DIPLOMA IN ARCHITECTURE

CDIO : INTEGRATED LEARNING EXPERIENCE

Semester 3

DCA30114 - Design Studio 3
DCA30123 - Working Drawing 2
DCA30132 - 3D Modelling & Animation

CDIO :

INTEGRATED LEARNING EXPERIENCE

DIPLOMA IN ARCHITECTURE

POLITEKNIK MALAYSIA
PORT DICKSON

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Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

CDIO : INTEGRATED LEARNING EXPERIENCE : DIPLOMA IN ARCHITECTURE / EDITOR Pn. Siti Amirah Binti Mohtaram ; WRITERS Pn. Zurika Amnah@Salmi Binti Mohtar, Pn. Siti Fatimah Tuzzahrah Binti Abd Latif, Dr. Fakhriah Binti Muhsin, Pn. Isma Zaida Binti Din, Pn. Badariah Binti Daud, Pn. Norliza Binti Johan, En. Shahrul Kamil Bin Yunus, Pn. Nur Hidayah Binti Rosman.
Mode of access: Internet

eISBN 978-967-2246-90-9
1. Architecture--Study and teaching (Higher).
2. Universities and colleges--Curricula.
3. Government publications--Malaysia.
4. Electronic books.
I. Isma Zaida Din, 1977-. II. Siti Fatimah Tuzzahrah Abd. Latif, 1984-.
III. Fakhriah Muhsin, Dr., 1984-. IV. Norliza Johan, 1983-.
V. Siti Amirah Mohtaram, 1974-. VI. Zurika Amnah@Salmi Mohtar, 1982-.
VII. Shahrul Kamil Yunus, 1964-. VIII. Nur Hidayah Rosman, 1989-.
IX. Badariah Daud, 1983-.
720.711

Published by:
Politeknik Port Dickson
KM14, Jalan Pantai 71050, Si Rusa,
Port Dickson, Negeri Sembilan.

JULAI 2020

TABLE OF CONTENT

Acknowledgement	2
Table Of Content	4
Foreword	5
Integrated Learning Experience	6
Course Mapping	8
DCA30114 - Design Studio 3	
Notes of Guidance	9
Project Brief	13
Rubrics	17
DCA30123 - Working Drawing 2	
Notes of Guidance	27
Project Brief	31
Rubrics	38
DCA30132 - 3D Modelling & Animation	
Notes of Guidance	55
Project Brief	59
Rubrics	64
References	67

FOREWORD

Alhamdulillah… First and foremost, we bow before Allah in deep gratefulness that His limitless wisdom and mercy granted us enough strength to complete this book. We express thanks from the bottom of our heart to the Holy Prophet Muhammad (May Allah blesses and peace be upon him) forever a torch of guidance and knowledge for humanity as a whole.

This book is developed as a manual and guideline for both lecturers and students who involved in teaching and learning for integrated courses of **DCA30114: DESIGN STUDIO 3, DCA30123: WORKING DRAWING 2 and DCA30132: 3D MODELLING & ANIMATION**. The guideline would develop an understanding upon projects that will be conducted for the whole semester. It is also acts as **guidelines and manual in producing good and creative design** in every design project which consists of the project brief, design needs, the submission requirements and relevant references. This book also acts as a guideline for lecturers and students in understanding **the suitable marking scheme** that should be given during the practical and exercise session. Furthermore, rubric of assessment (marking scheme) is explained to guide the process of assessment and develop better understanding upon the syllabus requirements. Most important, this booklet encourages both lecturers and students to stimulate their creativity and critical thinking to produce design products as required by Uniform Building by Laws (UBBL).

Final project for Design Studio 3, Working Drawing 2 and 3D Modelling & Animation will be integrated. Hopefully, this book will give benefits not only to students but also the lecturers involved.

Semester 3

CIVIL ENGINEERING DEPARTMENT

INTEGRATED LEARNING EXPERIENCE

DIPLOMA IN ARCHITECTURE

Project Description

In Integrated Learning Experience, we integrate **3 courses in semester 3 (DCA30114-Design Studio 3, DCA30123-Working Drawing 2, DCA30132 - 3D Modelling & Animation)** of the Diploma in Architecture programme using a studio design project. The project has integrated learning outcomes which infuses the CDIO skill sets of the 21st century skills.

1. Skills Development
   - **design** a residential building by **integrate** architectural theory and concept, **demonstrate** technical knowledge on building material and constructions. *(Design Skill)*
   - **use** 2D & 3D digital in producing 2D drawings and 3D modeling and presentation boards *(Digital Skill)*
   - **deliver** an effective verbal, graphic and video presentation *(Communication Skill)*

2. Project
   - Individual task

3. Assessment methodology
   - rubrics

COURSES	TOPICS	ASSESSMENTS
DCA30114 Design Studio 3	**Topic 1.0:** Design a Residential or Retreat House	Project: 20% Presentation: 20%
DCA30123 Working Drawing 2	**Topic 2.0:** Working Drawing For Two Storey Detached Building	Project: 35%
DCA30132 3 D Modelling & Animation	**Topic 3.0:** 3D Animation Techniques	Project: 40% - 3D Modelling (Still Image: 20%) - Animation (Video): 20%

Design of Integrated Learning Experience – Project

Project LOs	Courses	Related CLOs	Assessments	Implementation Week
At the end of the project, students will be able to: 1. **Design** a residential building with integration of architectural theory, concept, and technical knowledge on building materials and construction. 2. **Produce** 2D & 3D digital design. 3. **Present** the building design effectively and confidently using **appropriate presentation** as well as verbal and non-verbal (graphic) communication skills.	DCA30114: Design Studio 3	CLO2 : construct architectural design and technical requirements that respond to the residential or retreat house. (P4 , PLO 3) CLO4 : Organize work ethics and integrity for site analysis collaboratively in response to the project brief. (A4 , PLO 8)	Project: 20% Presentation: 20%	Week 1
	DCA30123: Working Drawing 2	CLO1 : Construct a set of working drawing using Computer Aided Design and Drafting (CADD) for single storey. timber building and double storey detach building for plan submission to local authority. (P4 , PLO 3) CLO3 : Adhere to procedure and requirement set by UBBL and authority on producing a set of working drawing. (A4 , PLO 8)	Project: 35%	Week 10
	DCA30132: 3D Modelling & Animation	CLO1 : Display the ability to use digital drawing tools in producing 3D building information modeling and animation in relation to design based task (P4 , PLO 3) CLO3 : Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task (A4 , PLO 8)	Project: 40% - 3D Modelling (Still Image: 15% - Animation (Video): 15% - Presentation - 5 % - Organization -5 %	Week 10

COURSE MAPPING

COURSE / WEEK	DCA30114	DCA30123	DCA30132
W1	Intro & Brief Project	Intro. & Brief Project 1	Introduction To Revit Software & BIM
W2	Case Study	Studio work (Project 1)	Exercise 1
W3		Studio work (Project 1)	Exercise 1
W4	**SITE VISIT**		Exercise 1
W5			Exercise 2
W6	Design Process	Studio work (Project 1)	Exercise 2
W7		Report	Exercise 2
W8		Report	Interactive Task
W9	**MID TERM PORTFOLIO**		Test
	MID TERM SEMESTER BREAK (10 – 16.05.2021)		
W10		**INTERGRATED PROJECT**	**INTERGRATED PROJECT**
W11		Studio work (Project 2)	Project
W12	Preparation For Final Submisson	Studio work (Project 2)	Project
W13		Studio work (Project 2)	Project
W14	**SUBMISSION & FINAL PRESENTATION**		
W15	**REVISION WEEK**		
W16	**PORTFOLIO**		

NOTES OF GUIDANCE

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

JABATAN KEJURUTERAAN AWAM / *DEPARTMENT OF CIVIL ENGINEERING*
RANGKA KURSUS / *COURSE OUTLINE*
SESI DISEMBER 2020 / *DECEMBER 2020 SESSION*

1.	NAME OF COURSE	DESIGN STUDIO 3
	COURSE CODE	DCA 30114
2.	SYNOPSIS	DESIGN STUDIO 3 course emphasizes on the architectural knowledge to design buildings. The content of the course focuses on design process related to site analysis, form and space organization, user needs, function, architectural terminology, aesthetic and technical requirements.
3.	CREDIT VALUE	4
4.	PREREQUISITE/ CO-REQUISITE (IF ANY)	DCA20053 - DESIGN STUDIO 2
5.	COURSE LEARNING OUTCOMES (CLO): Upon completion of this course, students should be able to:	
	CLO1	determine design ideas through appropriate presentation techniques for a small scale building. (C5, PLO2)
	CLO2	construct architectural design and technical requirements that respond to the residential or retreat house. (P4, PLO3)
	CLO3	integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication.. (A4, PLO7)
	CLO4	Organize work ethics and integrity for site analysis collaboratively in response to the project brief. (A4, PLO8)

PROGRAMME LEARNING OUTCOMES (PLO):

PLO2 : Evaluate issues and problems systematically through critical and creative thinking within architectural context and recommend appropriate technical strategy and design solutions.
PLO3 : Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions.
PLO7 : Demonstrate positive personal character, lifelong learning and entrepreneurial skills in preparation of working life.
PLO8 : Integrate ethical values, integrity and professionalism in performing task.

6. ASSESSMENT METHOD:
The course assessment consist of:
i. Continuous Assessment (CA) – 90%
ii. Final Assessment (FA) – 10%

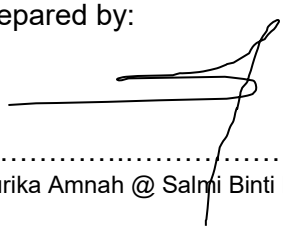
Assessment	Quantity	Percentage (%)
Case Study	1	10%
Design Process	1	30%
Project	2	20%
Presentation	2	20%
Mid term Portfolio	1	10%
Portfolio	1	10%

7. TEACHING SCHEDULE:

Topic No.	Topic/Content	Recommended Contact Hours	Assessment Method	Week
1.1	DESIGN A RESIDENTIAL OR RETREAT HOUSE PRILIMINARY STAGE OF DESIGN PROCESS Students are required to design a residential building or retreat house up to 1 ½ storey height and the area 150-200 square meter.	1 hour Lecture 4 hours Practical		W1
1.2	SITE ANALYSIS, SITE PLANNING & LANDSCAPE DESIGN This topic introduces the students to the site analysis, site planning and landscape design. It also covers the important of site analysis, it's relation of site zoning and landscape design in order to produce a site plan.	6 hours Lecture 36 hours Practical	Case Study Project 1A: Site Analysis Presentation 1 Design Process 1 Presentation 2	W2 – W7
1.3	ARCHITECTURAL DESIGN REQUIREMENT This topic introduces the relation of user needs and space organization using appropriate graphic presentation.	1 hour Lecture 5 hours Practical	Design Process 2 Presentation 3	W8
1.4	TECHNICAL REQUIREMENTS OF ARCHITECTURAL DESIGN This topic covers anthropometric, ergonomic and technical aspects, as well as materials and construction with Uniform Building By Laws (UBBL).	1 hour Lecture 5 hours Practical		W9
1.5	CHOOSE DESIGN PROJECT PROPOSAL This topic cover architectural presentation drawings and model making.	2 hour Lecture 19 hours Practical	Design Process 3	W10 – W12
1.6	COMPLETE THE DESIGN PROJECT PROPOSAL This topic identify the final solutions for the design proposal.	1 hour Lecture 6 hours Practical	Project 1B Presentation 4	W13 – W14

8.	REFERENCES	Main : 1. Francis D. K. Ching. (2014). Architecture: Form, Space, & Order, 4th Edition, Wiley. 2. Neufert (2019). Architects' Data. WIley-Blackwell. Additional : 1. Frank Melendez. (2019). Drawing from the Model: Fundamentals of Digital Drawing, 3D Modeling, and Visual Programming in Architectural Design, Wiley. 2. Edward Allen, Patrick Rand. (2016). Architectural Detailing: Function, Constructability, Aesthetics, 3rd Edition, Wiley. 3. American Institute of Architects, Dennis J. Hall (Editor-in-Chief), (2016) Architectural Graphic Standards, 12th Edition, Wiley.

Prepared by:



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(Zurika Amnah @ Salmi Binti Mohtar)

Date :05.03.2021

Verified by :

ZARITH SOFIA BT ABU ZAHRI
KETUA PROGRAM DIPLOMA SENIBINA
JABATAN KEJURUTERAAN AWAM
POLITEKNIK PORT DICKSON

.....

(KJ/KPro/KK Name & Signature **)**

Date : 06.03.2020

PROJECT BRIEF

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

STAYCATION

KEMENTERIAN PENGAJIAN TINGGI
www.mypolycc.edu.my

PROJECT BRIEF – DCA 30114 **DESIGN STUDIO 3**
ARCHITECTURAL PROGRAMME, DEPARTMENT OF CIVUL ENGINEERING
PUO – POLISAS – POLIMAS – **PPD** – PMM - PSIS

THE **IDEA**

A ***staycation*** (a portmanteau of "stay" and "vacation"), or *holistay* (a portmanteau of "holiday" and "stay"), is a period in which an individual or family stays home and participates in leisure activities within day trip distance of their home and does not require overnight accommodation.

- en.wikipedia.org

A ***staycation*** is a cost-effective alternative to taking a "real" vacation. Instead of flying to some far-away destination, a staycation means simply bringing the vacation to you. Staycations have become a very popular alternative to the common "pack your bags go" vacation.

- gulfnews.com

"***Staycations*** are likely to make travellers feel more comfortable as they are familiar with the location, they can potentially avoid flying, and they know the health service and health structure, as well as other benefits of staying within your own country such as reduced travel time and no language barrier."

- www.triparound.com

THE **BRIEF**

Students are required to design a people habitat or community type of building with the theme related to ***'Staycation'*** which the suggestion size for built-up area is 150m² – 200m² (max: 200m²). The number of building level maximum is two storey, and should allowed the capacity to accommodate around 5 to 20 people in one time. The design's prospectus client could be any of small commercial company as a references. Students are recommended to use manual method for presentation and optional to use computer-aided software. Students should consider the technical aspects which already learnt in Design Studio 1 and Design Studio 2 with additional components of:

- Intermediate site analysis
- Idea development
- Space planning and proportion
- Design principles
- Basic construction
- Material of construction
- Water supply
- Sanitary system (plumbing schematic and on plan)
- Introduction to basic UBBL requirement
- Human behaviour study
- Pedestrian & vehicular circulation
- Inside-outside relationship
- Basic design process

COURSE **INFORMATION**

Pre-requisite : DCA 20053
(Design Studio 2)

Credit value : 4

ASSESSMENT **WEIGHTAGE**

The course assessment consists of:

i. Continuous Assessment(CA) – 90%

- Case Study (1)	10%
- Design Process (1)	30%
- Project (2)	20%
- Presentation (2)	20%
- Mid-Term Portfolio (1)	10%

ii. Final Assessment (FA) – 10%

- Final Portfolio (1)	10%

COURSE **LEARNING OUTCOMES (CLO)**

Upon completion of this course, students should be able to:

CLO1 :
Determine design ideas through appropriate presentation techniques for a small scale building. (C5 , PLO 2)

Cognitive skills (C5): Students to prepare the Presentation (via verbal and visual aids) by evaluating information gathered from the Case Study, Design Process, Mid-Term Portfolio and Final Portfolio.

