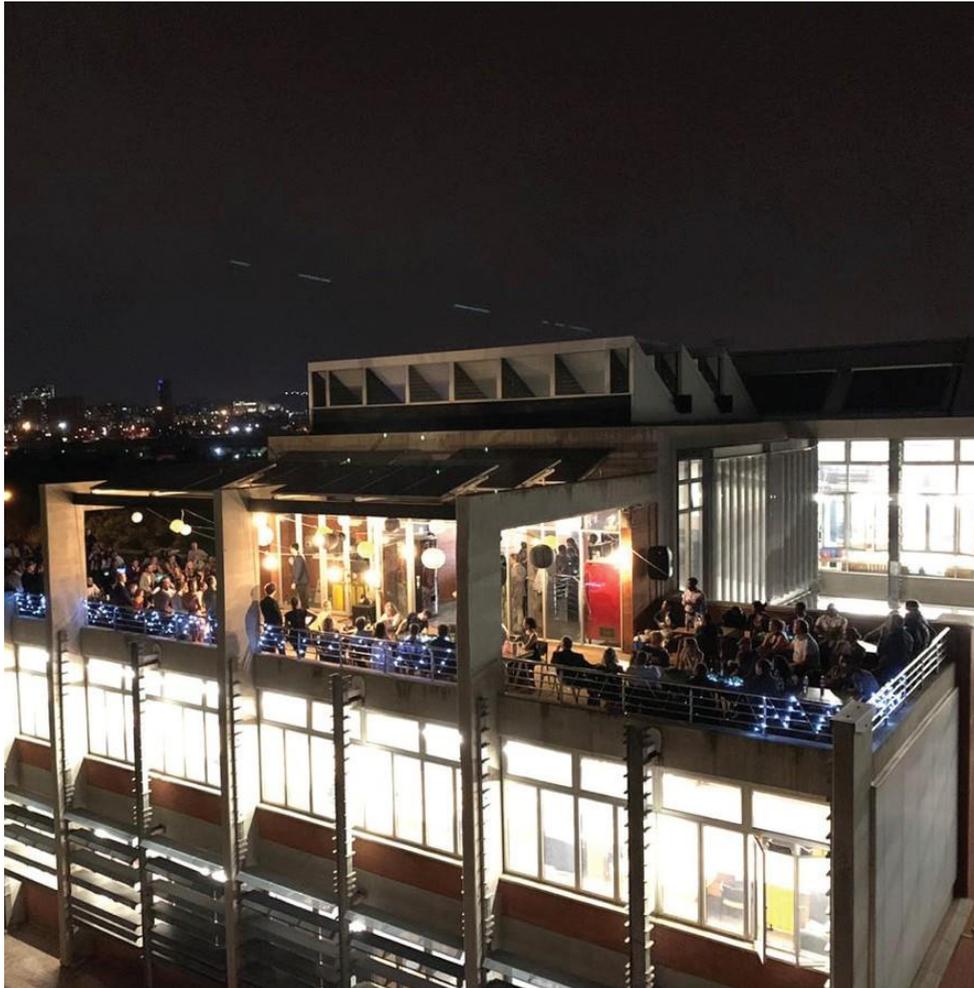




South African Council  
for the Architectural Profession

## FINAL: TSHWANE UNIVERSITY OF TECHNOLOGY ACCREDITATION VISIT REPORT



Report of the visiting SACAP Validation Board to the Department of Architecture & Industrial Design at the Tshwane University of Technology

Date: 15 – 17 August 2022

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## 1. LIST OF ACRONYMS

ALS	Architecture Learning Site
CAA	Commonwealth Association for Architecture
CA	Canberra Accord
CBE	Council for the Built Environment
CHE	Council on Higher Education
ETQA	Education and Training Qualifications Authority
HEI	Higher Education Institution
HOS	Head of School
SACAP	South African Council for the Architectural Profession
VB	Validation Board
TUT	Tshwane University of Technology
SAQA	South African Qualifications Authority
DAID	Department of Architecture & Industrial Design
PIA	Pretoria Institute of Architects

## 2. INTRODUCTION

The Validation Board (VB) undertook an accreditation visit on the 15<sup>th</sup> – 17<sup>th</sup> August 2022 to accredit the programmes at the Department of Architecture & Industrial Design (DAID) at the Tshwane University of Technology. The accreditation visit is to ensure the alignment with the statutory mandate entrusted on the SACAP Council, section 13 of the Architectural Profession Act, No 44 of 2000. The accreditation visit serves to examine whether the architectural qualification complies with the prescribed standards.

The accreditation visit served to assess the quality and relevance of the following programmes:

- Bachelor of Architecture (Design + Tech): B. Arch
- Bachelor of Architecture (Extended Curriculum): B. Arch (Ext)
- Master of Architecture: M. Arch
- Master of Architecture (Architectural Technology): M. Arch. Tech

The Validation Board (VB) is satisfied that the four programmes meet the minimum standards requisite for recognition set by SACAP. This report contains the findings of the VB. The VB appreciated the preparations for the visit (all the documentation, exhibitions, presentations) and appointments scheduled. The VB, once again experienced friendliness, openness and transparency which made the hybrid visit one which was memorable. The VB thanks the Executive Management, Faculty staff for their assistance passionate engagement and hospitality during the entire accreditation process.

### 3. EXECUTIVE SUMMARY

#### 3.1. Introduction

The VB commends and applauds the Tshwane University of Technology (TUT) for their clearly stated academic identity of creating architectural graduates that are creative, agile and entrepreneurial. The aim that TUT has taken, which was to focus on articulating the identity of the ALS, was evident in the efforts they demonstrated. They demonstrated to be: practice focused, design focused, developmentally focused and their “Model and Make” approach is evident whilst still meeting the SACAP minimum competencies.

The ALSs’ articulation of their distinct identity and architectural pedagogy was clearly visible in the SACAP engagements and presentations.

One of the few institutions to offer a comprehensive Foundation programme, which is to prepare a limited number of students who did not gain entry into first year, is a delight to witness in a country which needs such programmes to address imbalances of the past. More so, all programme modules presented were found to comply with the SACAP competencies, enabling TUT to satisfy the minimum standards for accreditation into their programmes.

The teaching staff demonstrated a high level of competence, dedication and diligence in the teaching and delivery of course modules. This was evident in the assessment practices and resources provided to the students.

The facilities inspected were found to be ahead of most faculties and conducive to teaching and learning, supporting the standard criteria for accreditation. That being said, there is still room for improvements on a number of aspects as will be detailed in this report.

#### 3.2. Recommendation to SACAP

The VB is satisfied with the outcomes of the assessment of the ALS and recommends that since the DAID satisfies the minimum accreditation standards for their programmes, the Council should grant TUT ***Unconditional Accreditation***.

