DESIGN AND PLANNING PROGRAM

1.5 - 2 Years Structure

Design and Planning Program

School of Architecture and Design, KMUTT

Name of Program

Full name:

Master of Science Program in Design and Planning (International Program)

Master of Fine Arts Program in Design and Planning (International Program)

Master of Science Program in Design and Planning (International Program)

Master of Fine Arts Program in Design and Planning (International Program)

Abbreviated name:

M.Sc. (Design and Planning) (International Program)

M.F.A. (Design and Planning) (International Program)

The Graduate Program of Design and Planing (International Program) is being developed by a multidisciplinary team of young academics in conjunction with foreign experts and accomplished external advisors. The program is designed to meet prospective demands on professionals who are well versed in innovative research and design, and pioneering planning techniques and methodologies. It helps professionals develop these skills through a dynamic and innovative learning environment revolving around human values, knowledge synergy and partnerships. Advanced Knowledge, specialist techniques and recent technologies are provided in seven fields of study: Major course:

- Architecture
- Design Management
- UX/UI, User Experience/User Interface
- Building Technology and Innovation
- Lighting Design
- Urban Management
- Visual Communication

Synergy among the seperate fields, networking at national, regional and global levels, and the international recruitment of students and faculties from multiple disciplines shall be encouraged so as to consolidate the cutting-edge quality of the program and to help ensure sustainability in local and regional futures.

PHILOSOPHY

The program aims to produce graduates of Master's Degrees who are designers and planners with the capability, knowledge and skills in integrating their own fields of expertise with others: interdisciplinary approach. They must consider the design or creation that leads to Sustainable Development Goals (SDGs) and promotes well-being for both users and society. Their vision

must consist of courage to bravely think and dare to do new or challenging things and projects. Also these graduates must be ready to face complex problems and rapid changes in society with Entrepreneurial Mindset, with the capability to use digital tools for design and research effectively.

Program Duration

Completion of required credits for full time program is to be made within a period 3-4 semester or 1.5-2 academic years, but not exceeding 10 semesters or 5 academic years.

Curriculum Components

Total Program Credits 36 credits

Course Sructure

Coursewo	rk and Research	36	credits	
Plan A(1)	(Thesis 36 credits)	36	credits	
Plan A(2)	(Thesis 12 credits)			
a)	Compulsory Core course	s 6	credits	
b)	Major courses	9	credits	
c)	Elective courses	9	credits	
d)	Thesis/Research	12	credits	
Plan B (Project 6 credits)				
a)	Compulsory Core course	s 6	credits	
b)	Major courses	9	credits	
c)	Elective courses	15	credits	
d)	Project	6	credits	

A. Compulsory Core courses 6 credits

Plan A(2) (Thesis 12 credits)

DPL 601 Research Thinking and Communication	1 (1-0-3)
DPL 602 Quantitative Research Method	1 (1-0-3) or
DPL 603 Qualitative Research Method	1 (1-0-3)
DPL 604 Academic Writing	1 (1-0-3)
DPL 605 Open Studio	3 (2-2-9)
Plan B (Project 6 credits)	
DPL 601 Research Thinking and Communication	1(1-0-3)
DPL 602 Quantitative Research Method	1(1-0-3) or
DPL 603 Qualitative Research Method	1(1-0-3)
DPL 604 Academic Writing	1(1-0-3)
DPL 605 Open Studio	3(2-2-9)

B. Major course 9 หน่วยกิต		DPL 611 Integrated Practice in Architecture Design	3(0-6-9)
Choose in at least 9 credits from Major courses.		DPL 612 Architectural Project Initiation and Management	3(3-0-9)
(1) Architecture			
DPL 613 Architecture Design for Development Studio I	4(0-8-12)		
DPL 614 Architecture Design for Development Studio II	4(0-8-12)		
DPL 615 Glocal Design	3(1-4-9)	C. Elective courses 9/15 Credits	
DPL 616 Well-Being Design Research Studio I	4(1-6-12)	Building Technology and Innovation	
DPL 617 Well-Being Design Research Studio II	4(1-6-12)	DPL 661 Internship	6(0-12-3)
(2) Design Management		Urban Management	
DPL 621 Strategic Design Planning	3(2-2-9)	DPL 662 Southeast Asia Urbanism	3(3-0-9)
DPL 622 Design Entrepreneurship	3(2-2-9)	DPL 663 Participatory Tools for Planning	3(2-2-9)
DPL 623 Visionary Design	3(2-2-9)	DPL 664 Urban Economics and Urban Management	3(3-0-9)
DPL 624 Eco-Product Innovation	3(2-2-9)	DPL 665 City Theory	3(3-0-9)
(3) UX/UI, User Experience/ User Interface		Develop learning skill courses	
DPL 625 UX communication and technology	3(3-0-9)	DPL 671 Practical Foundation of Communication	3(3-0-9)
DPL 626 User Experience Research	3(3-0-9)	DPL 672 Practical Fundamental Skills of Academic Writing	3(3-0-9)
DPL 627 Designing User Experience	3(3-0-9)	DPL 673 Advanced Academic Writing	3(3-0-9)
(4) Duilding Technology and Innovation		DPL 674 Public Speaking and Presentation	3(3-0-9)
(4) Building Technology and Innovation	ar 2(1 2 6)		
DPL 628 Blue and Green Infrastructure for Urban Resilien DPL 629 Climatic Design in Neighborhood and Buildings	2(1-2-6)	Special Topic courses	
DPL 639 Comfort and Well-Being	2(1-2-6)		
DPL 631 Fundamentals of Energy in Buildings	2(1-2-6)	DPL 681 Special Topic Study I	3(0-6-9)
DPL 632 Integrated Sustainable Design Project Studio	4(0-8-4)	DPL 682 Special Topic Study II	3(0-6-9)
DPL 633 Daylighting Design	3(2-2-9)	DPL 683 Special Topic Study III	3(0-6-9)
DI E 055 Daylighting Design	3(2-2-9)	DPL 684 Special Topic Study IV	3(0-6-9)
(5) Lighting Design		DPL 685 Special Topic Study V	3(0-6-9)
DPL 634 Lighting Fundamentals	2(1-2-6)	DPL 686 Special Topic Study VI	3(0-6-9)
DPL 635 Light and Architecture	2(1-2-6)		
DPL 636 Lighting Design Studio	3(1-4-9)	D. Project/Thesis 6/12/36 Credits	
DPL 637 Advanced Lighting Design	3(1-4-9)	Plan A 1 (Thesis 36 Credits)	
DPL 638 Lighting Design and Innovation	3(2-2-9)	DPL 711 Thesis	36 credits
		Plan A 2 (Thesis 12 Credits)	
(6) Urban Management		DPL 710 Thesis	12 credits
DPL 642 Urban Strategies and Social Planning	3(2-2-9)	Plan B (Project Study 6 Credits)	
DPL 643 Seminars on Urban Planning and Management	3(2-2-9)	DPL 701 Project Study	6 credits
DPL 644 Planning Communication and Analysis	3(2-2-9)		
(7) Visual Communication			
DPL 651 Research and Practice in Visual Communication	3(2-2-9)		
DPL 652 Contextual Studies	3(2-2-9)		
DPL 653 Studio I	3(2-2-9)		
DPL 654 Studio II	3(2-2-9)		
DPL 655 Studio III	3(2-2-9)		
DPL 656 Critical Writing in Art, Design and Media	3(2-2-9)		