CLO2 :
Construct architectural design and technical requirements that respond to the residential or retreat house. (P4 , PLO 3)

Practical skills (P4): Students to conduct the Site Analysis, Design Process and Presentation with appropriate mechanism (basic proficiency).

CLO3 :
Integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication. (A4 , PLO 7)

Verbal and written visual communication skills (A4): Students to integrate their design ideas effectively and articulately for the Presentation, Mid-Term Portfolio and Final Portfolio by using comprehensive presentation methods.

CLO4 :
Organize work ethics and integrity for site analysis collaboratively in response to the project brief. (A4 , PLO 8)

Managerial skills (A4): Students to conduct the Case Study and Site Analysis by working with significant degree of personal responsibility and autonomy with the lecturer's guidance and direction on well-defined or nonroutine activities (by fostering teamwork, time management, creative ideas and strong motivation).

** Penalties for late submission of assessment. The standard penalty for late submission should be 5% scale per normal working day, until the mark reaches zero. For example, an original mark of 67% would be successively reduced to 62%, 57%, 52%, 47% etc. Normal working days include vacation periods, but not weekends or public holidays.*






COURSE TASK **TIMELINE**

WEEK 1
Course Briefing

WEEK 2
Case Study (CLO1,2,3 & 4) - 10%

WEEK 3
Site Visit
Project 1(A) Briefing

WEEK 4
Project 1(A): Site Analysis (CLO4) - 5%
Presentation 1 (CLO1) - 5%

WEEK 5
Project 1(B) Briefing
Discussion

WEEK 6
Crit Session
Design Process 1 (CLO1) - 10%
Presentation 2 (CLO2) - 5%

WEEK 7
Crit Session / Discussion

WEEK 8
Design Process 2 (CLO2) - 10%
Presentation 3 (CLO3) - 5%
Crit Session

WEEK 9
Crit Session / Discussion

WEEK 10
Mid-term Portfolio (CLO1) - 10%

WEEK 11
Studio Work

WEEK 12
Design Process 3 (CLO3) - 10%

WEEK 13
Studio Work

WEEK 14
Project 1(B) (CLO2)– 15%
Presentation 4 (CLO4) – 5%
Submission All Presentation Board

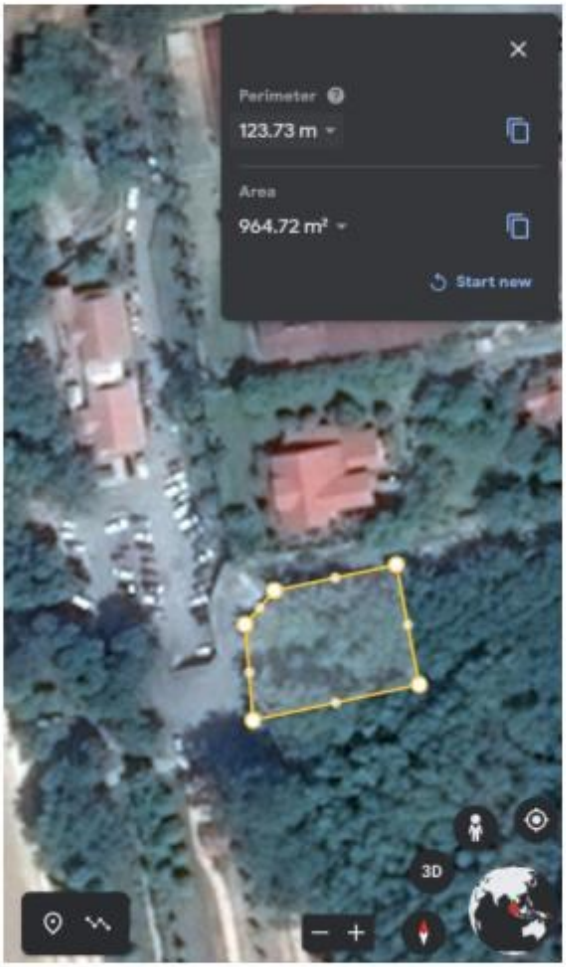
WEEK 15 - 17
Final Portfolio (CLO3) - 10%

The proposed timeline is scheduled according to the syllabus, however it is subjected to any changes regarding to current situation and depends to the institution.

The project proposal followed the Advisory Resolution through the Bengkel Kerja Interpretasi Dokumen Kurikulum Versi Jun 2019 Program Diploma Seni Bina, JKA Politeknik Malaysia 24-26 September 2019 di JPPKK

THE **SITE**

The site is located at Jalan Kemang 12, near Teluk Kemang, Port Dickson. Very strategic location with a great view overlooking beautiful sea. Near Teluk Kemang beach, the facilities provided and activities available suitable for short vacation.



RUBRICS

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

TASK 1: CASE STUDY (2.5% MARKS)

CLO1 : Determine design ideas through appropriate presentation techniques for a small scale building.(C5)

PLO2: Evaluate issues and problems systematically through critical and creative thinking within architectural context and recommend appropriate technical strategy and design solutions.

CLS2: Cognitive Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
DATA COLLECTION	Inventory data - Identification of the main issues that fulfills the project's requirements	Unable to collect/gather information in area of investigation from various sources	Able to collect/gather information in area of investigation from various sources under supervision	Able to collect/gather information in area of investigation from various sources very limited.	Able to collect/gather information in area of investigation from various sources appropriately	Able to collect/ gather information in area of investigation from various sources independently
	Analysis data.	Almost not analysis the issues	A few Incomplete analysis of the issues.	Superficial analysis of some of the issues in the case.	Thorough analysis of most of the issues.	Insightful and Thorough analysis of all the issues.
	Synthesis data - Problem solving & suggest possibilities	Little or no action sug- gested. Failure to propose suitable remedy	Superficial suggestion/ possibilities. Able to propose suitable remedy under supervision	Able to propose suita- ble remedy closely re- lated to the issues.	Able to propose suitable remedy and possibilities appriopriately.	Able to propose suitable remedy and possibilities consistently. Well thought.

TASK 1: CASE STUDY (2.5% MARKS)

CLO2 : construct architectural design and technical requirements that respond to the residential or retreat house (P4).

PLO3: Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions

CLS3a: Practical Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
INFOGRAPHIC REPORT	Introduction	Very poor and almost not indicate the statement	Poorly indicate the state- ment	Satisfactory indicate the statement	Good indication of the statement	Thoroughly indicate the statement. Paragraph clearly stated
	Data Organization	Almost no organization, Language and sentence structure is very poor; Report cannot be read and understood.	Organization lacks coher- ency; Language and sentence structure is poor; Report is difficult to read	Organization of few sec- tions is coherent; Language and sentence structure is average; Report requires some ef- fort to understand	Organization of some sections is coherent; Language and sentence structure is good; Report requires some effort to understand	Overall organization is coherent; Language and sentence structure is sophis- ticated; Report is easy to read and understand
	Language (Grammar and spelling)	Inadequate grammar and spelling; Lots of errors.	Consistently inadequate grammar and spelling; Errors impair meaning	Many errors, which affect writing clarity	A few errors, which do not impair meaning	Consistently correct use of grammar and spelling
	Conclusion	Summarize and discuss the viewpoint related to the topic - originality				
		VERY WEAK	**WEAK**	**FAIR**	**GOOD**	**EXCELENT**
	References	Almost no references	Few references	Some references	Use of references indi- cate ample project	Use of references indi- cate substantial project

TASK 1: CASE STUDY (2.5% MARKS)

CLO3 : integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication (A4).

PLO3: Demonstrate positive personal character, lifelong learning and entrepreneurial skills in preparation of working life

CLS4: Personal & Entrepreneurial Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	VERY GOOD
AUTONOMOUS LEARNING	Engagement	Least attempt to engage in autonomous learning	Minimally engage in autonomous learning	Putting effort to engage in autonomous learning	Consistently engage in autonomous learning	Highly engage in autonomous learning
	Self Learning	Not able to self learn	Limited ability to self learn	Sufficient ability to self learn	Good ability to self learn	Excellent ability to self learn
INQUISITIVE MIND	Initiative	No initiative to complete a task	Demonstrate limited initiative in completing a task	Demonstrate moderate initiative in completing a task	Demonstrate good initiative in completing a task	Demonstrate excellent initiative in completing a task
	Effort	No effort to complete task	Minimal effort to complete task	Sufficient effort to complete task	Good effort to complete task	Excellent effort to complete task

TASK 1: CASE STUDY (2.5% MARKS)

CLO4 : Organize work ethics and integrity for site analysis collaboratively in response to the project brief (A4).

PLO8: Integrate ethical values, integrity and professionalism in performing tasks.

CLS5: Ethics & Professionalism

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
WORK ETHIC & INTEGRITY	Work ethics	Not practicing a good work culture such as being polite, punctual, efficient, prudent and productive in the workplace and having disciplinary problems while performing tasks.	Lack of good work culture such as good manners, punctuality, efficiency, prudence and productivity in the workplace.	Practicing a good work culture such as being polite, punctual, efficient, productive and prudent in the workplace in general.	Practicing a good work culture such as being polite, punctual, efficient, productive and prudent at work in most time.	Always practice an excellent work culture such as being polite, punctual, efficient, productive and prudent at work at all times.
	Integrity	Not trustworthy, honest, sincere and transparent in carrying out a task.	Lack of trust, honesty, sincerity and transparency in carrying out a task.	Carry out a task with a satisfactory nature of trust, honesty, sincerity and transparency.	Carry out a task with the nature of trust, honest, sincere and completely transparent.	Always carry out a task with the nature of trust, honest, sincere and completely transparent in any situation.

TASK 2: SITE VISIT & ANALYSIS (5%)

CLO4 : Organize work ethics and integrity for site analysis collaboratively in response to the project brief (A4).

PLO8: Integrate ethical values, integrity and professionalism in performing tasks.

CLS5: Ethics & Professionalism

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
WORK ETHIC & INTEGRITY	Work Relationship	Have disharmonious relationships with colleagues, institutions, work groups and the workplace community.	Have less harmonious relationships with colleagues, institutions, working groups and the community workplace.	Have satisfactory relationships with colleagues, institutions, work groups and the workplace community.	Have good relationships with colleagues, institutions, working groups and the community at workplace.	Have excellent relationships with colleagues, institutions, working groups and the community at workplace.
	Work ethics	Not practicing a good work culture such as being polite, punctual, efficient, prudent and productive in the workplace and having disciplinary problems while performing tasks.	Lack of good work culture such as good manners, punctuality, efficiency, prudence and productivity in the workplace.	Practicing a good work culture such as being polite, punctual, efficient, productive and prudent in the workplace in general.	Practicing a good work culture such as being polite, punctual, efficient, productive and prudent at work in most time.	Always practice an excellent work culture such as being polite, punctual, efficient, productive and prudent at work at all times.
	Integrity	Not trustworthy, honest, sincere and transparent in carrying out a task.	Lack of trust, honesty, sincerity and transparency in carrying out a task.	Carry out a task with a satisfactory nature of trust, honesty, sincerity and transparency.	Carry out a task with the nature of trust, honest, sincere and completely transparent.	Always carry out a task with the nature of trust, honest, sincere and completely transparent in any situation.
	Task Responsibilities	Not carrying out assigned tasks even with supervision	Carry out assigned tasks according to the scope of work with supervision.	Perform assigned tasks according to the scope of work that meets expectations.	Perform assigned tasks according to the scope of work that exceeds expectations.	Perform assigned tasks beyond the scope of work set and exceed expectations.

TASK 3: DESIGN PROCESS (10% MARKS)

CLO1 : Determine design ideas through appropriate presentation techniques for a small scale building.(C5)

PLO2: Evaluate issues and problems systematically through critical and creative thinking within architectural context and recommend appropriate technical strategy and design solutions.

CLS2: Cognitive Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
INITIAL IDEAS	Design Intentions and Objectives	design intentions and objectives are very vague	design intentions and objectives are vague	design intentions and objectives are quite clear	design intentions and objectives are clear	design intentions and objectives are very clear
	Programme and spatial relationship	very poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	satisfactory analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	good analysis on users' needs and site study (bubble dia- gram, matrix diagram or any representational diagram) in relation to the spatial organization	excellent analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization
	Circulation	very poor consideration of entrances and exits	poor consideration of entrances and exits	satisfactory consideration of entrances and exits	good consideration of entrances and exits	excellent consideration of entrances and exits
CONCEPTUAL IDEAS	Space planning	Very poor articulation of spaces with very poor understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	poor articulation of spaces with poor understanding of spatial organizations (linear, radial, central- ised, etc) are shown in floor plan/s	satisfactory articulation of spaces with acceptable understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	good articulation of spaces with clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	excellent articulation of spaces with very clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s
	Site planning	very poor means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	poor means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	satisfactory means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	good means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	excellent means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan

TASK 3: DESIGN PROCESS (15% MARKS)

CLO2 : construct architectural design and technical requirements that respond to the residential or retreat house (P4).

PLO3: Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions

CLS3a: Practical Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
DESIGN DEVELOPMENT	Site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **very poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **satis- factorily** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **clearly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **excellently** shown in site plan
	Floor plan	Space planning, circula- tions, drawing conventions are **very poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **satisfactorily** shown in floor plan	Space planning, circula- tions, drawing conventions are **clearly** shown in floor plan	Space planning, circula- tions, drawing conventions are **excellently** shown in floor plan
	Sections	Vertical spatial relationships, vertical circulations are **very poorly** shown in sections	Vertical spatial relationships, vertical circulations are **poorly** shown in sections	Vertical spatial relationships, vertical circulations are **satisfactorily** shown in sec- tions	Vertical spatial relation- ships, vertical circulations are **clearly** shown in sec- tions	Vertical spatial relationships, vertical circulations are **excellently** shown in sections
	Elevations	Building envelopes, façade treatment and design prin- ciple of buiding forms (i.e hierarchy, datum, repeti- tion) are **very poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repeti- tion) are **poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **satisfactorily** shown in elevations	Building envelopes, fa- çade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **clearly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **excel- lently** shown in elevations

SHAPE & FORM	Form (3D manipulation of the building`s form)	demonstrate very **poor** form of 3D manipulation of the building's form	demonstrate **poor** form of 3D manipulation of the building's form	demonstrate **satisfactory** form of 3D manipulation of the building's form	demonstrate **good** form of 3D manipulation of the building's form	demonstrate **excellent** form of 3D manipulation of the building's form
	Facade treatment (openings layout, materials, colour, ornamentation)	**Very poor** development of façade treatment appropriate to the design rationale and site context.	**poor** development of fa- çade treatment appropriate to the design rationale and site context.	**satisfactory** development of façade treatment appropri- ate to the design rationale and site context.	**good** development of fa- çade treatment appropriate to the design rationale and site context.	**excellent** development of façade treatment appropriate to the design rationale and site context.
STRUCTURE & MATERIAL	construction method & material used.	show very poor understanding of construction /materials	show poor understanding of construction / materials	show satisfactory understand-ing of construction / materi- als	show good understanding of construction / materials	show excellent understanding of construction / materials
	types of structure	show very poor understanding of types of structure	show poor understanding of types of structure	show satisfactory understanding of types of structure	show good understanding of types of structure	show excellent understanding of types of structure
SERVICES	mechanical and electrical system	**very poor** consideration of technical	**poor** consideration of technical	**satisfactorily** meet the technical requirements	**good** consideration of technical requirements (mechanical and electrical system)	**thorough** consideration of technical requirements (mechanical and electrical system)
		requirements (mechanical and electrical system)	requirements (mechanical and electri- cal system)	(mechanical and electrical system)		
	ventilation (mechanical & natural)	**very poor** consideration of ventilation system	**poor** consideration of ventilation system	satisfactory consideration of ventilation system	good consideration of ventilation system	thorough consideration of ventilation system
	lighting	**very poor** consideration of lighting system	**poor** consideration of lighting system	**satisfactory** consideration of lighting system	**good** consideration of lighting system	**thorough** consideration of lighting system
	UBBL	meet less than 15% Uniform Building By Laws requirement	meet 15%- 30% Uniform Building By Laws require- ment	meet 30% - 60% Uniform Build- ing By Laws requirement	meet 60% - 90% Uniform Building By Laws require- ment	meet more than 90% Uniform Building By Laws requirement

TASK 3: DESIGN PROCESS (5% MARKS)

CLO3 : integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication (A4).

