

Our 77th Competition.

We offer a prize of £100 for the design adjudged the best for

AN ART GALLERY

required for a country town to which has been bequeathed a small number of pictures and a few pieces of sculpture collected in Italy by the testator, at one time resident in the town. A sum of money has also been left for the erection of the gallery, which under the terms of the will is to be designed in the Italian style. The amount at the disposal of the trustees will permit the building to be erected of stone and to be appropriately finished throughout. A brief inscription indicating that the gallery is the gift of John Markham is to be introduced into the design.

Accommodation required: Two galleries, each approximately 1,000 square feet; hall, approximately 300 square feet; vestibule and loggia, sizes at discretion of competitor.

Drawings to be on Whatman paper, Imperial size, in Indian ink only, and to comprise plan, section, elevation. Optional: Half-inch detail of exterior or interior feature.

Mr. C. Reginald Ford, of Wanganui, has kindly set this subject.

Designs must be sent in finished as above under a non-de-plume, addressed to the Editor "N.Z. Building Progress," 22 Wingfield Street, Wellington, and clearly marked "Seventy-seventh" Competition on outside, with a covering letter giving competitor's name, and address of employer. Designs must be sent in by July 27th, 1921.

EMBRACING TRADITION

CLASSICAL STUDIO IN 2022

CAMERON MOORE

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Abstract

The year 2022 saw the return of Classical Studio within the Unitec | Te Pūkenga School of Architecture after a ten-year hiatus. In Classical Studio, the goal isn't necessarily to teach how to design a classical building, but to give third- and fourth-year students a deeper understanding of proportional and compositional principles, and a way to generate and evaluate with traditional design methodology.

This time the studio was offered to second-year students, presenting new pedagogical opportunities. The criteria for the second-year studio are outlined, as well as how a classical approach to architectural design is aligned with these criteria.

The brief was found in a 101-year-old issue of *N.Z. Building Progress*, in an architectural competition conceived and judged by Reginald Ford, the founding member of Gummer and Ford, perhaps New Zealand's most influential architectural practice.

In a departure from the traditional Unitec Classical Studio, the students were required to present their final designs with CAD instead of watercolour, the opportunities and challenges of which are discussed.

This article explains the design process behind the studio, how the brief was interrogated and developed, and what steps the students took to learn how to design a classical building. But more importantly, what lessons were learned from following this process, and how a sampling of classical instruction can fit into a modern architectural education.

Keywords: Architectural design studio, Classical Studio, William Gummer, Reginald Ford, architectural education, classical design

Introduction

It had been ten years since the last Classical Studio was run at Unitec's School of Architecture. Until 2012, under the tutelage of Professor Branko Mitrovic (who left at the end of 2013), third- and fourth-year students were offered the chance to design within a classical paradigm, learning the classical language and design principles. It was the only architecture school in Aotearoa New Zealand that ever provided such a thing. Learning to soak and stretch the paper to apply watercolour washes over beautiful, manually drafted elevations and sections was a memorable highlight of the quarter. The Classical Studio supplemented the students' usual Design Studio curriculum by prioritising compositional rigour and reliance on formal precedent far more than their regular design studios did. The goal wasn't necessarily how to design a classical building, but to give the students a deeper understanding of proportional and compositional principles, and a way to generate and evaluate their work with an iterative design methodology.¹ Unitec even produced a publication about it in 2003.²

The year 2022 saw a return to Classical Studio, with fifteen second-year students volunteering to participate in the second semester. The brief was influenced significantly by the course outline of Design Studio 2 (ARCH6112). The purpose of the course is to continue the development of design capabilities through small-scale projects of moderate complexity in two three-hour classes per week. This is assessed in three ways:

- Learning Outcome 1: Resolve elementary functional, constructional, aesthetic, and contextual problems of architectural design.
- Learning Outcome 2: Design residential-scaled buildings of moderate complexity in plan, section, and three-dimensional formats.

1 Cameron Moore, "If You Copy, You Will be Caught and a Mess Will Remain: The Role of Formal Precedent in Design Studio," *Asylum* 1 (2020): 154–163, <https://www.unitec.ac.nz/eypress/wp-content/uploads/2021/03/if-you-copy.pdf>

2 Branko Mitrovic, Rau Hoskins, and Carin Wilson, *Traditional Architecture: Work from the School of Architecture* (Auckland: Unitec School of Architecture, 2003).

- Learning Outcome 3: Employ effective presentation strategies, including 3D digital imaging and advanced virtual modelling techniques in the presentation of project work.³

The brief was also required to follow the course outline: “The course is based on a sequence of typological and thematic design problems of moderate complexity addressing fundamental architectural issues including light, scale, space, site, boundary, and context. Digital instruction: perspective, modelling, photographing physical models, advanced virtual representations.”⁴

This classical design studio is also built on the knowledge base and approach to architectural history in Critical Studies 1, coordinated and taught by Renata Jadresin Milic, which the students had had in the previous year. This architectural history course aimed to “[use] flexible and blended learning techniques to teach architectural history in a way that reinforces the connections between architectural history and problem-solving to inform the student’s design work in studio.”⁵

The Brief

In the April 1921 edition of *N.Z. Building Progress*, a design competition was presented by Reginald Ford (two years later to become the Ford in Gummer and Ford) that required the design of a 300-square-metre art gallery “for a country town which has been bequeathed a small number of pictures and a few pieces of sculpture collected in Italy by the testator, a one-time resident in the town. A sum of money has been left for the erection of a gallery.”⁶ It was to be designed in the ‘Italian style’ and built and appropriately finished throughout in stone. There were to be two art galleries, each approximately 100 square metres, a hall of about 30 square metres, with a vestibule and loggia, the sizes of each “at the discretion of the competitor.”⁷

The Site – 947 New North Road

No site was given in the competition brief, so a nearby site was chosen on Mt Albert’s main street, at 947 New North Road. At 1856 square metres, the area was large enough to accommodate the proposed art gallery and offered opportunities to improve the civic capacity of Mt Albert with the potential for a plaza, park and other amenities consistent with the original brief. The site also demanded that the students respond to the street and sun paths, train tracks,



Figure 2. Auckland Council GIS map showing the site.



