University of Liberal Arts Bangladesh
Permanent Campus

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This achievement was not a one man job, but a collective effort.

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Abstract

Since 1992, Bangladesh has seen a rise in private universities after the government passed the Private University Act. Demand for higher education was rising, thus creating an opportunity for entrepreneurs to invest in universities, mostly within Dhaka. Up till now there are 68 private universities registered with the University Grants Council, most of which operate in temporary campuses, confined within a building. With the demand and number of student intake increasing every year, facilitating students has become an issue. This study aims to identify the necessary amenities required for a campus and its students along with the required environment which is evidently missing in the present scene of private universities

University of Liberal Arts (ULAB) is currently planning on establishing their permanent campus in Ramchandrapur, Dhaka which will house all the current departments and also include a football field, gym and research centres. The study will commence with site and program analysis followed by concept derivation which will transform itself into a formal expression through volumetric studies. Ultimately this study will be a walk through the process and outcome of designing ULAB’s permanent campus.

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CHAPTER 1: Introduction

1.1 Project Brief:

Title: ULAB Permanent Campus

Location: Ramchandrapur, Dhaka, Bangladesh

Site area: 16 acres

Client: University of Liberal Arts Bangladesh

1.2 Project Background:

Bangladesh being a developing country has grown significantly in the past decades in terms of health, infrastructure and most importantly, education. According to UNESCO, literacy rate in Bangladesh has increased to a 79.9% in 2012 from a 35.2% in 1981. Education minister Nurul Islam Nahid claims this to have been achieved by various reforms and initiatives taken by the government. However in terms of higher education, the British Council reports that the demand for higher education in South Asia is not being met. Private universities are quite a new phenomenon in Bangladesh, however it is a fast growing one as enrolments have tripled since 2000. The government along with the UGC have set out certain strategies to cope with the growing demand, one of them being the requirement of a private university's own campus. Therefore some private universities like NSU and EWU have already built their permanent campus whereas others such as ULAB have acquired land to establish their permanent campus.

University of Liberal Arts currently located in Dhanmondi, Dhaka is considered a leading university focusing largely on liberal arts. Its present temporary campus is confined within two buildings barely being able to accommodate the influx of students. As per the laws of UGC (University Grants Commission) ULAB has therefore proposed to use their land in Ramchandrapur to build their permanent

campus. Once built, it will be amongst the 11 private universities to shift to its permanent campus out of the 52 universities in the country (Own campus, 2012). The land is currently used as their cricket ground with more land surrounding the playing field.

The future campus will house its five existing departments along with few other newly proposed disciplines. All departments combined the university aims to accommodate 8000 students. Other student facilities such as research centres, gymnasium and indoor games room will also be introduced.

1.3 Aim & Objectives:

The main objective of this project is to establish a campus which promotes interaction through open spaces and landscapes, also creating grounds for other activities such as sports, exhibitions, etc. Within the urban chaos of Dhaka, the campus will be the green escape, encouraging students to spend more time within the university.

“The campus should provide everything the present youth needs, with students not wanting to go back home. And I believe this can be achieved through its architecture.” – Pro VC Jahirul Haque, ULAB.

CHAPTER 2: LITERATURE REVIEW

2.1 Brief history of higher education

2.2 Higher education in Bangladesh and its growth

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2.4 Liberal arts and its history

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CHAPTER 2: Literature Review

2.1 Brief history of higher education

Although the origin of tertiary education is still highly debated between scholars, it is said that before the 15th century most higher education revolved around religion and were mainly practiced in madrasas or monasteries depending on its geographical location. The oldest university, according to the Guinness Book of World Record, are Al-Karaouine mosque in Morocco. It was established in 859 AD by a woman named Fatima-al-Fihri and originally embraced traditional Islamic education. The mosque later added grammar, maths, phycis, chemistry, medicine and astronomy. Such schools started to grow in other parts of middle east such as Iran and Egypt, mostly during the 11th century, teaching Sunni Islamic learning and Arabic literature. (Ancient Colleges, n.d.)

In other continents such as Europe, higher education is said to have begun in the middle ages and took place in cathedral schools for hundreds of years. Gradually the trend of higher education began to grow although the transformation of cathedral schools to universities was quite rare. One exception being the University of Paris founded in 1170 with its major focus of study being maths, astronomy, grammar, geometry, music, culture and most importantly theology (University of Paris, n.d.). However University of Paris was not the first university listed in that region. Established in 1088, University of Bologna in Italy is recorded to be one of the first institutions to be called a university. The curriculum initially consisted of logic, rhetoric and grammar, whereas maths, astronomy, philosophy and medicine later being added as fields of study. Most of the teachers or professors of that era were philosophers, scholars and thinkers of that time and the curriculum can be seen shifting from religion to arts. This was because the knowledge of arts and humanities was starting to be considered important to be a part of society which is later discussed in this study (Walter, 1992).

2.2 Higher education in Bangladesh and its growth

In a country where literacy rates were significantly low, higher education was once known to be a luxury. Before the British rule (1757), education was considered a social prestige in the context of Bangladesh. After their intervention however, they designed a system which educated a selective group of locals to serve the economy and political interest. Most of the institutions were located in the urban centres and English became the medium of communication. It is said that during the first hundred years under the British rule, very little was done to promote higher education. However the present scenario of Bangladeshi higher education is quite different. With a better economy, increased GDP, and achievement of the middle income status, more people can now afford the luxury of higher education. It is believed that higher education provides the knowledge and training to be competent in the real world and more so in a developing country. In a world where competition is high, higher education is considered a ticket towards globalization, creating potential towards prosperity (UGC, 2006). During the 90s, the government began to realize that they will not be able to provide the growing demand of higher education. They appreciated the initiatives taken the group of educationists to form private universities and in 1992 set out the Private University Act. The act was later amended in 1998 to remove some inadequacies so that the universities could not misuse or take advantage of it. At present there is considered to be 80 universities in Bangladesh, 26 of them being public and 54 are private. In 2004 it was estimated that 1.3 million people receive higher education, 74% male and 26% female.

Bangladesh comprises of two types of education in the tertiary sector: colleges (including madrasas) and universities. Colleges are known to provide degrees or diplomas in professional, technological or special type of courses. A university on the other hand, provides Bachelors degree up till PhD. According to the Vice Chancellor of Daffodil University, the main objectives of an educational institution should be

- Creating the necessary skilled man power to meet the needs of the developing country

- Creating capable citizens with leadership skills
- Discovering new horizons through research
- Promoting international relations
- Opening the doors to knowledge regardless of race, gender or financial status

2.3 Existing Campuses of Bangladesh

2.4 Liberal Arts and its history

Liberal arts is the academic course that includes the distinctive blend of arts, science and humanities. These kinds of studies tend to give more general knowledge rather than developing a particular set of skills and are told to be essential for everyone to know in order to an active role in a civic society. The main academic areas which include liberal arts are

- Literature
- Linguistics
- Language
- Arts
- Mathematics
- Natural Science
- Religious studies
- Psychology
- Philosophy
- Social science

Liberal arts has been derived from the latin word *artes liberals* which in literal translation would mean art for the free. The education dates back to the period of classical antiquity, a long period of history which included events like the interlocking of ancient Greece and ancient Rome. However there is no indication of when the education actually began to reach to the masses even though this study was essential for the free citizens of Greece and Rome. In contrast, technical studies or vocational training was for the unfree or the slaves (Wagner, 1983). Those who were

able to study liberal arts considered themselves fortunate enough to be able to learn about development of civilization and civic duties.

There has been significant evolution of the education and its content. During the Greek and Roman times, the education mainly comprised of logic and grammar which reflected the skills needed to fulfil civic duties. The education then extended to math, astronomy and music during the medieval times. During the modern times it expanded even further with humanities and social sciences, giving a wide range of areas to study. According to its roots, liberal arts has been taught in the Socrates Method named after the famous philosopher himself. The method stimulated critical thinking and encouraged students to interact and participate in dialogue. This was known to be Socrates' method of teaching, encouraging debate and creative processes (Castle, 1969).

2.5 The Significance of Liberal Arts

These days, liberal arts has become a less preferable degree to many, the reason being that the economy is constantly changing. The jobs that might have been in demand 20 years ago will not be the same as of now. This leaves us to question the value of a liberal arts degree in the global market. In an era where technology and innovation is booming, parents and students of this generation tend to put more emphasis on STEM (science, technology, engineering and maths) for higher education as there are more demand for that set of particular skills. However critics disapprove of this claiming that studies of humanities and arts is just as important. Many claim that while STEM courses and Business studies teach for a particular industry, students with arts degrees tend to have broader knowledge and find themselves adjusting to a wider range of jobs. This claim is supported by the President of Oregon State University, Edward J Ray who believes that to have a successful career requires team work, critical thinking, and understanding of social, cultural and political issues. He believes that an education in liberal arts creates a perfect ground for all these qualities, and according to statistics, one third of CEOs of Furtune 500 companies have a liberal arts degree (Ray, 2013).

Author Jessica Keiman discusses how a competitive global economy has led to students being enrolled in subjects of demand, rather than subject of their individual interest. She also mentions how in the 90s, higher education would mean learning about something you love, enjoying the campus experience and graduate with the knowledge to create a fulfilling life (Kleiman, 2014).

2.6 Space requirements for Liberal Arts Education

During the site visit for the project, it had been a pleasure to meet with the Pro VC Mr. Jahirul Haque of ULAB. In a brief interview, he mentions a collective vision and essence for the university and its future campus. The fundamentals were as follows:

- “A green campus”. The vision of a green campus was highly emphasized in the discussions. ULAB believes in being energy efficient, reusing and recycling, their campus too should be a reflection of that belief.
- Historically, liberal arts education involves interaction. Various discussions and debates were used by scholars to gain knowledge from each other and the new campus hopes to imitate the past. Therefore the suggestion of ‘thinking zones’ were made to stem interactions between students and faculties.
- The existing cricket field can act as the heart of the campus. In an urban metropolis like Dhaka, students are rarely blessed with an open field. Apart from inter-university games, the field will be a place of greater interaction most of the time.
- Since the new campus will be an expansion from their current campus, there will be addition of facilities like gymnasium, art gallery and indoor sports.

CHAPTER 3: SITE APPRAISAL

3.1 Site background
3.2 Site surroundings
3.3 Social background
3.4 Climate
3.5 SWOT Analysis

CHAPTER 3: Site Appraisal

3.1 Site Background

University of Liberal Arts has recently acquired a 16 acre land in Ramchandrapur to establish their permanent campus. Currently the land is used as a cricket ground for inter-university tournaments and is considered to generate revenue. ULAB is at present situated within two buildings in Dhanmondi road 4/A.

Fig. 3.1. 1 Site for ULAB Permanent Campus

The existing buildings on the site include

- Warehouses for Meena Bazaar
- Two temporary department buildings
- Staff accommodation

The site is also blessed with large trees, green fields and is far from being urbanized which creates opportunities for the design to include spaces that highlight nature. Interaction with nature can be considered crucial for a student's learning process and is something that universities in an urbanized city lack.

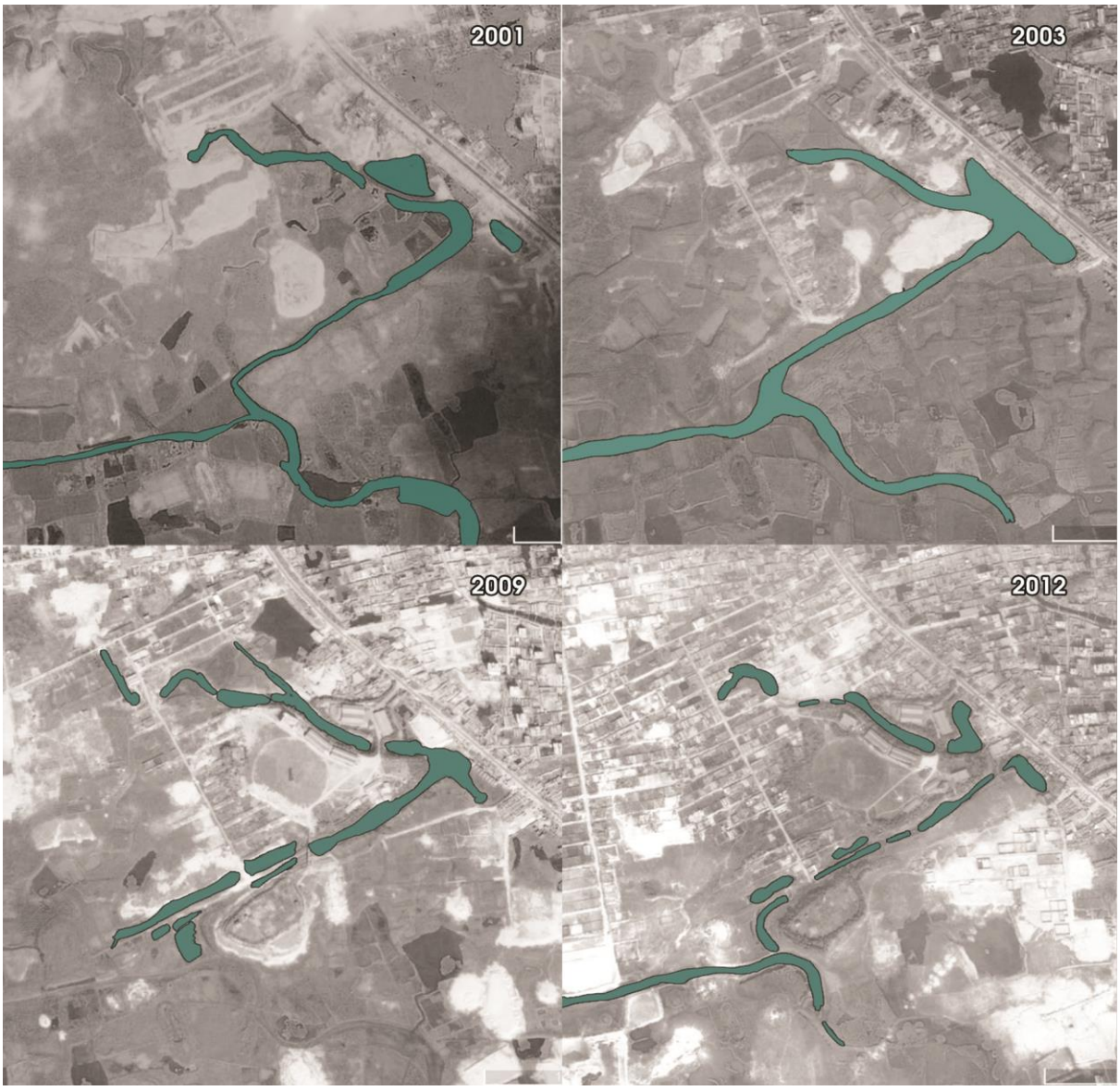

2001
2003
2009
2012

Fig. 3.1. 2 Existing buildings within site (purple: industrial; blue: educational; yellow: accommodation)