Study Plan		Plan B (Project 6 credits)		
Plan 1.5 year		Year 1 Semester 1		
Plan A 1 (Thesis 36 credits)		DPL 601 Research Thinking and	1 Communication	1(1-0-3)
Year 1 Semester 1		DPL 602 Quantitative Research	Method	1(1-0-3) or
DPL 711 Thesis	12 (0-24-48)	DPL 603 Qualitative Research N	Method	1(1-0-3)
Total	<u>12 (0-24-48)</u>	DPL 604 Academic Writing		1(1-0-3)
Hrs/Week	= 72	DPL xxx Major 1		3 (x-x-x)
Year 1 Semester 2		DPL xxx Elective 1		3 (x-x-x)
DPL 711 Thesis	12 (0-24-48)	DPL xxx Elective 2		3 (x-x-x)
Total	<u>12 (0-24-48)</u>	Total	12 (3+x-x-9+x)	
Hrs/Week	= 72	Hrs/Week	= 12+x	
Special Semester		Year 1 Semester 2		
DPL 711 Thesis	<u>3 (0-6-12)</u>	DPL 602 Open Studio		3 (2-2-9)
Total	<u>3 (0-6-12)</u>	DPL xxx Major 2		3 (x-x-x)
Hrs/Week	= 18	DPL xxx Elective 3		3 (x-x-x)
Year 2 Semester 1		DPL xxx Elective 4		3 (x-x-x)
DPL 711 Thesis	9 (0-18-36)	Total	12 (2+x-2+x-9+x)	
Total	<u>9 (0-18-36)</u>	Hrs/Week	= 13+x	
Hrs/Week	= 54	Special Semester		
Plan A 2 (Thesis 12 credits)		DPL 701 Project	<u>3 (0-6-12)</u>	
Subject Code Name credits (Lecture-Lab	-Own learning)	Total	<u>3 (0-6-12)</u>	
Year 1 Semester 1		Hrs/Week	= 18	
DPL 601 Research Thinking and Communic	cation 1(1-0-3)	Year 2 Semester 1		
DPL 602 Quantitative Research Method	1(1-0-3) or	DPL xxx Major 3		3 (x-x-x)
DPL 603 Qualitative Research Method	1(1-0-3)	DPL xxx Elective 5		3 (x-x-x)
DPL 604 Academic Writing	1(1-0-3)	DPL 701 Project	3 (0-6-12)	
DPL xxx Major 1	3 (x-x-x)	Total	9 (x-6+x-12+x)	
DPL xxx Elective 1	<u>3 (x-x-x)</u>	Hrs/Week	=18+x	
DPL xxx Elective 2	<u>3 (x-x-x)</u>	<u>Plan 2 years</u>		
Total	12 (3+x-x-9+x)	Plan A 1 (Thesis 36 credits)		
Hrs/Week	= 12+x	Year 1 Semester 1		
Year 1 Semester 2		DPL 711 Thesis	9 (0-18-36)	
DPL 605 Open Studio	3 (2-2-9)	Total	9 (0-18-36)	
DPL xxx Major 2	3 (x-x-x)	Hrs/Week	= 54	
DPL xxx Elective 3	3 (x-x-x)	Year 1 Semester 2		
Total	9 (2+x-2+x-9+x)	DPL 711 Thesis	9 (0-18-36)	
Hrs/Week	= 13+x	Total	9 (0-18-36)	
Special Semester		Hrs/Week	= 54	
DPL 710 Thesis	3 (0-6-12)	Year 2 Semester 1		
Total	<u>3 (0-6-12)</u>	DPL 711 Thesis	9 (0-18-36)	
Hrs/Week	= 18	Total	9 (0-18-36)	
Year 2 Semester 1		Hrs/Week	= 54	
DPL xxx Major 3	3 (x-x-x)	Year 2 Semester 2		
DPL 710 Thesis	9 (0-18-36)	DPL 711 Thesis	9 (0-18-36)	
Total	12 (x+0-18+x-36+x)	Total	9 (0-18-36)	
Hrs/Week	= 54	Hrs/Week	= 54	