Figure 3. Buildings on New North Road, Mt Albert. Photos: Cameron Moore.

3 myCourseDetails, Design Studio 2, Unitec, 2022, 1.

4 myCourseDetails, Design Studio 2, Unitec, 2022 1, 2.

5 Renata Jadresin Milic and Catherine Mitchell, “An Alternative Approach to Teaching Architectural History: Redrawing the Pedagogical Boundaries between Architectural History and Design Studio with Flexible and Blended Methods,” 2021: *ArcheA 103 – Manual of Best Practices for a Blended Flexible Training Activity in Architectural Higher Education* (December 10, 2021): 64–69, <https://doi.org/10.12838/fam/issn2039-0491/n0-2021/821>

6 Reginald Ford, “Our 77th Competition,” *N.Z. Building Progress* XVI, no. 8 (April 1921): 189.

7 Ibid.

pedestrian and cycle pathways, and neighbouring buildings. The area derives most of its character from the traditional, humble building stock that lines the street.

The twelve-week semester was divided into two parts: in the first six weeks (Quarter Three of the year), the students designed the building and its relationship to the context at a 1:100 scale with hand drawing only. The site plan, floor plan, reflected ceiling plans, sections and elevations were all to be developed concurrently by overlaying tracing paper and projecting the drawings onto each other. In the second six weeks (Quarter Four of the year), the students were required to use CAD software to continue the development of their buildings, particularly investigating materiality options and detail design, as well as presenting the building in perspective drawings, developing a fuller relationship to the site.

Quarter Three

The obvious departure from the competition brief was the introduction of the site, so a thorough site analysis, together with the massing of the building from the demands of the brief, was conducted in the first week. To both respond to the site's parameters and to apply classical architectural principles, an

iterative design process was strongly encouraged to allow the students to develop their initial architectural ideas. Because the brief was undemanding in terms of functionality, design emphasis was placed on the composition and sequencing of the spaces, the composition of the façades, and the civic duty of the site and how the building related to its setting. The hand-drawn aspect was important in this early stage, so that the students could more fully understand the relationships between the plans, sections and elevations, and get into a habit of designing by iteration – quickly discarding moves that didn't work by drawing a new plan to match the new section or elevation, and so on. At this stage in the student's development, this intensive hand-drawing process provides the opportunity to help further develop the student's drawing and analytical skills outside the Architectural Representation Stream.

The Organising Principle – Developing the Module

The students were instructed on how to develop a classical module by analysing the classical orders, particularly the difference in the height-to-diameter proportions and the ornamental complexity. Figure 4 shows the proportional differences between the orders by the relative thickness of the column, a far more helpful approach than what is commonly presented for students, where the ceiling height is a design decision.⁸

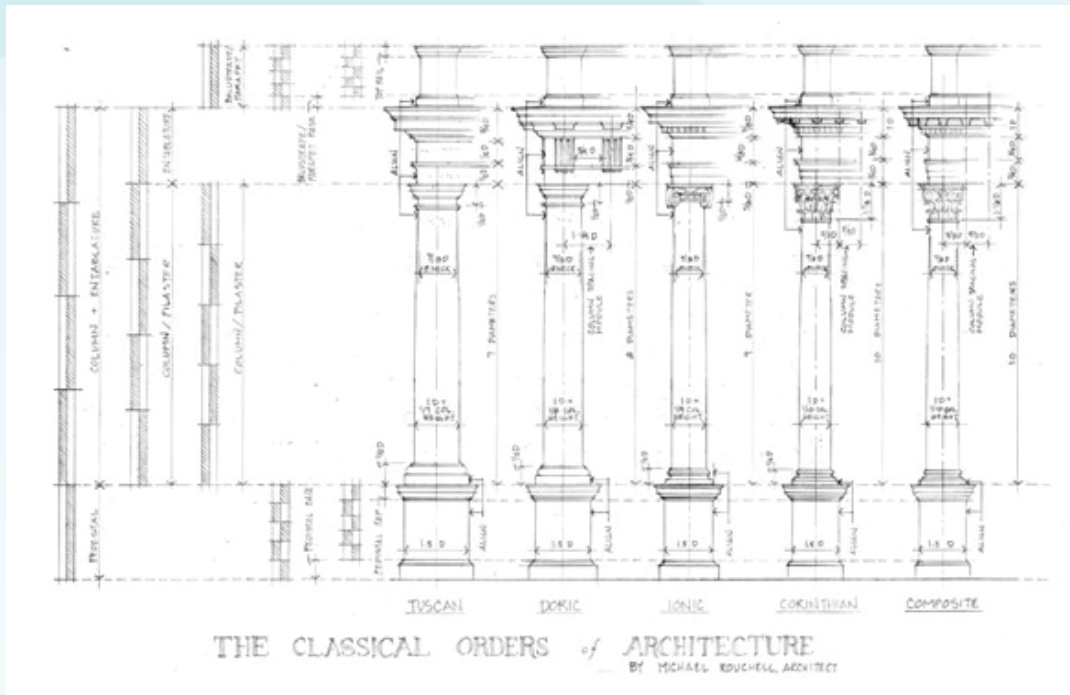


Figure 4: The Classical Orders of Architecture, by Michael Rouchell from W. A. Williams Architects, New Orleans, <https://mrouchell.wordpress.com/2013/03/11/the-classical-orders-a-simplified-approach-and-some-liberties-taken/>.