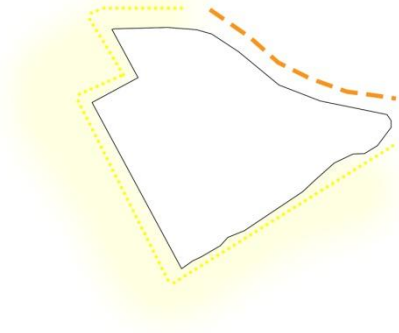


Fig.3.2.1 Orange: Industrial belt; Yellow: Housing

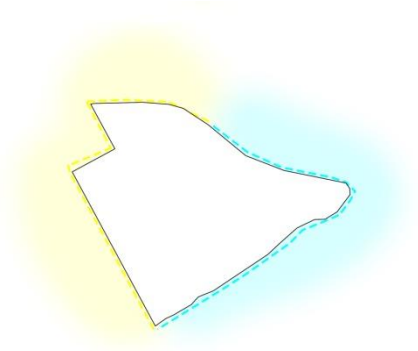


Fig.3.2.2 Yellow: Housing; Blue:Water body

3.2 Site Surrounding

The site is partially bounded by a natural water body, a narrow canal that connects to the Buriganga River. As Bangladesh is a riverine country, the rivers have always played a major role in the transportation of goods and people. The banks of the Buriganga were once considered a prime location for trades however at present the river is afflicted by the problem of pollution. Beyond the canals, the site is surrounded by low rise housings on three sides (Nabi Nagar & Chaad Uddan housing) and industrial warehouses on one side.

Fig.3.2 1 Zones surrounding site (orange:residential; grey:industrial)

There is no primary road adjacent to the site, but a seconday road that crosses through the industrial zone and over the canal. The closest major primary road is the Sadarghat-Gabtoli road which is detached from the site by an industrial belt.On a larger scale, the site is 3 km from the National Parliament Building and 12 km from Hazrat Shahjalal airport. It is also located 3 km from Dhanmondi residential area, an area that considers itself one of the many city centres of Dhaka. The site in close proximity to two major bus stops, the Gabtoli bus stop which is 3.5 km away, and a BRTC bus stop 2.4 km away which is a major advantage for student's transportation.

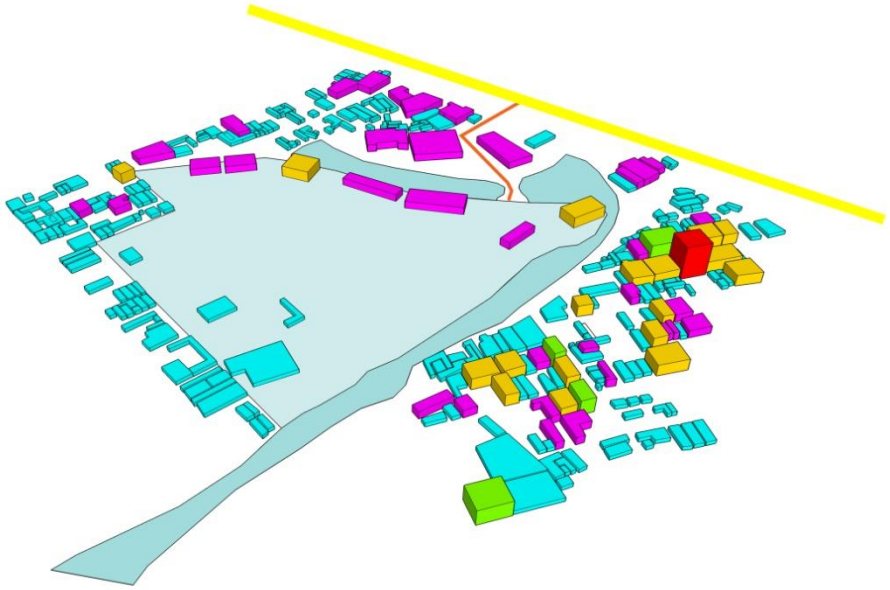


Fig.3.2 2 Surrounding building height

Site Pictures:

3.3 Social background (specific to site)

The Ramchandrapur area is still underdeveloped and far from being urbanized, with most tertiary roads still unbuilt. Most of the surrounding plots are empty in which nearby farmers let their goats and cows loose. Children too take advantage of the free space as there is no recreational space in that area. The price of land there is 8-10 lac per katha which is considered cheap for a densely populated city like Dhaka. Most of the local residents are from the middle income group who find the area affordable and connection to the rest of the city acceptable.

3.4 Climate (specific to site)

As mentioned earlier, the site in Ramchandrapur is surrounded by low-rise housing, which makes it inevitable to higher velocity winds at times as there are fewer obstructions. The temperature on site too is high on the existing cricket field however low on the north western region where there are large trees. Experientially, the shade from the canopy, and the flowing winds through the trees provides a cooler breeze which could be a pleasant aspect worth maintaining through design.

The canal that surrounds the site is known to be a flood retention pool. However recent threats have been imposed, as the canal is slowly being encroached and land filled. Also the canal is being used as a drainage system, which the locals complain gets clogged at times, completely taking away the aesthetics of a water body. Recent study shows that about 73% of the canal has already been encroached with a very narrow stream remaining. As ULAB desires a green campus and propagates sustainable development, it will be a design opportunity as well as a challenge to revive the surrounding canal to its former glory.

3.5 SWOT Analysis

Strength:

- Not urbanized like the rest of Dhaka city
- Consists of natural amenities like green and surrounding water
- Free flowing wind throughout the site
- Absence of commercial high-rises or activities
- Water canal connected to the Buriganga river
- Public transport facilities nearby

Weakness:

- Infrastructure yet to be developed
- No direct connection to primary roads
- Flood retention zone

Opportunity

- Utilizing existing nature with design
- Creating a civic space with the canal
- Addressing the flood retention issue

Threat

- The use of the canal as drainage
- Deteriorating ecosystem

CHAPTER 4: CASE STUDY

4.1 Ahmedabad University IET
4.2 University of Cyprus

CHAPTER 4: Case study

4.1 Ahmedabad University IET

Fig 4.1.2 Exterior view (source: virmueller.com)

Fig 4.1 1 View from courtyard (source:virmueller.com)

Project: **Ahmedabad University IET**
Architect: **Vir Mueller Architects**
Area: **2,52,000 sqft**

The idea:
An academic quadrangle. Timeless yet contemporary concept of a central courtyard garden to attract both students and scholars for interactive learning. Instead of several small courtyards, a large courtyard was provided much like the plaza in Kahn's design for the IIM.

Material:
The scorching heat of Ahmedabad can sometimes go as high as 45 degree celcius. The materials used are climate appropriate, red sandstone that weaves the facade throughout the building. It provides the play of light and shade, providing a porous ventilation through the galleries.

Similar approaches are taken when designing a building in Bangladesh, the use of materials such as concrete and bricks are known to be both cost effect and climate appropriate. The necessary steps required to provide shade yet let in light, keeping a building cool in a summers day.

Functions & spaces:
Most of the general functions such as group study rooms, computer labs a
& auditorium are placed in the ground floor. Each floors above are all identical with each floor

housing a different department (ICT, mechanical & chemical engineering. The space above the auditorium, supported by a long array of columns provide a space for various continuously evolving academic activities.

Fig 4.1.3 Ground floor plan (source: virmueller.com)

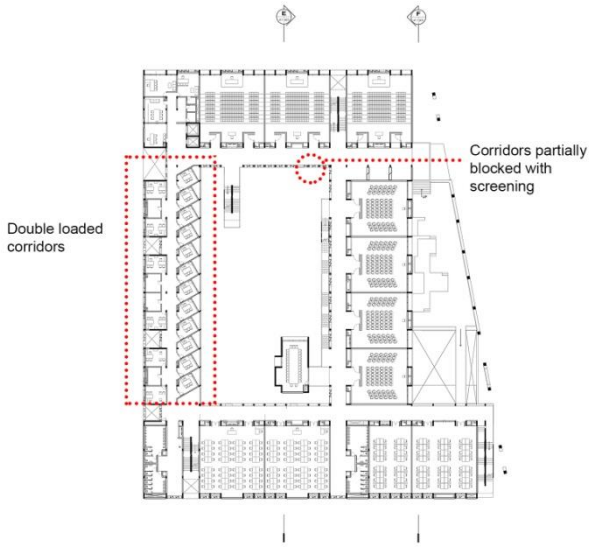


FIg. 4.1.4 First floor plan (source: virmueller.com edited by author)

Pros:

- Courtyard garden providing a relationship with nature on ground floor level.
-Sensitivity towards climate and choice of material
-Triple height space for various activities
-Enough vertical circulation designed beautifully around the courtyard

Cons:

- Double loaded corridors
- Corridors around the courtyard partially blocked with screening
- Connection with courtyard is lost in the 3rd and 4th floors.

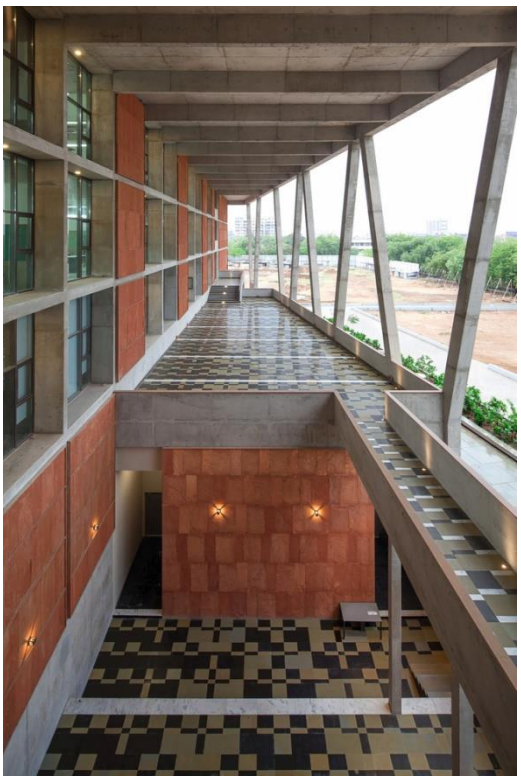


FIg. 4.1.5 Triple height space

4.2 University of Cyprus Medical School

FIg. 4.2.1 Interior courtyard (source: mibaarq.com)

FIg. 4.2.2 Interior space (sourcemibaarq.com)

Project: **University of Cyprus Medical School**
Architect: **MIBA Architects**
Area: **98 000 sqft**

The idea:

A campus within a campus. A combination of bio-climatic regulations and social spaces for learning, the design was inspired from a Cypriot neuroscientist. The facade was designed on the concept of DNA sequencing, the varying sizes and bands that inspire the rhythm.