Plan A 2 (Thesis 12 credits)		Plan B (Project 6 credits)	
Year 1 Semester 1		Year 1 Semester 1	
DPL 601 Research Thinking and Communication	1(1-0-3)	DPL 601 Research Thinking and Communication	1(1-0-3)
DPL 602 Quantitative Research Method	1(1-0-3) or	DPL 602 Quantitative Research Method	1(1-0-3) or
DPL 603 Qualitative Research Method	1(1-0-3)	DPL 603 Qualitative Research Method	1(1-0-3)
DPL 604 Academic Writing	1(1-0-3)	DPL 604 Academic Writing	1(1-0-3)
DPL xxx Major 1	3 (x-x-x)	DPL xxx Major 1	3 (x-x-x)
DPL xxx Elective 1	3 (x-x-x)	DPL xxx Elective 1	<u>3 (x-x-x)</u>
Total	9 (3+x-x-9+x)	Total	9 (3+x-x-9+x)
Hrs/Week	= 12+x	Hrs/Week	= 12+x
Year 1 Semester 2		Year 1 Semester 2	
DPL 605 Open Studio	3 (2-2-9)	DPL 605 Open Studio	3 (2-2-9)
DPL xxx Major 2	3 (x-x-x)	DPL xxx Major 2	3 (x-x-x)
DPL xxx Elective 2	3 (x-x-x)	DPL xxx Elective 2	3 (x-x-x)
Total	9 (2+x-2+x-9+x)	Total	9 (2+x-2+x-9+x)
Hrs/Week	= 13+x	Hrs/Week	= 13+x
Year 2 Semester 1		Year 2 Semester 1	
DPL xxx Major 3	3 (x-x-x)	DPL xxx Major 3	3 (x-x-x)
DPL xxx Elective 3	3 (x-x-x)	DPL xxx Elective 3	3 (x-x-x)
DPL 710 Thesis	<u>3 (0-6-12)</u>	DPL xxx Elective 4	<u>3 (x-x-x)</u>
Total	9 (x-6+x-12+x)	Total	<u>9 (x-x-x)</u>
Hrs/Week	= 18+x	Hrs/Week	= x
Year 2 Semester 2		Year 2 Semester 2	
DPL 710 Thesis	9 (0-18-36)	DPL xxx Elective 5	3 (x-x-x)
Total	<u>9 (0-18-36)</u>	DPL 701 Project	6 (0-12-24)
Hrs/Week	= 54	Total	9 (x-12+x-24+x)
		Hrs/Week	= 36+x

Course Description

DPL601 Research Thinking and Communication 1 (1-0-3)

Introducing ways of identifying, framing and communicating research problems through critical and creative thinking. Formulating research questions, contextualizing research through literature review, constructing and defending arguments in effective and concise ways using verbal and visual means. Practical study of the foundations of the research process with a particular focus on the development and communication of robust questions, topics and arguments as well as learn how to conduct the human subject research ethics.

Learning Outcomes

- 1. Identify, review and explain the relevance of related literature.
- 2. Explain and defend a research topic and proposed approach using writing, verbal and visual representation.
 - 3. Frame a research topic using critical and creative thinking.
- 4. Formulate and justify clear, coherent and relevant research questions.
- Explain knowledge of, and sensitivity to issues surrounding the responsible conduct of research with human subjects.

DPL602 Quantitative Research Method

1 (1-0-3)

Emphasize how to set up hypothesis and using the statistical techniques to validate such as comparative of two means, analysis of variance and Chisquare. This includes the objective measurements and the statistical, or numerical analysis of data collected through questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Be able to define the meaning of a variable, and to be able to identify independent, dependent, and mediating variables.

Learning Outcomes

- Explain the steps in the process of quantitative data collection and insight.
 - 2. Create a graph or diagram that shows a clear result of data.
 - 3. Choose the right method to tackle the research problem.
 - 4. Apply the theory and knowledge to the research problem.
- Establish a research team with agreement and communication standards of performance and behavior.
 - 6. Apply the statistic tools to analyze the data.

DPL603 Qualitative Research Method 1 (1-0-3)

Learning about research problems, questions and design considerations. Training graduate students in qualitative research on data collection such as ethnography observation, interview, focus group, action research and using of documents and archival data. Then analyzing data with content analysis, discourse analysis, grounded theory and framework analysis. Develop the mindset required to think through, design, and executive a qualitative study.

Learning Outcomes

- Construct their research design and data collection skills by undertaking a pilot research study.
- Present the results of qualitative research in a professional academic manner in both oral and written formats.
 - 3. Implement the process of qualitative data collection procedures.
 - 4. Apply the theory and knowledge to the research problem.
- Establish a research team with agreement and communication standards of performance and behavior.
 - 6. Apply the qualitative data analysis tool for analysis and finding.

DPL604 Academic Writing

1 (1-0-3)

A writing workshop designed to reinforce essay composition skills and introduce students to the practice of writing for academic purposes. Working in high level English courses in which research writing is a requirement. Introducing basic research writing skills including: conducting research, note taking, paraphrase, summary, direct quotation, positioning, and MLA or APA style citation. Placing equal or greater emphasis on macro-level composition skills such as: essay structure, paragraph structure, coherence, unity; and micro-level skills such as: sentence structure, grammar, vocabulary, spelling and mechanics. Learning how to conduct the human subject research ethics.

Learning Outcomes

- 1. Apply the model of writing for a strong literature review.
- Recognize and correct basic and more advanced writing errors, with their own learning.
- Apply academic writing technics and styles from the study of other work and their own work for research paper.
- Applying the digital tools for improving their own academic writing, grammatical errors, plagiarism and paraphrase.

DPL605 Open Studio

3 (2-2-9)

This course provides an opportunity for students in all tracks to work together as a multidisciplinary team. It emphasizes studio practice, based on current issues or aspects.

- Apply interdisciplinary knowledge with hands-on experience to create an innovative design solution.
- Show analytical attribute and visionary in design multidisciplinary approach.
- Explore and access design knowledge in both own and others discipline in the team.
- 4. Practice the means and communicate the important data effectively both in both oral and written communication.
- 5. Develop key tactics to help ensure team and individual resilience.
 - 6. Explain how the SDGs concept fit to the design concept.

DPL 611 Integrated Practice in Architecture Design 3 (0-6-9)

The studio is based on an integrative approach to well-being architectural practice. It aims at new innovative design solutions via a multidisciplinary design. This studio offers the students the chance to broaden and strengthen their design skills in architecture which is related to entrepreneurial, social, and economic well-being aspects merging with other disciplines for new creative solutions. The studio is formed based on a funded project, collaborative design projects with public, private companies, or both local and international workshops.

Learning Outcomes

- Integrate the theory to propose creative design into reality (practically).
- Apply the design and research process to initiate a new design solution.
- 3. Develop the sustainable or well-being impact of the design solution.
- Perform professional skills and attitudes in the design process and working procedure.