8 Michael Rouchell, "The Classical Orders – A Simplified Approach and Some Liberties Taken," *Michael Rouchell on Traditional Architecture* (blog), March 11, 2013, <https://mrouchell.wordpress.com/2013/03/11/the-classical-orders-a-simplified-approach-and-some-liberties-taken/>

The students found Jean-Francois Gabriel's *Classical Architecture for the Twenty-First Century*⁹ helpful in understanding the role of the module, and Robert Chitham's *The Classical Orders of Architecture*¹⁰ particularly useful in this stage, especially his work on the development of each of the orders from Vitruvius through the Italian, French, to the English Renaissance.¹¹

This more granular understanding of the orders and their canonisation than is taught in architectural history gave the students a better understanding of the flexibility and adaptability of the classical language. This notion was driven home when intercolumniation (how far apart the columns are) was discussed regarding the functionality (potential for access and light), the size and shape of the interior spaces and ceiling heights as part of developing the module. The students quickly realised that the openings between the columns determined the building's height, length and width, thus determining the building's primary proportional relationship.

Once developed, the module became the primary organising principle for the building in terms of plan, section and elevation, ready for the next step.

Axial and Spatial Design

The first design move was for the students to set up a central axis derived from points of interest or pedestrian movements observed in the site analysis. The building's axes determine how the visitor is oriented in the space, what they see and where – it's the architect's responsibility to control the visitor's spatial experience. The spaces were required to be well defined and considered three-dimensional shapes. A ceiling plan was a crucial tool to properly consider and define each internal space¹² and its character (form, light and materiality), design the thresholds between the spaces, and give a pleasing sequencing of spaces along the axes for the visitor.

Façade Composition

According to architectural theorist John Van Pelt, "The word 'composition' is the art of forming a whole by uniting different parts." The nature of the brief (one level and three main rooms, two of which were not required to have windows) and a commitment to axial planning meant that the composition of the façade and its integration with the plan and section wasn't very complex. The character, placement and size of the façade's focal point seemed a reasonably obvious decision for many students and very much precedent driven (see following section). However, substantial effort was directed toward placing and

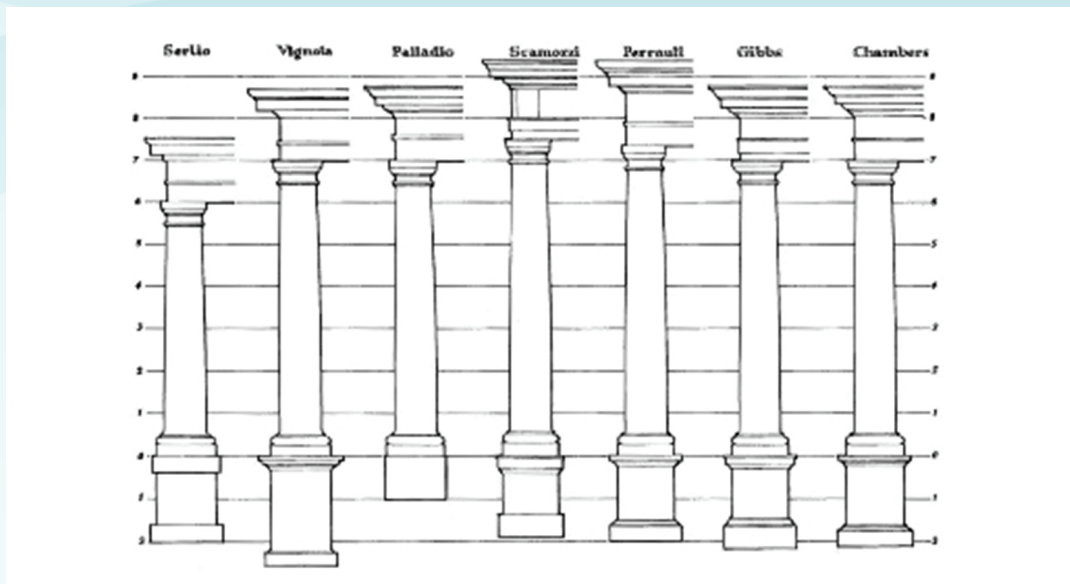


Figure 5. Comparative Tuscan Orders, Robert Chitham, *The Classical Orders of Architecture, Second Edition* (Amsterdam: Architectural Press, 2005), 29.

9 Jean-François Gabriel, *Classical Architecture for the Twenty-First Century: An Introduction to Design* (New York: W. W. Norton & Co, 2004).

