental impact.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The technical course ARCH 364 (and ARCH 671) provide a strong background in the science of building envelope assemblies. The student work for these courses demonstrates understanding, as does work done for Technical Report course (ARCH 473 and ARCH 671).

C5. Environmental Systems

The student must have an understanding of the basic principles that inform the design of passive and active environmental modification and building service systems, the issues involved in the coordination of these systems in a building, energy use and appropriate tools for performance assessment, and the codes and regulations that govern their application in buildings.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The technical courses ARCH 126 and ARCH 463 provide a strong background in the environmental systems, the student work for these courses demonstrate understanding, as does work done for Technical Report course (ARCH 473 and ARCH 671)..

D: Comprehensive Design

D1. Comprehensive Design

The student must demonstrate an ability to produce an architectural design based on a concept, a building program, and a site which broadly integrates contextual factors, structural and environmental systems, building envelopes and assemblies, regulatory requirements, and environmental stewardship.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The student work in Comprehensive design studios (ARCH 493 and ARCH 691) have produced project designs which demonstrate an ability to comprehensively design a building that integrates program, context, structural and environmental systems, detailed envelope design, and relevant regulations. Students also integrate sustainable design through site usage, material selection, energy conservation, passive and active systems, and enclosure design. The Comprehensive studio is strengthened by the work in the Technical Report course (ARCH 473 and ARCH:671) which presents the technical aspects of the students' designs..

E: Professional Practice

E1. The Architectural Profession

The student must have an understanding of the organization of the profession, the Architects Act(s) and its regulations, the role of regulatory bodies, the paths to licensure including internship, and the reciprocal rights and responsibilities of interns and employers.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐

The requirements for understanding the architectural profession are met through the professional practice course (ARCH 655). External specialists and practitioners provide topic focused presentations based on their areas of special knowledge. See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

E2. Ethical and Legal Responsibilities
The student must have an understanding of the ethical issues involved in the formation of professional judgment; the architect's legal responsibility under the laws, codes, regulations, and contracts common to the practice of architecture; intellectual property rights; and the role of advocacy in relation to environmental, social, and cultural issues.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The requirements for understanding ethical and legal responsibilities are met through the professional practice course (ARCH 655). External specialists and practitioners provide topic focused presentations based on their areas of special knowledge. See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

E3. Modes of Practice
The student must have an understanding of the basic principles and types of practice organization, including financial management, business planning, entrepreneurship, marketing, negotiation, project management, and risk mitigation, as well as an understanding of trends that affect the practice.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The requirements for understanding various modes of architectural practice and basic business practices are met through the professional practice course (ARCH 655). External specialists and practitioners provide topic focused presentations based on their areas of special knowledge. In addition, students exhibit an understanding of modes of practice through an overview and analysis of Co-op work term experience with the submission of a case study analysis as required for WRPT 203 (Firm Case Study). See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

E4. Professional Contracts
The student must have an understanding of the various contracts common to the practice of architecture.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The requirements for understanding professional contracts are met through the professional practice course (ARCH 655). External specialists and practitioners provide topic focused presentations based on their areas of special knowledge. See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

E5. Project Management
The student must have an understanding of the relationships among key stakeholders in the design process; the methods for selecting consultants and assembling teams; building economics and cost control strategies; the development of work plans and project schedules; and project delivery methods.

Visiting Team Assessment: **Met** ☑ **Not Met** ☐
The requirements for understanding project management are met through the professional practice course (ARCH 655). External specialists and practitioners provide topic focused

presentations based on their areas of special knowledge. In addition, aspects are found within the development of the work exhibited in the Comprehensive design studio (ARCH 493 and ARCH 691) and the Technical Report course (ARCH 473 and ARCH 671). See Causes for Concern and Team Recommendations regarding the ARCH 655 course.

