# NAB

National Architectural Accrediting Board, Inc.

#### 2020 Conditions and Procedures **Plan to Correct** for Continuing Accreditation

#### **Jefferson** Thomas Jefferson University

College of Architecture and the Built Environment

#### Master of Architecture Program

7 July 2023

# NMB

#### Plan to Correct

(2020 Procedures)

Institution	Thomas Jefferson University	
Name of Academic Unit	College of Architecture and the Built Environment	
Degree(s) (check all that apply) Track(s) (Please include all tracks offered by the program under the respective degree, including total number of credits. Examples: 150 semester undergraduate credit hours Undergraduate degree with architecture major + 60 graduate semester credit hours Undergraduate degree with non-architecture major + 90 graduate semester credit hours)	<ul> <li>□ Bachelor of Architecture Track:</li> <li>○ Master of Architecture Track: 2 Year Pre-professional architecture degree (undergraduate degree with architecture major) +49 TJU graduate semester credit hours Track: 3 Year Non pre-professional degree* (a bachelor's degree in a non-professional major) + 100 TJU graduate semester credit hours.</li> <li>□ Doctor of Architecture Track: Track:</li> </ul>	
Year of Previous Visit	February 2022	
Current Term of Accreditation	Continuing Accreditation (Eight-Year Term)	
Program Administrator	Evan Pruitt. Associate Director, Master of Architecture Program	
<b>Chief Administrator</b> for the academic unit in which the program is located (e.g., dean or department chair)	John Dwyer AIA. Chair, Department of Architecture Barbara Klinkhammer, DiplIng. Dean College of Architecture and the Built Environment	
Chief Academic Officer of the Institution	Mark Tykocinski, MD. President Thomas Jefferson University	
President of the Institution	Joseph Cacchione, MD. CEO Thomas Jefferson University	
Individual submitting the APR	David Kratzer, AIA. Previous Chair (during visit), Department of Architecture	
Name and Email Address of Individual to Whom Questions Should Be Directed	John Dwyer, AIA. Chair, Department of Architecture John.Dwyer@Jefferson.edu	

# NAVB

#### **Plan to Correct Form**

Conditions Not Met	Corrective Actions	Timeline
List the number and title of each condition that must be addressed in the Plan to Correct.	Provide a narrative describing the corrective actions that have been taken and those that are planned but not yet implemented. For all actions taken, provide supporting evidence as described under the relevant Condition in the 2020 Conditions and 2020 Guidelines for the Accreditation	List the timeline for all corrective actions, including actual or planned start and completion dates.
	Process. <b>TJU:</b> The Narratives below address the specific Criteria not Met listed in the NAAB Visiting Team Report: Access for the Overall Evidence Folder ( <u>Link</u> )	
SC 5 - Design	Program Narrative 1:	Overall Corrective Actions began
Synthesis & <b>SC.6</b> – Building	Overall Context for The Program's Addressing of SC.5 and SC.6 Both the Master of Architecture and Bachelor of Architecture	Spring 2022 (after visit), continued over the 2022/23 Academic Year. Actions will
Integration	<ul> <li>Both the Market of Architecture and bachetor of Programs in the College of Architecture and the Built Environment (CABE) at Thomas Jefferson University (TJU) primarily address SC.5 and SC.6 in ARCH 615 Design 5</li> <li>"Comprehensive Project" Studio and ARCH 645 Technology 5</li> <li>"Documentation and Detailing." These courses are corequisites taken together in the same semester. Between the two courses, students in the same teams explore and design as "complete" a building proposal as possible ranging from initial goal setting, site selection and predesign work to building assemblies and details. The process is iterative and scaffolds throughout the semester. The primary coordination tool utilized during the semester. The primary coordination tool utilized during the semester is the Revit software system given its ability to overlay and sync the complex layers a full building proposal requires.</li> <li>The course tandem reviewed in February 2022 is structurally the same as that reviewed by two different NAAB visiting teams in 2018 for both the MArch and BArch programs. The MArch review was an Initial Accreditation and wawarded a 3-year term – the maximum allowed. The BArch review was for a Continuing Accreditation and wawarded an 8-year term. Under the 2014 Conditions, both visiting teams determined C.2 Integrated Evaluations and Decision-Making Design Process and C.3 Integrative Design conditions were met and the BArch program, they were "met with distinction."</li> <li>It must be noted that the two conditions not met as a result of the February 2022 visit, SC.5 and SC.6, each contain a large number of sub-criteria. Our course objectives, rubric and benchmarks broke both criteria into sub-criteria for assessment and curricular planning (refer to the MArch APR dated 9/7/2021 and visit evidence). The condition not met for SC.5 was one of three sub-criteria and for SC.6, was one of five. Given the VTR's focus on conditions not met, it should be understood that the other six sub-criteria of SC.5 and S</li></ul>	continue moving forward.
	Supporting Evidence: N/A	