#### **Final Outcome from SACAP Council:**

The SACAP Council has granted TUT Unconditional Accreditation status.

#### **Recommendations to the TUT DAID**

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- More work is needed to improve the quality of internal and external moderation processes. There should be customised quality assurance checklists and tools put in place which have sections for comments and suggestions which are required on the forms that need to be submitted by moderators.
  - The VB noted that most external moderators did not comment on the standard of work given to students. The suggestion is that the moderation document is refined to make room for comments and recommendations by the moderators.
  - The ALS should aim to seek diversity among the external examiners in terms of geographical location, race and gender and further consider the inclusion of external examiners who graduated from other ALSs.
  - The VB noted with concern that the History and Theory modules do not seem to have external moderators allocated to them; this is something that needs to be addressed urgently.
- There needs to be more efforts in assisting students with their academic performance, by increasing the length of time that the students have access to the library and studios and by ensuring good internet connectivity. This will assist the student to achieve academic success.
- The TUT DIAD should encourage more free hand drawing projects and exercises which will help the students in articulating their Design process.
- The ALS should ensure that there is equitable staff workload to ease the burden observed from the junior staff.
- The 2017 TUT DAID Self-appraisal Report suggested that Building 2 and Building 11 must be combined. TUT needs to resolve whether or not they will combine the two buildings.
- The VB recommends that within 12 months from the receipt of this report, the TUT DAID must submit a report detailing the progress that has been made based on the recommendations.

#### **4. PREAMBLE**

The South African Council for the Architectural Profession (SACAP) is mandated in terms of section 13 of the Architectural Profession Act, No. 44 of 2000, to arrange for accreditation visits in order to examine the compliance of architectural qualifications with the SACAP prescribed standards.

The aim of an accreditation visit is to determine whether graduates who apply for registration as candidates in SACAP's four professional categories meet the minimum standards of competencies and skills associated with the respective categories.

An accredited qualification enables graduates to register in one of the categories as either a Candidate Draughtsperson, a Candidate Architectural Technologist, a Candidate Senior Architectural Technologist or a Candidate Architect with SACAP.

## **5. NATURE OF SACAP ACCREDITATION**

The accreditation process and its nature emanate from section 13 (a) of Act 44 of 2000. As per the Act, accreditation is subject to sections 5 and 7 of the Higher Education Act (No. 101 of 1997). The implication of accreditation is, therefore, conditional upon the accreditation of the architectural programmes by the Council on Higher Education (CHE). This implies that accreditation is an outcome-based evaluation system of architectural qualifications. SACAP evaluates the evidence provided by the ALS through an interview process with the academic teaching staff, students and external examiners, as well as conducting an onsite visit to inspect the facilities.

## **6. ACCREDITATION PROCESS, AIM AND OBJECTIVES**

The aim and objective of an accreditation is to improve the quality of architectural education and safeguard the standards of the architectural programmes. An accreditation is a continuous quality control process that occurs once every four years. The SACAP accreditation system is substantially equivalent to all Canberra Accord signatories, which implies that SACAP architectural programmes are internationally aligned. This is to enable the portability of architectural qualifications internationally.

## **7. CRITERIA FOR EVALUATION**

The accreditation is undertaken in accordance with the SACAP competencies and the validation protocols. The architectural competencies prescribe a range of skills and acknowledge fields for each of the four architectural professional

categories and they are approximately aligned with the qualification that is being validated.

The accreditation process is standardised for consistency and quality taking into account intrinsic diversity of learning programmes. The ALS undergoing accreditation is expected to clearly articulate and explain how its architectural programme is positioned and unique. This includes characteristics of the programme and niche.

The VB examines and assess the courses, modules and subjects in terms of structure, credits, content, teaching and learning, and intellectual intensity in terms of the year offered. An ALS must also indicate how continuity and vertical progression are achieved in the transition between qualifications. Of specific importance are the requirements for, and envisaged format of, final year design theses and the examination procedures.

#### **8. MEMBERS OF THE VALIDATION BOARD**

The VB consisted of Ms Nomagugu Mancu (Chairperson), Dr Finzi Saidi (VB member), Mr Eugene Barnard (VB member), Ms Mathebe Aphane (VB member), Mr Xola Dabula (VB member), Mr Charles Nduku (VB member), Ms Keressa Moodley (VB observer), Mr Mzwakhe Hlatshwayo (SACAP secretary), Dr Arthur Barker (Facilitator: Canberra Accord - CA), Prof Chen Mervin (CA representative) and Prof Li Boateng (CA representative).

#### **9. TUT DEPARTMENT OF ARCHITECTURE AND INDUSTRIAL DESIGN REPORT**

The TUT DIAD is a school for architectural programmes. Historically, the university was part of the old Technikons system, designed to transfer practical competence from skilled practitioners and crafts persons' to students and apprentices. The Technikon was changed into a university of technology during the national restructuring of South African universities in the early 2000s. This change set in motion a gradual emphasis on the balance between technical competence and critical reflection.

The TUT DIAD has experienced challenges in effectively implementing transformation initiatives in certain spheres, which has resulted in slow progress relative to SACAP's mandate, which was noted by the last 2017 VB. The VB however, commends the efforts in addressing some of these issues by the Department, which are outlined as per the TUT transformation framework. Progress is noticeable and commended for:

- **Student Intake:** The number of black students admitted to the department has increased steadily in the last ten years. In addition, the percentage of black M. Arch students has increased proportionally since the 2017 visit.
- **Curriculum Change:** VB noted visible efforts to broaden the curriculum beyond the historically Eurocentric approaches towards a wider and more inclusive one, that also focuses on Southern African theories.
- **Diversity of external examiner appointments:** From 2018 onwards, the list of examiners is reviewed by the HOS at the beginning of each year to ensure that there is diversity of external examiners for each module. It was noted however, that most of the external examiners are TUT graduates.
- **Part-time lecturer appointments:** In 2021, 40% of the total part-time lecturer appointments were female, of which 36% were black women.

The VB noted that further efforts are required to address issues of transformation and recommend that the following should be addressed:

- **Diversity of academic staff:** The percentage of permanent African staff members has reduced from 31% in 2017 to 24% in 2021. The percentage of female staff members has remained at 38% from 2017 to 2021. The VB noted with concern the lack of growth in the representation of women academics in the department. A decisive plan is required to change the situation within the next 12 months.
- **TUT post-graduate student diversity:** The VB noted with concern the persisting low number of black student enrolment in the M. Arch and MTech programmes. Black students constituted 34%, while white and Indian students made up 62% and 3% of the student's cohort respectively. The overall enrolment in terms of gender balance reveals a male-dominated student cohort with 76% male and 24% female,

respectively. A decisive plan is required to change the situation within the next 12 months.