IV. Appendices

Appendix A: Program Information

The following is condensed from the Program's Architecture Program Report

1- Brief History of University of Waterloo

The University of Waterloo began offering classes in July 1957 with the introduction of the Cooperative Education Program. In March 1959, the Legislative Assembly of the Province of Ontario approved the Bill incorporating the University of Waterloo as a degree-granting institution that offers courses at both the undergraduate and graduate levels. The University is non-denominational, but it houses four affiliated church-related university colleges: St. Jerome's University (Roman Catholic), Renison University College (Anglican), Conrad Grebel University College (Mennonite) and United College (United Church).

In its 63 years of existence, Waterloo has grown to be one of the five largest universities in the province of Ontario. Its reputation for innovation rests on the cooperative education program – a system that combines terms of study with work experience – and pioneering the use of computers as tools in research and education. In its annual rating of Canadian universities in 2023, Maclean's Magazine has ranked Waterloo second out of the forty-nine Canadian institutions in terms of best overall quality, leadership and innovation. In 2023 Waterloo placed first amongst all universities in innovation.

Instruction is given in six academic faculties: Arts, Engineering, Environmental Studies, Health, Mathematics and Science. Within this framework are various departments and schools.

Total full-time enrolment in 2022-2023 was 38,014. Since 2018, the undergraduate population has increased by approximately 17%, with the largest co-op enrolment in the world. Co-operative study options are available in various departments, while entire faculties such as Engineering or Schools such as Architecture are fully co-operative. Over half of the full-time students are participating in one of forty different cooperative programs offered at Waterloo. In recognition of the value of the co-operative program in experiential learning, the University determined in 2002 that co-op work terms receive academic credit. In addition to co-operative study options, the University has strong ties with various local businesses and community groups, located in each of the campus cities; Waterloo, Cambridge, Kitchener and Stratford.

The original campus is situated on a 365-hectare in the northwestern section of the City of Waterloo. The main academic precinct is serviced by a ring-road, with provided parking on the perimeter of the campus. The interior of the ring road is a pedestrian zone. Recently, there has been development of the Technology and Research Park on the North Campus and administrative buildings on the East Campus. There are several off-campus locations including the School of Architecture in Cambridge, the School of Pharmacy in downtown Kitchener, and the Stratford School of Interaction Design and Business located in Stratford

2- Institutional Mission

The University of Waterloo's mission, adopted in the University of Waterloo Act of 1972, is to "advance learning and knowledge through teaching, research, and scholarship, nationally and internationally, in an environment of free expression and inquiry."

The mission of the University of Waterloo is focused, and it is different from the missions of the other universities in Ontario. It is distinctive in terms of both what the University has chosen to do and what it has chosen not to do. Waterloo's mission is:

1. To engage in undergraduate and graduate teaching and in research in traditional and contemporary fields of study, and as part of these tasks: To offer professional programs which are soundly based on fundamental knowledge, which emphasize creativity and problem-solving, and which lead to an expertise in the profession combined with a broad and critical appreciation of its goals and its role in Canadian society. (The University offers professional studies in Accountancy, Actuarial Science, Architecture, Engineering, Optometry, Psychology, and Urban and Regional Planning. It does not offer professional programs in Business, Education, Law, and Medicine. The need for those programs is met by other universities in the Ontario system).

2. To offer specialized education in traditional as well as in emerging disciplines in the Arts and in the Pure and Applied Sciences, in programs which combine rigorous study in the discipline with a broad and critical presentation of the place of the discipline in the field of human knowledge and of its role in the Canadian context. To offer programs of general education in the humanistic and scientific traditions, which foster the development of critical capacities and lead to a deep understanding of the natural, cultural, social and technological environment of Canada and the world.

3. To provide an intellectual and physical environment which encourages and enables the faculty and students in all programs to engage in creative intellectual work in its various forms, such as basic and applied research, design, creative writing, artistic creation, etc.

4. To foster the intellectual and social development of its students, both within the academic programs and outside of the curriculum, and in this way help them to become responsible, enlightened, and cultured individuals. While most of the foregoing points are appropriate as the mission statements of many universities, the ones which follow are less common. Taken together they define a distinctive mission for the University of Waterloo.