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SC.5 – Design Synthesis & SC.6 – Building Integration	<ul> <li>Program Narrative 2: <u>General Studio Iterative Design Process – and its</u> <u>Documentation.</u></li> <li>Architecture program students are required to submit a "Process Book" at the end of the semester to complete and receive a final grade for all design studios. As a condition of acceptance, the book is to document the design project process including research, explorations, conceptualization, iterations, final proposals and design decision making evidence. Given the overlaps and close collaborations, the process books for ARCH 615 and 645 are often combined. Of constant struggle is the student's perceived lack of value, and therefore non-inclusion, of the early decision-making diagrams, sketches, explorations and iterations. This often gives the impression of a less rigorous design process – which we believe the Visiting Team concluded in review of the evidence during their visit. With the goal of improving this situation, the following plans have been initiated and explored:</li> <li>Supporting Evidence: See Below</li> </ul>	Overall Corrective Actions began Spring 2022 (after visit), continued over the 2022/23 Academic Year. Actions will continue moving forward.
SC.5 – Design Synthesis & SC.6 – Building Integration	Program Narrative 2-1:         Require Greater Emphasis on the Full Iterative Design         Process and Documentation through Process Books:         Greater focus will be placed upon the Process Book to more         clearly and comprehensively document the iterative design         process by the students. Examples of evidence from the         past academic year:         Supporting Evidence:         Evidence Folder (Link)         Iterative Studio Schedule         Iterative Studio Assignment Format         Process Book Examples	Corrective Actions began Fall 2023 and continue
SC.5 – Design Synthesis & SC.6 – Building Integration	Program Narrative 2-2: <u>Collaborate with Studio Consultants</u> : In order to better set and compare objectives as well as to develop metrics and measurable outcomes during the process, the addition of periodic "consultants" for the ARCH 615 studio has been explored. These consultants focus on specific areas of the student's design process and iterative topics such as structures, passive/ active environmental systems, site design and impacts on design decisions. Both "measurable environmental and building performance impacts" will be of greater focus as a starting point. For the academic year 2022/23 the following additions were made and explored:	Corrective Actions began Fall 2023 and continue

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	<ul> <li>2-2-1 Greater Focus on Sustainable Structure and Enclosures: With the goal of prompting greater focus on structure and enclosure as well as a building a greater awareness of sustainable building and issues of carbon, ARCH 615 required the use of mass timber structure for the student's projects during the Fall 22 and Spring 23 Semesters. In support of this position, mass timber professionals were involved periodically in the studio including engineering consultants from <i>Buro Happold</i>, an architectural firm working on the first mass timber building in Philadelphia. A variety of architectural professionals came to campus (for both semesters) to give a presentation on their carbon saving research of timber construction. Discussions focused on why and how they chose mass timber as well as how the structure and mechanical systems integrate into the specific architectural projects. Examples of evidence from the past academic year: Evidence Folder (Link) Examples from Professional Presentations</li> <li>2-2-2 More Rigorous Design Processes: With the goal of improving the iterative design process and its documentation, Thomas Jefferson University's Senior Director of Planning, Design &amp; Construction - Anthony Bracali, RA – joined the studio one day a week for the entire 15 week studio in Fall of 2022. He worked with the studio faculty to create a design process template to establish a consistent graphic format for submission of weekly project assignments. He then met with the students and conducted side exercises on the pre-design, planning, and system integration. The plan is to continue emphasis on the holistic and iterative design process and its documentation by the students as the projects develop. Examples of evidence from the past academic year: Evidence Folder (Link) (Copy of Narr. 2-1 above) Iterative Studio Schedule</li> <li>2-2-3 Expand the Dialogue on Building Performance Systems: With the goal of expanding the dialogue on building performance systems, a short-term pilot collaboration wa</li></ul>	
	from the methodologies and professional project decision	