10 Robert Chitham, *The Classical Orders of Architecture*, 2nd ed. (Amsterdam: Architectural Press, 2005).

11 Ibid.

12 Nathaniel Cortlandt Curtis, *Architectural Composition* (J. H. Jensen, 1935).

13 John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art* (New York: The Macmillan Company, 1913), <http://archive.org/details/essentialscompo00goog>

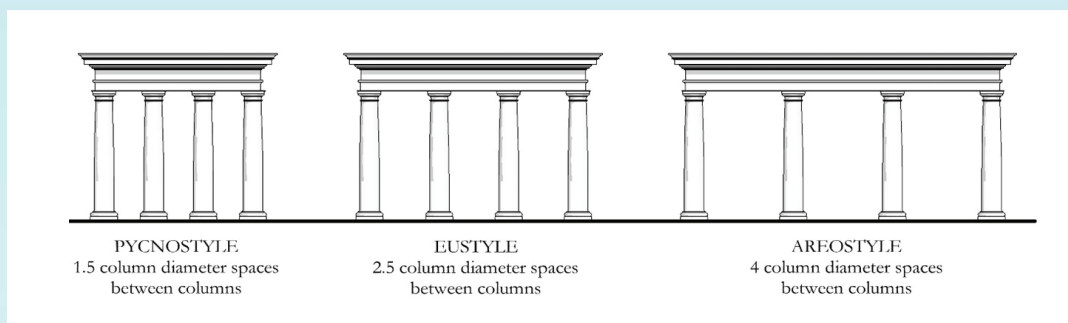


Figure 6. Intercolumniations from Vitruvius. Diagram by author. Note that one can always find satisfactory precedence for intercolumniations between 1.5 and 4 in the canon.

integrating secondary elements into the composition and deciding how to design the windows and doors, niches, plaques, entablatures, the prominence of the roof, string courses, etc. It was pleasing to see the students freely (but perhaps more accurately, naively) engaging in what Edwin Lutyens called the ‘high game’, re-interpreting traditional architectural elements in new ways to achieve compositional balance or contrast.

The iterative process was followed – changes in the floor and ceiling plans led to changes in the sections, elevations, and so on, all explored in pencil and pen on sheets of butter paper. The study of precedents was the primary way students answered the first design problem of spanning the spaces, for example, the structural strategy beam and lintel or arches. If arches, how are they formed? How does this structural system then affect the character of the building? Does this work with the broader site context? How does the arch affect the smaller architectural elements like doors, windows and niches? Do these now fit the desired general expression or character of the building?

Using Precedents as Design Guidance

To answer these design problems, precedents were studied in three ways:

1. Theoretical works such as Andrea Palladio’s *The Four Books of Architecture*,¹⁴ Giacomo da Vignola’s

*The Five Orders of Architecture*¹⁵ and Robert Chitham’s *The Classical Orders of Architecture*.¹⁶ These books gave the students design information and inspiration, helping the students become accustomed to the classical language and usage on a general level, such as how to design the column and entablature.

2. Architectural textbooks from the twentieth century, such as *Architectural Composition* by Nathaniel Curtis,¹⁷ *The Essentials of Composition* by John Vredenburg¹⁸ Van Pelt, *Classical Architecture for the Twenty-First Century* by Jean-François Gabriel,¹⁹ *Learning from Palladio* by Branko Mitrovic,²⁰ and *Classical Architecture: A Complete Handbook* by Robert Adam,²¹ were very helpful with specific architectural problems that the students faced, such as how to design a balustrade, or window, or how to define the relationship between a barrier and a column.

3. A study of buildings from architectural monographs such as *The Architecture of McKim, Mead & White in Photographs, Plans and Elevations*,²² *Palladio* by Manfred Wundram et al.,²³ and *Vitruvius Britannicus* by Colen Campbell,²⁴ among many others. Google searches and library visits were also an integral and continual part of the design process. New Zealand architects William Gummer, Cecil Wood, George Grey Young, and Grierson, Amir and Draffin, and their works, were also presented and discussed. In studying

14 Andrea Palladio and Adolf K. Placzek, *The Four Books of Architecture* (New York: Dover Publications, 1965).

15 Vignola, *The Five Orders of Architecture*, trans. Tommaso Juglaris and Warren S. Locke (Boston: Press of Berwick & Smith, 1889), <http://archive.org/details/fiveordersofarch00vign>

16 Chitham, *The Classical Orders of Architecture*.

17 Curtis, *Architectural Composition*.

18 Van Pelt, *The Essentials of Composition as Applied to Art*.

19 Gabriel, *Classical Architecture for the Twenty-First Century*.

20 Branko Mitrovic, *Learning from Palladio* (New York: W. W. Norton & Company, 2004).

21 Robert Adam, *Classical Architecture: A Complete Handbook* (London: Viking, 1990).

22 McKim, Mead, and White, *The Architecture of McKim, Mead & White in Photographs, Plans and Elevations* (New York: Dover Publications, 1990).

23 Manfred Wundram, *Palladio* (Cologne: Taschen, 2009).

24 Colen Campbell, *Vitruvius Britannicus, or, The British Architect: Containing the Plans, Elevations, and Sections of the Regular Buildings, Both Publick and Private, in Great Britain, with Variety of New Designs ...* (London: Printed and sold by the author ..., Andrew Bell ..., W. Taylor ..., Henry Clements ..., and Jos. Smith ..., 1715), http://archive.org/details/gri_33125008447589

the precedents, the students were encouraged to find and analyse floor and ceiling designs and thresholds to emphasise the quality and sequencing of spaces and how light will play in the internal composition. Designing the ceiling in reflected ceiling plans was new to the students, but a crucial tool to properly consider and define each interior space.²⁵ As the students were exposed to more examples, more ideas flowed, and understanding the inherent hierarchy of elements became an essential learning experience. Quick and constant production was encouraged until the student adequately responded to each compositional challenge. All iterative work at this stage was encouraged to be done on a 1:200 scale – the harmony, contrast and proportions of the building and main elements can be seen and managed easily without the student getting lost in the ornamental detail that at a larger scale will automatically become part of the design.