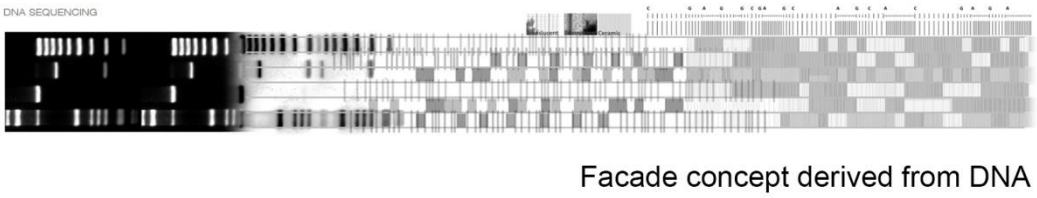
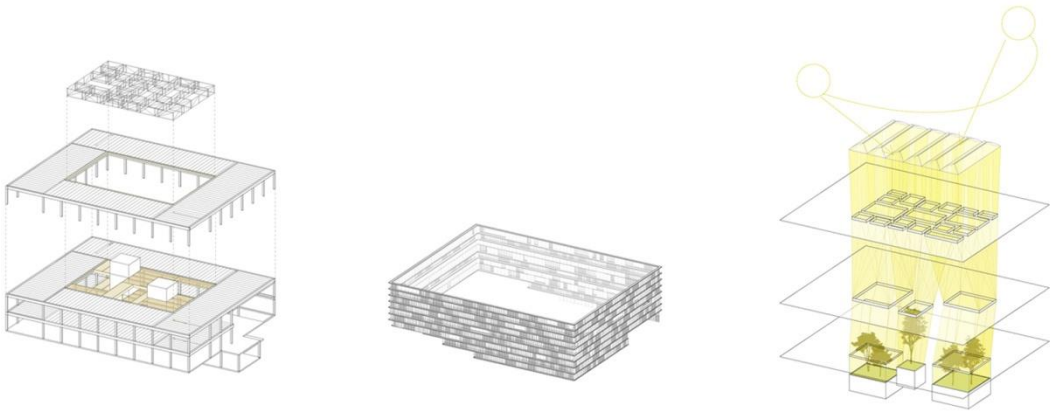


Fig. 4.2.3 Concept (source:mibaarq.com)

Sustainability:

The building is established under a unique combination of nature and technological systems. The facade interacts and responds to the climate keeping the atmosphere inside cooler during the summer and warmer during winter. The facade is built of thermal clay bricks that provides insulation. Moveable louvres are automated to provide shade from Sun when necessary. Same applies for the roof which can either block or direct sunlight.



structural systems

Perimetral ring: pre-fabricated concrete
Atrium: Laminated wood & ceramics blocks
Skylight: steel & laminated wood trusses

facade systems

Thermal clay brick with 16cm insulation.
Sun protection, adjustable motorized vertical ceramic louvres.

roof systems

The roof can accu-mulate and disipate solar gains.
It can let in or block direct sunlight.

FIg. 4.2.4 Innovative systems (source: mibaarq.com)

ULAB has been an advocate of sustainability and as for their new campus they desire a green one. In a country like Bangladesh where energy is scarce, architects now think of innovative ways to save energy through what they create. Thus this project illustrates as a perfect example of combining both nature and technology to save energy in the long-term.

Social Spaces:

Every educational institute requires spaces for students to interact as interaction tends to spread knowledge. MIBA has emphasized on the aspect by design layers of vegetation that permeates through the building. All the clusters eventually connected by one central circulation space to promote interaction.

Such courtyards are quite common in Bangladesh's traditional rural houses and the concept successfully works in modern designs aswell. It works as a common gathering space, performing various activities, better ventilation and building an interior-exterior relationship.

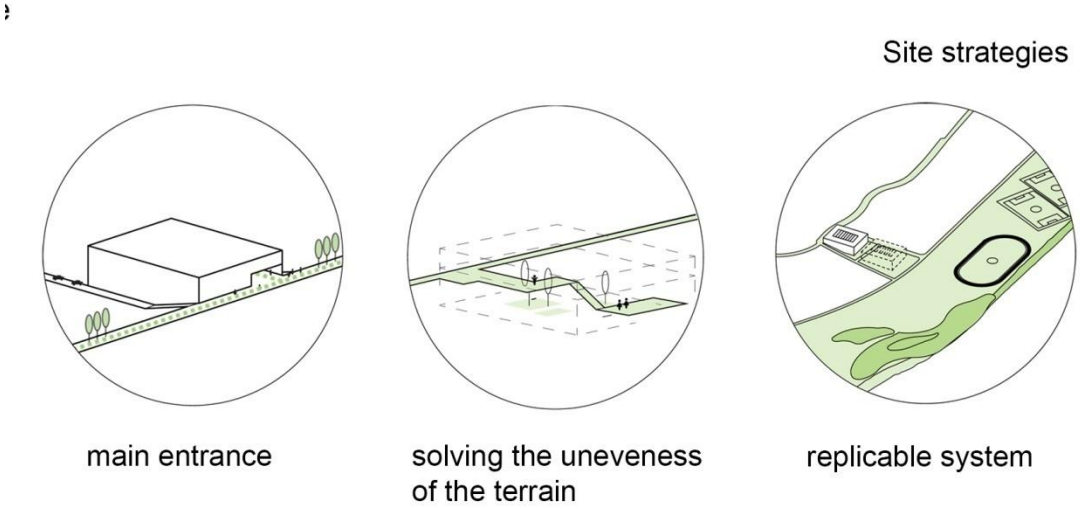


FIg. 4.2.5 Site strategies (source: mibaarq.com)

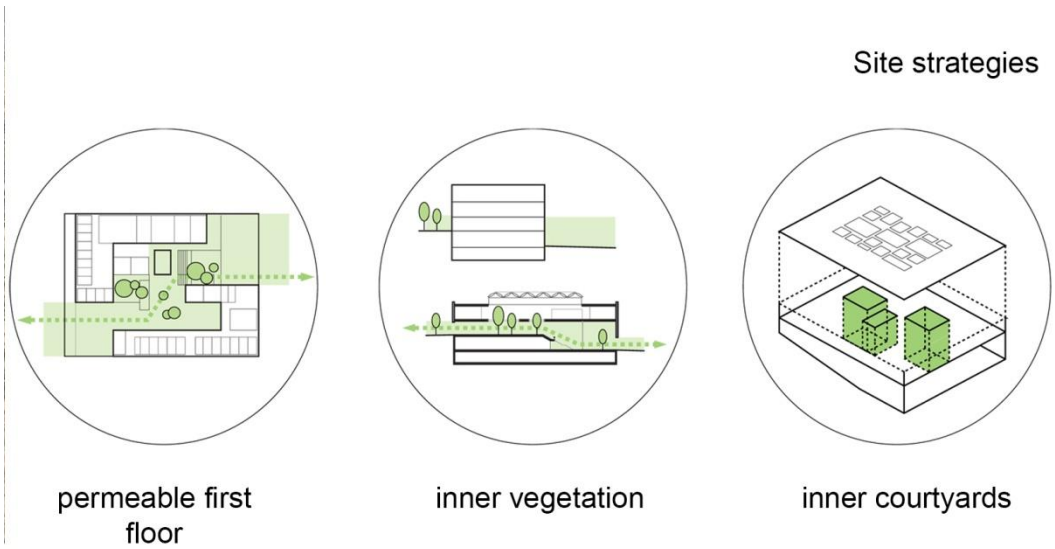


FIg. 4.2.6 Strategies within the campus

FIg. 4.2.7 Floor plans (source: mibaarq.com edited by author)

CHAPTER 5: PROGRAM DEVELOPMENT

5.1 Derivation of programs
5.2 Given pograms
5.3 Spacial organization

CHAPTER 5: Program development

5.1 Derivation of programs

The total program of the university can be categorized into three major parts: administration, recreation and academics. These three categories then carry sub categories which comprise of all the functions a university may require such as lecture rooms, indoor sports, auditorium and guest houses. Overall the program was provided by the university authority as per their student, professor ratios and their future plans on expanding. In terms of designer input, suggestions were made to introduce ‘thinking zones’. Thinking zones will placed to attract gathering and interaction within departments, as discussing and debating was an essential part of learning throughout the history of liberal arts education.

5.2 Given program

Reception & Front admin

Space category	**Room**	**Capacity**	**No. of rooms**	**Area (sqft)**
Reception	Front desk & reception	2	1	156
	Waiting area	40	1	1000
	Peons & cleaners		1	156
	Printers & photocopier		1	156
Admissions office	Head of adminissions	1	1	156
	Deputy	1	1	100
	Manager	1	1	100
	Office	4	1	300
	Waiting area	15	1	200
	Admissions storage		1	810
Total				3134

Top Administration

General	Executive meeting room	15	1	800
	Executive dining space	15	1	800
	Peons & cleaners	2	1	156

Board suite	President's room	1	1	300
	VP's room	1	1	300
	Board suite admin	2	1	300
	Offices for board members	1	5	1500
	Board suite waiting lobby	1	1	300
VC Suite	Vice chancellor	1	1	300
	Pro vice chancellor	1	1	300
	Treasurer	1	1	300
	Admin office	2	1	300
	Lobby	1	1	300
Total				5956

Student Administration

General	Peon & cleaners	1	1	156
	Printer & photocopier	1	1	156
Registrar's office	Registrar	1	1	200
	Deputy registrar	1	1	156
	Manager	8	8	2496
	Officers	2	2	1620
	Records storage	1	1	400
Exam controller	Head	1	1	156
	Officers	2	1	156
	Exam records room		1	400
Finance & accounts	Finance director	1	1	200
	Deputy	1	1	156
	Accounts office	12	1	810
	Accounts storage		1	400
Total				7462

General Administration

General admin	Head of admin	1	1	200
	Deputy	3	3	468
	Manager	6	6	600
	Asst manager	2	2	312
	Sr. Officers	1	1	156
	Officers	3	3	468
	Asst. Officers	3	3	468
	Admin storage	1	1	400

	Peons & cleaners	2	1	156
	Printer and photocopier	1	1	156
IT Division	Head of IT	1	1	156
	IT Office	12	1	810
	Repair room	3	1	156
	Help desk	2	1	156
	Server room		1	300
	IT storage		1	400
Academic affairs	Head of academics affairs	1	1	156
	Academics affairs office	4	1	500
Marketing	Head of marketing	1	1	156
	Office	4	1	500
Communications	Head of communication	1	1	156
	Office	8	1	500
	Designing lab	2	1	156
Total				6830

Student's activities centre

General	Waiting area	20	1	400
	Peons & cleaners	2	1	156
	Printer & photocopier	1	1	156
Career services	Head of career services	1	1	200
	Deputy	1	1	156
	CS centre	6	2	624
Students affairs	Head of students affairs	1	1	200
	Deputy	1	1	156
	Students affairs office	6	2	624
	Counselling room	1	2	200
Medical office	2 Counselling rooms & Pharmacy	4	3	468
Total				3340

Library

Library	110	1	10000
Head of library	1	1	156
Deputy	1	1	100

Manager	1	1	100
Asst. Manager	2	1	156
Officers	12	4	800
Language lab	10	1	500
Library storage	1	1	810
Peons & cleaners	2	1	156
Printer & photocopier	2	1	156
Total			12934

Classrooms

Very large classroom	120	2	3600
Large Classroom	80	2	3200
ULAB standard classroom	45	26	21060
Small classroom	30	10	6600
Screening room	45	1	1000
Case studies room	30	2	1200
Meeting room large	40	1	1000
Meeting room medium	25	1	600
Meeting room small	15	6	1800
Total			40060

Labs

Engineering	CSE hardware lab	45	1	810
	EEE	45	1	810
	ETE	45	1	810
	CSE Network lab	45	1	810
	Robotics lab	45	1	810
MSJ	Editing lab	20	1	810
	MSJ equipment room	2	1	312
	Radio station	4	1	312
	TV Lab	1	1	312
	Sound room	1	1	156
	Studio		1	2000
CSD	Soil testing lab	1	1	156
Total				8108

IT/Computer labs

IT lab large	60	1	1000
IT lab medium	45	7	5670
IT lab small	30	2	1200
Souvenir/ bookstore	2	1	810
Student photocopy centre	2	1	468
Total			9148

General use facilities

Auditorium	1500	1	12000
Auditorium green room	25	2	1620
Multipurpose room	200	1	200
Art gallery	45	1	600
Prayer space	15	2	200
Aju space	5	2	200
Security room	4	4	400
Club rehearsal space	45	1	810
Indoor sports room	10	1	2000
Gym	10	2	2000
Study room	45	3	3000
Student lounge	30	4	4000
Cafe	300	1	3600
Faculty and admin lounge	50	2	1200
Stationary/ bookstore	2	1	810
Photocopy centre	2	1	400
Total			33040

Department offices:

General	Peons & cleaners	2	1	156
	Printer & photocopier	1	1	156
	Reception desk	2	1	156
BBA	BBA office	2	1	312
	Storage		1	100
MSJ	MSJ office	2	1	312
	Storage		1	100
English & humanities	DEH office	2	1	312
	Storage		1	100
CSE	CSE Office	2	1	312
	Storage		1	100

EEE	ETE/EEE Office	2	1	312
	Storage		1	100
MBA	MBA office	2	1	312
	Storage		1	100
M Comm	MComm office	2	1	312
	Storage		1	100
M Eng	M Eng office	2	1	312
	Storage		1	100
Faculty offices	Advisors/consultants	1	6	936
	Professors/deans/heads	1	30	4680
	Assoc Prof	1	30	4680
	Asst prof	2	60	9600
	Lecturers	4	60	18720
	Adjunct faculty	4	6	1872
	TAs	2	6	936
Total				45188