DPL 612 Architectural Project Initiation and Management 3 (3-0-9)

This course offers student's exploration and inquires of the factors that affect the success of architectural projects by learning from case studies of historical and contemporary architectural projects and/or discussing with professional architects and/or stakeholders. Furthermore, the students analyze the various approaches and possibilities for proposing an architectural design or project from the current or future contexts. The knowledge and finding which concluded among the students or between students and professional architects are for the architectural design or project development, or possible business model development for the stakeholders.

Learning Outcomes

- 1. Practice the logical process of investigation.
- Conclude ideas to adapt and integrate into architectural design, management, well-being design, or business idea.
- Critically inquire and investigate effected factors to architectural success.
- Critically review literature and evaluate the information for initiating new ideas.

DPL 613 Architecture Design for Development Studio I 4 (0-8-12)

The studio offers students an opportunity to explore architectural concepts and theories with professional architects. The studio allows both local and international professional architects to work with students both in the short or long term to explore ideas to expand the conceptual and theoretical level to the practical design level.

Learning Outcomes

- Present the design skills and technique of presentation with current and appropriate media and technologies.
- Demonstrate the relationship between concepts/theories and practical practice in architectural design.
- Build their own interest and critically question the built environment and well-being environment.
- Practice logical analysis of the current and future issues in order to propose creative well-being or sustainable design solutions.
 - 5. Propose the solution for architectural design completion.

DPL 614 Architecture Design for Development Studio II 4 (0-8-12)

The studio is a continuation of the Architectural Design for Development Studio I to enhance the investigation and theory's application into the architectural design process or construction. The studio allows the professional architects and students to deepen the exploration of the theories and ideas to professional practices.

Learning Outcomes

- Initiate discussions with professionals and stakeholders in order to propose creative design solutions.
- Explain the relationship between concepts/theories and practical practice in architectural design.
 - 3. Develop the design concept to the reality
- Practice logical analysis of the current and future issues in order to propose creative well-being or sustainable design solutions.
 - 5. Propose the solution for architectural design completion.

DPL 615 Glocal Design 3 (1-4-9)

This course offers students the opportunity to investigate and research the impacts of global changes on different local contexts that emphasize well-being architectural design and the built environment. In addition, the course offers an approach to architectural design and built environment design based on various local conditions: social, economic, cultural, and resource conditions, in order to respond to global changes and well-being.

- 1. Produce the study or design in an academic written format.
- 2. Examine the global changes which affect the well-being of architectural design and the built environment.
- Construct the research process to investigate for the new possible solution.
- 4. Analyze the potential to synchronize the global and local ideas to apply or adapt the new global issues (tech/society/econ/etc.) to local conditions or the other way around.
- Apply digital means to assist the investigating possible wellbeing solution.

DPL 616 Well-Being Design Research Studio I

4 (1-6-12)

The studio opens an area for investigating and questions built environments for well-being through a research-led design approach. This allows students to question, criticize, and learn to understand the built environment for well-being conditions. The findings in the process or ideas are for future professional practice or research.

Learning Outcomes

- Initiate new ideas from theory and current or future situation for introducing design questions.
- 2. Examine the theory and research data to identify the architectural design or well-being approaches.
- Propose the architectural design for well-being via a research approach.
- Illustrate the new opportunity for the future sustainable or wellbeing idea through the design and research process.
- Utilize the individual or team research process and the application into the architecture design and well-being solution.

DPL 617 Well-Being Design Research Studio II

4 (1-6-12)

The studio is a continuation of the Well-Being Design Research Studio I which offers a deepening research process and expands the duration in investigation and exploration of the question in our built environment for well-being in order to give a clearer understanding and propose better architectural designs. Moreover, it is further the questions for new ideas and innovations.

Learning Outcomes

- Examine the theory and research data to identify the architectural design or well-being approaches.
- Establish the design concept and approach for future design solutions.
- Illustrate the new opportunity for the future sustainable or wellbeing through the design and research process.
- 4. Illustrate the personal investigation process of the interesting question.

DPL 621 Strategic Design Planning

3 (2-2-9)

The aim of this class is to understand how to think, create, plan and implement design strategy as part of a major business strategy. Students learn to analyze key issues surrounding the development of strategic design planning, for example corporate environment, objectives, core competencies and capabilities in order to propose strategic design objectives, strategy, planning and implementation.

Learning Outcomes

1. Plan, design and communicate verbal and visual presentation effectively

- Show ability to identify problems rationally and creatively by applying integrated theoretical and practical knowledge in design, business, and well-being
- 3. Establish the clear investigation of design problems in real case studies
- Being committed and taking the initiative in complex and challenging projects related to well-being businesses
 - 5. Demonstrate the impact areas of strategic design planning
- 6. Identify new opportunities and plan to implement tangible outcomes
 - 7. Develop teamwork abilities to work across disciplines
 - 8. Integrate digital literacy into strategic design planning

DPL 622 Design Entrepreneurship

3 (2-2-9)

The aim of this class is to understand how to organize, manage and set up creative design businesses. Students learn to conceptualize, plan and organize business related to their design interest. The class introduces key topics related to design business, including Intellectual Property Rights, Business Planning and Marketing for Design.

Learning Outcomes

- 1. Plan, design and communicate verbal and visual presentation effectively in pitching deck format
- 2. Utilize lean design process to create transformative design solutions for startups
- Show ability to identify problems rationally and creatively across business and management areas
- 4. Initiate new startup in complex and uncertain economic and social contexts
- $\label{eq:continuous} \mbox{5. Create business solutions that are able to achieve well-being } \mbox{impacts}$
- 6. Practice entrepreneurial skills such as leadership, proactivity and resilience
 - 7. Integrate high-level digital literacy into well-being startups

DPL 623 Visionary Design

3 (2-2-9)

The aim of this class is to understand four aspects i.e., business feasibility, user desirability, technology possibility and sustainability. Then these aspects will be integrated to search, conceptualize, visualize and prototype new design vision for our better futures in service and manufacturing industries, public welfare and government sector. At the end of the course, students will generate both visionary design and business model.

- 1. Design and communicate verbal and visual presentation effectively for future scenarios
- 2. Utilize visionary design process to create design future solutions

- Commit and take visionary initiative in complex and challenging futures
- Create a design solution that achieves future sustainable and well-being impacts
- Practice leadership skills and growth mindset to lead visionary initiatives

DPL 624 Eco-Product Innovation 3 (2-2-9)

The aim of this class is to understand key aspects involving in new and ecological product development, for example new idea generation, emergent issues, innovation diffusion, eco-product innovation management, marketing for innovation and environment and sustainable innovation strategy. The class provides both theoretical background and professional case studies.