The VB also recommends that from the transformation report, TUT DAID needs to:

- Focus on awarding more scholarships to talented students, especially black students in the MArch programmes
- Focus on decolonizing the curriculum of all modules and not only just the History and Theory modules.
- Establish an outreach programme with high schools around Tshwane area together with SACAP and PIA.

In responding to the 2017 self-appraisal report, the VB noted that the ALS had covered most items raised in the previous report. This includes, amongst others; addressing of the student intake rate, the staff demographics and the appointment of external examiners. The VB also commended the depth of knowledge covered in the History and Theory of Architecture modules.

There is a significant improvement in staff engagement which has resulted in the teamwork being displayed.

Although there has been a disruption in the school's administrative running due to the sudden resignation of Prof J Laubscher as HOS in April of 2022, the VB noted the institution's efforts to ensure stability and continuity of learning programmes within the TUT DAID. The VB lauds the appointment of the Executive Dean of the Faculty to oversee the administration of the TUT DAID with the assistance of Dr Nkambule, who was tasked with the accreditation project for the department. This leadership ensured a successful accreditation visit and a concise presentation of all evidence documents within a short space of time, a strategic move which was highly commendable by the VB.

Moreover, the VB commends TUT's foundation programme formulated as a bridging course to enable students to move from a non-architectural background into architectural studies. Many students in the foundation course come from disadvantaged backgrounds. Through this programme, the students are given the skills to better express and articulate themselves in a manner required of an architectural student. In turn, this fluency in the language of drawing gives them an advantage and immediate access to perform well in the mainstream course. The techniques employed are centred between two core poles - drawing well and drawing fast.

Lastly, the leadership at TUT is to be commended for successfully implementing and articulating a clear identity and unique traits /characteristics that define the ALS. The ALS has made the vision much clearer and indeed the ALS was experienced as a university that makes knowledge work. The integration with the engineering faculty has shown to be a good cross pollination and helps ALS even further articulate the Model and Make aspect of their Identity.

## 10. ACCREDITATION DOCUMENTS

The evidence documents were timeously received and easily distributed to the VB members. The information in the files was well organised, concise and clearly presented in Google Drive links with PDF files and labelled accordingly. The self-assessment or evaluation report provided the strategic overview of the ALS, a concise curriculum review, and assessment and moderation reports. Moreover, there were presentations from various units to support the digital files.



Photo 1: Introduction to Self-Appraisal

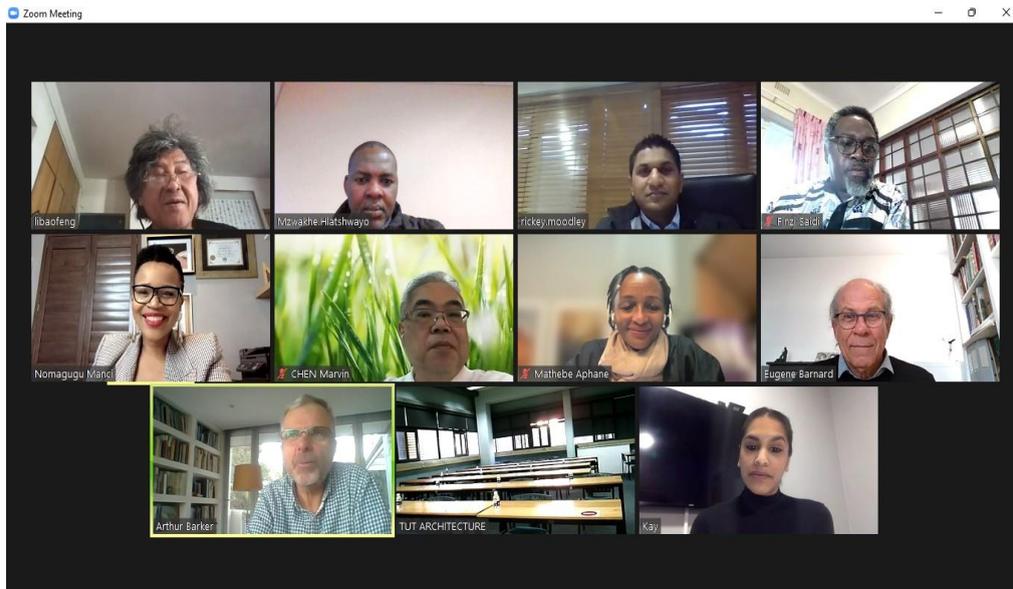
## 10.1 Self-Appraisal and Response to the previous accreditation report

The VB was satisfied with the response by the DAID at TUT towards the 2017 accreditation visit. The DAID appears to have viewed and implemented most of the recommendations from the previous VB. There are some areas that still require further effort, improvement with clear implementation strategy from the ALS as explained further in the report. These will be subjected to a review process by the next accreditation visit.

#### **10.2 Report from the Acting Head of School, Dr Mbongiseni Nkambule**

The VB commended the TUT leadership which has shown notable transformations since the 2017 VB visit despite the leadership transition process in the ALS. The current leadership demonstrated resilience and has implemented its strategy to drive academic success. This was achieved by creating systems to aid the curriculum – the production of detailed modules, study guides and assessment processes which are credible and meet the set standards required. The VB noted that despite the positive work seen, the ALS still needed to apply more effort to improve on the curriculum transformation on an ongoing basis to ensure relevance.

The VB also noted that there is a concise progression in the implementation of previous resolutions from the past reports. For instance, there is an improved collaboration in staff engagement with academic matters. The staff are actively and jointly involved in planning relevant resources and courses that are provided to students to ensure their wellbeing. This implies that the TUT operational strategy is more engaging towards all stakeholders.



**Photo 2: VB Interview with Dr Mbongiseni Nkambule (Architecture room)**

### **10.3 Report on the interview with external examiners**

The VB noted that teaching and learning material are of good quality and that quality assurance systems are in place to maintain this, as per the sentiments shared by the external examiners. The department has expanded and diversified the appointment of external examiners, which compliments the affirmative action policies.

The VB noted that there should be improvements required to the structuring of the examiner's report for more productive outputs and feedback/reviews as a standard to the TUT forms. External examiners comments should refer to each module and reflect on; the provided study material and resources; students' standard of work; assessment criteria and its application of criteria. The report template should provide space for external examiners to highlight issues, commend and make suggestion aimed at improving teaching and learning of each module.

The interaction with the external examiners was engaging and vibrant, with insufficient time to hear all comments for each subject. The examiners that did get to speak raised some constructive points that would be useful to the ALSs. There was concern raised by the VB that there were no History and Theory examiners present during the interview.