Lessons from William Gummer

At the three-week mark, the two winning entries from the *N.Z. Building Progress* competition were presented to the students and discussed at length. The judge for the original competition in 1921 was William Gummer. Born in Auckland in 1884, he is widely recognised as one of New Zealand's leading architects of the twentieth century. In 1923, along

with Reginald Ford (the writer of this competition), he formed Gummer and Ford. This firm is regarded as one of the twentieth century's most successful and influential New Zealand architecture firms.²⁶

Gummer wrote an extensive evaluation in the October 1921 edition of *N.Z. Building Progress*, offering practical advice on specific elements of the designs that were very helpful to our students. This presentation and critique of the 101-year-old work acted like a crit half-way through the quarter.

Gummer had devised a grading system for the competition, in which he ranked each entry on a scale of one to ten in four categories: Plans, Sections, Elevations and General Expression. The Plans and Sections “were marked for the manner in which the plans met the requirements of gallery design and accessories.” The Elevations were graded “in the abstract, that is, for such matters as proportion, massing, light and shade, and knowledge of architectural forms and their uses.” General Expression was judged “on the way the whole structure expressed its purpose as a gallery for pictures and sculpture and also met the important requirement of the programme that it should be designed in the Italian style.”

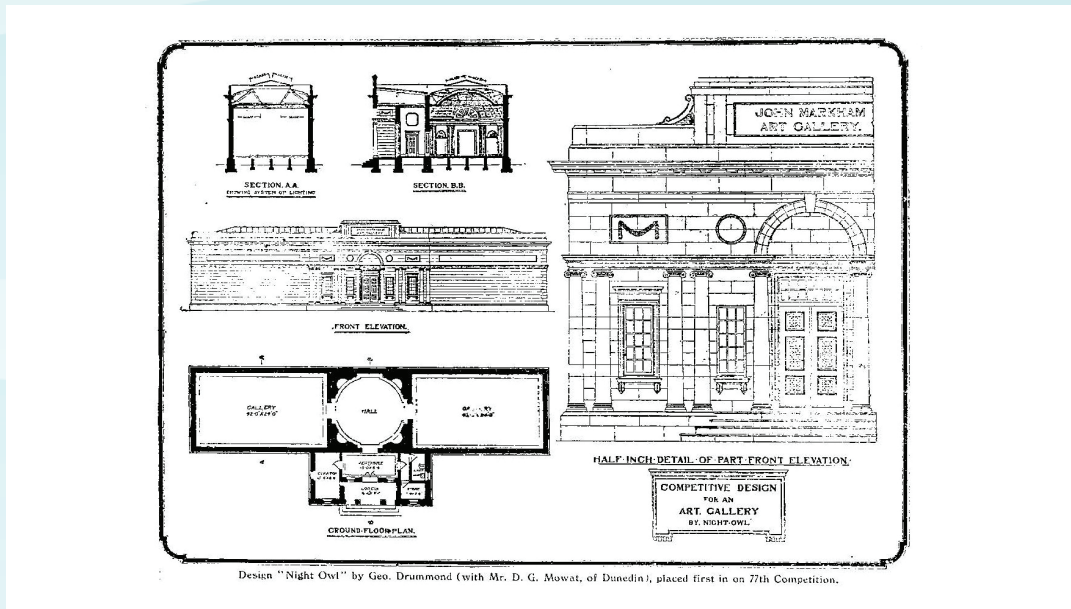


Figure 7. “Night Owl” by George Drummond, “Our 77th Competition,” *N.Z. Building Progress* XVII, no. 2 (October 1921): 36.

25 Curtis, *Architectural Composition*.

26 See, for example: Terence Hodgson, *Looking at the Architecture of New Zealand* (Wellington: Grantham House, 1990), 48; Bruce Petry, “The Public Architecture of Gummer and Ford” (MArch thesis, University of Auckland, 1992); Peter Shaw, *A History of New Zealand Architecture*, rev. ed. (Auckland: Hodder Moe Beckett, 2003), 19, 67, 88, 90, 111–15, 146, 197; Paul Waite, *In the Beaux-Arts Tradition. William Gummer Architect*. Exhibition catalogue (Napier, New Zealand: Hawke’s Bay Cultural Trust, 2005); Denis Welch, writing for the *New Zealand Listener* the following year, described the firm as “the best architectural practice of all time in New Zealand.” Denis Welch, “The Best of New Zealand,” *New Zealand Listener*, August 4, 2007.

“Night Owl” received the highest marks with 30/40. Gummer noted the efficient organisation, the pleasing shape of the galleries that are “nicely proportioned for the purposes of displaying pictures, the distinctly oblong shapes providing the long and short distances which are necessary for viewing various types of pictures”²⁷ In the section, Gummer noted the reasonable spaces but suggested that the wall treatment in the hall could continue into the galleries because “it is by such means the coherency and unity of design is expressed.”²⁸ The elevation let the entry down with its “lack of appreciation of horizontal subdivision.”²⁹ The entablature is out of proportion with the columns, which gives “an uneasy feeling of weight in the upper part of his façade.” Additionally, the way the skylight meets the entablature is “crude,” and the pilasters were drawn incorrectly, giving the impression that they were columns.