Learning Outcomes

- 1. Plan, design and communicate verbal and visual presentation effectively
- Show creative and critical thinking ability by using the theoretical and practical knowledge related to sustainability and well-being
- Investigate in the areas of sustainable problems and well-being possibilities
- 4. Initiate sustainable value chain to solve complex and challenging global well-being problems
- 5. Create an eco-system enhancing sustainable and well-being values
- Identify impactful local and/or global problems for design and development to support better well-being futures
- Identify relevant ethical aspects to sustainable and well-being ecosystem

DPL 625 UX Communication and Technology 3 (3-0-9)

Practicing the user-facing text or copy that appears within the design of digital products. Helping users understand how to use and interact with products. Study including conversation interface for voice user interface. Exploring new emerging technology that promotes well-being and immersive experience such as virtual reality, augmented reality or mixed reality.

Learning Outcomes

- 1. Create content that helps users complete tasks and transactions.
- 2. Modify the emerging technology for the future
- Develop an immersive experience by considering the physical environment and well-being
- Choose the language that promotes engagement, and create content that supports mental well-being

DPL 626 User Experience Research 3 (3-0-9)

The systematic study of target users and their requirements, to add realistic contexts and insights to design processes. Study including user research, usability testing and human factor experiment. Metric of measuring and plan of conducting research.

Learning Outcomes

- 1. Present the data from a field visit in ways that can be used to drive design
- 2. Choose the most appropriate format for sharing findings and recommendations: for example, a report, a daily stand up.
- Choose the most appropriate evaluation method, for example, usability instead v. expert review.
- Analyze and interpret existing data (for example web analytics, user surveys, customer support calls).
- Associate the concept of empathy design from a user point of view.

DPL627 Designing User Experience 3 (3-0-9)

Learning the holistic view of design process includes Design Thinking, Lean UX, Scrum and Sprint. Teach the fundamental concepts, techniques and tools associated with the practice of user experience design in web and mobile apps. Learn how to apply the methods and tools such as Empathy map, Persona, Customer Journey, Wireframe prototyping and others.

Learning Outcomes

- Use the design process: empathize with users, define pain points, ideate solutions, create wireframes and prototypes, test and iterate on designs
 - 2. Create a new challenging idea for the complex project
- Choose the method that fits to design problem in order to deliver a good result
- Perceive a clear vision on how to pivot or preserve the project after doing the minimal viable product
- 5. Organize the teamwork and roles for user experience design team
- Integrate the model of digital transformation to make the product more efficient.

DPL 628 Blue and Green Infrastructure for Urban Resilience 2 (1-2-6)

The aim of this class is to understand and to apply principles of blue and green infrastructure which is the network of natural and semi natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Further, students learn how to apply, analyze, prioritize and create main concept of Blue and Green Infrastructure. Finally, students learn to formulate and justify urban ecology and water management strategies in city, site and architecture scale, especially Blue and Green infrastructure in relation to rainwater management and flood mitigation. Appropriately site planned, designed and

managed, the assets and functions have the potential to deliver a wide range of benefits - from providing ecosystem services, maintaining livelihood to mitigating and adapting the impacts of climate change.

Learning Outcomes

- 1. Explain the principles of Blue and Green Infrastructure
- 2. Apply, analyze, prioritize and create main concept and planning tools of Blue and Green Infrastructure
- 3. Formulate and justify urban ecology and water management strategies in city, site and architecture scale, especially Blue and Green infrastructure in relation to rainwater management and flood mitigation

DPL 629 Climatic Design in Neighborhood and Buildings 2 (1-2-6)

Class is about efficient passive and active energy conservation design and site potential integration to achieve comfort and CO2 reduction. It also explores energy demand at the scales of the building and neighborhood, and relationship to spatial form and choice of mechanical-electrical systems. The practical and innovative application of landscape design features, building clusters and energy efficient technologies will be identified, examined, evaluated, and composed on best practice projects, utilizing various simulation tools.

Learning Outcomes

- 1. Explain the climate characteristics in relation to context, site, and buildings
- 2. Create main concept and design methods to achieve comfort and CO2 reduction with respect to human behavior, social and environmental impact
- 3. Innovate, analyze, compare, and justify climatic and hybrid design strategies in neighborhood and architecture scale

DPL 630 Comfort and Well-Being 2 (1-2-6)

Two main issues are discussed in this course: 1) the issues on human physiology, thermal comfort, acoustic comfort, visual comfort, and non-visual effect of light on human; 2) the well-being design concept which is the new design trend regarding the importance of Indoor Air Quality (IAQ), Circadian Lighting, natural light, glare, sound, material, building, context, and their effects with respect to health, safety, and well-being. This basically includes understanding the benefits, consequences, and goals of well-being, and more importantly, practicing implementing strategies for healthier places in existing and new buildings. WELL standard will be addressed.

Learning Outcomes

- 1. Explain human comfort and well-being factors in relationship with design and environment.
- 2. Create, develop and manipulate integrated architectural design and analyze its effect on comfort and well-being to improve quality of life and environment.

DPL 631 Fundamentals of Energy in Buildings

2 (1-2-6)

Fundamentals of energy in building provides basic energy, psychrometric, air properties, heat transfer in buildings and enclosures, and principles of A/C system and with aims to decarbonize and advance towards a net zero energy building concept and sustainable built environment in different context. The class enhances research and experience on building, materials, and construction with applications to sustainable energy-efficient architecture and building technology. Students will create their own building design or tools to the course program, evaluate and share their own discoveries.

Learning Outcomes

- 1. Explain basic thermodynamics and heat transfer, know the leading order factors in building energy use
- 2. Employ their understanding of energy fundamentals and knowledge of building energy use in innovative building design projects.