Research centres

General	Peons & cleaners	2	1	156
	Printer & photocopier	1	1	156
Research Office	Head of research	1	1	156
	Research office	4	1	312
	Storage		1	100
Centre for Language Studies	Head of CLS	1	1	156
	CLS office	4	1	312
	Storage		1	100
Theory Centre	Head of TC	1	1	156
	TC Office	4	1	312
	Storage		1	100
Total				2016

Storage

Accounts	1	1	500
Records Room	1	1	810
Sports	1	1	200
General	1	1	2000
Cleaning Store and Seating	1	1	600
Security Store	1	1	200
Total			4310

Studio Apartments for Visitors	4	1600

Ancillary Spaces

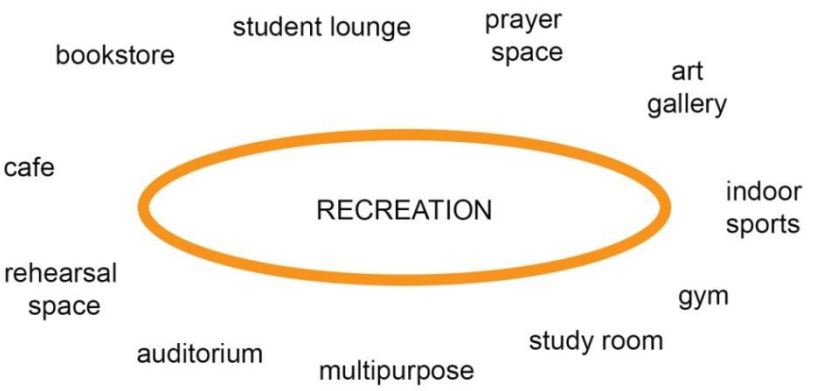
Toilets
Lifts
Stairs
Corridors
Switch Rooms
Walls/Pipes
Generators
Parking

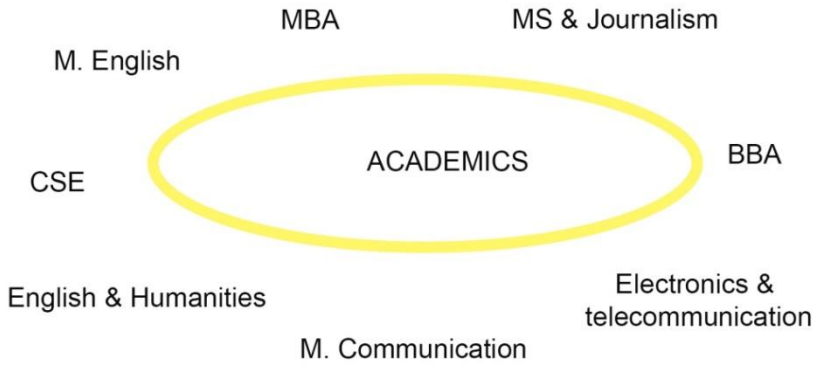
Gate Security

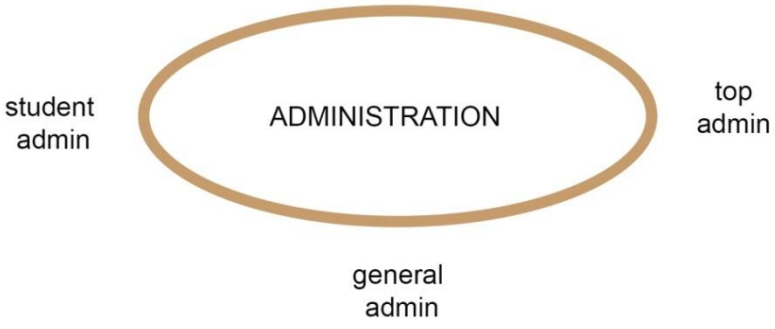
Gate Room
Toilet
Resting Room

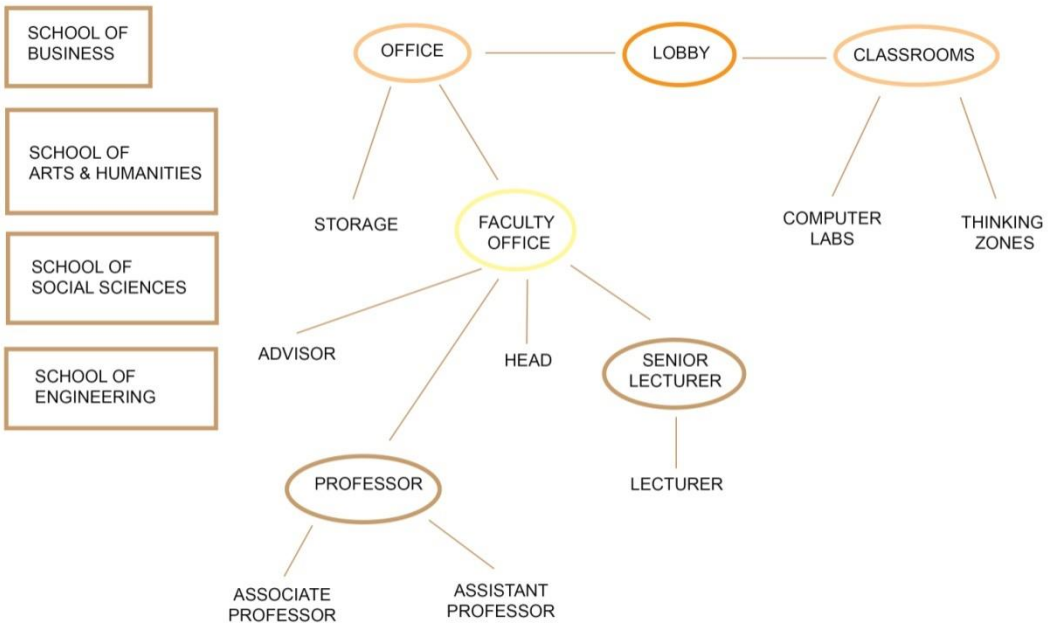
Total area: 183126 sqft

5.3 Spacial organization





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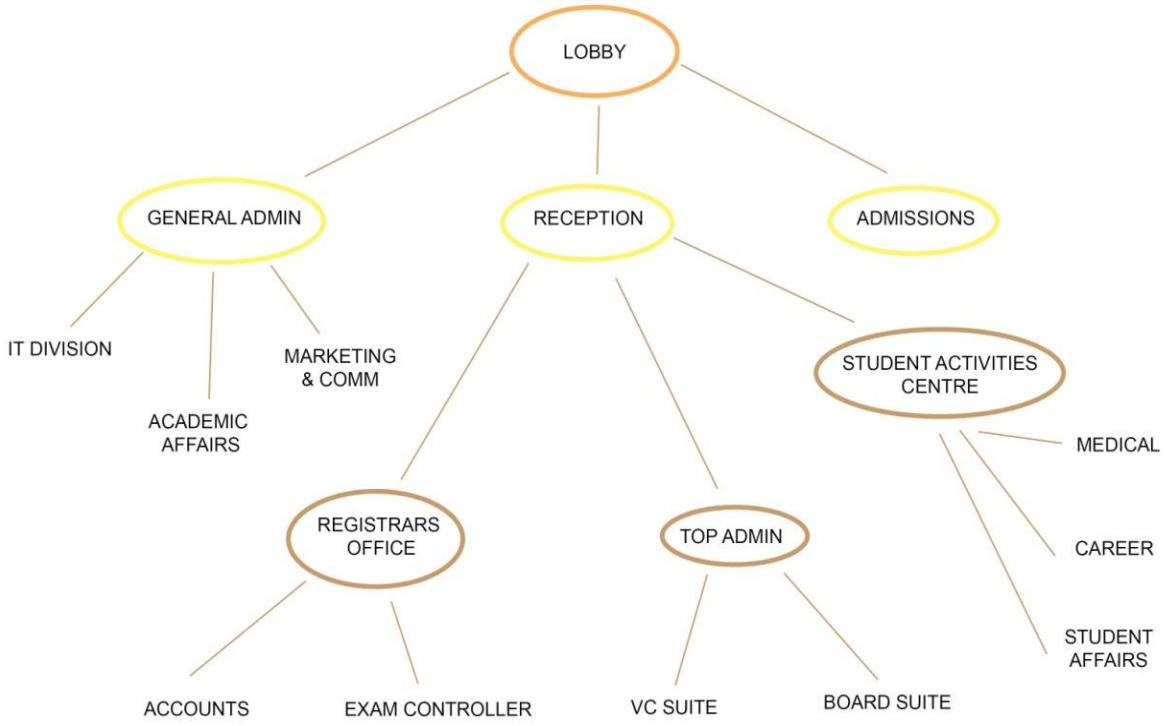
SCHOOL OF ARTS & HUMANITIES
SCHOOL OF SOCIAL SCIENCES
SCHOOL OF ENGINEERING
OFFICE
LOBBY
CLASSROOMS
STORAGE
FACULTY OFFICE
COMPUTER LABS
THINKING ZONES
ADVISOR
HEAD
SENIOR LECTURER
PROFESSOR
LECTURER
ASSOCIATE PROFESSOR
ASSISTANT PROFESSOR


LOBBY
GENERAL ADMIN
RECEPTION
ADMISSIONS
IT DIVISION
ACADEMIC AFFAIRS
MARKETING & COMM
STUDENT ACTIVITIES CENTRE
MEDICAL
CAREER
STUDENT AFFAIRS
REGISTRARS OFFICE
TOP ADMIN
ACCOUNTS
EXAM CONTROLLER
VC SUITE
BOARD SUITE

CHAPTER 6: DESIGN DEVELOPMENT

6.1 Introduction
6.2 Initial ideas
6.3 Form generation
6.4 Schematic layout of programs
6.5 Facade treatment and considerations
6.6 Final design

CHAPTER 6: Design development

6.1 Introduction

Design is a process that requires constant referencing from previous site and program analysis. Relating back to the context of the site and other factors that need to be considered, eventually helping us build logical reasoning. Most of the inspiration taken from the site forces itself helps in identifying the position of the built form and the zoning of functions.

6.2 Initial ideas

Fig 6.2.1 Initial zoning

The initial aim was to identify the position of the physical massing in the site. Keeping the existing cricket ground in plans and an aperture toward the north of the site, the remainder of the zone was marked orange. The U-shaped space creates a direction pointing towards the waterbody, leaving some space to create a recreactional zone.

Fig 6.2.2 Initial idea

Following the urban fabric of the site, the intention was to create pocket spaces that faced towards the cricket field. The cricket field is considered the heart of the campus whereas the pocket spaces (marked yellow) are individual interaction zones.