The “Italia” entry won second place with 28/40, mainly on the strength of its façade, which Gummer praised as the best in the competition. In the sections, Gummer praised the designers on the wall treatment running through the halls and galleries to conserve the alignment through the three main spaces. Gummer wrote nothing positive about the plan, noting the cramped vestibule, the lack of public access to the WC, and the door into the curator’s office on the central axis: “No doors should ever be planned that the public may mistake for entrance doors.”³⁰ He saved his biggest complaint for the design of the galleries, which, as squares, didn’t have the advantages of the short and long view and were too split-up to provide adequate wall space for hanging pictures. He was also unimpressed with the alcoves in the galleries “with detached columns [that] suggest architectural effect only.”³¹

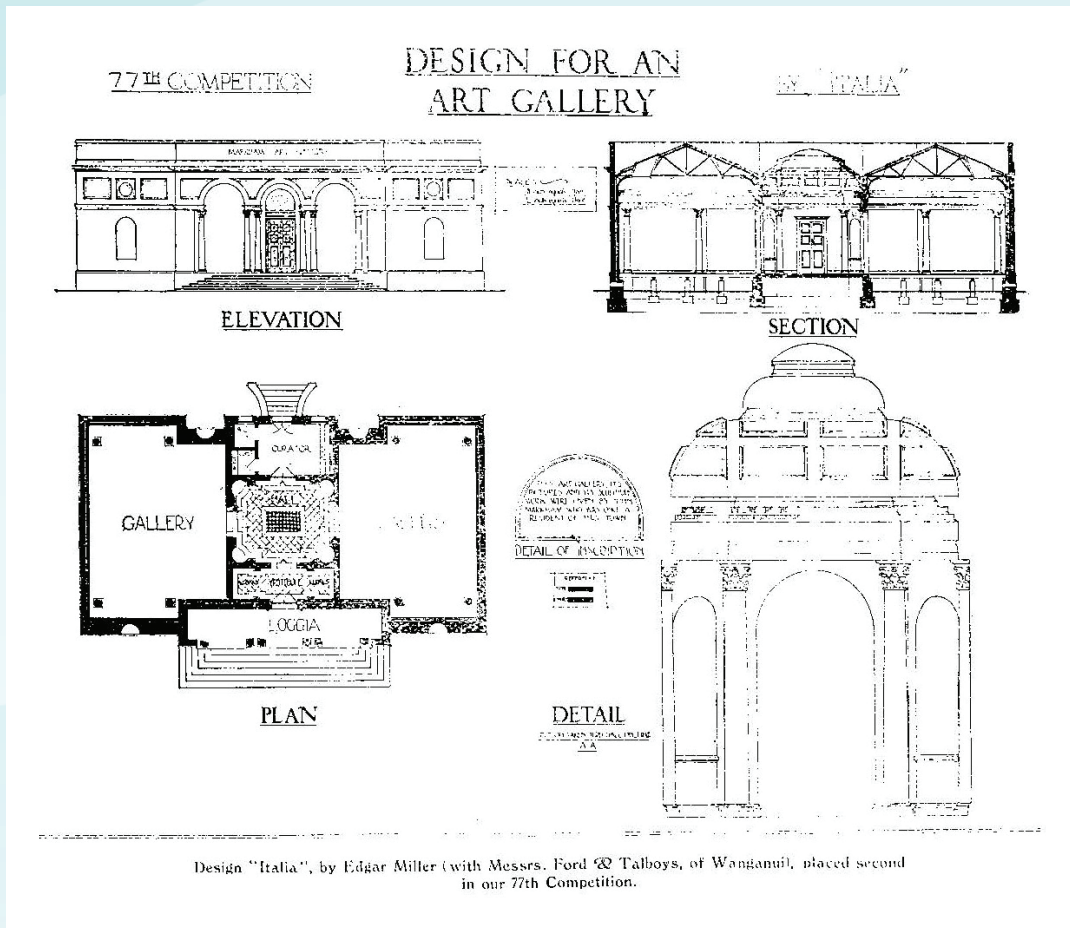


Figure 8. “Italia” by Edgar Millar, “Our 77th Competition,” *N.Z. Building Progress* XVII, no. 2 (October 1921): 36.