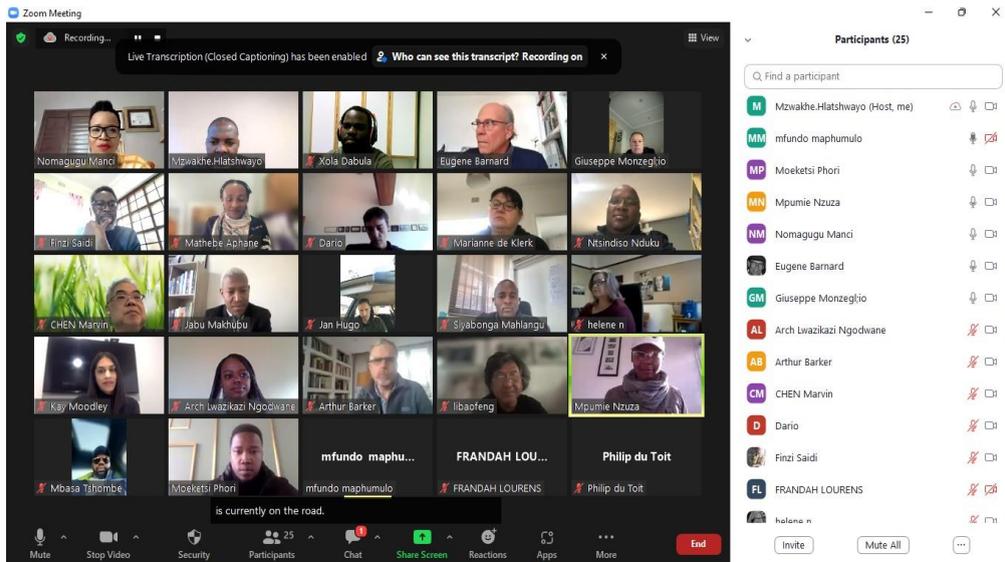


Photo 3: VB in interview with external examiners

#### 10.4 Report on the interview with students (Student body)

The VB commends the ALS for such a huge turnout of students to the sessions for discussion, both past and current students attended the session. The student body looked united and engaged - indicative of the changes implemented in the election of the AIRC leadership.

Students provided generally positive feedback on the curriculum delivery; however, they did raise concerns of limited access to the library. The VB noted that this needed to change as to allow all students the equal opportunity to deliver work required for the programmes given the different backgrounds they come from. The students were happy with the assistance they got from the ALS related to stationery and materials required for building models for the programmes. They also found the interaction between the engineering students quite informative and felt this does improve their work and creativity. They noted receiving discounts on printing and being provided with access to workshops to work on their models for submissions.

Students expressed satisfaction with the quality and competence of the academic teaching staff. It was evident that there was a strong sense of collaboration between staff and students. The VB recommended, however, that the staff-to-student ratio of 1:15 is to be maintained in order to ensure good quality education.

The students raised the issue of lack of access to studios outside the current stipulated open hours, which compromises underprivileged students. The VB has advised the ALS to urgently effect improvement on this matter. In addition, senior student asserts that sketching needs to be given more emphasis as compared to the digital approach. This is a concern that needs to be noted by the academic teaching staff and actioned where possible. The VB noted that there is insufficient network coverage in the ALS and that this is a problem which requires urgent improvement within the university WIFI system.

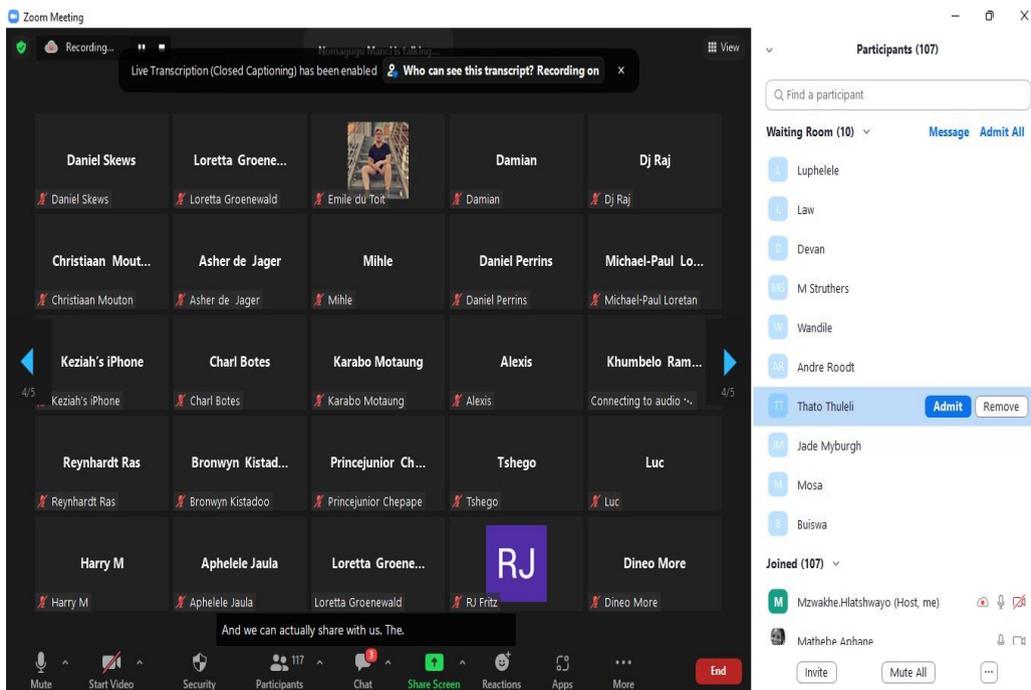


Photo 4: VB interviews students & student body

## 10.5 Report on the interview with staff

The academic teaching staff proved to be a diverse and vibrant group of qualified personnel with the necessary experience to deliver on the curriculum. The staff appeared very motivated and passionate about the work they were doing within the ALS. All were able to clearly articulate themselves in line with the course content they were addressing. The ALS has effective curriculum delivery systems and have established quality assurance processes to monitor academic performance. They have created online academic modules, guides and assessment processes which are credible and satisfy standards as a response strategy to COVID-19. The staff also expressed confidence and support of the new leadership structure which facilitated for a good work environment.

The staff noted that further efforts needed to be made to ensure transformation takes place in the ALS staffing component. The staff also felt supported by the ALS related to pursuing higher academic achievements. The VB noted the issue of inequitable workload amongst staff members as an issue that must be addressed with the Dean of Faculty.

The VB also commends the staff's competency and dedication which is evidenced in the academic delivery on all aspects.

The History and Theory modules still pose a challenge to the staff in terms of facilitating inclusion of the African context in the teachings. It was also noted that there are no external examiners for this subject currently which is proving to be an academic challenge.