6.3 Form generation

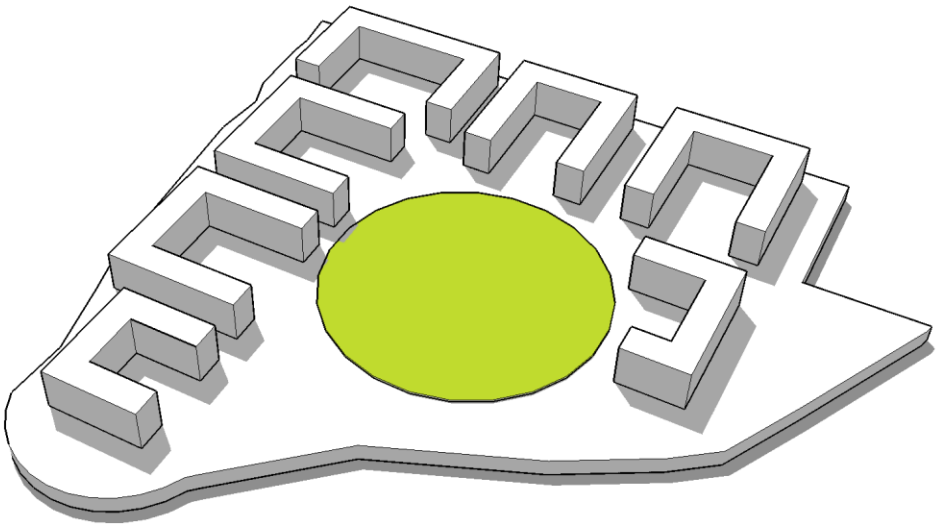


Fig 6.3.1 Courts enclosing field

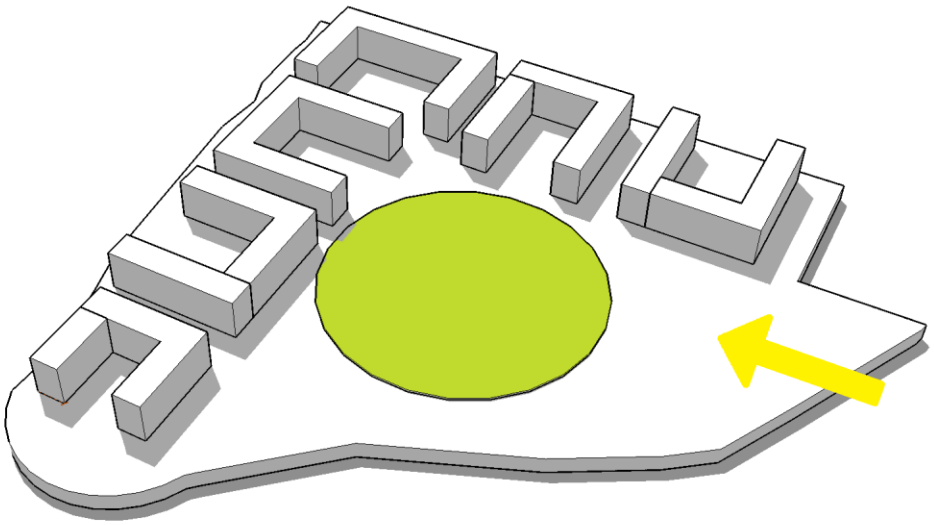


Fig 6.3.2 Establishing entry

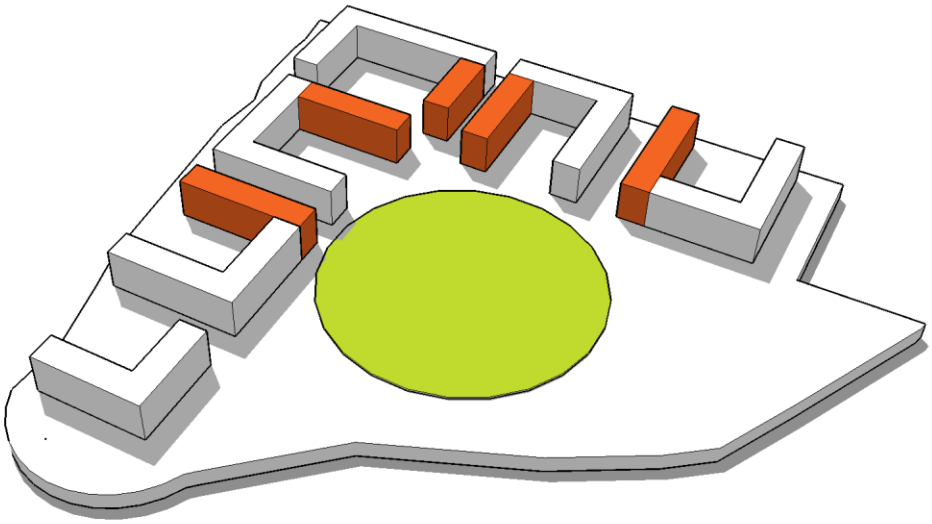


Fig 6.3.3 Connecting spaces

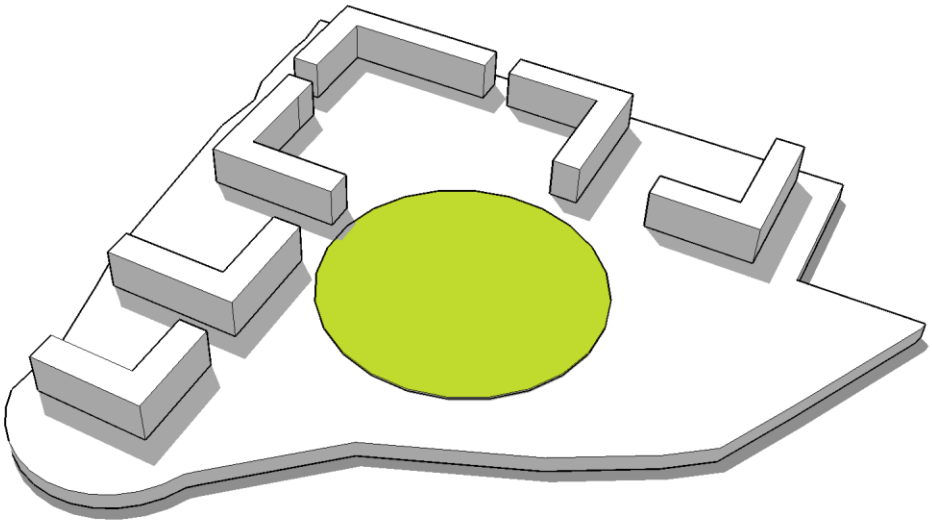


Fig 6.3.4 Heirarchy of spaces

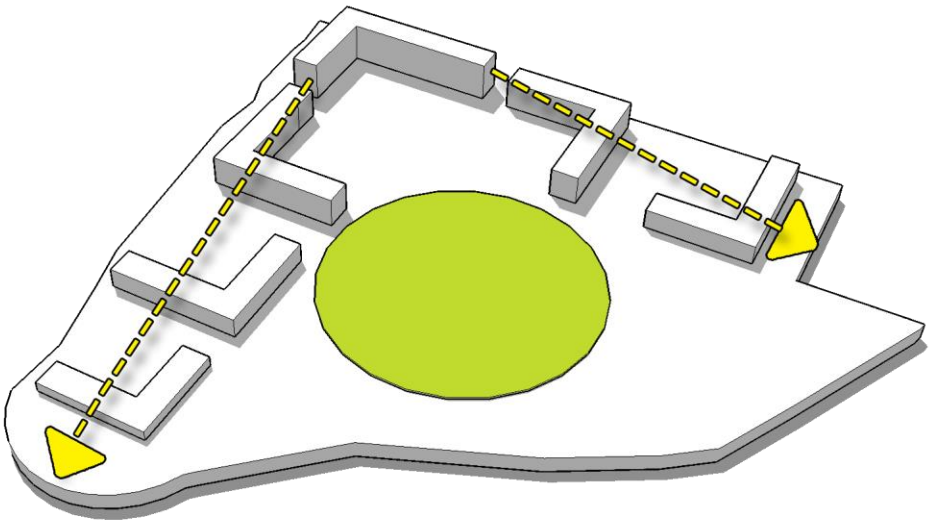


Fig 6.3.5 Descending volumes

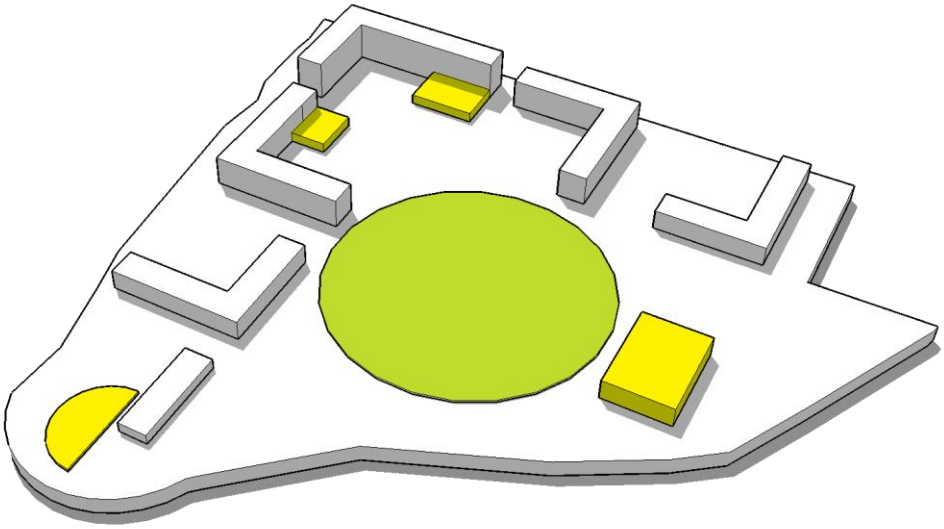


Fig 6.3.6 Adding necessary volumes

6.4 Schematic layout of programs

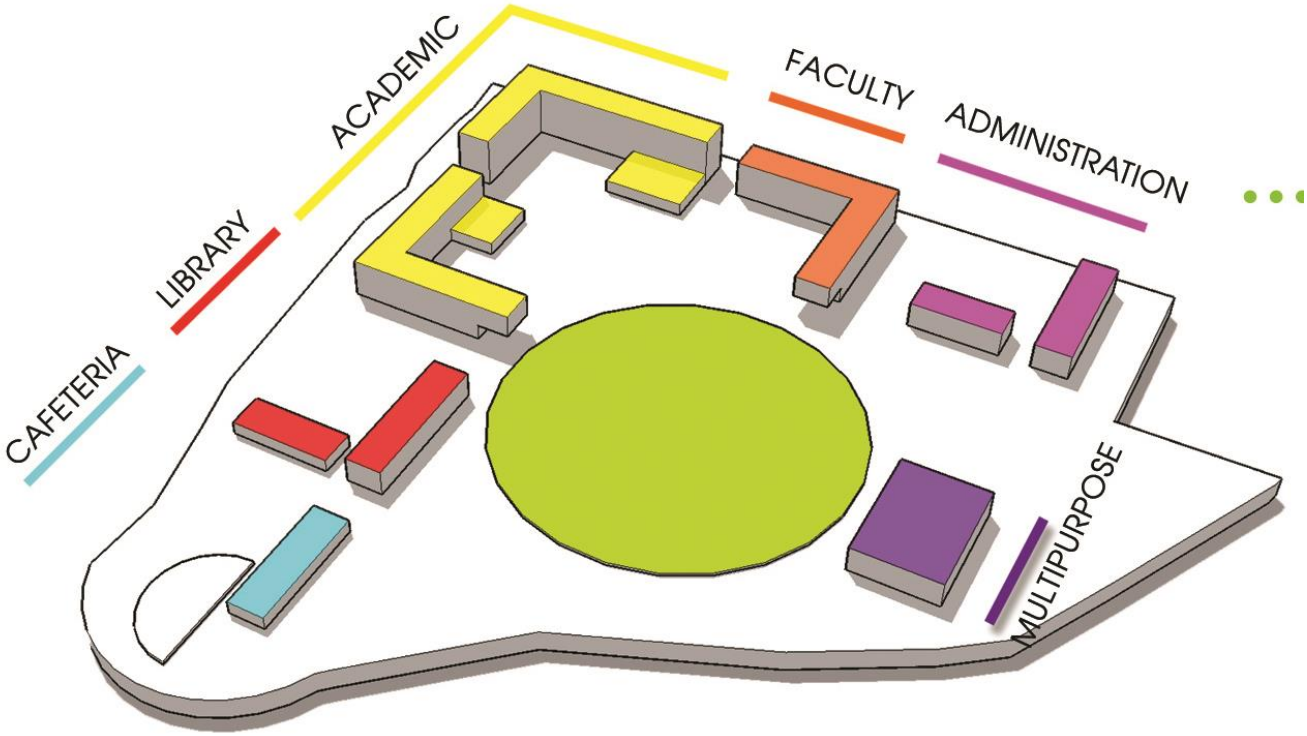
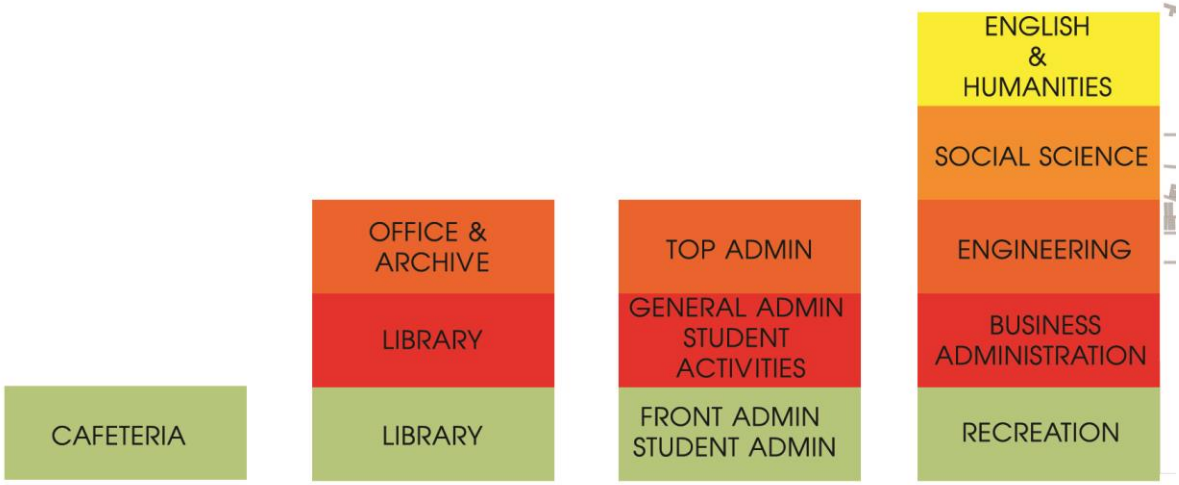


Fig 6.4.1 Zoning



According to the derived entry into the complex, the most public functions (multi-purpose hall and administration) were conveniently placed nearest to the entry. The administration block and facutly block are placed beside one another for an equally fitting relationship with the administration s is with the students.

The academic block creates a larger courtyard in itself along with the faculty block in hopes of generating all kinds of activities. This pocketspace will essentially be where students will meet before and after class, cross each others paths and converse. The lirary is easily accessible as it is right next to the academic block and includes a bridge connection on the second floor. The journey through the complex terminates with the cafeteria as it is consiered the most happening place for students to gather.

ULAB mainly consists of four schools that are vertically divided. Each student must travel horizontally for their own classrooms and labs and vertically to mingle with other departments. This has known to generate more interaction between students from different years and departments.