PLO3: Demonstrate positive personal character, lifelong learning and entrepreneurial skills in preparation of working life

CLS4: Personal & Entrepreneurial Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	VERY GOOD
AUTONOMOUS LEARNING	Engagement	Least attempt to engage in autonomous learning	Minimally engage in autonomous learning	Putting effort to engage in autonomous learning	Consistently engage in autonomous learning	Highly engage in autonomous learning
	New Idea	No new idea to solve problems	Able to solve problems with weak new ideas	Able to solve problem with moderate new ideas	Able to solve problem with good new ideas	Able to solve problems with excellent new ideas
	Self Learning	Not able to self learn	Limited ability to self learn	Sufficient ability to self learn	Good ability to self learn	Excellent ability to self learn
INQUISITIVE MIND	Initiative	No initiative to complete a task	Demonstrate limited initiative in completing a task	Demonstrate moderate initiative in completing a task	Demonstrate good initiative in completing a task	Demonstrate excellent initiative in completing a task
	Effort	No effort to complete task	Minimal effort to complete task	Sufficient effort to complete task	Good effort to complete task	Excellent effort to complete task

TASK 4: MID TERM PORTFOLIO (10% MARKS)						
CLO1 : Determine design ideas through appropriate presentation techniques for a small scale building.(C5) PLO2: Evaluate issues and problems systematically through critical and creative thinking within architectural context and recommend appropriate technical strategy and design solutions. CLS2: Cognitive Skills						
	CRITERIA	**VERY WEAK**	**WEAK**	**FAIR**	**GOOD**	**EXCELENT**
INITIAL IDEAS	Design Intentions and Objectives	design intentions and objectives are very vague	design intentions and objectives are vague	design intentions and objectives are quite clear	design intentions and objectives are clear	design intentions and objectives are very clear
	Programme and spatial relationship	very poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	satisfactory analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	good analysis on users' needs and site study (bubble dia- gram, matrix diagram or any representational diagram) in relation to the spatial organization	excellent analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization
	Circulation	very poor consideration of entrances and exits	poor consideration of entrances and exits	satisfactory consideration of entrances and exits	good consideration of entrances and exits	excellent consideration of entrances and exits
CONCEPTUAL & IDEA DEVELOPMENT	Space planning	Very poor articulation of spaces with very poor understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	poor articulation of spaces with poor understanding of spatial organizations (linear, radial, central- ised, etc) are shown in floor plan/s	satisfactory articulation of spaces with acceptable understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	good articulation of spaces with clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	excellent articulation of spaces with very clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s
	Site planning	very poor means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	poor means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	satisfactory means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	good means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	excellent means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan
DESIGN DEVELOPMENT	Site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **very poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **satis-factorily** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **clearly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **excellently** shown in site plan
	Floor plan	Space planning, circula- tions, drawing conventions are **very poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **satisfactorily** shown in floor plan	Space planning, circula- tions, drawing conventions are **clearly** shown in floor plan	Space planning, circula- tions, drawing conventions are **excellently** shown in floor plan

TASK 5 : PROJECT (15% MARKS)

CLO2 : construct architectural design and technical requirements that respond to the residential or retreat house (P4).

PLO3: Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions

CLS3a: Practical Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	EXCELENT
INITIAL IDEAS & CONCEPTUAL	Design Intentions and Objectives	design intentions and objectives are very vague	design intentions and objectives are vague	design intentions and objectives are quite clear	design intentions and objectives are clear	design intentions and objectives are very clear
	Programme and spatial relationship	very poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	poor analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	satisfactory analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization	good analysis on users' needs and site study (bubble dia- gram, matrix diagram or any representational diagram) in relation to the spatial organization	excellent analysis on users' needs and site study (bubble diagram, matrix diagram or any representational diagram) in relation to the spatial organization
DESIGN DEVELOPMENT	Site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **very poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **satisfactorily** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **clearly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **excellently** shown in site plan
	Floor plan	Space planning, circulations, drawing conventions are **very poorly** shown in floor plan	Space planning, circulations, drawing conventions are **poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **satisfactorily** shown in floor plan	Space planning, circula- tions, drawing conventions are **clearly** shown in floor plan	Space planning, circula- tions, drawing conventions are **excellently** shown in floor plan
	Sections	Vertical spatial relationships, vertical circulations are **very poorly** shown in sections	Vertical spatial relationships, vertical circulations are **poorly** shown in sections	Vertical spatial relationships, vertical circulations are **satisfactorily** shown in sec- tions	Vertical spatial relation- ships, vertical circulations are **clearly** shown in sec- tions	Vertical spatial relationships, vertical circulations are **excellently** shown in sections
	Elevations	Building envelopes, façade treatment and design prin- ciple of buiding forms (i.e hierarchy, datum, repeti- tion) are **very poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repeti- tion) are **poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **satisfactorily** shown in elevations	Building envelopes, fa- çade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **clearly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **excel- lently** shown in elevations
SHAPE & FORM	Form (3D manipulation of the building`s form)	demonstrate very **poor** form of 3D manipulation of the building's form	demonstrate **poor** form of 3D manipulation of the building's form	demonstrate **satisfactory** form of 3D manip- ulation of the building's form	demonstrate **good** form of 3D manipulation of the building's form	demonstrate **excellent** form of 3D manipulation of the building's form
	Facade treatment (openings layout, materials, colour, ornamentation)	**Very poor** development of façade treatment appropriate to the design rationale and site context.	**poor** development of façade treatment appropriate to the design rationale and site context.	**satisfactory** development of façade treatment appropriate to the design rationale and site context.	**good** development of fa- çade treatment appropri- ate to the design rationale and site context.	**excellent** development of façade treatment appropriate to the design rationale and site context.
STRUCTURE & MATERIAL	construction method & material used.	show very poor understanding of construction /materials	show poor understanding of construction / materials	show satisfactory understand-ing of construction / materials	show good understanding of construction / materials	show excellent understanding of construction / materials
	types of structure	show very poor understanding of types of structure	show poor understanding of types of structure	show satisfactory understanding of types of structure	show good understanding of types of structure	show excellent understanding of types of structure
SERVICES	mechanical and electrical system	**very poor** consideration of technical requirements (mechanical and electrical system)	**poor** consideration of technical requirements (mechanical and electrical system)	**satisfactorily** meet the technical requirements (mechanical and electrical system)	**good** consideration of technical requirements (mechanical and electrical system)	**thorough** consideration of technical requirements (mechanical and electrical system)
	ventilation (mechanical & natural)	**very poor** consideration of ventilation system	**poor** consideration of ventilation system	satisfactory consideration of ventilation system	good consideration of ventilation system	thorough consideration of ventilation system
	lighting	**very poor** consideration of lighting system	**poor** consideration of lighting system	**satisfactory** consideration of lighting system	**good** consideration of lighting system	**thorough** consideration of lighting system
	UBBL	meet less than 15% Uniform Building By Laws requirement	meet 15%- 30% Uniform Building By Laws require- ment	meet 30% - 60% Uniform Build- ing By Laws requirement	meet 60% - 90% Uniform Building By Laws require- ment	meet more than 90% Uniform Building By Laws requirement

TASK 6 : PRESENTATION (5% MARKS)						
CLO1 : Determine design ideas through appropriate presentation techniques for a small scale building.(C5) PLO2: Evaluate issues and problems systematically through critical and creative thinking within architectural context and recommend appropriate technical strategy and design solutions. CLS2: Cognitive Skills						
	CRITERIA	**VERY WEAK**	**WEAK**	**FAIR**	**GOOD**	**EXCELENT**
INITIAL IDEAS & CONCEPTUAL DEVELOPMENT	Design Intentions and Objectives	design intentions and objectives are very vague	design intentions and objectives are vague	design intentions and objectives are quite clear	design intentions and objectives are clear	design intentions and objectives are very clear
	Space planning	Very poor articulation of spaces with very poor understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	poor articulation of spaces with poor understanding of spatial or- ganizations (linear, radial, centralised, etc) are shown in floor plan/s	satisfactory articulation of spaces with acceptable understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	good articulation of spaces with clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s	excellent articulation of spaces with very clear understanding of spatial organizations (linear, radial, centralised, etc) are shown in floor plan/s
	Site planning	very poor means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	poor means of ingress and egress, vehicular and pedestrian circula- tions pattern and site layout are shown in site plan	satisfactory means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	good means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan	excellent means of ingress and egress, vehicular and pedestrian circulations pattern and site layout are shown in site plan

TASK 6: PRESENTATION (10% MARKS)						
CLO2 : construct architectural design and technical requirements that respond to the residential or retreat house (P4). PLO3: Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions CLS3a: Practical Skills						
	CRITERIA	**VERY WEAK**	**WEAK**	**FAIR**	**GOOD**	**EXCELENT**
DESIGN DEVELOPMENT	Site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **very poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **poorly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **satifactorily** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **clearly** shown in site plan	Accessibility, vehicular and pedestrian circulations, building entrance are **excellently** shown in site plan
	Floor plan	Space planning, circula- tions, drawing conventions are **very poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **poorly** shown in floor plan	Space planning, circula- tions, drawing conventions are **satisfactorily** shown in floor plan	Space planning, circula- tions, drawing conventions are **clearly** shown in floor plan	Space planning, circula- tions, drawing conventions are **excellently** shown in floor plan
	Sections	Vertical spatial relationships, vertical circulations are **very poorly** shown in sections	Vertical spatial relationships, vertical circulations are **poorly** shown in sections	Vertical spatial relationships, vertical circulations are **satisfactorily** shown in sec- tions	Vertical spatial relation- ships, vertical circulations are **clearly** shown in sec- tions	Vertical spatial relationships, vertical circulations are **excellently** shown in sections

	Elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repeti- tion) are **very poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repeti- tion) are **poorly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **satisfactorily** shown in elevations	Building envelopes, fa- çade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **clearly** shown in elevations	Building envelopes, façade treatment and design principle of buiding forms (i.e hierarchy, datum, repetition) are **excel- lently** shown in elevations
SHAPE & FORM	Form (3D manipulation of the building`s form)	demonstrate very **poor** form of 3D manipulation of the building's form	demonstrate **poor** form of 3D manipulation of the building's form	demonstrate **satisfactory** form of 3D manipulation of the building's form	demonstrate **good** form of 3D manipulation of the building's form	demonstrate **excellent** form of 3D manipulation of the building's form
	Facade treatment (openings layout, materials, colour, ornamentation)	**Very poor** development of façade treatment appropriate to the design rationale and site context.	**poor** development of façade treatment appropri- ate to the design rationale and site context.	**satisfactory** development of façade treatment appropri- ate to the design rationale and site context.	**good** development of fa- çade treatment appropri- ate to the design rationale and site context.	**excellent** development of façade treatment appropriate to the design rationale and site context.
STRUCTURE & MATERIAL	construction method & material used.	show very poor understanding of construction /materials	show poor understanding of construction / materials	show satisfactory understand-ing of construction / materi- als	show good understanding of construction / materials	show excellent understanding of construction / materials
	types of structure	show very poor understanding of types of structure	show poor understanding of types of structure	show satisfactory understanding of types of structure	show good understanding of types of structure	show excellent understanding of types of structure
SERVICES	mechanical and electrical system	**very poor** consideration of technical requirements (mechanical and electrical system)	**poor** consideration of technical requirements (mechanical and electrical system)	**satisfactorily** meet the technical requirements (mechanical and electrical system)	**good** consideration of technical requirements (mechanical and electrical system)	**thorough** consideration of technical requirements (mechanical and electrical system)
	ventilation (mechanical & natural)	**very poor** consideration of ventilation system	**poor** consideration of ventilation system	satisfactory consideration of ventilation system	good consideration of ventilation system	thorough consideration of ventilation system
	lighting	**very poor** consideration of lighting system	**poor** consideration of lighting system	**satisfactory** consideration of lighting system	**good** consideration of lighting system	**thorough** consideration of lighting system
	UBBL	meet less than 15% Uniform Building By Laws requirement	meet 15%- 30% Uniform Building By Laws require- ment	meet 30% - 60% Uniform Build- ing By Laws requirement	meet 60% - 90% Uniform Building By Laws require- ment	meet more than 90% Uniform Building By Laws requirement

TASK 6: PRESENTATION (2.5% MARKS)

CLO3 : integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication (A4).

PLO3: Demonstrate positive personal character, lifelong learning and entrepreneurial skills in preparation of working life

CLS4: Personal & Entrepreneurial Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	VERY GOOD
AUTONOMOUS LEARNING	Engagement	Least attempt to engage in autonomous learning	Minimally engage in autonomous learning	Putting effort to engage in autonomous learning	Consistently engage in autonomous learning	Highly engage in autonomous learning
	New Idea	No new idea to solve problems	Able to solve problems with weak new ideas	Able to solve problem with moderate new ideas	Able to solve problem with good new ideas	Able to solve problems with excellent new ideas
	Self Learning	Not able to self learn	Limited ability to self learn	Sufficient ability to self learn	Good ability to self learn	Excellent ability to self learn
INQUISITIVE MIND	Initiative	No initiative to complete a task	Demonstrate limited initiative in completing a task	Demonstrate moderate initiative in completing a task	Demonstrate good initiative in completing a task	Demonstrate excellent initiative in completing a task
	Effort	No effort to complete task	Minimal effort to complete task	Sufficient effort to complete task	Good effort to complete task	Excellent effort to complete task

TASK 7: PORTFOLIO (10% MARKS)

CLO3 : integrate autonomous learning and inquisitive mind for final project through presentation drawings, model(s) and verbal communication (A4).