5. To maintain an active institutional role in promoting the economic accessibility of all its programs to qualified applicants, as well as the subsequent employability of graduates from all these programs, and to these ends to offer the Co-operative Education format in all the academic programs in which it is feasible.

6. To provide leadership in the development and application of modern computing and communications technologies in all aspects of university activity, and particularly to promote excellence in student computing both in instruction and in scholarship - by providing all students with the opportunity to develop appropriate critical competence in computing.

7. To make its programs as widely accessible as possible to mature students and to special student populations, and to offer a range of high-quality distance courses and degree programs for students with limited access to the Waterloo campus.

8. To offer continuing education in all areas of the University, ranging from complete programs for the upgrading of professionals to individual courses for the continued personal development of alumni and members of the public.

9. To promote scholarship directed at current issues from a strong basis in the relevant disciplines, creating interdisciplinary Centers and Institutes for this purpose when necessary.

10. To widen and accelerate the application of results, discoveries, and inventions for the benefit of Ontario and Canada by encouraging entrepreneurship and facilitating the transfer of new technology and of the results of evaluative scholarship to industry, to government, and to the public.

11. To enter partnerships and other co-operative arrangements with individuals and firms, and with governmental and non-governmental organizations, to the benefit of the University, of its partners, and of the broader community.

12. To recognize the international obligations of a university, and engage in a broad range of international activities such as: welcoming international students to undergraduate and graduate programs, working to develop sources of financial support for needy international students, providing an international experience for Waterloo students in particular programs, developing co- operative agreements with universities abroad, inviting foreign scholars, and participating in programs of technical assistance in the Third World.

13. To reserve resources for innovation, even in times of financial stringency.

14. And in all elements of its mission, invariably to act in a manner which maintains its integrity and enhances its credibility as a university.

3- Program History

The School of Architecture at the University of Waterloo continues to grow steadily both academically and within the community. Internally, the graduate program has expanded, encouraged by funding provided by the provincial government and the dropping of the BArch years ago. More recently, the ability to recruit students outside the School as well as retaining many of our own students has improved the student profile. Externally, the school has become increasingly

engaged in research, exhibition and education programs. We are now at our fifth representation by Waterloo Architecture faculty members at the Venice Biennale. Waterloo has been instrumental in launching two proposals for new architecture schools in Sudbury and Saskatoon. The school has played an increasingly important role at the University of Waterloo, taking on a series of significant design projects.

In terms of leadership, the School has seen more changes in the past 10 years than it had in the previous 25 years. After Rick Haldenby's sixth mandate as Director, a search for a new Director was launched in 2012. Following a thorough process of selection, an external candidate, Ila Berman, was selected and appointed as Full Professor and O'Donovan Director. Her term began in January 2013. Professor Berman's tenure was marked with several adjustments both at the graduate and undergraduate levels, including the elimination of the qualifying year for external applicants to the Masters degree and, in the undergraduate degree, a new emphasis on digital media and communication as well as landscape and urbanism. Through these changes, the notion of a self-directed and independent thesis was preserved as the Masters level, and so were the coherence and foundations of the curriculum at the undergraduate level.

In July 2015, Ila Berman stepped down as director, and Professor Lola Sheppard was appointed as interim director while a search was conducted. The search resulted in the appointment of an internal candidate, Dr. Anne Bordeleau, for a four-year term beginning in May 2016. Dr. Anne Bordeleau was re-appointed in 2020 for a subsequent term. Dr. Bordeleau's term was marked by its significant initiatives to support gender balance, Indigenous ways of knowing, racial equity, and climate justice. In August 2022, Dr. Bordeleau stepped down as O'Donovan Director, and Associate Professor Maya Przybylski was appointed interim director while a search was conducted. The search resulted in the appointment of internal candidate Maya Przybylski to remain in place as the O'Donovan director for a four-year term commencing September 2, 2023.