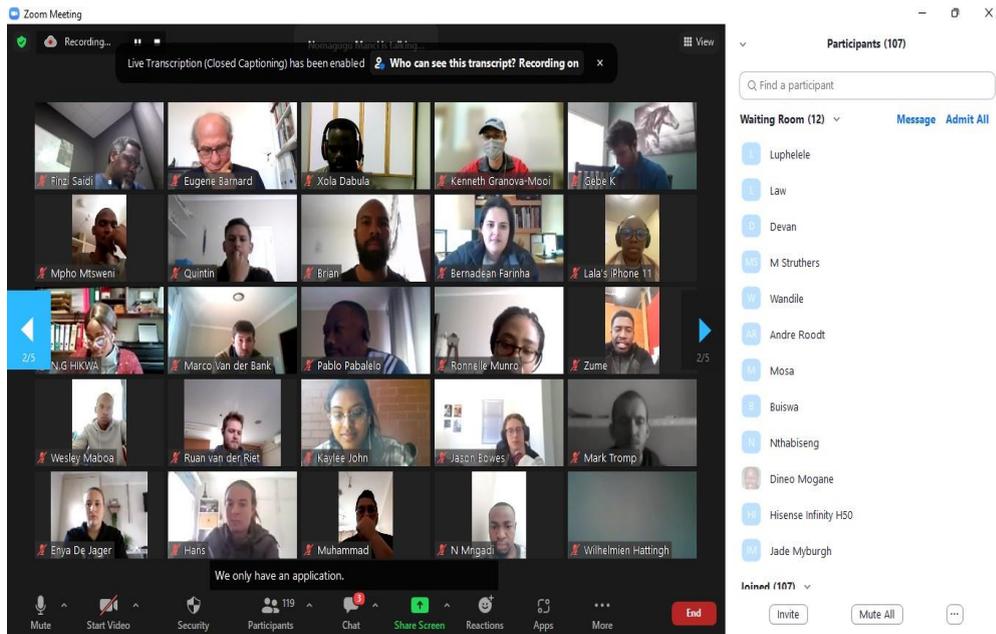


Photo 5: VB interviews with staff & part-time staff

## 11. FACILITIES AND RESOURCES

During the visit, the VB was accommodated in a spacious and comfortable exhibition and meeting hall. The refreshments served were generous and well appreciated by the board members. The VB commends the DAID at TUT for the diligent manner in which the students' work was displayed in the exhibition, from the borderline students to the highest mark. The students' portfolios were well arranged chronologically, easily accessible and well exhibited. The exhibited portfolios gave the VB a clearer understanding of the standard of work at the TUT DAID. The quantum of work per subject and year met the recommended SACAP requirements.

The department has studio spaces for all academic years of study. The studio spaces are spread between Building 2 and Building 11 (the newer building of the two). During the last SACAP visit in 2017 the idea of linking the two separate buildings was discussed, and the idea is yet to be realised. There have been cosmetic upgrades to building 2, which must be commended. The studio and pin-up spaces are open plan layouts and, therefore, flexible. The spaces are more than adequate for the number of students the building accommodates. Only Building 2 is accessible to the students 24 hours.



Photo 6: Studios and pin-up spaces

The DAID at TUT also provides digital surveying equipment for both the students of Architecture and Industrial Design. This equipment is used to obtain photographs for photogrammetry and laser scans to create 3D point cloud images for digital surveying.

Available equipment includes:

- A FARO Focus S 70 Terrestrial Scanner fully equipped with carbon fibre tripod and IPAD;
- A RICOH Theta Z1 360 Camera telescopic monopod;



**Photo 7: Print Lab**

The DAID at TUT has an in-house reference library. In this reference library, books cannot be taken out on loan or removed from the room although there is a copy of all key reference books available for loaning in the TUT Main Library. The volumes on the shelves are mainly books illustrating the work of prominent architects and technical books and brochures assisting of contract documentation process in construction and materials technologies.



**Photo 8: Library**

The DAID has an auditorium which can accommodate 200 students.



**Photo 9: Auditorium**

The VB would like to commend the TUT management for supporting the DAID in all the upgrading projects of the school. The students will benefit immensely from all the state-of-the-art facilities offered at the school.

## 12. REVIEW OF COURSES

### 12.1. Bachelor of Architecture (Extended Curriculum) B. Arch (Ext) Foundations

#### **Architectural Design 1 (ACHF05P)**

The findings of the VB indicate that the course is a well-structured and manages to prepare the students for the first year. The teaching and learning methods employed are appropriate for the level of entry and the basics requirements are met. The report from the external examiner is not elaborative and only gives a rating of 60%. The VB noted that due to the passing of Dr MJ Stander, who was the main champion of this programme, there may be some transition challenges that will be experienced. There is currently no clear succession plan for who would drive the programme in future, something that the ALS urgently needs to consider.

#### **Foundation Construction 1 (CSTF05P)**

The course was restructured based on the findings of the previous accreditation visit report. The VB noted that the teaching techniques could not be located in the files provided, only in the provided assignments. It was noted that the construction standard is of good quality which includes clear vertical and horizontal progression. The lack of resources, such as computers, constrains the students from producing the required work. The module, however, does align with SACAP competencies.

#### **Architecture Language and Presentation 1 (AFLF05P)**

The VB has noted that the course has an excellent potential to prepare students for the first year. The skills acquired by students enable them to thrive in the first year. There is clear progression from Foundation to the first year and aligns with transformation and SACAP competencies. In terms of assessment, very concise projects and marking rubrics are provided. However, there are no clear systems of the internal and external moderation process. From the interviews with the students however, they seemed to enjoy the course and resources that were available to aid learning in a conducive environment.

#### **Foundation Technical Drawing (FDTF05P)**

From the previous 2017 report, a high standard of teaching and learning is evident and the course proves to be suitable for student preparation for mainstream. The

teaching method and assessment are appropriate for the level of the course. There is a clear percentage allocation of the exam (60%) vs portfolio work (40%). The external moderator reports are not clear and specific in their purpose. It was noted that a drawing board in the studio would be a good investment for this programme to encourage drawing at this level.

#### **Foundation for Professional Practice (PFRP25P)**

The VB noted that the course was good effective as a preparatory course for the first year. The skills acquired by students enable them to thrive and excel in the first year of study. However, from interviews with students, adaptation is required - since students become 'bored' in their first year of study. There is clear progression from Foundation to the first year and the course aligns with transformation and SACAP competencies. In terms of assessment very concise projects and marking rubrics are provided. However, there are no clear systems of the internal and external moderation process. From interviews, students seemed to enjoy the course and the resources available to aid learning in a conducive environment.