PLO3: Demonstrate positive personal character, lifelong learning and entrepreneurial skills in preparation of working life

CLS4: Personal & Entrepreneurial Skills

	CRITERIA	VERY WEAK	WEAK	FAIR	GOOD	VERY GOOD
AUTONOMOUS LEARNING	Self Learning	Not able to self learn	Limited ability to self learn	Sufficient ability to self learn	Good ability to self learn	Excellent ability to self learn
	Independent	Showing attitude always depends on the help of others in performing a task.	Demonstrates a tendency to rely on the help of others in accomplishing something assignment.	Demonstrates an attitude of self-reliance in general in doing something assignment.	Demonstrates an attitude of self-reliance in most things in doing a task.	Always show an attitude of self-reliance in all things in doing an assignment.
INQUISITIVE MIND	Interest	No interest in exploring issues for a given task	Demonstrate limited interest in exploring issues for a given task	Demonstrate sufficient interest in exploring issues for a given task	Demonstrate good interest for exploring issues for a given task	Demonstrate excellent interest in exploring issues for a given task
	Initiative	No initiative to complete a task	Demonstrate limited initiative in completing a task	Demonstrate moderate initiative in completing a task	Demonstrate good initiative in completing a task	Demonstrate excellent initiative in completing a task
	Effort	No effort to complete task	Minimal effort to complete task	Sufficient effort to complete task	Good effort to complete task	Excellent effort to complete task

NOTES OF GUIDANCE

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

JABATAN KEJURUTERAAN AWAM / *DEPARTMENT OF CIVIL ENGINEERING*
RANGKA KURSUS / *COURSE OUTLINE*
SESI DISEMBER 2020 / *DECEMBER 2020 SESSION*

1.	NAME OF COURSE	WORKING DRAWING 2
	COURSE CODE	DCA30123
2.	SYNOPSIS	WORKING DRAWING 2 course is to emphasize skills, professionalism and communication to construct a set of working drawings incompliant to Uniform Building by Laws (UBBL 1984). This course is a discipline core component in the Body of Knowledge (BoK) in Architecture Studies.
3.	CREDIT VALUE	3
4.	PREREQUISITE/ CO-REQUISITE (IF ANY)	None
5.	COURSE LEARNING OUTCOMES (CLO): Upon completion of this course, students should be able to:	
	CLO1	Construct a set of working drawing using Computer Aided Design and Drafting (CADD) for single storey. Timber building and double storey detach building for plan submission to local authority. (P4, PLO3)
	CLO2	Complete a set of working drawing with complete documentation and suitable format, comply to Uniform Building by Law (UBBL, 1984). (A3, PLO4)
	CLO3	Adhere to procedure and requirement set by UBBL and authority on producing a set of working drawing. (A4, PLO8)

PROGRAMME LEARNING OUTCOMES (PLO):

PLO 3: Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions.

PLO 4: Demonstrate interpersonal skills and teamwork with effective communication in delivering services in related discipline.

PLO 8: Integrate ethical values, integrity and professionalism in performing tasks.

6. ASSESSMENT METHOD:

The course assessment consists of:

i. Continuous Assessment (CA) – 90%
ii. Final Examination (FE) / Final Portfolio – 10%

Assessment	Quantity	Percentage (%)
Project	2	60%
Report	1	20%
Mid-Term Portfolio	1	10%
Final Portfolio	1	10%

7.

TEACHING SCHEDULE:

Topic No.	Topic/Content	Recommended Contact Hours	Assessment Method	Week
1.0	WORKING DRAWING FOR SINGLE STOREY TIMBER BUILDING Produce a set of working drawings for single storey timber building (Area: Approx. 100 m^2, Scale 1: 75). Draw a set of working drawings using computer aided design & drafting (CADD) consist of: Floor(s) plan Structure floor Plan Roof plan Section(s) Elevation(s)	24 hours Practical	Project 1	W2-W6
2.0	WORKING DRAWING FOR TWO STOREY DETACHED BUILDING Based on site analysis, produce a set of working drawings for two storey detached building, which used various building material (Area: Approx. 350 m^2) Draw a set of working drawings as required by local authority (in format for submission) (Scale 1: 100): Key plan Location plan Site plan Floor(s) plan Roof plan Section(s) Elevation(s) Detail drawing(s) Door and window schedules Electrical Fitting Layout Sanitary diagrammatic layout Plumbing diagrammatic layout (P/s: All the drawings must be related to uniform building by law (UBBL).	40 hours Practical	Report Project 2	W8-W14

8.	REFERENCES	Main: 1. Chudley, R. and Greeno, R (2016). Building construction handbook 11th edition. London, United Kingdom: Routledge. Additional: 1. Ching, Frank DK. (2014). Building Construction Illustrated 5th Edition. New York, United States: McGraw Hill. 2. Edward Allen, (2013). Fundamentals of building construction: material and methods. 6th edition. United States: John Wiley & Sons Inc. 3. Edward Allen, Patrick J. Rand (2014). Architectural Detailing: Function, Constructability, Aesthetics, 3rd Edition. United States: John Wiley & Sons Inc 4. Uniform Building by Law (1984) Pindaan 2016. MALAYSIA: International Law Book Services, International Law Book Services (ILBS)

Prepared by:

DR. FAKHRIAH BINTI MUHSIN
Pensyarah
Jabatan Kejuruteraan Awam
Politeknik Port Dickson

……
(Course Coordinator Name & Signature)

Date : 7 Mac 2021

Verified by :

ZARITH SOFIA BT ABU ZAHRI
KETUA PROGRAM DIPLOMA SENIBINA
JABATAN KEJURUTERAAN AWAM
POLITEKNIK PORT DICKSON

……
(KJ/KPro/KK Name & Signature)

Date : 7 Mac 2021

PROJECT BRIEF

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

KEMENTERIAN PENGAJIAN TINGGI

POLITEKNIK MALAYSIA
PORT DICKSON

Diploma in Architecture

SITE VISIT *(INTEGRATED PROJECT)*

DCA30123 – WORKING DRAWING 2

SESSION: DECEMBER 2020

Brief of Site Visit *(Integrated Project)*

TASK 1: Site Visit Report (20% marks)

PLO4; CLS3B; CLO2(A3)

PLO8; CLS5; CLO3(A4)

INTRODUCTION

Working Drawing project for double storey detached building should be initiated with a site visit to expose the student to existing site context. Based on the Site Visit of Design Studio 3 (DCA 30114) course, ECO-FRIENDLY HOUSE project; the students are required to identify the surrounding of the site and prepare a writing report. Students should also refer to the Local Authority and other related authorities in order to identify local authority requirements in compliance to Street, Drainage and Building Act (SDBA,1974), Uniform Building by Law (UBBL,1984) and any other related law. The objective of this task is to enable students to do a preparation by obtaining enough data and related information from the site visit before starting to produce a complete set of working drawings for the next project. Hence, students can relate the building drawing based on the actual construction site.

SUBMISSION REQUIREMENTS

In group of four (4), students are required to organize a site visit for inventory study related to building design. In order to collect the data, the students need to conduct an observation, sketch, measurement, information searching and submit an A4 report on site visit consists of:

- Table of content & page numbering
- Introduction on the selected site (owner, address, size, etc.) & background of the proposed project
- Content must include; (Explain the data collection with images & diagrams, plan, sketches, etc.)
- Gather information about the site (to be included in site plan) such as
- North point, dimensions of the lot, lot no.;
- Street name, means of access to the site;
- The complete lines of surface water, hydrant points, water supply main pipeline;
- existing drainage system, point of discharge of the proposed drains, roadside drain;

- numbers of adjoining lots or buildings, dimensions of clearances between the proposed building and the boundaries;
- other existing cable, pipes and other service or utility or equipment
- existing and proposed ground level of the site, site contour

Important!

- Identify requirements from Local Authority, Land Office, JKR, Bomba, IWK, SAINS, TNB, JPS & JAS for double storey detached house for submission in compliance to the UBBL, etc.
- Relate the building drawing based on the actual construction site.
- Conclusion is based on the findings and suggestion for improvement
- References are included.
- Appendices – Diary of site visits, photographs and task of each individual group member

REPORT must be compiled in .pdf A4 size report (upload softcopy in CIDOS submit hardcopy with hard cover & proper binding):

Font: Arial, 10pt, Title BOLD, 12pt

Line and Paragraph: Justify, 1.15 spacing

Labelled diagrams & figures

ASSESSMENT CRITERIA:

Marks will be given based on:

- Reports that are complete/comprehens
- Originality 10%
- On time submission 10%
- Teamwork 10%

IMPORTANT DATES:

Week	Activity
W4 – W5	Brief & Site visit
	Data Collection
W6 – W8	Report Writing
	Submission

KEMENTERIAN PENGAJIAN TINGGI

POLITEKNIK MALAYSIA
PORT DICKSON

Diploma in Architecture

PROJECT (*INTEGRATED PROJECT*)

DCA30123 – WORKING DRAWING 2

SESSION: DECEMBER 2020

Brief of Project (*Integrated Project*)

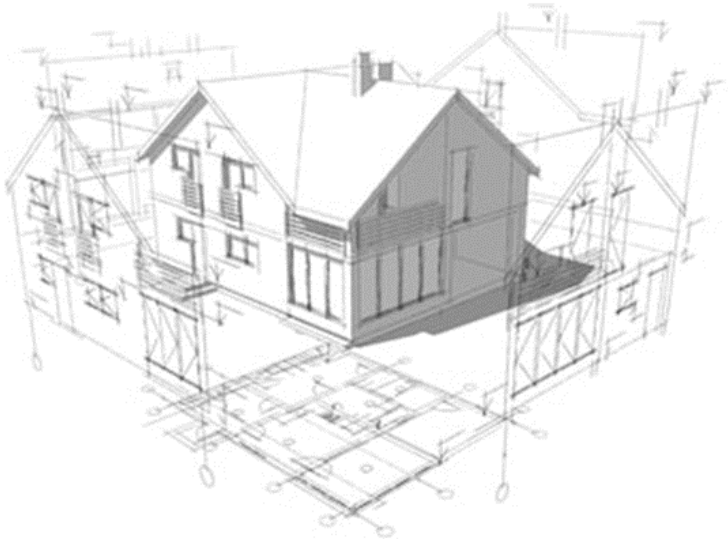
TASK 2: Project 2 (35% marks)

PLO3; CLS3a; CLO1(P4)

PLO4; CLS3B; CLO2(A3)

PLO8; CLS5; CLO3(A4)

Assessment	:	**PROJECT 2**
Topic	:	**WORKING DRAWING FOR TWO STOREY DETACHED BUILDING**
Tools and Materials	:	**Hardware:** Computer set with good internet access **Software:** Revit (version 2019 or below) .pdf software (can convert to .pdf from any file format especially CADD softwares & MSWord, combine & delete pages, add & remove text)



Task : Based on Design Studio 3 (DCA 30114) course, **ECO-FRIENDLY HOUSE** project; and by using **finished 3D building information modeling of the same project** in 3D Modelling & Animation (DCA 30132) course;

students are required to produce a complete set of working drawing as required by local authority format for submission.

QUESTION 1 [PLO3; CLS3a; CLO1(P4)]

Construct a set of working drawings using Revit Software for **ECO-FRIENDLY HOUSE** project. The working drawing must consist the following:

Key plan (Scale – NTS)

Location plan (Scale – NTS)

Site plan (Scale – 1:100)

Floor(s) plan (Scale – 1:50)

Roof plan (Scale – 1:50)

2 Section(s) (Scale – 1:50)

4 Elevation(s) (Scale – 1:50)

Detail drawing(s) (Scale – 1:5 / 1: 10 / 1:20 *which necessary)

Door and window schedules (Scale – 1:25)

Electrical Fitting Layout (Scale – NTS)

Sanitary diagrammatic layout (Scale – NTS)

Plumbing diagrammatic layout (Scale – NTS)

Perform self-assessment of the completed working drawing by marking the checklist provided

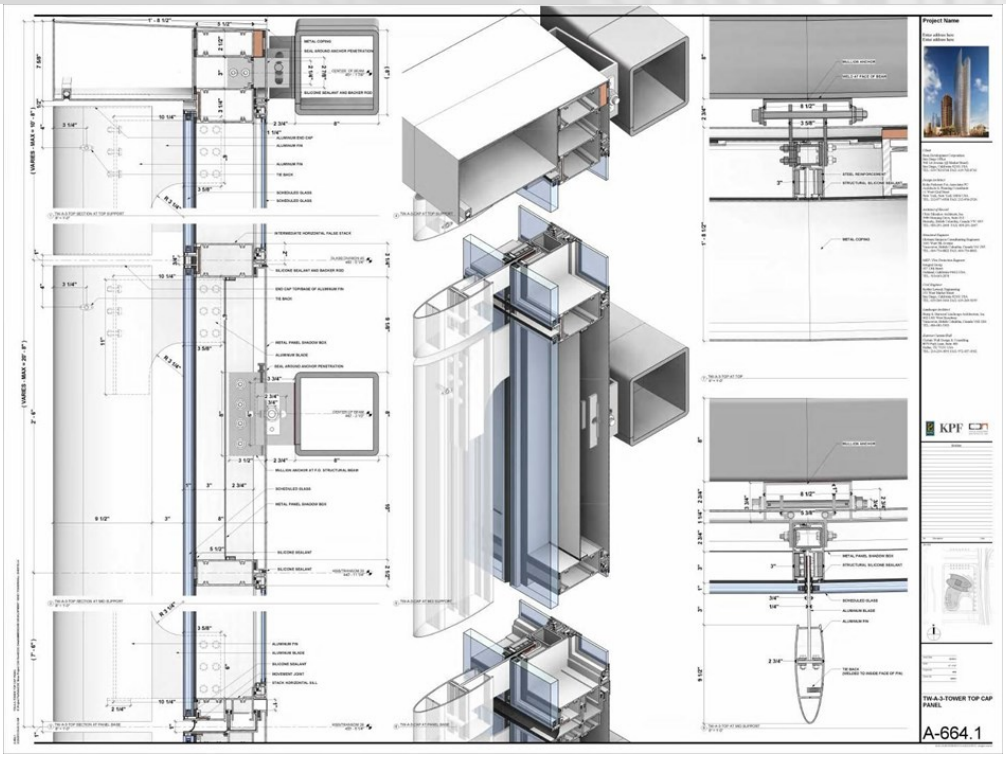
QUESTION 2 [PLO4; CLS3B; CLO2(A3)]

a. Perform self-assessment of the completed working drawing by marking the checklist provided for plan submission to local authority as APPENDIX A.

b. Perform self-assessment of the completed working drawing by marking the checklist provided with complete documentation and suitable format, comply to Uniform Building By Law as APPENDIX B.

QUESTION 3 [PLO8; CLS5; CLO3(A4)]

a. Complete a set of working drawings by making amendments, adhere to procedure and requirements set by UBBL and authority based on a checklist provided as Appendix A and Appendix B.