Under the current leadership, the priorities are to leverage the foundation and history of the School, with a renewed focus to re-affirm and renew its mission to provide the best possible preparation for a career in architecture. The shift in leadership has resulted in a sincere reflection of what it means to lead the School of Architecture both academically and administratively, while offering opportunity for inflection by a leader to shape a "vision" at a particular time and place. The time is indeed particular: the global pandemic, calls for action on decolonization, racial and social injustices, and climate change reprioritized values, altered relationships and expectations, while shifting operations at an accelerated fashion. The need for a set of priorities based on a renewed focus that is authentic, safe and grounded will allow the school to flourish, ensuring that a shored-up foundation thrives for many more years.

In 2018, a new Architectural Engineering program that cuts across Architecture and Civil Engineering welcomed its first cohort. Architectural Engineering students share studio space with Architecture students every Winter and Spring Academic terms. With 25% Architecture and 75% Civil Engineering, the new Architectural Engineering program has led to hiring 3 new architecture faculty members while also opening new possibilities for student and faculty collaborations with the Engineering faculty.

Since the move to Cambridge in 2004 as a standalone unit that scrambled to provide campus-like services, these extremely resource-intensive and unsustainable activities stretched the limits to simultaneously deliver academic programs and campus services. The arrival of Architectural Engineering students and changing expectations of Architecture students is testing these limits

even more. Reframing and clarifying the activities that happen in Cambridge and in Rome to create a strategic plan that engages the institution as part of a renewed focus on all satellite campuses and units. The University's appointment of an Associate Vice-President Academic Operations to liaison with these units is one step towards an understanding of the work to maintain these spaces but also our role as a driver of cultural production. These relationships within the campus, to the Waterloo campus, with the local community and the broader world community enrich academics and research, campus experience and wellness, and advancement.

Maintaining the confidence, and co-operation of each group within the school community – students, faculty and instructors, and staff – is priority one, not just between the groups and the director but within and between the groups themselves. In June 2023, 75% of the work being facilitated by the staff and Director are being done for the first time. Building capacity, developing skills and acquiring knowledge accompanies this priority while creating trust and confidence. Knowledge sharing and establishing a collaborative relationship with the students reaffirms they are the core of the mission, a mission that addresses wellness, provides a space for feedback, focusing on the student experience. For the faculty, service and community participation is vital in supporting the culture of the school through their involvement and administration.

One of the leadership priorities involves addressing the density of the undergraduate program entwining the two approaches of the professional education offered at the School of Architecture and situating knowledge as a deep cultural practice. This will also include welcoming and supporting more diverse voices, roles and experiences thickening the population of lecturers with improved compensation and support. Workshops and speakers as part of the curriculum, in the classroom is also an important way to expand and promote this diversity. This will open the promotion of design and design-education focused interactions as well, as part of the larger re-centering architecture and design education in the context of changing values, technology and other disciplinary focuses.

In 2023, the school has been in Cambridge for 19 years, and in Rome for over 4 decades, one of the oldest and best-established international programs in Italy. The graduate program turned 20 years old in 2019. We are a school that continues to cultivate its identity and foundations, and that prides itself as a nurturing School wherein all involved – staff, students, faculty – are equal participants in the project of education and research.

4- Program Mission

Waterloo Architecture (WA) adopted the following mission statement in 1997. It continues to underpin program direction and development:
The University of Waterloo School of Architecture dedicates itself to providing its students with an excellent education which builds on the traditions of a profession rooted in the liberal arts and the art of construction, balances elements of theory and practice, incorporates new and emerging areas of influence and engages in discourse and design activity at a local, national and international level. The school is committed to maintaining a fully supportive educational environment in which teaching, design and research form a common project in which faculty, staff and students act as much as possible as collaborators.

5- Program Mission

1. **Undergraduate Learning: Experience** - Offer the single best engineering and design education in Canada

Leverage and reinforce our LOCAL/GLOBAL education model — Cambridge & Rome, culture & coop – to address diversity and shape our identity, activities and vision in a uniquely integrated design education.