DPL 632 Integrated Sustainable Architecture Design Studio 4 (0-8-4) This course is designed to critically integrate the dimensions of ecology, economy and socio-culture and to investigate how they are related to climate change and urban environment. These involve intangible values such as health, well-being, learning, demographic along with mobility and quality of life. Overall the goal is to creatively develop new design strategies or typologies for a long-term sustainability and to acquire in depth knowledge on architectural technologies, renewable energy in a life cycle perspective with respect to urban resilience and global warming crisis. A holistic and a multi-disciplinary design approach is considered against UN's SDGs.

Learning Outcomes

- 1. Develop skills for systems-thinking to investigate a deeper integration of architecture, urban design and planning with energy, water and eco systems.
- 2. Generate new typologies, morphologies / infrastructure towards self-sufficiency and resilience.
- 3. Justify the impact of their design decisions in both quantitative and qualitative ways and assess problems from multiple viewpoints.

3 (2-2-9) DPL 633 Daylighting Design

The aim of this course is to understand theory and fundamentals of daylight, to learn from vernacular wisdom typology, to integrate various daylight design strategies in architectural design, and electric lighting controls. Human factors, design processes and evaluation methods for architectural daylighting design (physical model and computer simulation) will be explored. Students will be able to initiate, create, and manipulate their own daylight design process and tool with respect to the context. In addition, this course covers the available solar radiation, the application of building-integrated photovoltaic (PV), and tool or knowledge development to accelerate the utilization of Daylight.

- Explain and employ the daylight characteristics integrated into architecture, and electric lighting controls
- Identify the impact of various architectural variables, strategies, and materials in space and perception.
- Utilize and manipulate daylight evaluation tools such as physical modeling, and computer analysis techniques for architectural daylighting design.
- 4. Explain and design that integrate PV/renewable energy in product or architecture
- Practice an in-depth view of daylight research and technologies that link users to propose new applications on human experience in daylighting.

DPL 634 Lighting Fundamentals

2 (1-2-6)

This class provides an essential foundation for understanding the relationship between people and the luminous environment through light's visual and nonimage-forming (NIF) effects or Circadian Rhythms. It introduces human factors in lighting and lighting technologies as critical aspects of developing quality lighting design and innovation.

Learning Outcomes

- 1. Explain the different mechanisms between the visual and NIF effects of light
- Identify luminous environments suitable for different users and requirements.
- Describe quantitative metrics and qualitative characteristics of natural light and different lighting technologies
- Apply theoretical knowledge to analyze visual conditions and select appropriate equipment
- 5. Recognize new opportunities for lighting solutions or ideas for innovation

DPL 635 Light and Architecture

2 (1-2-6)

This class explores a close relationship between natural daylight and spatial and temporal experiences in the architecture of different climatic and cultural contexts. Students need to investigate daylight's functional and poetic/symbolic meanings in selected architecture through literature, direct observation, and simulations or other appropriate tools.

Learning Outcomes

- Identify factors influencing the application of daylight in architecture.
- 2. Appraise and describe spatial and temporal experiences of natural light in architecture from a different climatic and cultural context
- Simulate and critically evaluate the meanings of natural light in selected architecture
 - 4. Present the results from daylight investigation effectively.

DPL 636 Lighting Design Studio

3 (1-4-9)

This first lighting design studio class applies theoretical knowledge to designing a small lighting project. It introduces a range of design tools and processes to establish coherent lighting concepts and develop them into meaningful and creative lighting solutions.

Learning Outcomes

- 1. Apply theoretical knowledge and critically assess the lighting requirements
 - 2. Establish a coherent lighting concept and objectives
- Select appropriate lighting techniques and equipment, and apply suitable tools for design development
- 4. Provide evidence that the lighting design solutions achieve the stated objectives
- Present suitable and creative lighting solutions effectively, verbally, and graphically

DPL 637 Advanced Lighting Design 3 (1-4-9)

This class is an advanced design studio involving more complex programs for interior and exterior applications. It provides state-of-the-art visualization and calculation training and introduces sustainable lighting design criteria. Students need to investigate lighting design solutions that address both the visual aspect and the well-being.

Learning Outcomes

- 1. Practice the work as a competent team member
- 2. Assess the visual and biological requirements of different users
- 3. Propose lighting design objectives, addressing sustainability, creativity, and wellbeing
- Choose appropriate lighting techniques and equipment, and apply suitable tools for design development
 - 5. Verify lighting design solutions quantitatively
- 6. Communicate the lighting solutions effectively, verbally, and graphically

DPL 638 Lighting Design and Innovation 3 (2-2-9)

This class introduces evidence-based lighting design, new lighting technologies, and knowledge from related emerging fields. Students need to explore social or environmental issues that require new lighting solutions. It provides a basis for students to identify new opportunities and develop innovative lighting solutions for real or virtual space.

- 1. Show the ability to work as a competent team member and collaborate with others
- Select and evaluate social or environmental issues, and set a goal for lighting innovation
- Review literature from lighting and other fields and identify new opportunities

- 4. Generate, assess, and select new ideas for further development
- 5. Validate new lighting solutions or innovations quantitatively
- Present the development process and output effectively, verbally, and graphically

DPL 642 Urban Strategies and Social Planning 3 (2-2-9)

This course overviews urban strategic planning using case readings from around the world. It also covers discussions of the importance of social planning, equity and resiliency concept, participation in community development, and public involvement in planning. Through project-based work, each year the class will co-create knowledge applying an urban strategy for social well-being/equity and resiliency in often complex real-world situations.

Learning Outcomes

- 1. Explain urban strategic planning using case readings
- Discuss the importance of social planning, participation in community development, and public involvement in planning.
- Integrate an urban strategy for social well-being/equity and resiliency using project-based work (often in complex situations) with co-created knowledge.

DPL 643 Seminars on Urban Planning and Management 3 (2-2-9)

This seminar is a crucial component of the program. Coursework focuses on reviewing best practice cases in urban planning and management. It embraces a new more social, and market-oriented role based on cooperation in diverse networks to be able to address city concerns. Furthermore, the seminar offers an opportunity for students to strengthen the theoretical knowledge acquired in these and other courses through hands-on exercises in studio work and workshop modules.

Learning Outcomes

- 1. Explain best practice cases in urban planning and management
- 2. Expand multidisciplinary planning and management network through invited public discussion event
- Develop strength in theoretical knowledge acquired in these and other courses through hands-on exercises in studio-work and workshop modules.