### **12.2. Bachelor of Architecture (Design and Technology) B. Arch**

#### **Architectural Design I, II, III, IV (ACD105P/216P/307P/408P/BPS418P)**

From the previous 2017 report, the VB asserts that the school's choice of identity has negatively impacted the design curriculum, particularly from first - fourth year. Though TUT mentioned that their design focuses more on process than the outcome, there seems to be a fundamental absence of a design process that distils findings from the brief or site interrogation into design informants, which should be used as a base for concept generation. This is due to the gap between site analysis to the concept.

The VB recommends that the design concept should not be decided on without following a clear process that will generate ideas that can be used to formulate site-specific concept. Intention of encouraging students to use freehand is commendable, but there seems to be less assistance given to students to hone their freehand drawing and graphic presentation skills.

First-year students should be given exercises geared towards honing their drawing skills to clearly communicate the design strategic framework that can be followed to produce a design responsive to its location and intended function. As the students' progress to the second and third year, assessments that are more complex and larger in scale should be used to prepare them for more complex designs. Third-year and Fourth-year projects seem to be addressing urban issues, and that must be commended, though a clear storyline stitching projects together is missing.

**Building Physics and System Design I, II, III, IV  
(BPS105P/216P/307/408P/ABP418P)**

TUT responded to the previous accreditation visit by adding this module as part of the course. The VB noted an integration between the structure component and the Design and Construction module. It was further noted that the module aligns with SACAP competencies and adheres to transformation objectives. In terms of pedagogy: the modules are taught by qualified lecturers with an approach that develops competence. It was noted that module BPS105P had no content in its study guide.

The VB further noted a clear progression from fundamental building knowledge and legislation to advanced system design. Also, the level of the work readiness programme is intense. In terms of assessment, there is a clear progression from the year i – year iv and the level of complexity differs. The VB highlighted that the marking is accurate with appropriate instruments of marking such as rubrics. However, moderation across all modules is poor, and great improvement is required in modifying the system to enable appropriate feedback.

**Computer Applications in Architecture I, II, III, IV (CAR 125P/226P/327P/428P)**

The findings and recommendation of the 2017 VB have been implemented by the ALS, as such, change of the curriculum has yielded positive results for teaching and learning.

The VB further noted that students are introduced to a good foundation of basic computer programmes. The introduction of programmes ranges from basic computer programmes such as; Microsoft products; Gimp, and Inkscape used for presentation; BIM, Revit and ArchiCAD for drawings at First year. The level of

teaching of these CAD programmes gradually progresses towards the Fourth year, where students are taught more advanced topics, and the projects given are more complex to assess skills such as collaboration and analytic functions of Revit, ArchiCAD and BIM.

In the higher levels of this qualification - this module is linked with the Design module wherein design models/drawings are prepared for 3D printing and laser-cutting. The module has a good incorporation of presentation and technical drawings.

The module objectives and teaching strategies vary from first year to fourth year. Lecturers are competent and apply a variety of techniques to deliver curriculum and clear assessment strategies. Although internal and external quality assurance processes are not clear, this can be improved by revising their moderating systems. The VB notes that the module aligns with SACAP competencies and that students are competent in producing plans, elevations, sections, details, and door/window schedules. Students are proficient in CAD programs namely: Revit, ArchiCAD and BIM.

- The module is taught in sections during the second semester. The VB recommends that TUT DAID investigate the possibility of making this module a year course compared to a module in a semester.
- Unfortunately, only a few external examiners report and lecturers' evaluation forms were given to the VB. The forms which were presented were too generic and don't deal with the particular subject.
- It is recommended that the DAID at TUT introduces an Auto CAD. This will benefit the students as it will broaden their competencies of the applicable programmes used in industry.
- The DAID at TUT needs to investigate and strengthen the relation of this module with the 6 months office work experience that students are enrolled in. The established expected competencies and the scope for work experience needs to be clearly outlined for the student and the company they will be working at.

**Construction I, II, III, IV (CST 105P/216P/307P/408P)**

The findings and recommendation of the 2017 VB have been implemented by the ALS, as such, changes to the curriculum have yielded positive results for teaching and learning.

The VB noted that students are, at first year, introduced to the construction and drawings of simple structures. The syllabus advances to more complex detailing and documentation of multiple-story buildings in the higher levels of the qualification. As the students advance with their studies, the programme becomes more intense and detailed which introduces students to more complex construction techniques. The first year projects initially develop students' hand-drawing skills in relation to basic drawing techniques such as line weights, annotations, scale and representing different materials. Eventually, the outcome of the module is a comprehensive set of municipal submission drawings of a simple building produced in CAD.

It was further noted that there are clear aims and objectives for the module, which are appropriate for differentiated levels as students' progress. This indicates that the module is well crafted, taught by competent lecturers and varied assessment strategies are used to evaluate performance.

- It would have been effective to see the actual lecture slides used to present lessons in order to get a better perspective of the topics discussed and how they relate to the latest SANS regulations and local municipal authority requirements.
- It was observed that a high number of students do not submit or perform well on the final assessment in first year. It could be beneficial to separate the final assessment into two (or more) parts, as most students showed better performance in a series of assessments prior to the final. Another recommendation is to investigate time allocations for the final projects and milestones for students in the Honours programme.
- For the third-year students, there was no clear marking criteria to assess the students work. The final project is interlinked with a Design project, although this has merits, it constrains the student in the cases of incomplete design project, thus their marks will be directly impacted by the status of their design project. Therefore, there should be an investigation of options of more assessments based on SANS standards.

### **Professional Practice I, II, III, IV (PFR 105P/216P/307P/418P)**

This module had no findings in the self-appraisal report since the last visit. The VB noted that the module satisfies the SACAP competencies and adheres to transformation. The teaching methods entail workshops, projects as well as lectures. There is a clear progression from the foundation module to the advanced modules in the higher years of the programme. Instructions are differentiated to accommodate different levels of presentation and to accommodate a variety of students. The course is assessed through examinations and assignments for portfolios. The VB suggested an improvement in the quality assurance processes. The interview with students showed that they are quite satisfied with the module and that there are sufficient resources to learn.

### **History and Theory of Architecture I, II, III, IV (THR 105P/216P/307P/408P)**

Although there was information missing from what was presented in this module, the module's content was revised comprehensively with the help of an appointed History Subject Matter Expert. The VB noted that there were no external moderators' reports available. In terms of the SACAP competencies and transformation agenda - there was a progressive alignment from first year to fourth year. It was also noted that teaching involves more graphic exploration, whereas writing competencies could be explored more creatively.

The modules are clearly structured to assist students with knowledge of integrated workplaces. There were clear assessment criteria – from simple to complex graphic representations of artists. The assignments did not reflect relevance in the subject content and the quality output of work is something the ALS needs to work strongly on. This includes working on establishing a proper system for external and internal moderation. Lastly, there are adequate teaching and learning resources (such as reading labs for research purposes) and study guides provided to students. There needs to be more work done to ensure the course achieve the required level of standard.