- Goal A1: Integrate learning across streams to foster students' ability to engage complex conditions by combining design, cultural and technological expertise.
- Goal A2: Pursue global and local opportunities for students, faculty and staff

2. **Graduate Learning & Experience** - Lead work-integrated graduate studies in engineering and architecture

   Build on Waterloo Architecture graduate program strengths — offer a leading M.Arch Program that fosters speculative and critical design research addressing the world's most urgent social and ecological issues.

   - Goal B1: Build on strengths in graduate research
   - Goal B2: Build on strengths in experiential learning

3. **Research: From Imagination to Impact** - Become unmatched in bringing transformation from the lab to the world

   Support ground-breaking studies — in architecture's culture, craft, technology and fabrication through better visibility, increased opportunities, more extensive and varied networks and new research facilities.

   - Goal C1: Grow impactful research interactions within School, Faculty and University
   - Goal C2: Promote and better support the diversity and success of research in the School of Architecture
   - Goal C3: Expand networks and research dissemination

4. **Operations and Resources** - Foster a collaborative culture that supports our people's wellbeing.

   Secure resources and space needed for a satellite campus — to foster a community of faculty, staff and students that provides outstanding support for student wellness and success

   - Goal D1: Leverage and expand existing facilities (Cambridge and Rome) to foster interdisciplinary research partnerships, educational programs and community relevance
   - Goal D2: Bring additional financial and human resources to support the School's strategic goals best

5. **From Imagination to Impact** - Become unmatched in bringing transformation from the lab into the world.

   Improve Communications — to enhance our reputation for leading design research and teaching that addresses critical emerging topics through engagement and dialogue with our broader communities.

- Goal E1: Strengthen the Identity of the School's value, vision, and mission within the University and beyond
- Goal E2: Expand Audiences by responding to our public, disciplinary and global communities' needs.
- Goal E3. Improve visibility by increasing our reach across digital, print, and building projects.

Appendix B: The Visiting Team *(names & contact information)*

VISITING TEAM
Accreditation Maintenance Visit

University of Waterloo
Date: March 16 – 21, 2024

MEMBERS OF THE VISITING TEAM

VOTING MEMBERS

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OBSERVERS

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Appendix C: The Visit Agenda

CACB CANADIAN ARCHITECTURAL CERTIFICATION BOARD
CCCA CONSEIL CANADIEN DE CERTIFICATION EN ARCHITECTURE

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Ottawa, Ontario
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A-3: Typical Initial and Maintenance Accreditation Hybrid Site Visit Agenda

University of Waterloo: Site March 15-21, 2024

This Agenda gives a framework for ordering the visit in a timely manner. The order of these items may vary, and additional items may be scheduled at the discretion of the Team Chair.

Virtual Pre-Visit Planning

50 days in advance **Student Work access** **Jan. 28, 2024**	☐ The Program sends the CACB any links required to access the student work exhibit ☐ The Team Chair and CACB test the links before sharing them with the Visiting Team
Meeting #1 **February 2, 2024** **45** days in advance **Readiness for the visit**	☐ The Team Chair and Program Head determine whether the program is ready for the visit ☐ The Program Head performs a walk-through of the student work compilation for the Visiting Team
Meeting #2 **February 9, 2024** **38-40** days in advance **Process and technology overview**	☐ The Team Chair reviews student work with the Visiting Team ☐ The Team Chair provides expectations for how the team will work, and makes review assignments
Meeting #3 **February 23, 2024** **28-30** days in advance **Review and discussions**	☐ The Visiting Team review ACR-A (APR), CACB Conditions and Procedures, and visit protocols, and identify missing materials ☐ The Team members discuss their initial reactions to the ACR-A (APR) and student work, raise any initial concerns, and identify and prioritize the questions to be addressed during the documentary review
Meeting #4 **March 8, 2024** **14** days in advance **Documentary Review and questions**	☐ The Visiting Team reviews the results of the documentary review, finalizes questions to be addressed during the site visit, and identifies any other areas of inquiry ☐ The Team develops a draft ACR-B (VTR) ☐ Entrance meeting with Librarian