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	Access for the Overall Evidence Folder (Link) making process examples. The plan is to continue collaborations with local professionals to promote more attention to design decisions and building performance. Examples of evidence from the past academic year: Evidence Folder (Link) (Copy of Narr. 4-3 Below) Assignment Brief	
	Initial Narrative 2 Assessments: Based primarily on observation, evaluation of the student work and in-class dialogue, the Process Books did improve though they continue to lack all of the day to day iterations displaying the full extent of the project development. The consultants did expand the breadth of the design iteration and documentation in their specific areas of focus though greater coordination is needed moving forward to develop better transference of the consultant's affect into the overall projects – and to minimize distractions to an already complex semester. Supporting Evidence: Listed Above in Narrative	
SC.5 – Design Synthesis	Program Narrative 3: <u>"Measurable Environmental Impacts on Design Decisions"</u> Conditions SC.5 and SC.6 are directly related in tandem courses ARCH 615 Design 5 and ARCH 645 Tech 5, making it tricky to isolate them in our curriculum. For purposes of this plan, this SC.5 Narrative 3 will address "environmental impacts" through the lenses of and site, climate and building orientation. SC.6 Narrative 4 will consider "building performance" through the lenses of material selection/ use and energy. It must be noted that many types of "measure" can be utilized to understand and quantify conditions, design propositions and projected result estimations. These include calculation and estimation utilizing tools ranging from analogue observation to digital simulations and datasets. With the goal of improving this situation, the following plan has been initiated and explored:	Corrective Actions began Fall 2023 and continue

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<b>SC.5</b> – Design Synthesis	Program Narrative 3-1:         Expand Emphasis on More Rigorous Site Analysis and         Documentation:       Greater focus will be placed on the project         site analysis process, its components and the findings from         the analysis especially in ARCH 615 Design 5.         Evidence         examples from the past academic year:         Supporting Evidence:         Evidence Folder (Link)         Site Analysis Introduction Presentation         Process Book Examples	Corrective Actions began Fall 2023 and continue
SC.5 – Design Synthesis	<ul> <li>Program Narrative 3-2: Expand the Focus of Passive Environmental Systems Integration and Assessment Testing: With the goal of building better intuition on building orientation, solar shading and façade screening, the course has explored the use of:</li> <li>3-2-1 Incorporation of the "Heliodon" as an Analogue Tool: As a companion to the digital simulation, the Heliodon was incorporated into ARCH 615 Design 5 for students to measure through observation the impacts of solar exposure and proposed shading strategies. The building orientation, solar exposure, solar simulations and assessments as well as daylighting threads ran throughout the semester in both analogue and digital formats. Examples of evidence from the past academic year: Evidence Folder (Link) Assignment Briefs Process Book Photographic Study Examples</li> <li>3-2-2 Greater Use of the "Enscape" (or other) Revit Analysis Plugin(s): To assess impacts of heat gain and daylighting through digital simulation as the first step in an expanded digital assessment and impact measurement tools, the exploration of differing Revit Plugins was undertaken – with some successes. (See Initial Assessments below) Enscape evidence examples from the past academic year: Evidence Folder (Link) Assignment Examples</li> <li>Initial Narrative 3 Assessments: Assessments have indicated a continuing lack of digital software that balances the need for initial broad-brush design strategy impact results versus highly accurate and detailed energy analysis results. Relative to a student's design process, time is crucial in being able to assess a strategy options and make</li> </ul>	Corrective Actions began Fall 2023 and continue

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	finalize decisions – and learning heavy software takes time. In previous years and courses, the software <i>Sefaira</i> by Trimble was used to provide benchmark assessments for daylighting, solar orientation and shading with some successes. Unfortunately, it works best through <i>Sketchup</i> , which is not taught in our curriculum, and <i>Revit</i> by Autodesk, which the students only begin learning at the start of the Design 5/ Tech 5 semester. This makes it difficult to fully integrate this plug in, as well as <i>Insight</i> and <i>Enscape</i> into the early design phases efficiently enough to offer quick impact assessments. Incorporation of the early phase Heliodon assignments were in part a reaction to this situation – and found to be a valuable, and well liked, early design tool. <i>Enscape</i> was incorporated later in the semester as an additional tool after students were better versed in <i>Revit</i> . The NAAB visit, and subsequent self- assessment, has highlighted the challenges of teaching Revit late in the curriculum, especially given the need for more quantitative assessment tools moving forward. The search for a well-balanced software will continue. <b>Supporting Evidence:</b> Noted in Narrative Above	
SC.6 – Building Integration	Program Narrative 4: <u>"Measurable Outcomes of Building Performance" in the design process:</u> Again, Conditions SC.5 and SC.6 are directly related in the tandem courses ARCH 615 Design 5 and ARCH 645 Tech 5, making it tricky to isolate them in our curriculum. For purposes of this plan, this SC.6 Narrative 4 will consider "building performance" through the lenses of material selection/ use and energy. (Per the previous, SC.5 Narrative 3 addresses "environmental impacts" through the lenses of site, climate and building orientation.) It again must be noted that many types of "measure" can be utilized to understand and quantify conditions, design propositions and projected result estimations. These include calculation and estimation utilizing tools ranging from analogue observation to digital simulations with datasets. With the goal of improving this situation, the following plan has been initiated and explored:	Corrective Actions began Fall 2023 and continue