27 William Gummer, “Our 77th Competition,” *N.Z. Building Progress* XVII, no. 2 (October 1921): 34–36.

28 *Ibid.*

29 *Ibid.*

30 *Ibid.*

31 *Ibid.*

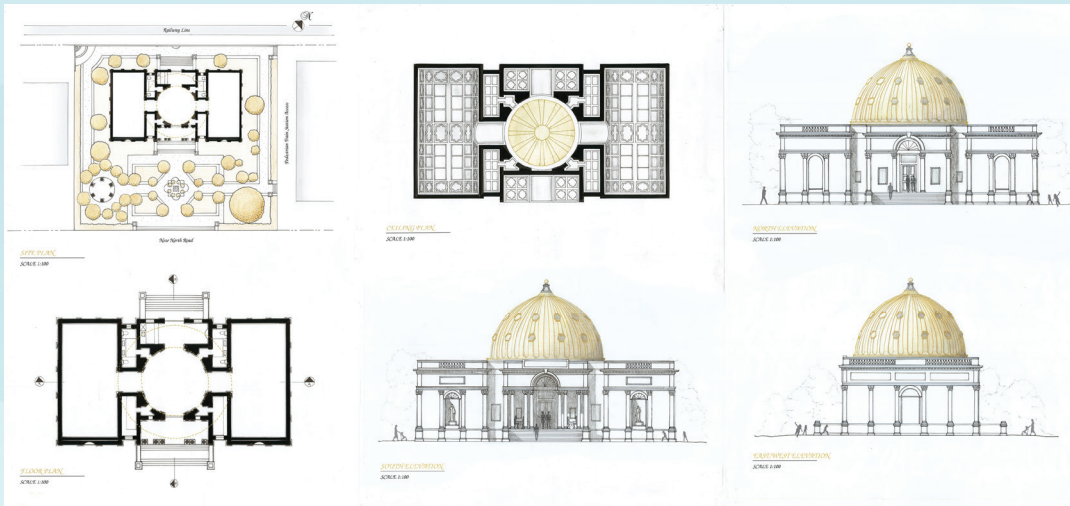


Figure 9. Quarter Three student work by Arlene Sisarich, modelled after McKim, Mead and White, and Christopher Wren.

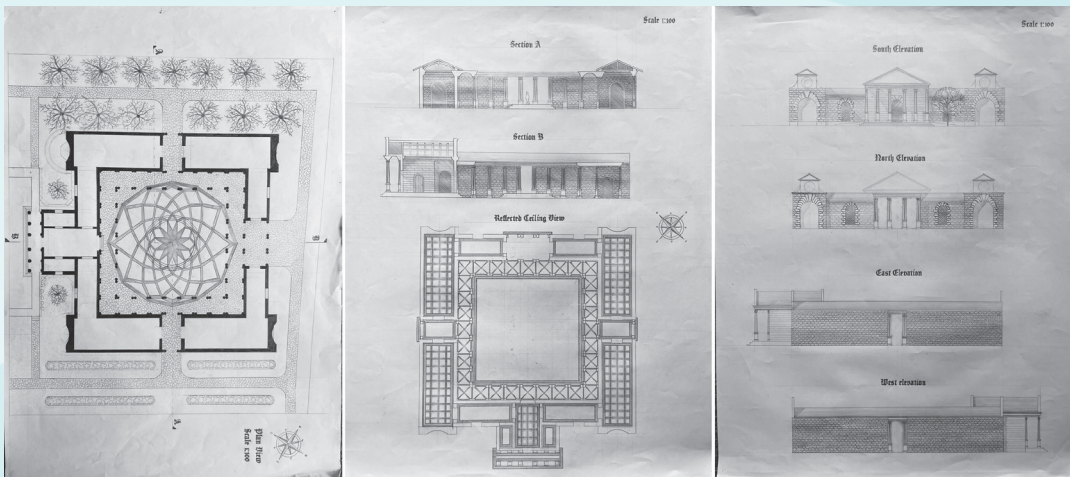


Figure 10. Quarter Three student work by Joshua Latham, modelled loosely after Michelangelo.

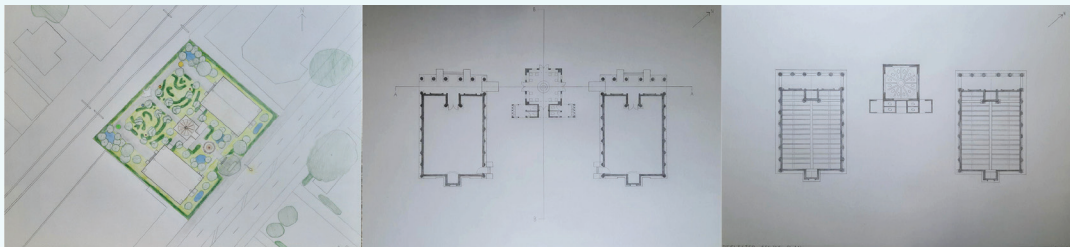


Figure 11: Quarter Three student work by Elise Alexander, modelled loosely after Maison Carrée in Nîmes, France.

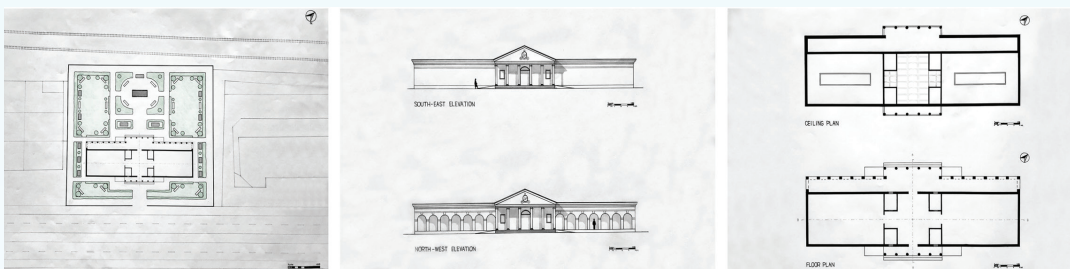


Figure 12: Quarter Three student work by Madison Carkeek, modelled after Palladio's villas.

These specific lessons came at a time when the students were engaging in these exact design decisions about composing façade elements, the shapes of the hall and galleries, and ways to naturally light the interiors of the galleries without compromising on wall space.