6.5 Facade treatments and considerations

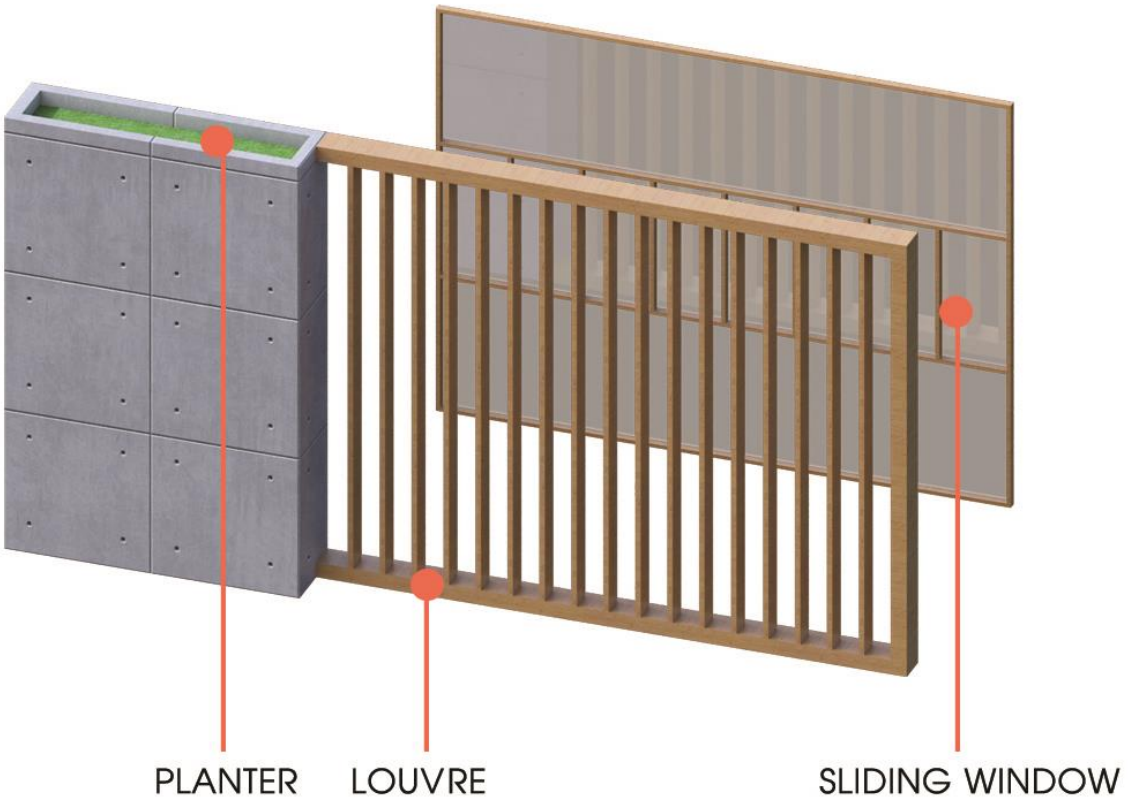


Fig 6.5.1 West & South facade

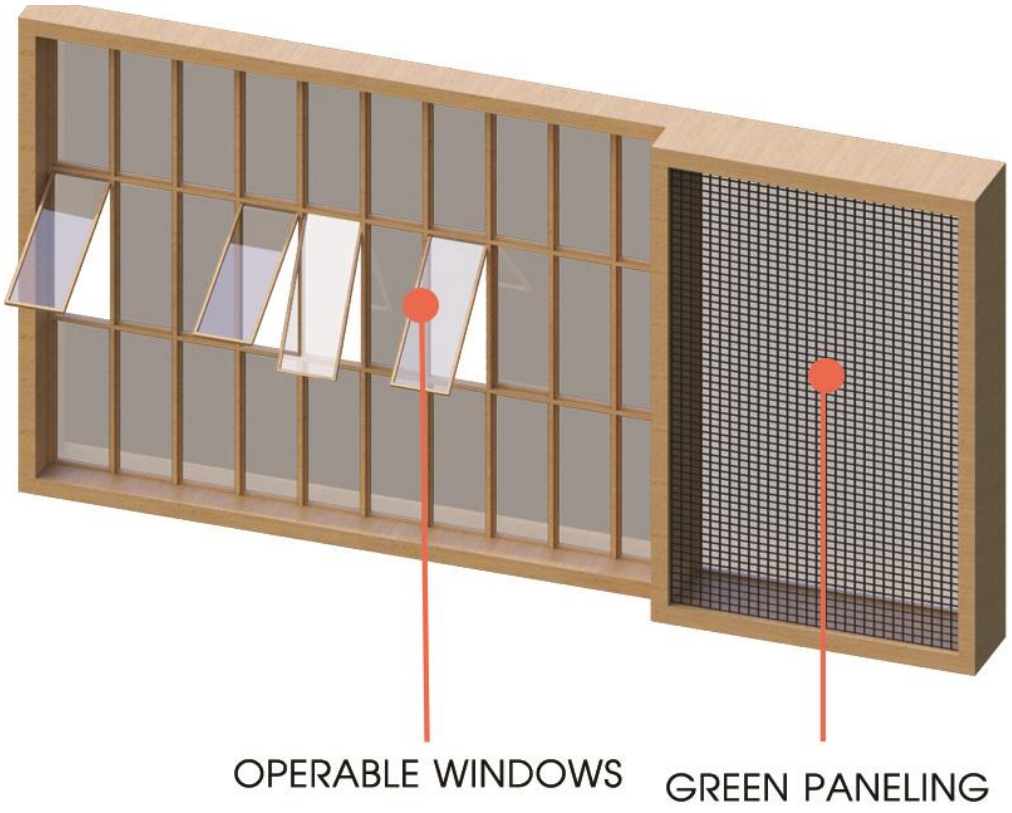


Fig 6.5.2 North & East facade

Fig 6.5.3 Outdoor sitting

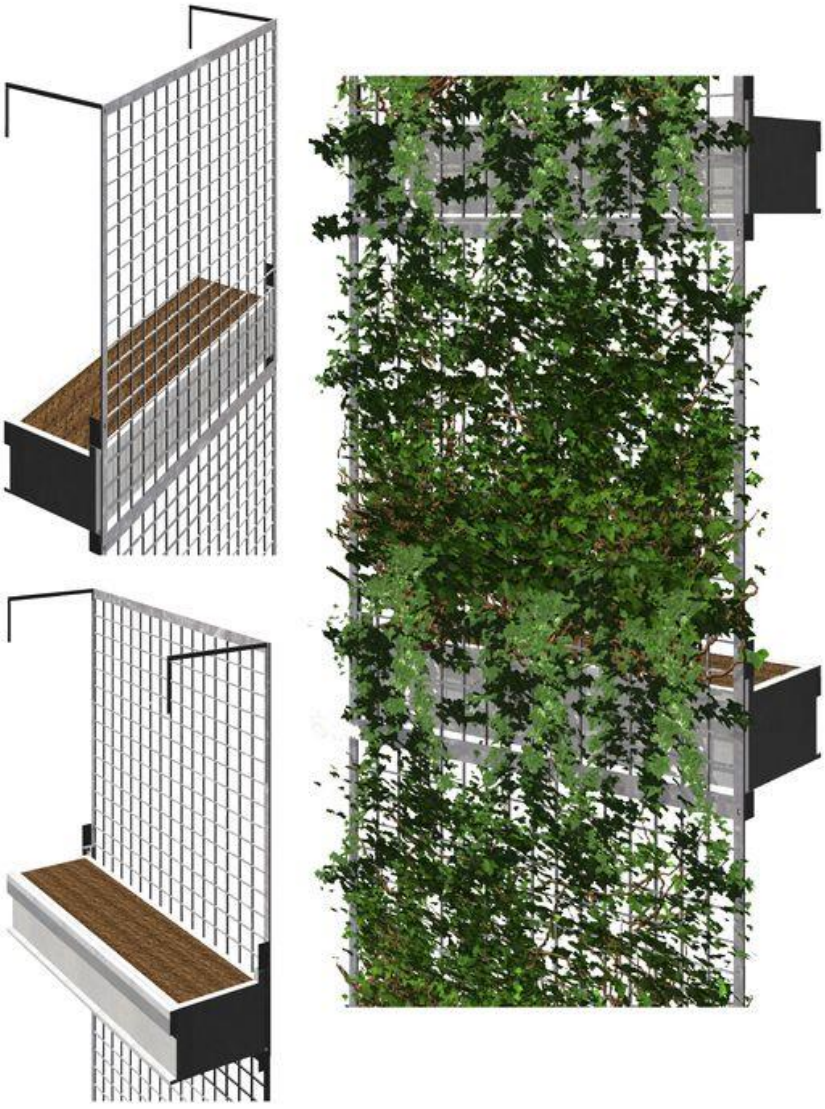


Fig 6.5.4 Green panelling with planters

6.6 Final design

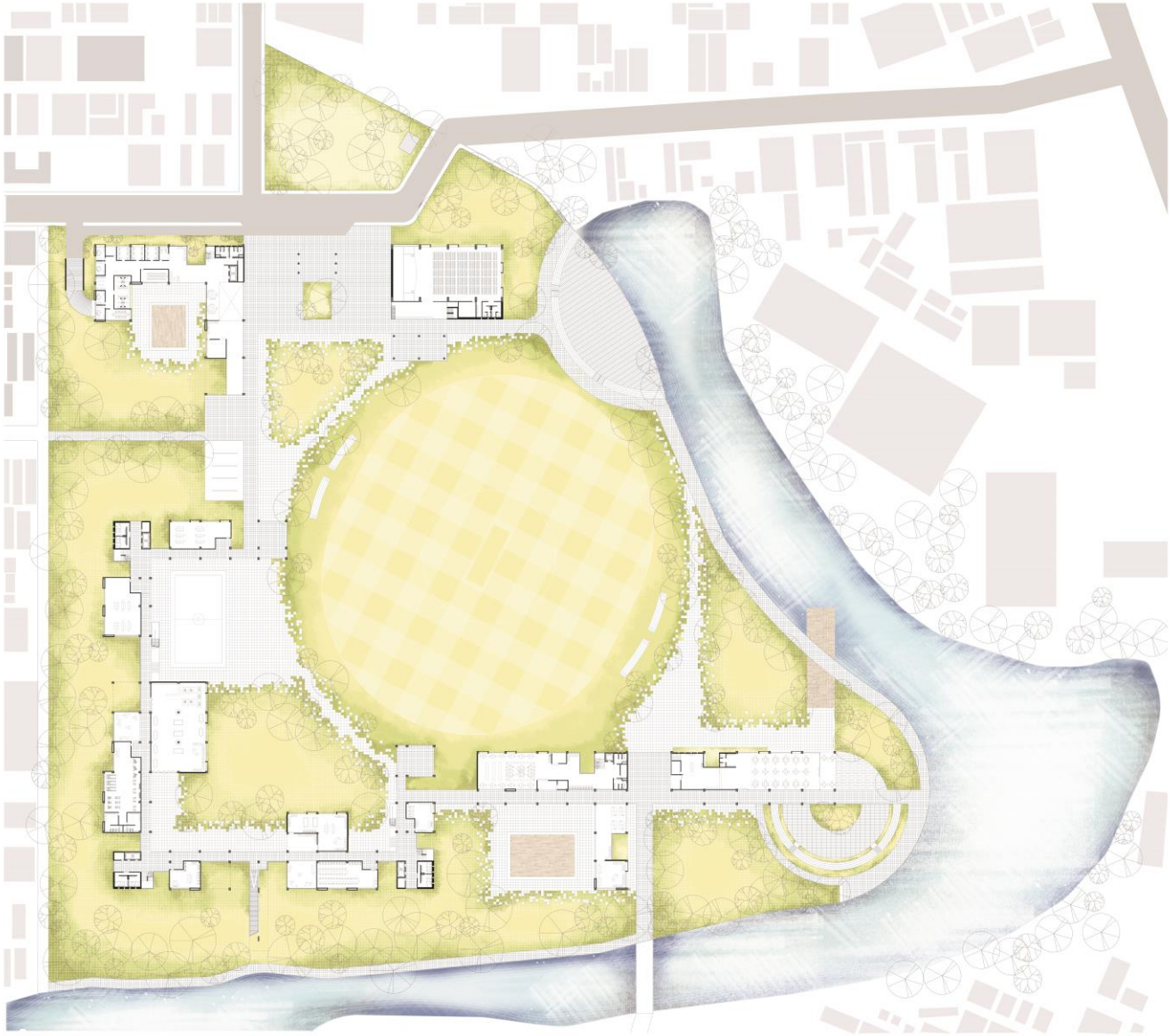


Fig 6.6.1 Plan @ +7'-0"

The groundfloor of the complex mainly consists of recreational functions much like the corbusian concept of freeing the ground for the public. The functions include facilities like gym, workshops, photocopy centre and open verandas for tea stalls.