## **12.3. Master of Architecture (M Arch)**

### **Architectural Design V (ACH109M)**

The VB recommends that the design concept at the Masters level should be well structured and follow a concise process. This process needs to be from abstract concept to a conclusion based on research. This is not something that should be decided on without following a clear process which will generate ideas that can be used to formulate site-specific concepts. It was further noted that there seems to be less assistance given to learners to hone their design skills. Fifth-year students should be given assessments that hone conceptual skills to generalisations. Student drawing skills should clearly communicate a design strategic framework that can be followed to produce a design responsive to its location and intended function.

#### **Architectural Practice V (AHC109M)**

The VB noted that the module satisfies the SACAP competencies and adheres to the transformation agenda. The teaching methods entail workshops, projects as well as lectures. There is a clear progression from the foundation module to the advanced module. Instructions are differentiated to accommodate different levels of presentation and to accommodate a variety of students. The course is assessed through examinations and assignments, which contribute towards the portfolio mark. The VB recommends an improvement in the quality assurance processes - both internal and external. The interview with the students showed that they are quite satisfied with the module, and resources are sufficient to learn.

#### **Advanced Computer Applications (ARA109M)**

The VB noted that further exposure to advanced systems in Revit, such as Dynamo scripting and incorporating data capturing systems or technology (telemetry sensor), is required. The Masters students participate with the 4th-year students to design and produce physical products from their 3D printing and laser cutting. Assessments are carried out through projects that investigate mass production of small-scale products and prototypes. The strategy to present the module is a blended approach consisting of online links and videos for practical experience. The External examiners reports record a high review of the module although it is evident that there is room for improvement. The module aligns with SACAP competencies and transformation agenda.

#### **Business Management V (BMN109M)**

The VB noted that it would be beneficial for this course to begin earlier in the programmes because of how relevant it is in the economic climate. The DAID atTUT has aligned the course with the SACAP competencies. The pedagogic approach is intense and enables students to be prepared for the work environment. Assessment exercise is very interesting and covers a variety of skills that promote student development in business management skills. The academic teaching staff is well equipped to facilitate the course, and resources are accessible to aid learning. The students enjoy and support this module as evident in the positive commentary during the student interviews.

#### **Contract Documentation V (CD0209M)**

The VB noted that students produced high-quality work which prepares them for the work environment. The DAID at TUT has aligned the course with the SACAP competencies. The teaching strategy is clear and provides more of a favourable learning environment. This is evident in the design brief documents provided to students when assessed. Assessment exercises have clear outcomes and assess various skills to promote student development in contract administration. The academic teaching staff is well equipped to facilitate the course, and resources are accessible to aid learning.

#### **Research Report V (ARP209M/ARP209R) / Research Methodology (RMD 209M/RMD209R)**

The VB noted that the Research Report Module was very well articulated. The structured approach to the year's programme resulted in very good outcomes. The ALS is to be commended for the work produced by the students; external examiners have described it as above average. The standard of the lowest pass is appropriate. The Research Reports standard meets the requirements set by the SACAP.

### **12.4. Masters of Architectural Technology (M Arch Technology)**

#### **Environmental Science V (ESA 109M)**

The VB notes the comments made from the previous 2017 report regarding the module, but felt, the module satisfies the minimum requirements of SACAP competencies where it pertains to energy and water comfort. There are elements

of sustainable design in terms of water, energy and thermal comfort incorporated into the teaching strategy. Assessment is well integrated with the Design module, and students' projects reveal extensive research of the environmental buildings. There is satisfaction regarding the module in general.

#### **Project Management V (PMA 109M)**

The VB noted that the module is aligned with the SACAP competencies and that the recommendations from the external examiners were positive. The pedagogic approach is sufficient and enables students to be prepared for the work environment. Assessment exercises cover a variety of skills that promote student development for application in the profession. The academic teaching staff is well equipped to facilitate the course, and resources are accessible to aid learning.

#### **Technical Studio Design (TDA 109M)**

The Technical Studio Design engages students in community projects to enable the transfer of skills. It is noted that two black students enrolled for the module out of seven which is a step in achieving transformation. Although the module is labour intensive, lectures and students are more engaging, and exercises are conducted very well. The students were well guided, and the structured approach to the year's programme resulted in very good outcomes. The Tshwane University of Technology is to be commended for the work produced by the students; external examiners have described it as above average. The standard of the lowest pass is appropriate. The standard of the module meets the requirements as set by the SACAP.

### **13. CONCLUSIONS**

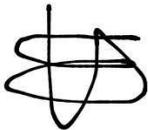
After almost three days of online visits coupled with an on-site visit by the VB inspecting the physical infrastructure at TUT, the VB commended the approach and quality of the four programmes, including the dedication of the academic teaching staff and the leadership of the ALS. The academic standards and notable efforts that have been observed in dealing with the issue of transformation while the institution faces transition in leadership. The VB wishes the acting Head of Department and the ALS the very best in this pursuit of academic success.

#### 14. ACKNOWLEDGEMENTS

The SACAP Council wishes to thank the Validation Board for undertaking the validation visit.

The Validation Board wishes to thank the following for their time, effort, arrangements, and hospitality.

- **Executive Dean:** Doctor Grace Kanakana
- **Acting Head of School:** Doctor Emmanuel Nkambule
- **Vice-Chancellor & Principal:** Professor Tinyiko Maluleke
- The Staff, Students, Alumni, and Part-time lecturers were represented at the virtual visit to make time available and sharing information.

<b>Dr Mbongiseni Nkambule</b>	<b>Ms Nomagugu Manci</b>
Date: 10.11.2022	Date: 11.11.2022
Signature: 	Signature: 

**Annexure A: Competencies Used**

The competencies are aligned with the identification of work matrix. The matrix is based on the complexity of the project, the sensitivity of the context and site.