CANADIAN ARCHITECTURAL CERTIFICATION BOARD
CONSEIL CANADIEN DE CERTIFICATION EN ARCHITECTURE

1 rue Nicholas Street, Suite 710
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The Visit

Friday, March 15, 2024 (Virtual)	**AM**	☐
	PM	☐ **13:00-13:30 pm:** Entrance meeting w/ President (representative) and Provost. ☐ **14:00-15:00 pm:** Entrance meeting with Program Head (Ward Room – RM 2008) ☐ **15:00-15:30 pm:** Entrance meeting with Dean
Sunday, March 17, 2024		☐ Team travels to Cambridge.
Monday, March 18, 2024 (On-Site)	**AM**	☐ **8:00-9:00 am:** Team breakfast with Program Head. (Team Room) ☐ **9:00-12:00 pm:** Team review of materials and deliberations. (Team Room)
	PM	☐ **12:00-13:00 pm:** Lunch and Team-only meeting. (Location: TBD) ☐ **13:00-14:00 pm:** Tour of facilities. ☐ **14:00-15:00 pm:** Observation of studio sections. (ARCH 193 – RM 3102, ARCH 392 RM 3102 & 3103 River-side studios, ARCH 690 – RM XXXX) ☐ **15:00-16:00 pm:** Meeting with Staff. (Gallery – RM 1113) ☐ **16:00 – 17:00 pm:** Meeting with Associate Directors. (Ward Room – RM 2008) ☐ **17:00-18:30 pm:** Team review of materials and deliberations. (Team Room) ☐ **19:00-20:30 pm:** Team-only dinner. (Location: TBD)
Tuesday, March 19, 2024 (On-Site)	**AM**	☐ **8:00 - 9:00 am:** Team Breakfast with the Program head ☐ **9:30 - 11:00 am:** Meeting with the faculty ☐ **11:00 - 11:30 am:** Observation of lectures and seminar ☐ **11:30 - 12:30 pm:** 2 Team Members meet with librarian 2 Team members meet with Co-op Coordinator (ARC 2008) Brent Thornhill 2 Team members meet with Workshop staff (ARC 1006) Heinz Koller & Michael Syms
	PM	☐ **12:30-13:30 pm:** Team lunch with Student Representatives. (Location:TBD) ☐ **13:30-14:30 pm:** Meeting with Grad Students. (MLH - RM 1001) ☐ **14:30- 15:00 pm:** Break (Team Room) ☐ **15:00-15:30 pm:** Observation of lectures and seminars. (MLH - ARCH 143) ☐ **16:00-17:00 pm:** Meeting with Undergrad Students. (MLH - RM 1001) ☐ **18:00-19:30 pm:** Team-only dinner. (Location:TBD) ☐ **19:30 - 21:00 pm:** Program Strengths and Causes of Concern. (Team Room)
Wednesday, March 20, 2024 (On-Site)	**AM**	☐ **8:00-9:00 am:** Team breakfast with Program Head. (Team Room) ☐ **9:00-11:00 am:** Team review of materials and deliberations. (Team Room) ☐ **11:00-11:30 am:** Exit meeting with Program Head. (Ward Room – RM 2008) ☐ **11:30-12:00 am:** Exit meeting with President and Provost (Virtual).
	PM	☐ **12:00-12:30 pm:** Exit meeting with Dean. (Ward Room – RM 2008) ☐ **13:00 pm:** Check-out of hotel and depart.

V. Report Signatures

DocuSigned by:
9D28603A6E594EE...

Graham Livesey,*Chair*
representing the educators

DocuSigned by:
Chris Young
39CE4479D2F146E...

Chris Young
representing the practitioners

DocuSigned by:
Ivan Martinovic
3F2E3AA807A6477...

Ivan Martinovic
representing the practitioners

DocuSigned by:
katherine Wagner
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Katherine Wagner
representing the educators

DocuSigned by:
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Fiona Hamilton.
representing the Interns

DocuSigned by:
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Lisa Landrum
CACB non-voting member

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