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SC.6 – Building Integration	Narrative 4-1:         Simplify the Student's Search for a Structural System: With the goal of focusing the students on a single structural system in comparison to more familiar systems, Mass-Timber was assigned in ARCH 615 Design 5 as a basis for all designs to see if the students could explore a system in greater detail. This selection provided an agenda and coordinated set of building performance benchmark criteria to use in developing the projects for detailing in comparison to standard steel and concrete systems – and simplified the overall design process. Examples of evidence from the past academic year:         Supporting Evidence:       Evidence Folder (Link)         Assignment Briefs       Example of Presentations by Mass Timber Experts (see Narrative 2 above)         Process Book Examples       Process Book Examples	Corrective Actions began Fall 2023 and continue
SC.6 – Building Integration	Narrative 4-2:         Provide Opportunities to Explore Materials Through         Sustainability Lenses:         With the goal of improving the         environmental and building performance impacts of material         choices, an assignment was added to ARCH 645 Tech 5 to         explore the impacts of differing materials. In Assignment 6,         students were required to obtain EPD's for their selected         materials (Environmental Product Declarations) and assess         the choices by carbon footprint and cost. Examples of         evidence from the past academic year:         Supporting Evidence:         Evidence Folder (Link)         Assignment Briefs         Assignment Examples	Corrective Actions began Fall 2023 and continue
SC.6 – Building Integration	<b>Narrative 4-3:</b> <u>Provide Examples of Analysis Processes</u> : With the goal of expanding the students understanding of, and methodology for, assessing building performance in relation to energy use, Tech 5 explored incorporating a one-week charette with local architectural professionals from the <i>Payette</i> architecture firm. Assignment 8 focused on consideration of measurable impacts of environmental and energy use through an iterative façade development process. Following presentations by the professionals, and research presentations by the student groups, facades were sketch designed and assessed through a variety of digital modeling and detailing techniques to determine baseline	Corrective Actions began Fall 2023 and continue

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	performance. The students then incorporated these methodologies to their own projects. This charette was a pilot to explore potential improvements to the iterative design process of the students surrounding building performance. It is the goal of the program to expand the collaborations with professionals moving forward. Examples of evidence from the past academic year:         Supporting Evidence:         Evidence Folder (Link) Assignment Brief Assignment Examples	
SC.6 – Building Integration	Narrative 4-4: Promote Design Option Analysis and Design Arguments: With the goal of reinforcing the iterative design process and the use of measurable tools for decision making, an assignment was added to ARCH 645 Tech 5 which required students to analyze and document a design decision. The students chose a design problem and documented two solution options. They were then asked to assess those options utilizing an analysis tool of their choice to arrive at a solution and the reasons why. The goal is to promote this "optioning" throughout the design process for all design studios in the architecture programs. Examples of evidence from the past academic year: Supporting Evidence: Evidence Folder (Link) Assignment Brief Assignment Examples	Corrective Actions began Fall 2023 and continue
	Initial Narrative 4 Assessments: Assessments indicated that selecting a structural system, while seemingly a limit, did offer the students more time to explore the structure and associated systems at a more comprehensive level including more issues of building performance. Most student groups did add other secondary structural system types but setting a base system simplified at least one variable in a complicated semester. Asking the students to consider the carbon footprint and cost of materials did expand their understanding of the environmental and building performance implications of material and system choices. While the charette pilot collaboration was successful in demonstrating and utilizing clear methodologies of building performance analysis, it was hampered by the software challenges noted in the Narrative 3 Initial Assessments above. The ARCH 614 Design 5 and ARCH 645 Tech 4 tandem is proving to be a very dense	

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	semester as greater numbers of project components continue to be added into the semester. Explorations are underway into the ancillary courses that lead into, and support, the Comprehensive Studio Project semester as well as an evaluation of the studio overall schedule and time demands.	
	End of Plan to Correct Respectfully Submitted, David Kratzer, AIA. Associate Professor, Architecture Programs John Dwyer, AIA. Chair, Department of Architecture For Running Text Version of this Plan: (Link)	