Evaluation criteria : **QUESTION 1 [PLO3; CLS3a; CLO1(P4)]**

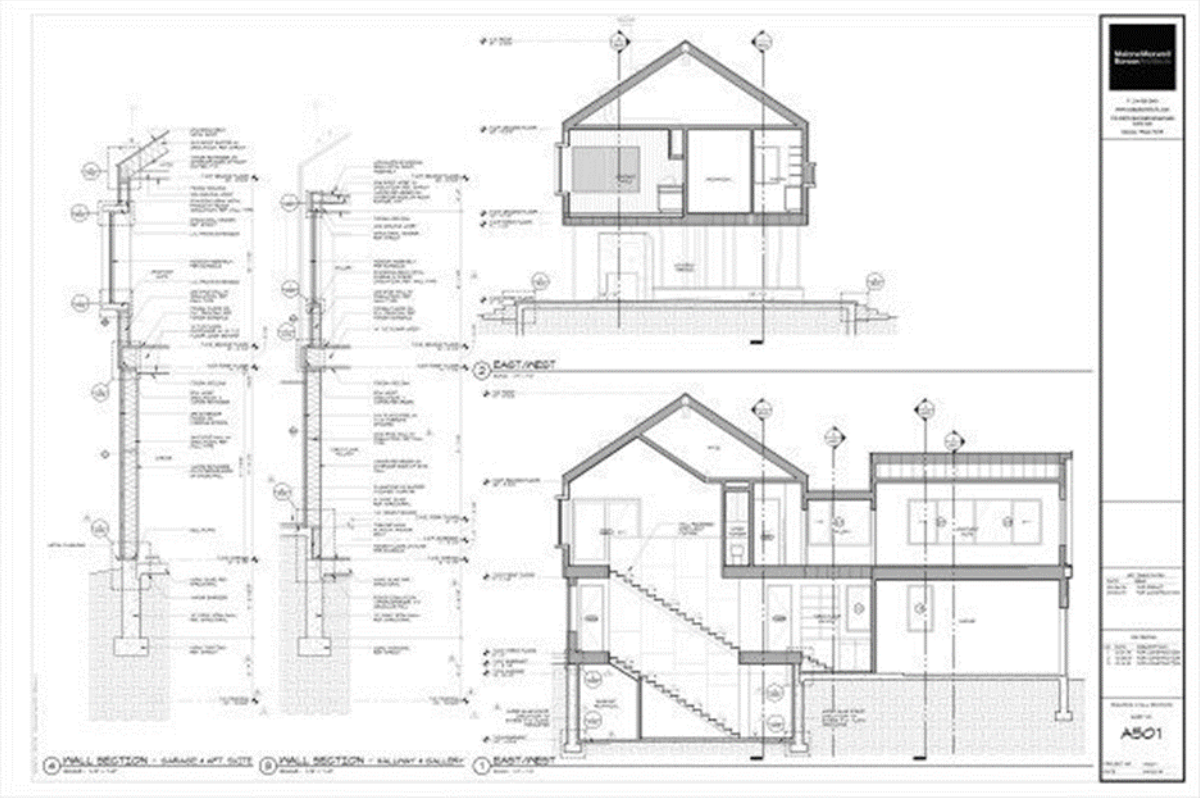
Working drawing construction	5 score	
Key plan (Scale – NTS)	5 score	
Location plan (Scale – NTS)	5 score	
Site plan (Scale – 1:100)	5 score	
Floor(s) plan (Scale – 1:50)	5 score	
Roof plan (Scale – 1:50)	5 score	
2 Section (Scale – 1:50)	5 score	
4 Elevation (Scale – 1:50)	5 score	
Detail drawing(s) (Scale – 1:5 / 1: 10 / 1:20 *which necessary)	5 score	**60%**
Door and window schedules (Scale – 1:25)	5 score	
Ceiling and Electrical Fitting Layout (Scale – NTS)	5 score	
Sanitary diagrammatic layout (Scale – NTS)	5 score	
Plumbing diagrammatic layout (Scale – NTS)	5 score	
Student perform self-assessment of the completed working drawing by marking the checklist provided.	**[/65] X 60%**	

QUESTION 3 [PLO8; CLS5; CLO3(A4)]

Students submit a complete set of working drawing by making amendments, adhere to **procedure and requirement set by UBBL and authority** based on checklist provided as APPENDIX A1, APPENDIX A2 and APPENDIX B1 into folders with copies based on requirement as APPENDIX B2.	5 score	**15%**
	[/5] X 15%	
	TOTAL:	**100%**

QUESTION 2 [PLO4; CLS3B; CLO2(A3)]

Students perform self-assessment of the completed working drawing by marking the checklist provided **for plan submission to local authority** as APPENDIX A1 and APPENDIX A2	5 score	**25%**
Students perform self-assessment of the completed working drawing by marking the checklist provided with **complete documentation and suitable format, comply to Uniform Building By Law** as APPENDIX B1.	5 score	**[/10] X 25%**



RUBRICS

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

Rubric of Site Visit (*Integrated Project*)

Assessment Criteria		1	2	3	4	5	Marks (5)	Total (%)
		VERY POOR	POOR	MODERATE	GOOD	EXCELLENT		
Report	Data collection	Very little data collection.	Few data and photos with few labels, explanations and dimensions.	Enough data and photo	Many data collection and findings from local authority requirement & UBBL	Data collection and findings from local authority requirements & UBBL more than expected. Data full of photo with label, explanation and dimension.	5	10
	Quality of information	Assignment instructions not followed and not provides support for topic. Not completed.	Few assignment instructions followed and provides inappropriate support for topic. Almost not complete.	Some assignment instructions followed and provide minimal support for topic. Entry lacks a sense of completeness.	Most assignment instructions followed and provides a sense of completeness with few details.	Report fully complies with instructions & requirements supports topic with adequate details and provides a sense of completeness.	5	10
	Format & Introduction	Only have content or introduction only.	Have content and very little information about introduction.	Content and introduction about site are very basic.	Good introduction about site and introduction about the proposed building.	Content complete with page number. Introduction about site visit related to the CLO. Introduction about the proposed building. Has full of information.	5	10
	Conclusion	Very poor Summarize and discuss the viewpoint related to the topic – originality	Poor summarize and discuss the viewpoint related to the topic - originality	Satisfactory summarize and discuss the viewpoint related to the topic - originality	Good summarize and discuss the viewpoint related to the topic - originality	Excellent summarize and discuss the viewpoint related to the topic - originality	5	10
	Organization	Almost no organization, Language and sentence structure is very poor; Report cannot be read and understood.	Organization lacks coherency; Language and sentence structure is poor; Report is difficult to read.	Organization of few sections is coherent; Language and sentence structure is average; Report requires some effort to understand.	Organization of some sections is coherent; Language and sentence structure is good; Report requires some effort to understand.	Overall organization is coherent; Language and sentence structure is sophisticated; Report is easy to read and understand.	5	10
	Language (Grammar and spelling)	Inadequate grammar and spelling; Lots of errors.	Consistently inadequate grammar and spelling; Errors impair meaning.	Many errors, which affect writing clarity.	A few errors, which do not impair meaning.	Consistently correct use of grammar and spelling.	5	10
	References	Almost no references	Few references.	Some references	Use of references indicate ample project.	Use of references indicate substantial project	5	10

Assessment Criteria		1	2	3	4	5	Marks (5)	Total (%)
		VERY POOR	POOR	MODERATE	GOOD	EXCELLENT		
Originality	Originality of report	Report is a rehash of other people's ideas and/or graphics and shows very little attempt at original thought.	Report shows an attempt at originality and inventiveness on 1-2 pages.	Report shows some originality and inventiveness.	Report shows some originality and inventiveness. The content and ideas are presented in an interesting way.	Report shows considerable originality and inventiveness. The content and ideas are presented in a unique and interesting way.	5	10
On time submission	Time of submission	Very late submission	Submit after 24 – 36 hours late	Submit report after 12-24 hours late	Submit report less than 12 hours late	Early submission or submit report on time	5	10
Teamwork	Respond appropriately in a cooperative group work	Very poor team working show among group members. Workload on each member does not seem to be fair. The efforts are scattered.	Poor team working show among group members. Workload on each member does not seem to be fair. The contribution of each team members are NOT identified	Work in group among members with satisfied contribution.	Good team working among group members. The workload on each member seems fair. The contribution of each team members is identified.	Very Good teamwork shows among group members. The workload on each member is fair. The contribution of each team members are identified and clearly.	5	10
Total							**50**	**100**

Rubric of Project (*Integrated Project*)

RUBRIC OF PROJECT 2

QUESTION 1 [PLO3; CLS3a; CLO1(P4)]

a. Working drawing construction

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Key Plan	Failed to provide the required criteria	Unable to provide a correct key plan (WD format)	Prepare a correct key plan with an inappropriate range. Not marked the proposed site position.	Prepare a correct key plan with an appropriate range. Not marked the north arrow or proposed site position.	Prepare a correct key plan with an appropriate range. Mark the north arrow, proposed site position and location names.	Prepare a correct key plan with an appropriate range. Mark the north arrow, proposed site position and location names clearly and neatly compose.
Location Plan	Failed to provide the required criteria	Unable to provide a correct location plan (WD format)	Prepare a correct location plan with an inappropriate range. Not marked the proposed site position.	Prepare a correct location plan with an appropriate range. Not marked the north arrow or proposed site position.	Prepare a correct location plan with an appropriate range. Mark the north arrow, proposed site position and either one of location names or road names or lot number.	Prepare a correct location plan with an appropriate range. Mark the north arrow, proposed site position, location names, road names and lot number clearly and neatly compose.
Site Plan	Failed to provide the required criteria	Unable to prepare a correct site plan (building plan is drawn regardless of setback requirements in WD format)	Prepare a correct site plan (building plan is drawn within correct setback) with required scale by consists of the following; Gridline Border line Setback line Proposed site lot number Adjacent site lot number Adjacent road name Access road link Appropriate dimension Tittle and scale and none or any 1 of the following; Drain line and water flow direction arrow Manhole line Garbage disposal area Monsoon drain line	Prepare a correct site plan (building plan is drawn within correct setback) with required scale by consists of the following; Gridline Border line Setback line Proposed site lot number Adjacent site lot number Adjacent road name Access road link Appropriate dimension Tittle and scale and any 2/3 of the following; Drain line and water flow direction arrow Manhole line Garbage disposal area Monsoon drain line	Prepare a correct site plan (building plan is drawn within correct setback) with required scale by consists of the following; Gridline Border line Setback line Proposed site lot number Adjacent site lot number Adjacent road name Access road link Drain line and water flow direction arrow Manhole line Garbage disposal area Monsoon drain line Appropriate dimension Tittle and scale	Prepare a correct site plan (building plan is drawn within correct setback) with required scale by consists of the following; Gridline Border line Setback line Proposed site lot number Adjacent site lot number Adjacent road name Access road link Drain line and water flow direction arrow Manhole line Garbage disposal area Monsoon drain line Appropriate dimension Tittle and scale with neatly compose.

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Floor(s) Plan	Failed to provide the required criteria	Unable to prepare floor plans as required (WD format)	Prepare correct floor plans with required scale by consists of the following; Grid Wall Drain and apron Doors and windows Roof line Dimension Specification Doors and windows numbering and any 1/2/3 of the following; Sanitary fittings Space name Floor level label Floor materials label Floor drop arrow Section cut symbols Tittle and scale	Prepare correct floor plans with required scale by consists of the following; Grid Wall Drain and apron Doors and windows Roof line Dimension Specification Doors and windows numbering and any 4/5/6 of the following; Sanitary fittings Space name Floor level label Floor materials label Floor drop arrow Section cut symbols Tittle and scale	Prepare correct floor plans with required scale by consists of the following; Grid Wall Drain and apron Doors and windows Sanitary fittings Roof line Dimension Section cut symbols Specification Doors and windows numbering Space name Floor level label Floor materials label Floor drop arrow Tittle and scale	Prepare correct floor plans with required scale by consists of the following; Grid Wall Drain and apron Doors and windows Sanitary fittings Roof line Dimension Section cut symbols Specification Doors and windows numbering Space name Floor level label Floor materials label Floor drop arrow Tittle and scale with neatly compose.
Roof Plan	Failed to provide the required criteria	Unable to prepare roof plan as required (WD format)	Prepare correct roof plan with required scale by consists of the following; Grid line Roof line Ridge line Rainwater fall arrow Dimension Specification and any 1 of the following; Dotted outer wall line Section cut symbols Roof hatching Tittle and scale	Prepare correct roof plan with required scale by consists of the following; Grid line Roof line Ridge line Rainwater fall arrow Dimension Specification and any 2/3 of the following; Dotted outer wall line Section cut symbols Roof hatching Tittle and scale	Prepare correct roof plan with required scale by consists of the following; Grid line Roof line Dotted outer wall line Ridge line Rainwater fall arrow Dimension Section cut symbols Specification Roof hatching Tittle and scale	Prepare correct roof plan with required scale by consists of the following; Grid line Roof line Dotted outer wall line Ridge line Rainwater fall arrow Dimension Section cut symbols Specification Roof hatching Tittle and scale with neatly compose.

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Section (s)	Failed to provide the required criteria	Unable to prepare sections as required (WD format)	Prepare correct sections with required scale by consists of the following; Grid line Foundation and structure Floor Wall Door and window Roof Staircase Level Dimension Specification and any 1 / 2 of the following; Clear section cut (structure, floor, wall, roof) Room labelling Doors and windows numbering Detail drawings callout Tittle and scale	Prepare correct sections with required scale by consists of the following; Grid line Foundation and structure Floor Wall Door and window Roof Staircase Level Dimension Specification and any 3 / 4 of the following; Clear section cut (structure, floor, wall, roof) Room labelling Doors and windows numbering Detail drawings callout Tittle and scale	Prepare correct sections with required scale by consists of the following; Grid line Clear section cut (structure, floor, wall, roof) Foundation and structure Floor Wall Door and window Roof Staircase Level Dimension Specification Room labelling Doors and windows numbering Detail drawings callout Tittle and scale	Prepare correct sections with required scale by consists of the following; Grid line Clear section cut (structure, floor, wall, roof) Foundation and structure Floor Wall Door and window Roof Staircase Level Dimension Specification Room labelling Doors and windows numbering Detail drawings callout Tittle and scale with neatly compose.
Elevation (s)	Failed to provide the required criteria	Unable to prepare elevations as required (WD format)	Prepare correct elevation with required scale by consists of the following; Grid line Floor Wall and column Door and window Roof Staircase (if necessary) Dimension and any 1 of the following; Doors and windows numbering Specification Tittle and scale	Prepare correct elevation with required scale by consists of the following; Grid line Floor Wall and column Door and window Roof Staircase (if necessary) Dimension and any 2 of the following; Doors and windows numbering Specification Tittle and scale	Prepare correct elevation with required scale by consists of the following; Grid line Floor Wall and column Door and window Roof Staircase (if necessary) Dimension Specification Doors and windows numbering Tittle and scale	Prepare correct elevations with required scale by consists of the following; Grid line Floor Wall and column Door and window Roof Staircase (if necessary) Dimension Specification Doors and windows numbering Tittle and scale with neatly compose.