		SITE SENSITIVITY		
		LOW	MEDIUM	HIGH
PROJECT COMPLEXITY	LOW	PrArchDraught		
		PrArchT		
		PrSArchT		
		PrArch		
	MEDIUM	PrArchT		
		PrSArchT		
		PrArch		
	HIGH	PrSArchT		

**Annexure B: Curriculum Overview**

QUALIFICATION	SUBJECT NAME	SUBJECT CODE
Diploma (BA) Qualification code: First year	60 credits	
	Foundation Architectural Design I*	ACDF05P
	Foundation Construction I*	CSTF05P
	Foundation Architectural Language and Presentation I	ALPF05P
	Foundation Technical Drawing I	FDTF25P
	Foundation Professional Practice I	PFRF25P
Diploma (BA) Qualification code: First year	480 credits	
	Architectural Design I**	ACD105P

	Building Physics and Systems Design I*	BPS105P
	Computer Applications in Architecture I	CAR125P
	Construction I*	CST105P
	Professional Practice I	PFR125P
	Presentation Techniques I	PTR105P
	Theory and History of Architecture I*	THR105P
Second year	Architectural Design II*	ACD216P
	Building Physics and Systems Design II*	BPS216P
	Computer Applications in Architecture II	CAR226P
	Construction II*	CST216P
	Professional Practice II*	PFR216P
	Theory and History of Architecture II*	THR216P
Third year	Architectural Design III*	ACD307P
	Building Physics and Systems Design III*	BPS307P
	Computer Applications in Architecture III	CAR327P
	Construction III*	CST307P
	Professional Practice III	PFR327P
	Theory and History of Architecture III*	THR307P
Fourth year Specialization Design	Architectural Design IV*	ACD408P
	Building Physics and Systems Design IV*	BPS418P
	Computer Applications in Architecture IV	CAR428P
	Construction IV*	CST408P
	Professional Practice IV	PFR418P
	Theory and History of Architecture IV*	THR408P
B.Arch qualification code.	480 credits	
Fourth year Specialization Technology	Building Physics and Systems Design IV*	BPS418P
	Advanced Building Physics and Systems Design IV*	ABP418P
	Construction IV*	CST408P
	Advanced Construction IV*	ACC408P
	Computer Applications in Architecture IV	CAR428P
	Professional Practice IV	PFR418P
	Advanced Professional Practice IV*	APC418P
	Studio Work IV*	STW408P
Master qualification code.	181 credits	
year	First	
	Architectural Design V**	ACH109M
	Architectural Practice V	AFC109M
	Advanced Computer Applications V	ARA109M
	Business Management V	BMIN109M
	Computer Hardware V*	CHH109M
	Construction Materials V**	CSM109M
	Construction Methods V**	KME109M
	Network Systems V*	NSY109M
	Theory of Design V**	THD109M
Second year	Research Report Architecture Professional V	ARP209M
	Research Report Architecture Professional V (re-registration)	ARP209R
	Contract Documentation V*	CDO209M
	Contract Documentation V* (re-registration)	CDO209R
	Research Methodology**	RMD229M
	Specification V*	SFN209M

	Specification V* (re-registration)	SFN209R
MArch (Architect) (Qual. code: First year)	180 credits	
	Construction and Materials and Methods V	CMR109M
	Environmental Science V	ESA109M
	Project Management V	PMA109M
	Research Methodology V	RAT109M
	Technical Design Studio V	TDO109M
Second year	Research Report: Architectural Technology V	ATG109M, ATG500T
	Research Report: Architectural Technology V	ATG109R, ATG500R

**Annexure C: Validation Board Schedule 12<sup>th</sup> August**

2022

TIME	ACTIVITY	RESPONSIBILITY	VENUE
10:00 – 12:00	Pre-Accreditation visit	VB members	Zoom

15<sup>th</sup> -17<sup>th</sup> August 2022

TIME	ACTIVITY	PERSON/S INVOLVED	VENUE
15 <sup>th</sup> August			
07:15 – 9:00	Presentation by staff of the outline of the programme and of core subjects that directly inform architectural design.	HOS, VB, Course Stream Coordinators, Lecturers	Zoom
9:00 – 10:00	Private meeting with Head of School (HOS)	HOS and VB	Zoom
10:00 – 13:00	VB members divide their time between inspection of portfolios and other work.  Two VB members at the ALS do a physical inspection of workshops, library, studios, computer facilities etc. including informal discussion with staff and learners.	VB members	Physical inspection at ALS
13:00-14:00	Lunch	Staff and 2 VB members	

TIME	ACTIVITY	PERSON/S INVOLVED	VENUE
14:00 – 16:00	Video of ALS facilities and slides of the best work of students	VB members and Staff	Zoom
<b>16<sup>TH</sup> August</b>			
06:30	VB members join online	VB members & secretary	Zoom
6:40-7:00	Check-in time		Zoom
07:00-8:00	VB members reflect on evidence presented	VB members	Zoom
08:00 – 09:30	Meeting with external examiners and moderators	VB members, external examiners and moderators	Zoom
09:30 – 10:00	VB members reflect on meeting with external examiners	VB members	Zoom
10:00-10:30	Tea Break		
10:30- 11:30	VB members meeting with the learners	VB members and Learners	Zoom
11:45 – 12:45	VB members meeting with Full Time and Part Time Staff	VB members, PT and FT Staff	Zoom
13:00 – 14:00	Lunch		
14:00 – 16:00	Private meeting of the VB to agree on general findings and report content. Draft statement and outline report.	VB members	Zoom
<b>17<sup>th</sup> August</b>			
06:30	VB members join online	VB members	Zoom

TIME	ACTIVITY	PERSON/S INVOLVED	VENUE
07:00 -10:00	Work on statement and draft report. Prepare for a meeting with senior management.  Finalise, print and sign off statement.	VB members	Zoom
10:00 – 11:00	Meeting with VC, DVC, Dean and Assoc. Dean to convey findings and hand over statement	VB members, VC, DVC, Dean, Assoc. Dean	Zoom
11:00 – 13:00	Meeting with Head of School, staff and interested learners to convey findings and hand over statement	VB members, HOS, Staff, Learners	Zoom
13:00 – 14:00	Lunch		
14:00 -15:00	Depending on Visiting Board arrangements	VB members	Zoom

**Annexure D: Validation Board Members**

For the SACAP Validation Board			
Name & Surname	Email	Cell phone Number	Role
Ms Nomagugu Manci	<a href="mailto:noma@nsmprojects.co.za">noma@nsmprojects.co.za</a>	072 910 8844	VB Chair
Dr Finzi Said	<a href="mailto:Finzi.saidi@ui.ac.za">Finzi.saidi@ui.ac.za</a>	082 765 1552	VB member

Ms Mathebe Aphane	<a href="mailto:mathebe@icloud.com">mathebe@icloud.com</a>	084 536 1177	VB member
Mr Sandile Nduku	<a href="mailto:ndukun@nnarch.co.za">ndukun@nnarch.co.za</a>	082 899 4526	VB member
Mr Xola Dabula	<a href="mailto:Xola.dabula@gmail.com">Xola.dabula@gmail.com</a>	074 501 9071	VB member
Ms Kay Moodley	<a href="mailto:kaymorales@gmail.com">kaymorales@gmail.com</a>	061 628 4092	VB Observer
Mr Eugene Lemmer	<a href="mailto:eugene@lemeg.com">eugene@lemeg.com</a>	082 452 1612	VB member
Mr Mzwakhe Hlatshwayo	<a href="mailto:Mzwakhe.Hlatshwayo@saca-psa.com">Mzwakhe.Hlatshwayo@saca-psa.com</a>	066 262 2802	VB Secretary