DPL 644 Planning Communication and Analysis 3 (2-2-9)

This course emphasizes the importance of data communication that will affect planning analysis as applicable in urban management. It covers the planning communication concept, the 'paradigm shifts' of democracy and planning theory, and related changes in the citizen's role. The class project will enable students to formulate concepts, technology, and tools available to communicate and analyze work in the planning field using GeoDesign framework (global change assumptions and system innovations in water, green, transport & energy infrastructure; agriculture; residentials, commerce, industrial, institutional). Introduction of Geographic Information Systems and other tools for

planners will be included. The class will co-disseminate knowledge for equity and resiliency using project-based work.

Learning Outcomes

- 1. Explain planning communication concept.
- Formulate concepts, technology, and tools available to communicate and analyze work in the planning field.
- ${\it 3.}\ Co\mbox{-}disseminated\ knowledge\ for\ equity\ and\ resiliency\ using\ project-based\ work.$

DPL 651 Research and Practice in Visual Communication 3 (2-2-9)

This course introduces to the core themes and values of the track, including articulation, contextualization and critique of personal goals and interests; the relative roles of research, theory, and practice in creative production; and principles of practice-based research.

Learning Outcomes

- Identify and model a small set of meaningful personal, professional, and social interests to be explored through creative inquiry.
- Conceptualize, produce and critique small scale experimental projects in response to theory introduced in class.
- Practice the writing and design of a visual essay based on critical reflection on project work.

DPL 652 Contextual Studies 3 (2-2-9)

This course focuses on theoretical and philosophical contexts of art, media, design, and culture. It also emphasizes contemporary debates, critical reading, and creative writing. Students need to construct intellectual frameworks for practical activity.

Learning Outcomes

- 1. Identify, review, and map a set of ideas, theories, works, and technologies relevant to their creativity.
- 2. Plan, run and critically evaluate a seminar based upon a theoretical text decided in class.
- Produce an argumentative essay that synthesizes the sources identified in the LO 1 and relates these critically to their own creative practice/ project.

DPL 653 Studio I 3 (2-2-9)

Creative Product Studio provides the development of thinking and understanding through practice-based and other forms of research. Tutorials, seminars, and studio discussion with external experts are provided.

Learning Outcomes

 Propose, plan, and manage the production of a body selfinitiated imaginative work in response to clearly de-fined issues/ interests/ concerns.

- Maintain an ongoing critical and reflective perspective on their project work through the production of a detailed journal of ideas, problems, and processes.
- Lead discussion of the theoretical ideas introduced in this and other classes to their creative.
- Conceptualize and deliver an effective and creative visual presentation/exhibition.

DPL 654 Studio II

3 (2-2-9)

Creative Product Studio provides the development of thinking and understanding through practice-based and other forms of research. Tutorials, seminars, and studio discussion with external experts are provided.

Learning Outcomes

- Propose, plan, and manage the production of a body selfinitiated imaginative work in response to clearly de-fined issues/ interests/ concerns.
- Maintain an ongoing critical and reflective perspective on their project work through the production of a detailed journal of ideas, problems, and processes.
- Lead discussion of the theoretical ideas introduced in this and other classes to their creative.
- Conceptualize and deliver an effective and creative visual presentation/exhibition.

DPL 655 Studio III

3 (2-2-9)

Creative Product Studio provides the development of thinking and understanding through practice-based and other forms of research. Tutorials, seminars, and studio discussion with external experts are provided.

Learning Outcomes

- Propose, plan, and manage the production of a body selfinitiated imaginative work in response to clearly de-fined issues/ interests/ concerns.
- Maintain an ongoing critical and reflective perspective on their project work through the production of a detailed journal of ideas, problems, and processes.
- Lead discussion of the theoretical ideas introduced in this and other classes to their creative.
- Conceptualize and deliver an effective and creative visual presentation/exhibition.

DPL 656 Critical Writing in Art, Design and Media 3 (2-2-9)

Extended piece of critical and reflective writing. Critical evaluation and contextualization of practice activity. Preparation for formal written component of the project.

Learning Outcomes

- 1. Identify, deploy and critique writing strategies for a range of purposes and outcomes
- Apply high-level literary (technical and expressive) and intellectual (reflection, analysis, synthesis, interpretation) skills in the research and production of written texts.
- Examine the writing as a form of inquiry and relate this to their own creative practice.

DPL 661 Internship

6 (0-12-3)

Internship provides students with an opportunity to gain knowledge and skills from a planned work experience in the student's chosen area of expertise. The student is able formulate personal learning goals prior to the search for an internship. Jointly developed learning outcomes are created and evaluated by the Academic Internship Advisor, Work-site Supervisor, and the student. Internship placements are directly related to the student's program of study and provide learning experiences not available in the classroom setting. Internships could also be used as an opportunity to explore career fields. Students must meet with an Internship Advisor prior to registering. Upon completion of the internship, students must submit a report and present results to the Academic Internship Advisor to evaluate the learning outcomes.

Learning Outcomes

- Present knowledge, skills, and attitudes appropriate to assignment
- 2. Exhibit evidence of increased knowledge and skill through practical experience
 - 3. Explain how the internship fits into a career field
 - 4. Gain cultural knowledge and increase language skills

DPL 662 Southeast Asia Urbanism

3 (3-0-9)

This course addresses questions about the essence of Southeast Asian Urbanism. What are the unique historical, aesthetic, and sociological characteristics of Thai cities? How do Thai cities compare to other cities in the region of Southeast Asia? What are common characteristics we share with them and what are the physical, cultural and environmental differences? What can we learn from these neighboring cities? By answering these questions, this course aims to establish a foundation of knowledge about Southeast Asian cities in order to develop a better understanding of our unique "city image" (Lynch 1960) and urban culture. In addition to identifying indigenous and pre-colonial characteristics of Southeast Asian cities, the class will also discuss the western colonial policies that have influenced most cities in this region. We will analyze how these western influences have affected urban culture and the physical form of cities in Southeast Asia.

Learning Outcomes

 Develop the special context of Southeast Asia that has been neglected in western influenced planning discipline. 2.Distinguish the unique character and development pattern of different cities in SEA.