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Detail drawing(s)	Failed to provide the required criteria	Unable to prepare detail drawings as required (WD format)	Drawings not detailed / complex. There are very few features on the objects. The drawings have many messy or missing lines, dimensions or other drafting features.	Drawings not detailed / complex. There are a few features on the objects. The drawings have some messy or missing lines, dimensions or other drafting features.	Drawings somewhat detailed / complex. There are many features on the objects. The drawings have few messy or missing lines, dimensions or other drafting features.	Drawings very detailed / complex. There are many features on the objects. The drawings have no messy or missing lines, dimensions or other drafting features.
Door and window schedules	Failed to provide the required criteria	Unable to prepare door and window schedules as required (WD format	Prepare correct door and window schedules with required scale by consists of the following; Doors and windows plan Doors and windows elevation Tittle and any 1 of the following; Doors and windows number Dimension Type	Prepare correct door and window schedules with required scale by consists of the following; Doors and windows plan Doors and windows elevation Tittle and any 2 of the following; Doors and windows number Dimension Type	Prepare correct door and window schedules with required scale by consists of the following; Doors and windows plan Doors and windows elevation Doors and windows number Dimension Floor level Type Quantity Tittle	Prepare correct door and window schedules with required scale by consists of the following; Doors and windows plan Doors and windows elevation Doors and windows number Dimension Floor level Type Quantity Tittle with neatly compose
Ceiling & Electrical Fitting Layout	Failed to provide the required criteria	Unable to prepare ceiling & electrical fitting layout as required (WD format)	Prepare correct ceiling & electrical fitting layout with required scale by consists of the following; Reflected ceiling plan Meter box Distribution fuse box Electrical fittings Connection line to switch Power point and any 1 of the following; Tv and telco point Label Tittle and scale Symbol legend and quantity	Prepare correct ceiling & electrical fitting layout with required scale by consists of the following; Reflected ceiling plan Meter box Distribution fuse box Electrical fittings Connection line to switch Power point and any 2 / 3 of the following; Tv and telco point Label Tittle and scale Symbol legend and quantity	Prepare correct ceiling & electrical fitting layout with required scale by consists of the following; Reflected ceiling plan Meter box Distribution fuse box Electrical fittings Connection line to switch Power point Tv and telco point Label Tittle and scale Symbol legend and quantity	Prepare correct ceiling & electrical fitting layout with required scale by consists of the following; Reflected ceiling plan Meter box Distribution fuse box Electrical fittings Connection line to switch Power point Tv and telco point Label Tittle and scale Symbol legend and quantity with neatly compose.

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Sanitary diagrammatic layout	Failed to provide the required criteria	Unable to prepare sanitary diagrammatic layout as required (WD format)	Prepare correct sanitary diagrammatic layout with required scale by consists of the following; Level Sanitary fittings by area/room Waste pipe Manhole (tally with site plan) Soil pipe (with gradient) Specification Tittle and scale and any 1/2/3 of the following; Floor trap Gully trap Septic tank / main sewer line Gully trap detail Floor trap detail Label	Prepare correct sanitary diagrammatic layout with required scale by consists of the following; Level Sanitary fittings by area/room Waste pipe Manhole (tally with site plan) Soil pipe (with gradient) Specification Tittle and scale and any 4/5 of the following; Floor trap Gully trap Septic tank / main sewer line Gully trap detail Floor trap detail Label	Prepare correct sanitary diagrammatic layout with required scale by consists of the following; Level Sanitary fittings by area/room Waste pipe Floor trap Gully trap Manhole (tally with site plan) Soil pipe (with gradient) Septic tank / main sewer line Gully trap detail Floor trap detail Label Specification Tittle and scale	Prepare correct sanitary diagrammatic layout with required scale by consists of the following; Level Sanitary fittings by area/room Waste pipe Floor trap Gully trap Manhole (tally with site plan) Soil pipe (with gradient) Septic tank / main sewer line Gully trap detail Floor trap detail Label Specification Tittle and scale with neatly compose.
Plumbing diagrammatic layout	Failed to provide the required criteria	Unable to prepare plumbing diagrammatic layout as required (WD format)	Prepare correct plumbing diagrammatic layout with required scale by consists of the following; Level Water meter (from JBA main supply) Rising pipe Water tank Distribution pipe (from water tank) Distribution pipe (from water meter) Sanitary fittings by area/room Specification and any 1/2 of the following; Scour pipe (discharge to nearest drain) Overflow pipe (discharge to nearest drain) Stop cork (at the right place) Label Tittle and scale	Prepare correct plumbing diagrammatic layout with required scale by consists of the following; Level Water meter (from JBA main supply) Rising pipe Water tank Distribution pipe (from water tank) Distribution pipe (from water meter) Sanitary fittings by area/room Specification and any 3/4 of the following; Scour pipe (discharge to nearest drain) Overflow pipe (discharge to nearest drain) Stop cork (at the right place) Label Tittle and scale	Prepare correct plumbing diagrammatic layout with required scale by consists of the following; Level Water meter (from JBA main supply) Rising pipe Water tank Scour pipe (discharge to nearest drain) Overflow pipe (discharge to nearest drain) Distribution pipe (from water tank) Distribution pipe (from water meter) Stop cork (at the right place) Sanitary fittings by area/room Label Specification Tittle and scale	Prepare correct plumbing diagrammatic layout with required scale by consists of the following; Level Water meter (from JBA main supply) Rising pipe Water tank Scour pipe (discharge to nearest drain) Overflow pipe (discharge to nearest drain) Distribution pipe (from water tank) Distribution pipe (from water meter) Stop cork (at the right place) Sanitary fittings by area/room Label Specification Tittle and scale with neatly compose.

b. Student perform self-assessment of the completed working drawing by marking the checklist provided.

Self-assessments	Failed to submit self-assessments form	Unable to reflected by self-assessments	Reflected without amendments for some criteria as follows: Key plan Location plan Site plan Floor(s) plan Roof plan 2 Section 4 Elevation Detail drawing(s) Door and window schedules Ceiling and Electrical Fitting Layout Sanitary diagrammatic layout Plumbing diagrammatic layout	Reflected with amendments for some criteria as follows: Key plan Location plan Site plan Floor(s) plan Roof plan 2 Section 4 Elevation Detail drawing(s) Door and window schedules Ceiling and Electrical Fitting Layout Sanitary diagrammatic layout Plumbing diagrammatic layout	Reflected without amendments for all criteria as follows: Key plan Location plan Site plan Floor(s) plan Roof plan 2 Section 4 Elevation Detail drawing(s) Door and window schedules Ceiling and Electrical Fitting Layout Sanitary diagrammatic layout Plumbing diagrammatic layout	Reflected with amendments for all criteria as follows: Key plan Location plan Site plan Floor(s) plan Roof plan 2 Section 4 Elevation Detail drawing(s) Door and window schedules Ceiling and Electrical Fitting Layout Sanitary diagrammatic layout Plumbing diagrammatic layout

QUESTION 2 [PLO4; CLS3B; CLO2(A3)]

a. Student perform self-assessment of the completed working drawing by marking the checklist provided **for plan submission to local authority** as APPENDIX A1 and APPENDIX A2

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Self-assessments	Failed to submit self-assessments form	Unable to reflected by self-assessments	Reflected a few (10%-49%) criteria in APPENDIX A1 and APPENDIX A2	Reflected some (50%-69%) criteria in APPENDIX A1 and APPENDIX A2	Reflected most of (70%-99%) criteria in APPENDIX A1 and APPENDIX A2	Reflected for all (100%) criteria in APPENDIX A1 and APPENDIX A2

b. Student perform self-assessment of the completed working drawing by marking the checklist provided with **complete documentation and suitable format, comply to Uniform Building By Law** as APPENDIX B1.

Criteria	0 Not Done	1 Poor	2 Fair	3 Satisfactory	4 Good	5 Excellent
Self-assessments	Failed to submit self-assessments form	Unable to reflected by self-assessments	Reflected a few (10%-49%) criteria in APPENDIX B1	Reflected some (50%-69%) criteria in APPENDIX B1	Reflected most of (70%-99%) criteria in APPENDIX B1	Reflected for all (100%) criteria in APPENDIX B1

QUESTION 3 [PLO8; CLS5; CLO3(A4)]

a. Student submit a complete set of working drawing by making amendments, adhere to **procedure and requirement set by UBBL and authority** based on checklist provided as APPENDIX A1, APPENDIX A2 and APPENDIX B1 into folders with copies based on requirement as APPENDIX B2.

Self-assessments	Failed to submit self-assessments form	Unable to make any amendments	Make amendments for a few (10%-49%) criteria in APPENDIX A1, APPENDIX A2 and APPENDIX B1	Make amendments for some (50%-69%) criteria in APPENDIX A1, APPENDIX A2 and APPENDIX B1	Make amendments for most (70%-99%) criteria in APPENDIX A1, APPENDIX A2 and APPENDIX B1	Make amendments for all (100%) criteria in APPENDIX A1, APPENDIX A2 and APPENDIX B1

APPENDIX A1

SENARAI SEMAK KELULUSAN PELAN BANGUNAN DCA30123

Rujukan: MPPD-P(JB)-02/02 Pindaan : 01

		ADA	TIADA	PEMBETULAN
1.	Sesalinan Pelan (linen) dan kira-kira struktur (r.c) ditandatangani dan diperakukan tanggungjawab oleh Jurutera Berdaftar	☐	☐	☐
2.	Pelan Lokasi :-			
	2.1 Apa-apa skala yang sesuai [Rujuk UKBS 10(1)(b)]	☐	☐	☐
	2.2 Menyatakan nama-nama jalan ke tapak cadangan dengan jelas	☐	☐	☐
	2.3 Menunjukkan jalan-jalan ke tapak cadangan dari jalan utama	☐	☐	☐
	2.4 Tapak cadangan diwarnakan	☐	☐	☐
3.	Pelan Tapak :-			
	3.1 Skala tidak kurang daripada 1 : 1000 [Rujuk UKBS 10(1)(a)]	☐	☐	☐
	3.2 Menunjukkan ukuran-ukuran lot	☐	☐	☐
	3.3 Jalan masuk ketapak dari jalan utama dan nama jalan	☐	☐	☐
	3.4 No. Lot atau bangunan bersebelahan ditandakan	☐	☐	☐
	3.5 Ukuran jarak lega diantara bangunan cadangan dengan garisan sempadan	☐	☐	☐
	3.6 Arah aliran air longkang ke longkang sedia ada	☐	☐	☐
	3.7 Arah air kumbahan dari ‘manhole’ ke ‘main sewer’	☐	☐	☐
	3.8 Paras tanah	☐	☐	☐
	3.9 Titik utara	☐	☐	☐
	B3.10 Bangunan cadangan diwarnakan	☐	☐	☐
4.	Pelan Lantai :-			
	4.1 Skala tidak kurang daripada 1 : 100 [Rujuk UKBS 10(1)(b)]	☐	☐	☐
	4.2 Tandakan sempadan dengan dotted line dan ukuran lot cadangan	☐	☐	☐
	4.3 Ukuran lebar jalan sedia ada dan pintu masuk ditandakan	☐	☐	☐
	4.4 Jarak kelegaan antara bangunan dan garisan sempadan hadapan, tepi dan belakang ditandakan	☐	☐	☐

4.5 Jarak garisan cucur atap dari garisan sempadan ditandakan	☐	☐	☐
4.6 Menyediakan longkang dan apron di sekeliling bangunanesalinan	☐	☐	☐
4.7 Arah aliran air longkang ke longkang sedia ada dan saiz parit longkang ditandakan	☐	☐	☐
4.8 Arah air kumbahan dari manhole ke main sewer atau septic tank ditandakan	☐	☐	☐
4.9 Tandakan garisan keratan memanjang dan menegak	☐	☐	☐
4.10 Sudut minima 90° untuk saliran air kumbahan ke Sistem Pembentung	☐	☐	☐
4.11 Menunjukkan ukuran panjang dan lebar sesuatu bilik dan namakan kegunaan ruang lantai	☐	☐	☐
4.12 Menunjukkan ukuran pintu, tingkap dan ruang terbuka. Jadual Spesifikasi pintu, tingkap dan ruang terbuka disertakan	☐	☐	☐
4.13 Aras lantai bangunan ditandakan	☐	☐	☐
5. Pelan Keratan :-			
5.1 Skala tidak kurang daripada 1 : 100 [Rujuk UKBS 10(1)(b)]	☐	☐	☐
5.2 Paras tanah sedia ada dan paras tanah baru ditandakan	☐	☐	☐
5.3 Paras jalan, parit sisi jalan dan jalan kaki lima ditandakan (jika bersempadan dengan jalan)	☐	☐	☐
5.4 Bahan-bahan yang hendak digunakan dalam pembinaan struktur	☐	☐	☐
5.5 Ketinggian bangunan dari aras tanah ke lantai dan ke bumbung	☐	☐	☐
6. Pelan Pandangan Hadapan, Belakang dan Sisi :-			
6.1 Skala tidak kurang daripada 1 : 100 [Rujuk UKBS 10(1)(b)]	☐	☐	☐
6.2 Paras lorong jalan kaki, jalan kaki lima, jalan yang bersampingan	☐	☐	☐
6.3 Paras lantai, parapet dan tinggi beranda	☐	☐	☐
6.4 Bahan untuk dinding, tingkap dan bumbung	☐	☐	☐
7. Pelan Perincian berkaitan permohonan dikemukakan, seperti berikut :-			
7.1 Culvert	☐	☐	☐
7.2 Pagar dan pintu pagar	☐	☐	☐
7.3 Kebuk sampah	☐	☐	☐

APPENDIX A2

JADUAL WARNA UNTUK PERMOHONAN KELULUSAN PELAN

BIL	JENIS LUKISAN	WARNA	ADA	TIADA	PEMBETULAN
1	**PELAN KUNCI**				
	i. TAPAK CADANGAN	MERAH	☐	☐	☐
2	**PELAN LOKASI**				
	i. LOT CADANGAN	MERAH	☐	☐	☐
3	**PELAN TAPAK**				
	i. BANGUNAN CADANGAN	MERAH	☐	☐	☐
	ii. FENCING	MERAH	☐	☐	☐
	iii. ARAH AIR KUMBAHAN	MERAH	☐	☐	☐
	iv. JALAN	KUNING	☐	☐	☐
	v. PAVING	OREN	☐	☐	☐
	vi. KOLAM / SWIMMING POOL	BIRU	☐	☐	☐
	vii. OXIDATION POND	BIRU	☐	☐	☐
	viii. MANHOLE	BIRU	☐	☐	☐
	ix. LONGKANG	BIRU	☐	☐	☐
	x. TURFING, LANSCAPE, KAWASAN LAPANG	HIJAU	☐	☐	☐
4	**PELAN LANTAI**				
	i. BRICK WALL	MERAH	☐	☐	☐
	ii. CERAMIC TILES	MERAH JAMBU	☐	☐	☐
	iii. HOMOGENOUS TILES DAN LAIN-LAIN KEMASAN	MERAH JAMBU	☐	☐	☐
	iv. RUANG TOILET	BIRU	☐	☐	☐
	v. RUANG ABLUTION	BIRU	☐	☐	☐