Gummer's overall conclusion in *N.Z. Building Progress* was as relevant to the Unitec students now as it was 101 years ago:

The facility for design should be comprehensive: no student should be satisfied with a good elevation and a poor plan or vice versa. The ability to design is not gained in a short time, students should be encouraged to work, and work hard, to master the historic forms of architectural construction and design and to learn architectural drawing, not by trying merely to make pretty patterns on the paper but by realizing the form that is to be expressed ... shadows are sometimes not required in finished drawings, but in process of studying a problem they should be some of the earliest lines on the paper. They may tell some unpleasant truths, but they never lie.³²

A short workshop was held in Week Five on how to draw shadows on the elevations, from *Architectural Shades and Shadows* by Henry McGoodwin.³³

After six weeks, as per the requirements of the competition brief, the students presented their work in site plan, floor and reflected ceiling plan, sections and elevations at 1:100 scale in pen and pencil on vellum paper. A crit was held for 50 percent of the grade, with Unitec architectural history lecturers Jadresin Milic

and Graeme McConchie, and classical architectural practitioner Greg Noble as the guest critic.

Quarter Four

In the fourth quarter, the students continued the iterative design process, allowing them to respond to the feedback from the Quarter Three crit and further develop their concepts with computer-aided design. A benefit of using 3D software is that a building's materiality and colour can be explored at length, ornamentation can be drawn and replicated far more accurately and quickly, light and shadows can be rapidly ascertained, and trees and their shadows are far better rendered by computer. Placing the building in its visual context can also be done more quickly and thus responded to more thoroughly. Creating the very complex shapes and their relationships to each other, which required adherence to their hand-drawn site plans, plans, sections and elevations, was challenging for the students. Designing a classical building in CAD drove home the lesson that CAD is merely a tool to help create humane, well-composed spaces and not to be relied on to fill in any non-considered parts of the building. No default settings or elements in any computer program are acceptable in a classical context. As the students were forced to consider their building in three dimensions, the problems of corners and junctions and some structure issues became apparent. Hence, the students realised they still needed their precedents' help to solve these issues. Consequently, the student's CAD skills, and perhaps more importantly, how the students think about CAD, developed markedly through this exercise.

The final work was presented alongside their Quarter Three work in a fifteen-minute crit with the same critics as for Quarter Three.



Figure 13. Quarter Four student work. Façade by Yona Al Zheyrey modelled after the Grand Trianon by Jules Hardouin-Mansart.

32 Ibid.

33 Henry McGoodwin, *Architectural Shades and Shadows* (Boston: Bates & Guild Co., 1904), <http://archive.org/details/cu31924015333770>



Figure 14. Quarter Four student work. The garden and façade by Madison Carkeek are modelled after Villa Barbaro by Palladio.



Figure 15. Quarter Four student work. Courtyard interior by Brittany Familton, loosely modelled after McKim, Mead and White.



Figure 16. Quarter Four student work. Façade by Arlene Sisarich, modelled after the J.P. Morgan Library by McKim, Mead and White, and Christopher Wren.



Figure 17. Quarter Four student work. Courtyard interior by Joshua Latham, loosely modelled after Michelangelo.

There was a friendly and supportive atmosphere in the studio. The students responded well to designing exclusively with pencil and ruler in the first semester, and they appreciated being challenged aesthetically instead of being challenged with functional issues. Elise Alexander wrote, “I loved Classical Studio, I feel like we just had so much fun while learning these new (old) techniques that we didn’t even realise how much we were learning at the time.” Brittany Familton expanded her understanding about the social function buildings can have outside a commercial paradigm. Maddison Carkeek “found Classical Studio to be an enlightening experience learning how structures were formed before modern structural systems. I really appreciated the freedom to explore the many styles of classical architecture ... the different rules in classical architecture for designing columns have helped me design structural systems in the third-year Design Studio, making my design process a lot easier.”

Conclusion

The studio aimed to engage second-year architectural students in the language and methods of classical architectural production to appreciate traditional design and take lessons from it into their future designs. They realised early on that they were not missing anything from the ‘regular’ studio – they were still required to understand and apply the building’s responsiveness to site, its functional logic, structural strategy, materiality, lighting strategies and passive design techniques. The approach to the thresholds of the building might be even more important in the classical idiom. They quickly learned that classical design could never be a ‘copy and paste’ exercise, but that the rigour required to adhere fully to classical design principles engaged them in compositional, spatial and proportional problems that they had never faced before; now (hopefully) that they are aware of these aesthetic issues, they will become part of their personal design approaches.

The students also appreciated the connection to New Zealand’s architectural history that this studio afforded them through the 101-year-old design competition from *N.Z. Building Progress*, having the ability to compare their designs to those original entries and receiving completely applicable, accurate and practical advice from William Gummer, one of New Zealand’s greatest architects, albeit that he died in 1966.

Finally, and perhaps most profoundly, I hope the students learned the limitations of designing in CAD. Once the students had drawn a viable building designed according to proportional and ornamentation guidelines, where all the architectural elements were a part of the composition, and one change to an architectural component triggered a chain reaction that compromised the whole, the computer was of no help to them. It would only do what the designer told it to; anything that was a default setting (an aluminium-framed window, or a glass balustrade, or a brick or stone pattern applied in a render) was not appropriate or credible, so the student needed to consider CAD critically and take responsibility for the design themselves.

As for the outcomes, overall, they were successful considering the limited capacity of a typical second-year student – as always, there is room for improvement. However, this studio was never about outcomes but the chance to expand the students’ minds and think critically about how to produce architecture, what architecture is and what it could be. The goal wasn’t to learn how to design a classical building, but to give the students a deeper understanding of proportional and compositional principles and a way to generate and evaluate their work, a critical eye unlocked by an iterative design methodology.

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