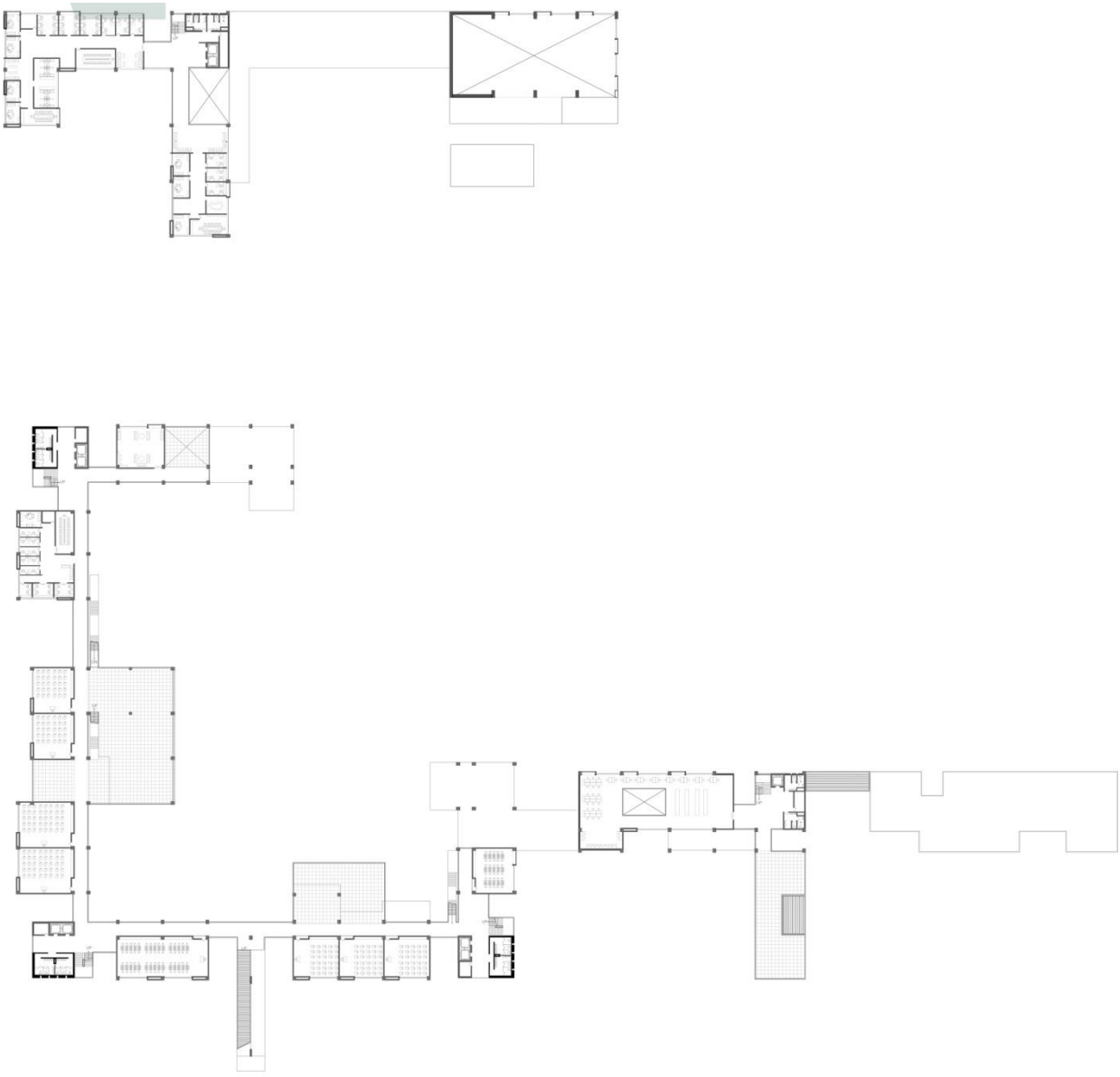
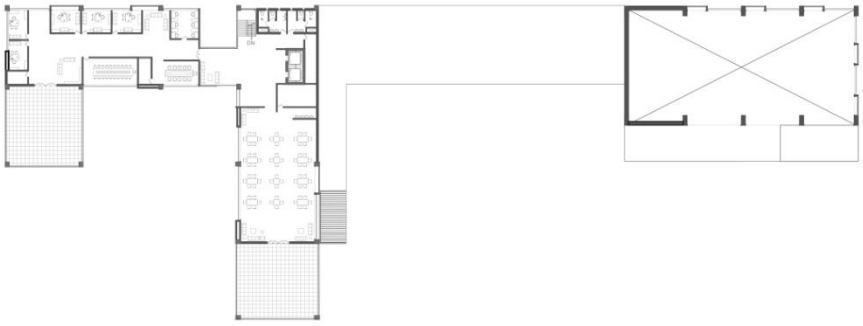


Fig 6.6.2 Plan @ + 20'-0"



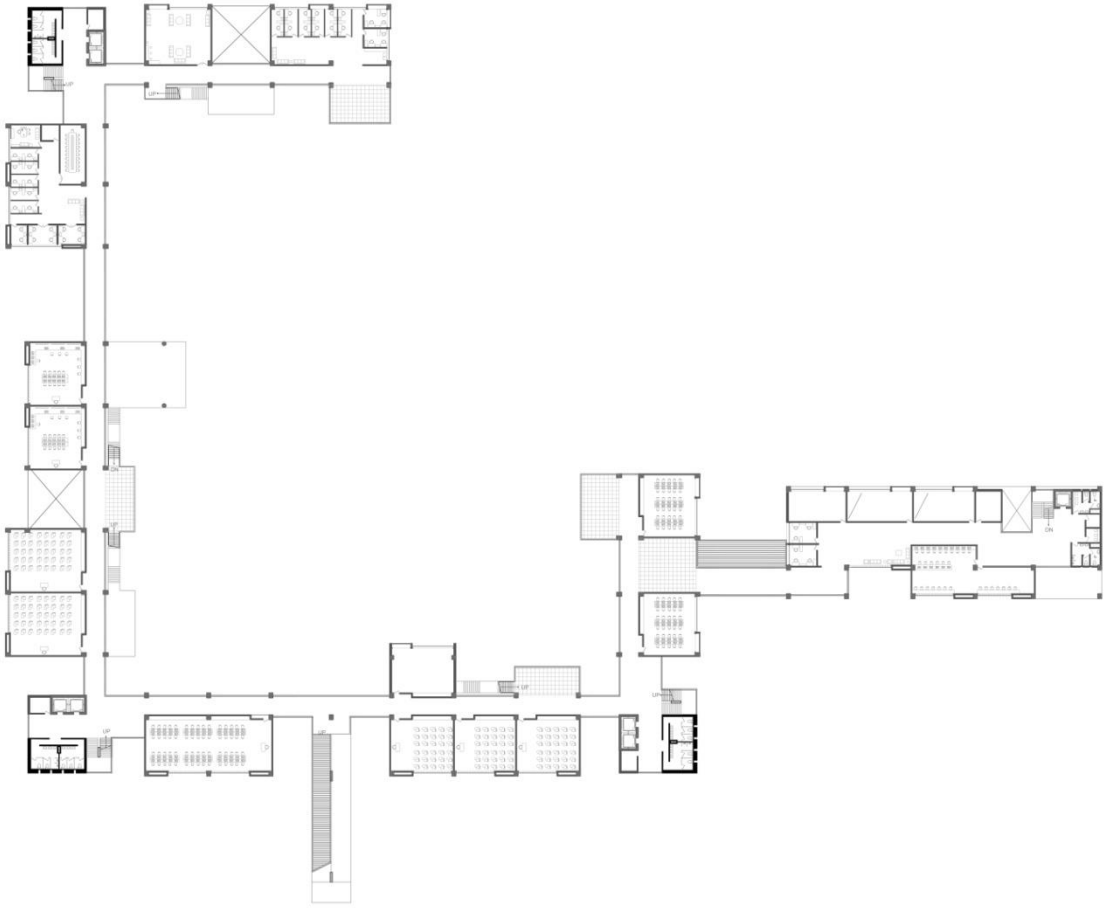


Fig 6.6.3 Plan @ + 32'-0"

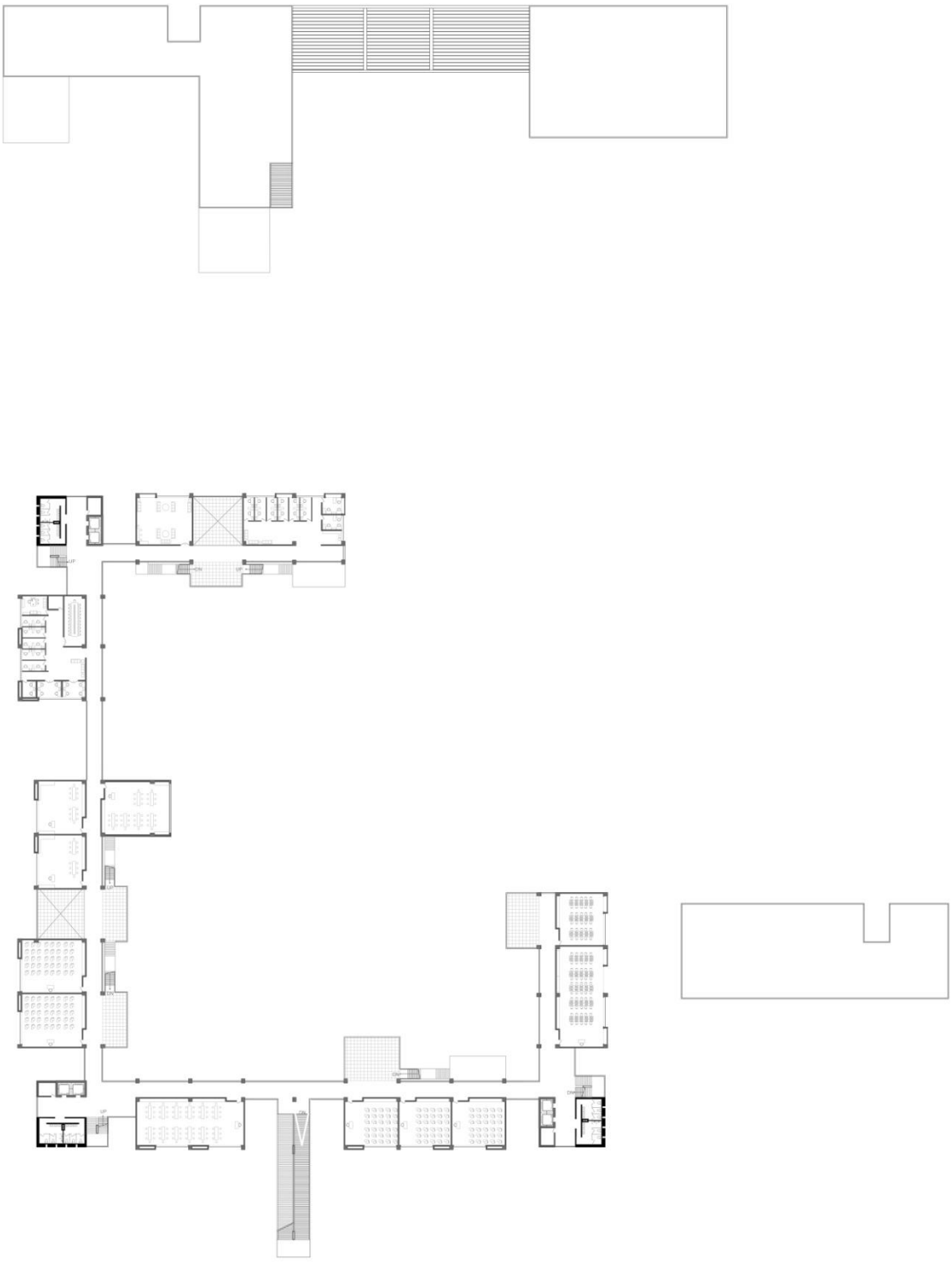


Fig 6.6.4 Plan @ + 44’-0”