BIL	JENIS LUKISAN	WARNA	ADA	TIADA	PEMBETULAN
vi.	LONGKANG	BIRU			
vii.	KOLAM RENANG / POND	BIRU			
viii.	TANGKI AIR	BIRU			
ix.	MANHOLE	BIRU			
x.	TINGKAP	BIRU			
xi.	OXIDATION POND	BIRU			
xii.	CEMENT RENDERED / CEMENT SCREED	KUNING			
xiii.	FLOOR HARDENER	KUNING			
xiv.	ENTRANCE CULVERT	KUNING			
xv.	APRON	KUNING			
xvi.	P.C. SLAB	KUNING			
xvii.	HALF WALL	KUNING			
xviii.	PAVING	OREN			
xix.	PARQUET	COKLAT			
xx.	TIMBER STRIP	COKLAT			
xxi.	RAILING KAYU	COKLAT			
xxii.	TURFING, LANSCAPE	HIJAU			
xxiii.	MARBLE	UNGU			
5. PELAN BUMBUNG					
i.	ROOF TILES	MERAH			
ii.	METAL DECK	BIRU			
iii.	CLADDING	BIRU			
iv.	CORRUGATED ASBESTOS SHEET	BIRU			

BIL	JENIS LUKISAN	WARNA	ADA	TIADA	PEMBETULAN
v.	GLASS	BIRU	☐	☐	☐
vi.	STEEL	BIRU	☐	☐	☐
vii.	GUTTER / R.C. GUTTER	BIRU	☐	☐	☐
viii.	TANGKI AIR	BIRU	☐	☐	☐
ix.	FLAT ROOF	KUNING	☐	☐	☐
6.	**PELAN KERATAN**				
i.	BRICKWALL	MERAH	☐	☐	☐
ii.	HALF WALL	MERAH	☐	☐	☐
iii.	TINGKAP	BIRU	☐	☐	☐
iv.	PINTU – GLASS / STEEL (ROLLER SHUTTER)	BIRU	☐	☐	☐
v.	ROOF STRUCTURES – STEEL / GLASS	BIRU	☐	☐	☐
vi.	DINDING CLADDING / GLASS	BIRU	☐	☐	☐
vii.	ROOF STRUCTURE - KAYU	COKLAT	☐	☐	☐
viii.	PINTU KAYU	COKLAT	☐	☐	☐
ix.	RAILING KAYU	COKLAT	☐	☐	☐
x.	R.C. SLAB	HIJAU	☐	☐	☐
xi.	CONCRETE SLAB	HIJAU	☐	☐	☐
xii.	DINDING PLASTERED	KUNING	☐	☐	☐
7.	**PELAN TAMPAK**				
i.	BUMBUNG ROOF TILE	MERAH	☐	☐	☐
ii.	BUMBUNG METAL DECK	BIRU	☐	☐	☐
iii.	BUMBUNG CORRUGATED ASBESTOS SHEET	BIRU	☐	☐	☐
iv.	WINDOW GLASS / STEEL	BIRU	☐	☐	☐

BIL	JENIS LUKISAN	WARNA	ADA	TIADA	PEMBETULAN
v.	RAILING STEEL	BIRU			
vi.	DINDING CLADING	BIRU			
vii.	DINDING GLASS	BIRU			
viii.	GUTTER	BIRU			
ix.	RAINWATER DOWN PIPE	BIRU			
x.	PINTU - ROLLER SHUTTER / GLASS / STEEL	BIRU			
xi.	PINTU KAYU	COKLAT			
xii.	RAILING KAYU	COKLAT			
xiii.	DINDING BRICKWALL (PLASTERED)	KUNING			
xiv.	DINDING VENT BLOCK	KUNING			
xv.	HALF WALL	KUNING			

APPENDIX B1

SENARAI SEMAK PERMOHONAN PELAN BANGUNAN DCA30123

Rujukan: MPPD-P(JB)-02/02 Pindaan : 01

1. Salinan Pelan dalam bentuk CD (2 set) :-

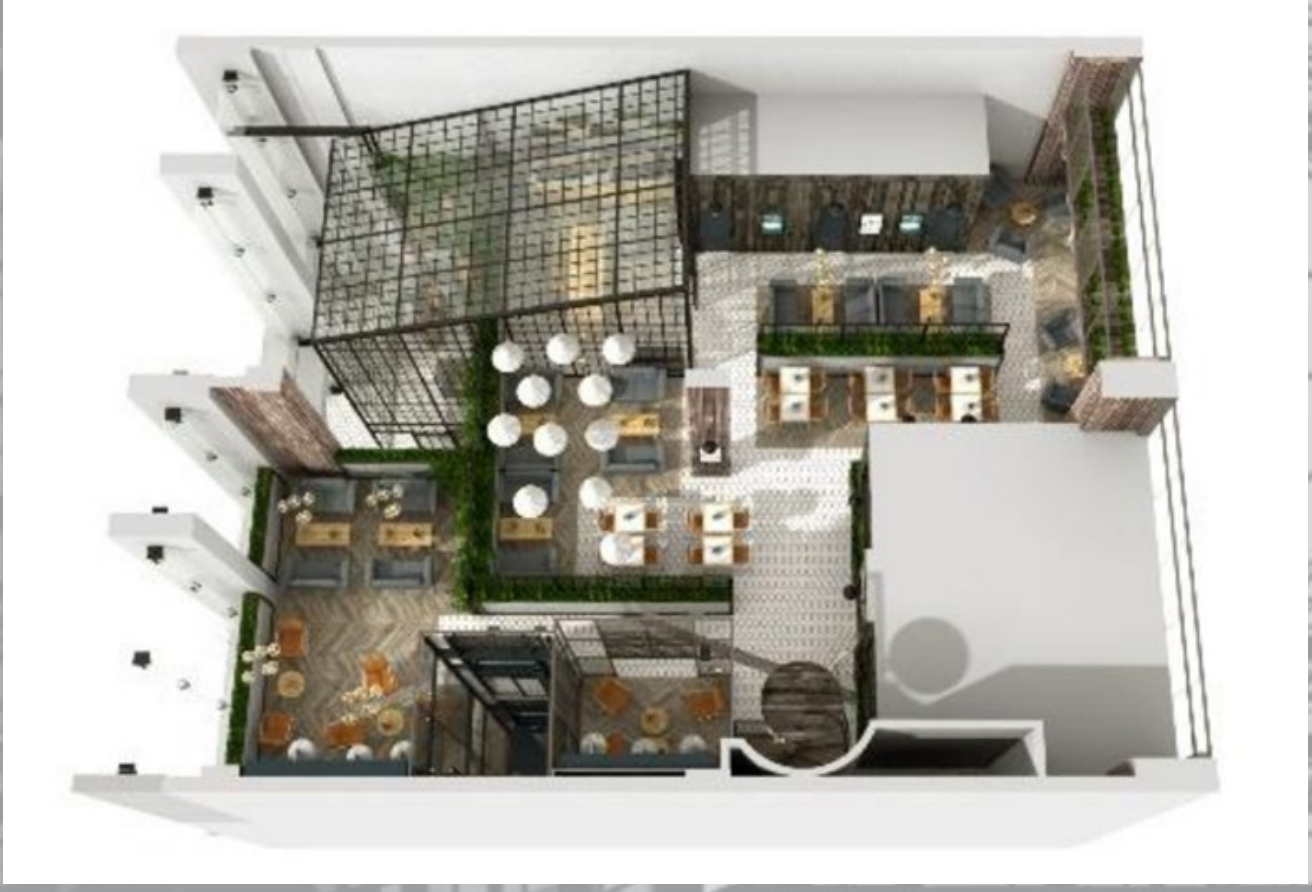
1.1 Lukisan Pelan dalam format AUTOCADD (Drawing)	☐	☐	☐
1.2 Lukisan Pelan di dalam format PDF	☐	☐	☐
1.3 Gambar tapak cadangan	☐	☐	☐
2. Setiap salinan pelan yang dikemukakan hendaklah ditandatangani oleh orang yang berkelayakan dan pemilik atau wakil pemilik	☐	☐	☐
3. Pelan-Pelan Yang Terlibat - (Saiz A1) (Rujuk Pra Rundingan	☐	☐	☐
4 Salinan Pelan Senibina (3 kertas 1 linen) yang dilengkapkan perkara-perkara berikut :-			
4.1 Lebar kertas ukuran A1 mengikut format 'Standard Title Blok' yang ditetapkan oleh Jabatan Kawalan Bangunan MPPD.	☐	☐	☐
4.2 Lipatan pelan mengikut format yang ditetapkan oleh Jabatan Kawalan Bangunan MPPD.	☐	☐	☐
4.3 Tajuk projek hendaklah mengandungi perkara-perkara berikut :			
4.3.1 Menggunakan Bahasa Melayu	☐	☐	☐
4.3.2 Menyatakan jenis pembangunan	☐	☐	☐
4.3.3 Mengandungi bilangan unit, blok dan tingkat	☐	☐	☐
4.3.4 No. Lot dan / atau No. Bangunan	☐	☐	☐
4.3.5 Nama Jalan dan Nama Bandar	☐	☐	☐
4.3.6 Nama Pemilik	☐	☐	☐
4.4 Keperluan maklumat orang yang berkelayakan (Perunding)			
4.4.1 Nama syarikat	☐	☐	☐
4.4.2 Nama penandatangan	☐	☐	☐
4.4.3 Tandatangan (tandatangan asal)	☐	☐	☐
4.4.4 Alamat	☐	☐	☐
4.4.5 Cop Rasmi dan No. Pendaftaran	☐	☐	☐
4.4.6 Cop perakuan tanggungjawab perunding di bawah Undang-undang Kecil Bangunan Seragam	☐	☐	☐

APPENDIX B2

MPPD-P(JB)-02/02
Pindaan : 01

JABATAN TEKNIKAL DALAMAN	SET	SEMAKAN PEMOHON	SEMAKAN MAJLIS
Jabatan Bangunan	4		
Jabatan Kejuruteraan	1		
Jabatan Perancang Bandar	1		
JABATAN TEKNIKAL LUARAN (Jika Berkaitan)	**SET**	**SEMAKAN PEMOHON**	**SEMAKAN MAJLIS**
Pejabat Tanah dan Daerah , PD - Perihal tanah sekiranya tidak selaras dengan syarat tanah / binaan di atas tanah kerajaan	1		
Jabatan Kerja Raya (JKR) - Sekiranya melibatkan rezab jalan dan jalan masuk utama	1		
Bomba (Lukisan Keperluan Bomba)	3		
IWK - Sekiranya terdapat tandas di dalam tapak cadangan	3		
SAINS (Lukisan Keperluan SAINS)	1		
TNB (Lukisan Keperluan TNB)	1		
JPS - Sekiranya sempadan dengan laut, sungai dan parit	1		
JAS - Sekiranya melibatkan jenis perniagaan seperti kilang, perusahaan kecil dan lain-lain	1		
JUMLAH	**18**		

NOTES OF GUIDANCE



Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

POLITEKNIK MALAYSIA
PORT DICKSON

JABATAN KEJURUTERAAN AWAM/ *DEPARTMENT OF CIVIL ENGINEERING*
RANGKA KURSUS/ *COURSE OUTLINE*
SESI DISEMBER 2020/ *DECEMBER 2020 SESSION*

1.	NAME OF COURSE	3D MODELLING & ANIMATION
	COURSE CODE	DCA 30132
2.	SYNOPSIS	3D MODELLING & ANIMATION course expands the knowledge on Computer Aided Design (CAD) in architecture. The course equips the students with enhanced 3D computer aided design commands with building information to model and produce computer generated 3D visualization. Building Information Modelling elements is being introduced in this course up to LOD 200. This course is a core component of Communication in the Body of Knowledge (BoK) in Architecture Studies.
3.	CREDIT VALUE	2
4.	PREREQUISITE/ CO-REQUISITE (IF ANY)	None
5.	COURSE LEARNING OUTCOMES (CLO): Upon completion of this course, students should be able to:	
	CLO1	Display the ability to use digital drawing tools in producing 3D building information modeling and animation in relation to design based task (P4 , PLO 3)
	CLO2	Initiate entrepreneurial mind in operating 3D building information modelling and animation in relation to design based task (A3 , PLO 7)
	CLO3	Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task (A4 , PLO 8)
	PROGRAMME LEARNING OUTCOMES (PLO) : PLO3 : Display technical skills in using design tools, design manners and numerical skills in delivering architectural idea and solutions PLO7 : Demonstrate positive personal character, lifelong learning and entrepreneurial skills preparation of working life PLO8 : Integrate ethical values, integrity and professionalism in performing task	
6.	ASSESSMENT METHOD: The course assessment consist of: i. Continuous Assessment (CA) – 100% ii. Final Examination (FE) / Final Assessment (FA) – None	

Assessment	Quantity	Percentage (%)
Test	1	10%
Exercise	2	40%
Project	1	40%
Interactive Task	1	10%

7. TEACHING SCHEDULE:

Topic No.	Topic/Content	Recommended Contact Hours	Assessment Method	Week
1.0	3D Architectural Computer Generated Models and Building Information Modelling (BIM) LOD200 1.1 Display the use of digital drawing tools in producing 3D modelling and animation of architectural presentation in relation to design based task 1.2 Assembles 3D building information model using appropriate techniques according to the architecture design project's brief	4 hours Lecture 8 hours Practical	Exercise 1 Test	W1 – W5
2.0	Enhance Visual Effects of 3D Architectural Computer Generated Models 2.1 Display the use of lighting and exposure tool to enhance visual effect of architectural computer generated models (perspectives drawing) 2.2 Manipulate the use of cameras tool for viewing 2.3 Assembles 3D digital still images of building information model using appropriate techniques to enhance the 3D generated model	4 hours Lecture 8 hours Practical	Exercise 2 Interactive Task	W6 – W9
3.0	3D Animation Techniques 3.1 Display fundamental of 3D software and tools animation 3.2 Organize 3D animation 3.3 Organize animation output	3 hours Lecture 8 hours Practical	Project	W10 – W13

8. REFERENCES

Main :

1. Agkathidis, A. (2012). Computational Architecture: digital designing tools and manufacturing techniques. BIS Publishers

Additional :

1. Ali., A. Brebbia., C.A. (2006). Digital Architecture and Construction, WITAE.
2. Eastman., C., Teicholz, P., Sacks, R. & Liston, K. (2008). BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors. John Wiley & Sons

		3. Edward., A (2011). The Architect's Studio Companion: Rule of thumb for Preliminary Design, John Wiley & Sons 4. Hardin., B. (2009). BIM and Construction Management: Proven Tools, Methods, and Workflows. Sybex. 5. Kirby., L., Krygiel., E. & Kim., M. (2018) Mastering Autodesk Revit 2018. Canada: John Wiley & Sons 6. Martin., D. (2017) Instant Revit: A Quick and Easy Guide to Learning Autodesk® Revit® 2018. USA: Create Space Independent Publishing Platform