 Explain the common character and pattern of life among cities in SEA.

DPL 663 Participatory Tools for Planning 3 (2-2-9)

In line with the mission statement, this course outlines theories and practices of participatory planning in both Western and Southeast Asian contexts. It also provides students with in-depth knowledge of planning principles and techniques, and planning support systems in particular. They also learn to use a practical toolkit for moderation and process management in the field. The class will explore new tools and innovations for urban development including gaming for data gathering etc.

Learning Outcomes

- Explain theories and practices of participatory planning in both Western and Southeast Asian contexts.
- Discuss in-depth planning principles and techniques, and planning support systems in particular.
- Use a practical toolkit for moderation and process management in the field.

DPL 664 Urban Economics and Urban Management 3 (3-0-9)

This elective course offers an insight into the principles of urban economics and strengthens students' ability for budgeting and financial management, as an application of the compulsory course on management strategies and techniques.

Learning Outcomes

- 1. Explain the principles of urban economics.
- Operate budgeting and financial management relating to urban development.

DPL 665 City Theory 3 (3-0-9)

This course offers a historical review of urbanization patterns all over the world, as well as an overview of the models and theories that have been developed both in Eastern and Western traditions. It situates urban development at any given time in a given place in a wider social, economic and political context and relates this factual information with the dominant perceptions, images and "Imagineering" about the city at the time. As of the twentieth century onwards, the course focuses on mainstream urban theories (starting from the Chicago School of Castell's Information City up to Sassen's World Cities) but also mentions alternative visions developed under communism and/or fascism government rules as well as those developed by Utopianists.

Learning Outcomes

 Explain the history of urbanization patterns all over the world, as well as an overview of the models and theories that have been developed both in Eastern and Western traditions. 2. Discuss situations of urban development at any given time in a given place in a wider social, economic and political context and relate this factual information with the dominant perceptions, images and "Imagineering" about the city at the time.

DPL 671 Practical Foundation of Communication 3 (3-0-9)

The course aims to develop students' ability of using communication skills more effectively as it focuses on the understanding of grammar and structure, together with developing the semantic

knowledge for academic purposes in a practical way. Students will be able to show their applied improvement of accuracy, clarity, and comprehension, semantically and grammatically.

Learning Outcome

- Communicate with four skills with academic style in fundamental level.
- Comprehend and show conveyed messages with accuracy and clarity.

DPL 672 Practical Fundamental Skills of Academic Writing 3 (3-0-9)

The course is designed for students who want to improve their fundamental academic writing skills. It will help them understand the basic writing process and make them aware of the elements contributed to the acquisition of good academic writing. They will learn how to organize their writing pieces starting from sentences to paragraphs and eventually to essays, as well as other important writing aspects such as coherence and unity, writing orders and how to paraphrase and summarize, etc.

Learning Outcome

- 1. Use proper fundamental academic writing skills.
- Identify their own writing strengths and weaknesses and be able to improve their writing skills in terms of grammar, structure, style and semantice.

DPL 673 Advanced Academic Writing 3 (3-0-9)

The course is designed for students who want to develop their thesis writing skills by offering a mixture of lectures, advice and practice in thesis and academic writing. It will help them understand the correct advanced writing process as well as provide various

elements that promote their qualified thesis writing. The course will include the required processes of organizing dissertation and research papers, sourcing data, paraphrasing and summarizing, acknowledging sources, creating a list of works cited, etc.

- Use their academic writing skills with the correct advanced writing processes
- Produce advanced academic writing pieces such as research reports, journals and publications with proper style.

DPL 674 Public Speaking and Presentation 3 (3-0-9)

This course will help students to develop presentation skills that are required in their study. The course takes the students systematically through the important stages of public speaking and presentations from planning to handling questions. Students will also be

exposed to appropriate language required for effective public speaking and presentations. Students will practice the skills learnt at the different stages via short presentations in class and assignments as well as discussions.

Learning Outcome

- 1. Use proper presentation skills in their academic context.
- Communicate appropriate verbal language required for effective public speaking and presentations.

DPL 681 Special Topic Study I

3 (0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 682 Special Topic Study II

3 (0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 683 Special Topic Study III

3 (0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 684 Special Topic Study IV

3(0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- 1. Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 685 Special Topic Study V 3 (0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 686 Special Topic Study VI

3 (0-6-9)

The primary purpose of a special topic study course is to provide the exceptional student with the opportunity to explore a special study topic that is not available through regular course offerings. The topic is of mutual interest to the faculty and the student

Learning Outcomes

- Develop practical, technical and conceptual skills through ongoing creative explorations.
- Identify pertinent ideas and approaches from relevant fields and apply, test and evaluate these in relation to their own practice.

DPL 701 Project Study (Study Plan B)

6 (0-12-24)

Students are required to conduct an original design or innovation project study on a topic related to de-sign and/or planning under the supervision and approval of advisory committee.

- Apply design process and knowledge to develop a project within their disciplines, cross-disciplines, or inter-disciplines under the supervision of an advisor
- Communicate the concept of design skills through media effectively and creatively.
 - 3. Practice a professional code of ethics relevant to their field.

DPL 710 Thesis (Study Plan A.2)

12 (0-24-48)

Students are required to conduct original research on a topic related to design and/or planning under the supervision and approval of advisory committee.

Learning Outcomes

- $1. \ Identify a \ research \ topic \ addressing \ selected \ SDG \ or \ social$ well-being goals.
- Synthesize current literature and implications for designing research methodology to achieve the set goals.
- Conduct projects/theses based on the student's disciplines, cross-disciplines, or inter-disciplines under the supervision of an advisor.
- 4. Apply knowledge of academic ethics and the institutional review board (IRB) in their research project.

DPL 711 Thesis (Study Plan A.1)

36 (0-72-144)

Students are required to conduct original research on a topic related to design and/or planning under the supervision and approval of advisory committee.

- Identify a research topic addressing selected SDG or social well-being goals based on the student's disciplines, cross-disciplines, or interdisciplines under the supervision of an advisor.
- Synthesize current literature and implications for designing research methodology to achieve the set goals
- Conduct a research project complied with academic ethics and the institutional review board (IRB).
- Write a research paper that clearly describes the study and can be accepted to publish in an international journal.