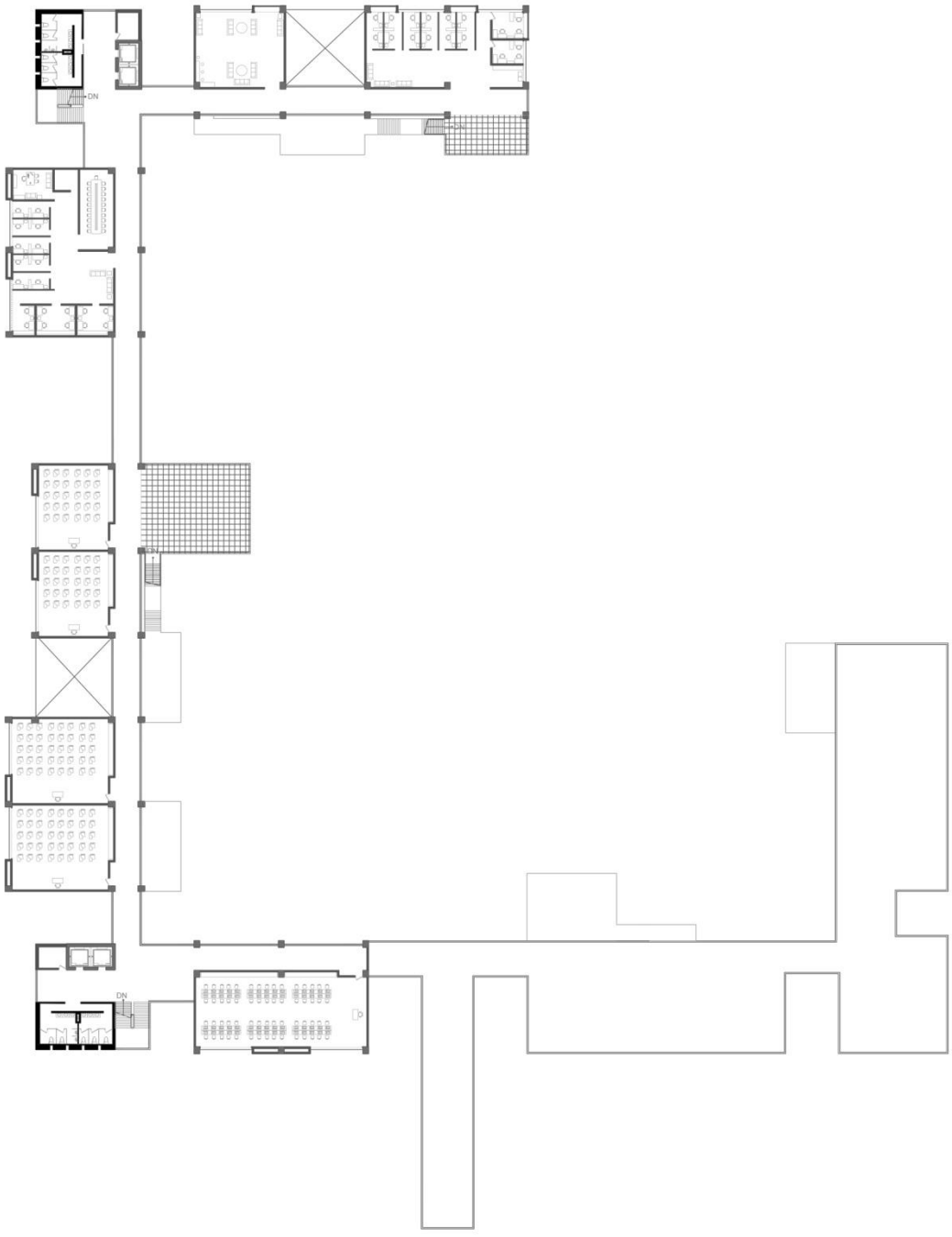


Fig 6.6.5 Plan @ + 56'-0"

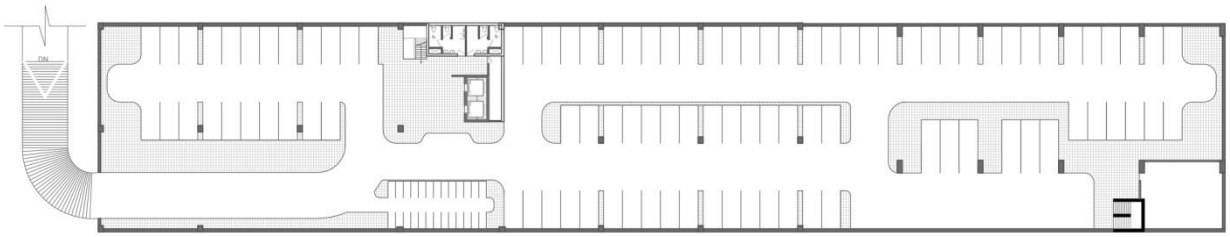


Fig 6.6.6 Plan @ -5'-0"

Fig 6.6.7 Roof plan

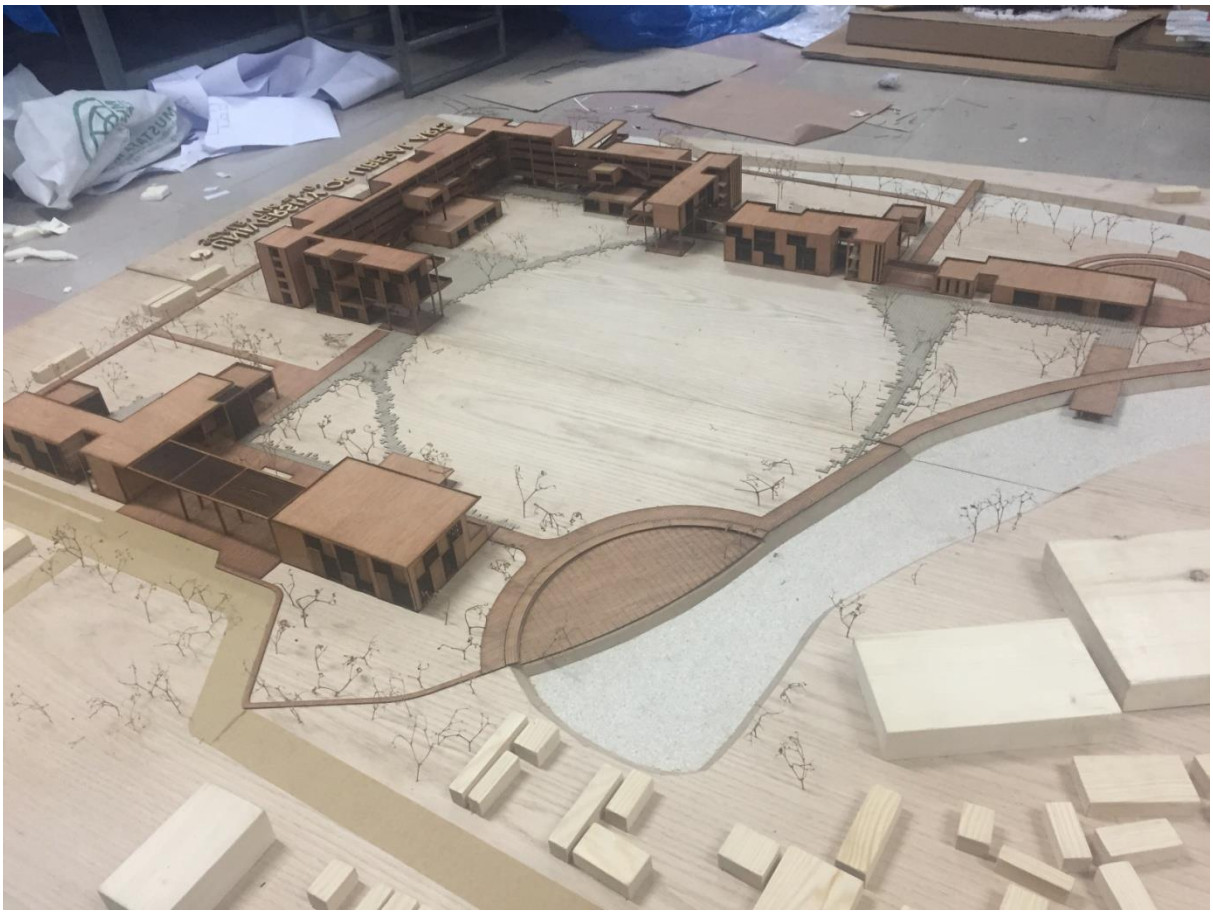
Fig 6.6.8 Elevations & Sections

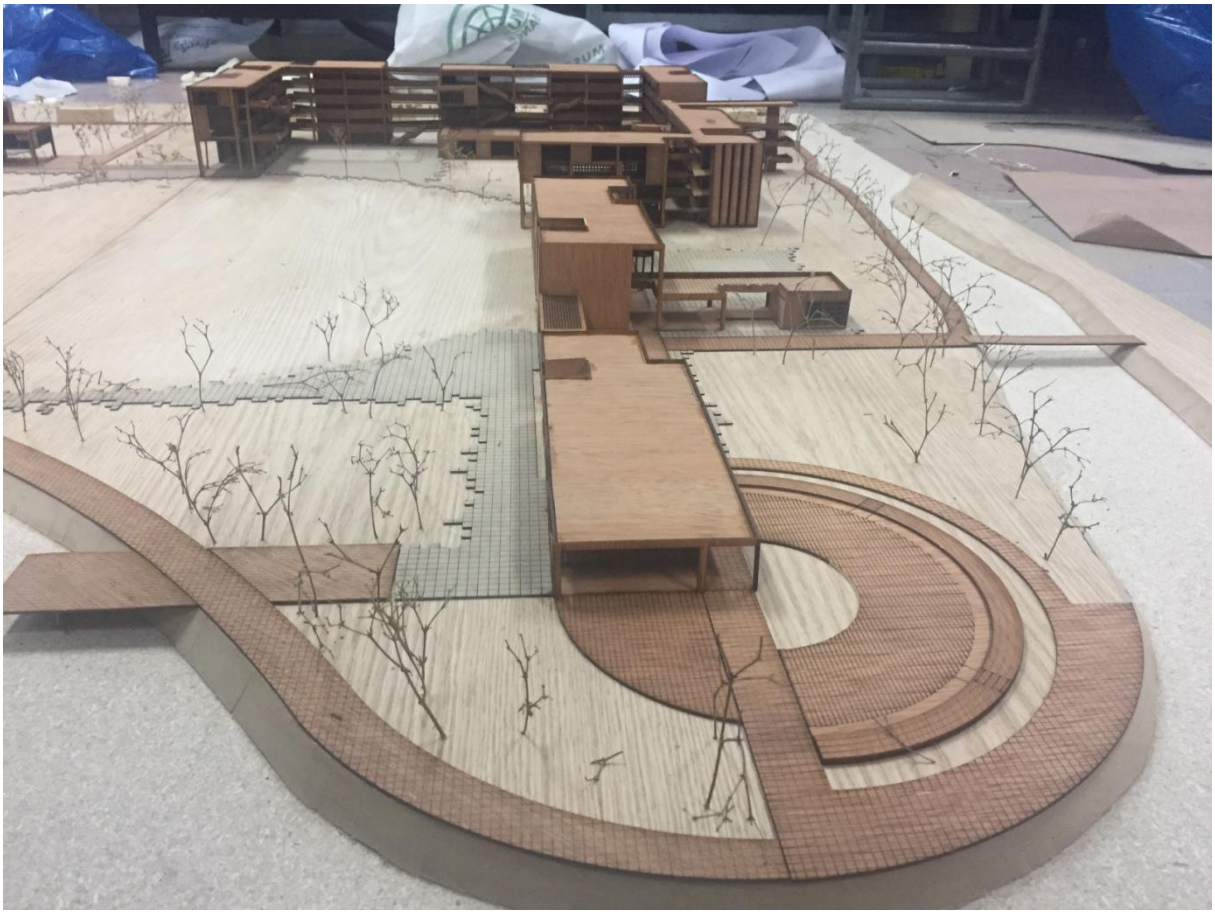
Fig 6.6.9 Perspective of entry

Fig 6.6.10 Terrace and corridor

Fig 6.6.11 Outdoor sitting

Fig 6.6.12 Model Images





CHAPTER 7: Conclusion

A university requires a variety of spaces, each space with its individual characteristics. What is interesting is being able to create spaces that promote conversations, urge discussions and generate different activities. This was the main intention when designing such a facility, that it focuses as much on the external activities as it does with the internal. Addressing the context is key when design such a facility, and this site was blessed with two major forces, water and a cricket field, both of which were intentionally preserved. Designing such a complex in the urban metropolis of Dhaka can be a challenge in itself but if done right it can be as much of an opportunity as well.

References:

Rüegg, Walter: "Foreword. The University as a European Institution", in: *A History of the University in Europe. Vol. 1: Universities in the Middle Ages*, Cambridge University Press, 1992.

Ancient colleges. Retrieved from http://collegestats.org/2009/12/top-10-oldest-universities-in-the-world-ancient-colleges/

The First Colleges and Universities: Brief History of Higher Education. Retrieved from http://hankeringforhistory.com/the-first-colleges-and-universities-a-brief-history-of-higher-education/

Kleiman J. 2014. *Why Getting a Liberal Arts Education is not a Mistake.* Retrieved from http://www.forbes.com/sites/work-in-progress/2014/04/28/why-getting-a-liberal-arts-college-education-is-not-a-mistake/#595e0bd51a20

Edward J.R. 2013**.** The *Value of a Liberal Arts Education in Today's Global Marketplace*. Retrieved from http://www.huffingtonpost.com/edward-j-ray/the-value-of-a-liberal-arts-education_b_3647765.html

Wagner, D.L. (1983). *The Seven liberal arts in the Middle Ages*. Indiana University Press.

E. B. Castle. 1969. *Ancient Education and Today*.

Bangladesh University Grants Commission. 2006. *Strategic Plan for Higher Education in Bangladesh: 2006-2026*, Dhaka

Own campus: Private Universities asked to move within a year. 2012. Retrieved from http://www.thedailystar.net/news-detail-220607

UNESCO: Literacy rates of Bangladesh. Retrieved from: http://www.uis.unesco.org/DataCentre/Pages/country-profile.aspx?code=BGD&sector=lit

University of Cyprus. 2015. Retrieved from: www.mibaarq.com

Ahmedebad University IET. 2015. Retrieved from: www.virmueller.com