Prepared by:

NORLIZA BINTI JOHAN
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.....
(Course Coordinator Name & Signature)

Date : 06.03.2021

Verified by :

ZARITH SOFIA BT ABU ZAHRI
KETUA PROGRAM DIPLOMA SENIBINA
JABATAN KEJURUTERAAN AWAM
POLITEKNIK PORT DICKSON

.....
(KJ/KPro/KK Name & Signature)

Date : 06.03.2021

PROJECT BRIEF

Semester 3

DCA30114 - Design Studio 3

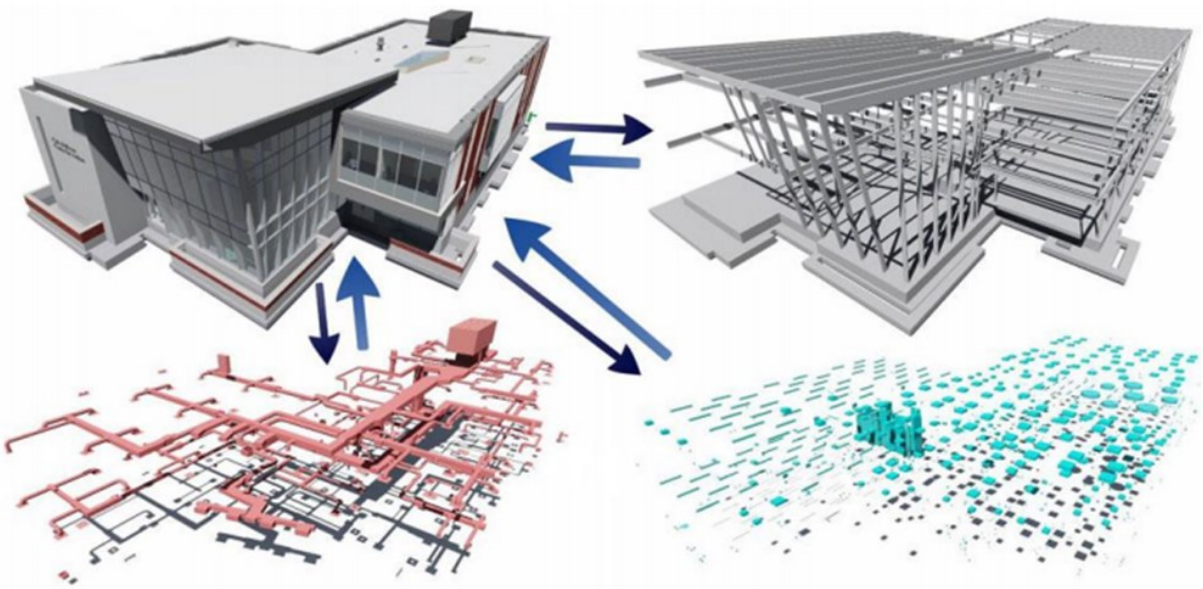
DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

POLYTECHNIC PORT DICKSON
CIVIL ENGINEERING DEPARTMENT
DIPLOMA IN ARCHITECTURE

COURSE CODE : DCA30132 – 3D MODELLING & ANIMATION
EXERCISE : EXERCISE 1 (20%)

TOPIC 1	:	3D Architectural Computer Generated Models and Building Information Modelling (BIM) LOD200
COURSE LEARNING OUTCOME	:	**CLO 1 :** Display the ability to use digital drawing tools in producing 3D building information modeling and animation in relation to design based task
TASK	:	To produce Building Information Modelling (BIM) using Autodesk Revit **(Small House 16m x 8m)**
SUBMISSION REQUIREMENT	:	-Floor Plan, Roof Plan, 4 Elevations, 2 Interior & 2 Exterior Perspectives -A3 size drawing -Hardcopy & Softcopy



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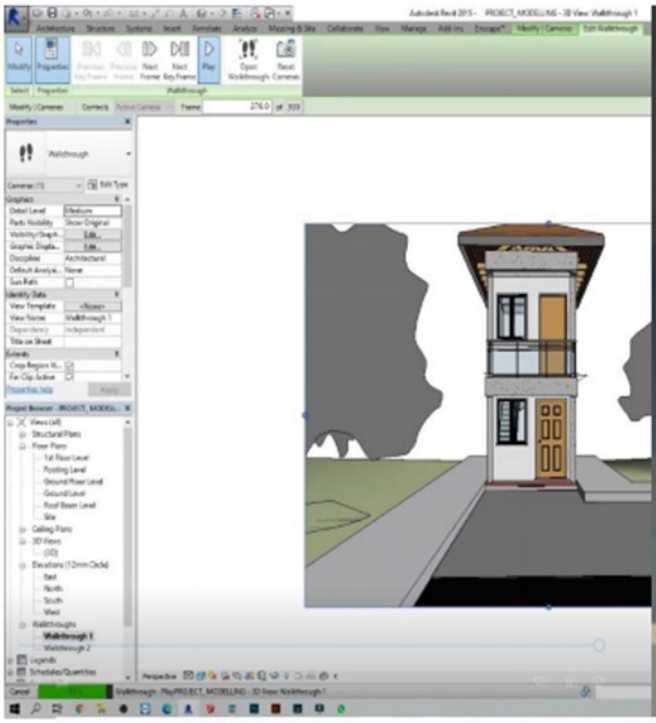
POLITEKNIK PORT DICKSON

POLYTECHNIC PORT DICKSON
CIVIL ENGINEERING DEPARTMENT
DIPLOMA IN ARCHITECTURE

COURSE CODE : DCA30132 – 3D MODELLING & ANIMATION
EXERCISE : EXERCISE 2 (20%)

TOPIC 2	:	Enhance Visual Effects of 3D Architectural Computer Generated Models
TOPIC 3	:	3D Animation Techniques Display fundamental of 3D software and tools animation
COURSE LEARNING OUTCOME	:	**CLO 2 :** Initiate entrepreneurial mind in operating 3D building information modelling and animation in relation to design based task **CLO 3 :** Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task
TASK	:	To demonstrate the use of Building Information Modelling in the form of **House Brochure/ Pamphlet**
	:	To assemble 3D animation for community network sharing **(Youtube)**
SUBMISSION REQUIREMENT	:	- House Brochure/ Pamphlet (A3 Size) - Animation video presentation (.mp4)



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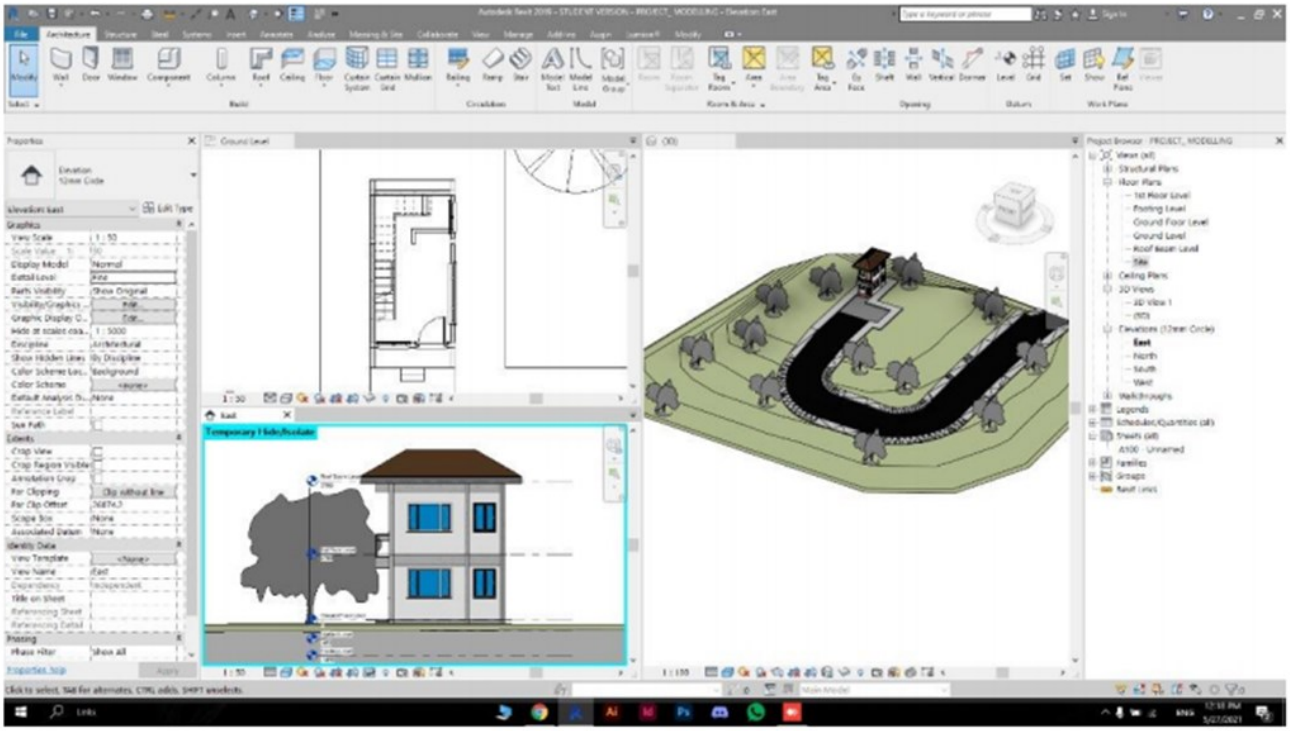
POLYTECHNIC PORT DICKSON
CIVIL ENGINEERING DEPARTMENT
DIPLOMA IN ARCHITECTURE

COURSE CODE : DCA30132 – 3D MODELLING & ANIMATION
EXERCISE : INTERACTIVE TASK (10%)

TOPIC 1	:	3D Architectural Computer Generated Models and Building Information Modelling (BIM) LOD200
COURSE LEARNING OUTCOME	:	**CLO 1 :** Display the ability to use digital drawing tools in producing 3D building information modeling and animation in relation to design based task
TASK	:	To produce a video learn Building Information Modelling (BIM) using Autodesk Revit
SUBMISSION REQUIREMENT	:	-Video presentation (.mp4)



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POLYTECHNIC PORT DICKSON
CIVIL ENGINEERING DEPARTMENT
DIPLOMA IN ARCHITECTURE

COURSE CODE : DCA30132 – 3D MODELLING & ANIMATION
EXERCISE : PROJECT (40%)

TOPIC 1	:	3D Architectural Computer Generated Models and Building Information Modelling (BIM) LOD200
TOPIC 2	:	Enhance Visual Effects of 3D Architectural Computer Generated Models
TOPIC 3	:	3D Animation Techniques Display fundamental of 3D software and tools animation
COURSE LEARNING OUTCOME	:	**CLO 1 :** Display the ability to use digital drawing tools in producing 3D building information modeling and animation in relation to design based task **CLO 2 :** Initiate entrepreneurial mind in operating 3D building information modelling and animation in relation to design based task **CLO 3 :** Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task
TASK	:	To produce 3D Building Information Modelling (BIM) & Animation (Integrated Project DCA30114-Design Studio 3)
SUBMISSION REQUIREMENT	:	- Presentation Board/ Poster (Floor Plan, Roof Plan, 4 Elevations, 2 Interior & 2 Exterior Perspectives) - Animation video presentation (.mp4)

Prepared by:

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JABATAN KEJURUTERAAN AWAM
POLITEKNIK PORT DICKSON

RUBRICS

Semester 3

DCA30114 - Design Studio 3

DCA30123 - Working Drawing 2

DCA30132 - 3D Modelling & Animation

DIPLOMA IN ARCHITECTURE
DCA30132 – 3D MODELLING AND ANIMATION
SESSION DECEMBER 2020

STUDENT NAME		STUDENT'S SIGN.	
MATRIC NO.			
DATE			

EXERCISE 1 (20%)							
	PARTICULARS	VERY POOR	POOR	MODERATE	GOOD	VERY GOOD	TOTAL %
		1	2	3	4	5	
1	CLO1 i. Display the ability to use digital drawing tools in producing 3D building information modelling and animation in relation to design based task	Entourage/Furniture					
							/5x2
		Perspective View					
							/5x2

EXERCISE 2 (20%)							
	PARTICULARS	VERY POOR	POOR	MODERATE	GOOD	VERY GOOD	TOTAL %
		1	2	3	4	5	
1	CLO2 i. Initiate entrepreneurial mind in operating 3D building information modelling and animation in relation to design based task	Creativity					
							/5
		Entrepreneurial mind					
							/5
2	CLO3 ii. Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task	Visual Effect					
							/5
		Punctuality					
							/5

INTERACTIVE TASK (10%)							
	PARTICULARS	VERY POOR	POOR	MODERATE	GOOD	VERY GOOD	TOTAL %
		1	2	3	4	5	
1	CLO1 i. Display the ability to use digital drawing tools in producing 3D building information modelling and animation in relation to design based task	Rendering Technique					
							/5
		Lighting Effect					
							/5

DIPLOMA IN ARCHITECTURE
DCA30132 – 3D MODELLING AND ANIMATION
SESSION DECEMBER 2020

STUDENT NAME		**STUDENT'S SIGN.**	
MATRIC NO.			
DATE			

PROJECT

	PARTICULARS	1 VERY POOR	2 POOR	3 MODERATE	4 GOOD	5 VERY GOOD	TOTAL %
	3D MODELLING (STILL IMAGE)						
CLO1 Display the ability to use digital drawing tools in producing 3D building information modelling and animation in relation to design based task. (P4, PLO3)	i. Modelling Technique						/5
	ii. Materials						/5
	iii. Lighting & Visual Effect						/5
	iv. Rendering Technique						/5
				/20 x 15%			
	ANIMATION (VIDEO)						
	v. Speed (tracks&key)						/5
	vi. Visual Effect						/5
	vii. Sound Effect						/5
				/15 x 15%			
CLO2 Initiate intrepreneurial mind in operating 3D building information modelling and animation in relation to design based task. (A3, PLO7)	**PRESENTATION**						
	viii. Creativity						/5
	ix. Language(Grammar and Spelling)						/5
				/10 x 5%			
CLO3 Relate good values and attitude during producing 3D building information modelling and animation in relation to design based task (A4, PLO8)	**ORGANIZATION**						
	x. Coherancy with the desgn scheme						/5
	xi. Punctuality						/5
				/10 x 5%			
				TOTAL			/100

REFERENCES

Jawatankuasa Akademik Program Seni Bina Politeknik (2013). Garis Panduan Pelaksanaan Penilaian Projek Seni Reka, Program Seni bina. Kementerian Pengajian Tinggi

Uniform Building by Law (1984) Pindaan 2016. MALAYSIA: International Law Book Services, International Law Book Services (ILBS)

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MPPD-P(JB)-02/02 Pindaan 01 : Senarai Semak Kelulusan Pelan Bangunan

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e ISBN 978-967-2246-90-9